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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Enterprise Field Services LLC	OGRID	241602
Contact Name	Robert Dunaway	Contact Telephone	575-628-6802
Contact email	rhdunaway@eprod.com	Incident # *(assigned by OCD)*	NAPP2035042855
Contact mailing address	PO Box 4324, Houston, TX 77210		

Location of Release Source

Latitude 32.266889 Longitude -103.792056
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Oxy Sand Dunes North	Site Type	Compressor Station
Date Release Discovered	August 2, 2020	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
A	032	23S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) ~250 bbls consumed by fire	Volume Recovered (bbls) - 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe)	Volume/Weight Released (provide units) - Fire	Volume/Weight Recovered (provide units)

Cause of Release

Gas detector located near the condensate pumps sensed a flammable gas and the station ESD was activated automatically. Several minutes later, a producer notified an Enterprise pipeline tech that there was a fire at the facility. Due to the severity of the damage from the heat of the fire, the Investigation Team was unable to determine the exact origin of the source of fuel that started the fire.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? – Fire and Condensate burned by fire.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notifications were provided to BLM and NMED on August 3, 2020. OCD was notified on December 14, 2020 (phone call between Mike Bratcher – OCD District 2 and Paul Reinermann – Enterprise Environmental Mgr).	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Robert Dunaway Title: Senior Environmental Engineer

Signature: [signature] Date: 4/21/2021

email: rhdunaway@eprod.com Telephone: 575-628-6802

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Incident ID	NAPP2035042855
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? – Fire and Condensate burned by fire.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notifications were provided to BLM and NMED on August 3, 2020. OCD was notified on December 14, 2020 (phone call between Mike Bratcher – OCD District 2 and Paul Reinermann – Enterprise Environmental Mgr).	

Closure

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☒ Description of remediation activities

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

Printed Name: Robert Dunaway Title: Senior Environmental Engineer

Signature: [signature] Date: 4/21/2021

email: rhdunaway@eprod.com Telephone: 575-628-6802

Incident ID	NAPP2035042855
District RP	
Facility ID	
Application ID	

OCD Only

Received by: Robert Hamlet Date: 8/11/2021

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

Closure Approved by: Robert Hamlet Date: 8/11/2021

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

ENSOLUM

CLOSURE REPORT

Property:

Oxy Sand Dunes North

Eddy County, New Mexico
32.266889 N, 103.792056 W
NMOCD Incident # NAPP2035042855
Enterprise ECIRT # 90098

March 4, 2021
Ensolum Project No. 03B1226035

Prepared for:

Enterprise Field Services, LLC
P.O. Box 4324
Houston, TX 77210
Attn: Ms. Maria Lerma

Prepared by:

Beaux Jennings
Senior Project Manager

Liz Scaggs, PG
Principal

ENSOLUM

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ENSOLUM

CLOSURE REPORT

Oxy Sand Dunes North

Eddy County, New Mexico
32.266889 N, 103.792056 W
NMOCD Incident # NAPP2035042855
Enterprise Spill # 90098

Ensolum Project No. 03B1226035

1.0 INTRODUCTION

1.1 Executive Summary

- On August 2, 2020, a fire was reported at the Sand Dunes North Compressor Station. Approximately 250 barrels (bbls) of condensate liquid were unrecoverable due to the probability of fire consumption. The adjacent slop tank, gun barrel tank, condensate tank, and secondary containment were consumed by the fire. Additionally, the secondary containment lining, as well as electrical wiring, motor windings, and plastic components that were up to 40 feet away from the tanks experienced damage.

- On December 11, 2020, Ensolum, LLC (Ensolum) arrived at the Site and collected six (6) composite soil samples (CS-1 through CS-6) at a depth of two (2) inches bgs as well as one (1) composite stockpile soil sample (STP-1).

- Subsequent to additional excavation activities by Strike, LLC (Strike), composite soil samples CS-1, CS-3, CS-4, and CS-6 were resampled by Ensolum for total petroleum hydrocarbons (TPH) on December 21, 2020.

- The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the applicable New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) Closure Criteria for Soils Impacted by a Release using the New Mexico EMNRD OCD's New Mexico Administrative Code (NMAC) 19.15.29 *Releases* as guidance.

- A total of 10 composite soil samples from six (6) locations were collected from the excavation area and one (1) stockpile soil sample was collected from the on-site remediated stockpile. Based on the final soil sample analytical results, the final composite soil samples (CS-1 through CS-6) and composite stockpile soil sample (STP-1) are below the applicable NMOCD Closure Criteria.

Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

1.2 Site Description & Background

Operator:	Enterprise Field Services, LLC (Enterprise)
Site Name:	Oxy Sand Dunes North
Location:	32.266889 N, 103.792056 W Section 32, Township 23 South, Range 31 East Eddy County, New Mexico
Property:	Bureau of Land Management (BLM), Enterprise Field Services, LLC
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On August 2, 2020, the Oxy Sand Dunes North, hereinafter referred to as the "Site", reported a gun barrel tank fire due to possible condensate vapors escaping and coming in contact with a secondary incendiary component. Once ignited, the fire came into contact with a slop tank, the original gun barrel tank, a condensate tank, and the secondary containment. The fire consumed the lining of the secondary containment of both condensate pumps and the storage tanks, causing considerable damage to electrical wiring, motor windings, and plastic components up to 40 feet away from the tanks. Approximately 250 barrels (bbls) of liquid condensate are unaccounted for, presumably consumed in the fire.

The Topographic Map depicting the location of the Site is included as **Figure 1**, the Site Vicinity Map is included as **Figure 2,** the Site Map indicating the locations of composite soil samples and soil stockpile is included as **Figure 3,** and the Closure Criteria Map is included as **Figure 4** in **Appendix A**.

1.3 Project Objective

The primary objective of the closure activities was to reduce constituent of concern (COC) concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria concentrations.

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. In order to address activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action. Ensolum, LLC (Ensolum) utilized information provided by Enterprise, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD Imaging database to determine the appropriate closure criteria for the Site.

Supporting documentation associated with the following bullets are provided in **Appendix B**. No water wells were identified within a half-mile of the Site. However, one (1) water well (C-02661) was identified approximately 1.37 miles south of the Site on the OSE Water Rights Reporting System (WRRS) database with an unknown depth to water. Due to the distance to the closest water well, the strictest closure criteria will be utilized.

- The Site is not located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or any other significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole or playa lake.

- The Site is not located within 300 feet from an occupied permanent residence, school, hospital, institution or church.
- According to the OSE WRSS database there are no private, domestic freshwater wells used by less than five (5) households for domestic or stock water purposes identified within 500 feet of the Site.
- According to the OSE WRSS database there are no freshwater wells identified within 1,000 feet of the Site as declared in the previous bullet.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include:

Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Method	Limit
≤50 feet	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

3.0 SOIL REMEDIATION ACTIVITIES

On August 2, 2020, a fire was reported at the Site due to condensate vapors emitted from a gun barrel tank igniting from a secondary source. A slop tank, gun barrel tank, and a condensate tank were fully involved in the fire, including the secondary containment. The fire was fully extinguished with the extent of the damage including the lining of the secondary containment, and electrical wiring, motor windings, and plastic components that were up to 40 feet away from the tanks. An approximate amount of 250 bbls of condensate liquid was lost, presumably consumed by the fire. The site was then excavated by Strike, LLC (Strike) and all impacted soil was placed into a stockpile that was staged on-Site.

On December 9, 2020, Ensolum was contacted by Enterprise with the purpose of sampling the soil under the removed tanks as well as the associated soil stockpile staged on-Site to determine if further excavation was required.

On December 11, 2020, Ensolum arrived on-Site and collected six (6) composite soil samples (CS-1 through CS-6) and one (1) composite stockpile soil sample (STP-1) which were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), total petroleum hydrocarbons (TPH) and chloride in accordance with New Mexico Oil Conservation Division (NMOCD) Closure Criteria for Soils Impacted by a Release (NMOCD Closure Criteria). Composite soil samples CS-2, CS-5, and composite stockpile soil sample STP-1 exhibited results below the applicable NMOCD Closure Criteria. Composite soil samples CS-1, CS-3, CS-4, and CS-6 were below NMOCD Closure Criteria for BTEX and chloride. However, composite soil samples CS-1, CS-3, CS-4, and CS-6 exceed the NMOCD Closure Criteria for TPH.

Subsequent to additional excavation activities by Strike, composite soil samples CS-1, CS-3, CS-4, and CS-6 were resampled by Ensolum for TPH on December 21, 2020. The composite soil samples CS-1, CS-3, CS-4, and CS-6 all exhibited results below the applicable NMOCD Closure Criteria. The soil that had been excavated and removed by Strike had been taken off-Site by Torres Trucking (Torres) to Delaware Basin Landfill (DBL) in New Mexico prior to the December 21, 2020 sampling event.

The final impacted area measured approximately 60 feet long and 20 feet wide at the maximum extents. The maximum depth of the excavation measured approximately six (6) inches below ground surface (bgs).

The lithology encountered during the completion of sampling activities consisted primarily of unconsolidated caliche.

Figure 3 identifies approximate composite soil sample locations and approximate dimensions of the excavation with respect to the Site (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Ensolum's soil sampling program included the collection of 10 composite soil samples from six (6) locations (CS-1 through CS-6) from the excavation area and one (1) composite stockpile soil sample (STP-1). The samples were collected and placed in laboratory prepared glassware, labeled/sealed using laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were relinquished to Eurofins Xenco, LLC in Midland, Texas for an expedited laboratory analysis.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for BTEX utilizing Environmental Protection Agency (EPA) SW-846 Method 8021B, TPH gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) utilizing EPA SW-846 Method 8015M, and chloride utilizing EPA Method 300.0.

Laboratory analytical results are summarized in **Table 1** in **Appendix D**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix E**.

6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH GRO/DRO/MRO, and chloride concentrations associated with the final composite soil samples (CS-1 through CS-6) and composite stockpile soil sample (STP-1) to the applicable NMOCD Closure Criteria.

- Laboratory analytical results indicate benzene concentrations for the final composite soil samples and composite stockpile soil sample are below the applicable NMOCD Closure Criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate that total BTEX concentrations for the final composite soil samples and final composite stockpile soil sample are below the laboratory sample detection limits (SDLs) and/or the applicable NMOCD Closure Criteria of 50 mg/kg.
- Laboratory analytical results indicate combined TPH GRO/DRO/MRO concentrations for the final composite soil samples and composite stockpile soil sample are below the laboratory SDLs and/or the applicable NMOCD Closure Criteria of 100 mg/kg.
- Laboratory analytical results indicate chloride concentrations for the composite soil samples and composite stockpile soil sample do not exceed the applicable NMOCD Closure Criteria of 600 mg/kg.

Laboratory analytical results are summarized in **Table 1** in **Appendix D.**

7.0 RECLAMATION AND RE-VEGETATION

During the completion of response action activities, approximately 22 cubic yards (cy) of impacted soil was excavated and stockpiled on-Site. Subsequent to composite soil sample results, the soil stockpile was taken off-Site by Torres to DBL. Based on correspondence with Enterprise, the excavated area will be backfilled with clean fill material and then contoured to the original surrounding grade. The release area is located inside an active station; therefore, Strike will compact the backfilled excavation in order to minimize dust and erosion.

8.0 FINDINGS AND RECOMMENDATION

- On August 2, 2020, a fire was reported at the Sand Dunes North Compressor Station. Approximately 250 bbls of condensate liquid were unrecoverable due to the probability of fire consumption. The adjacent slop tank, gun barrel tank, condensate tank, and secondary containment were consumed by the fire. Additionally, the secondary containment lining, as well as electrical wiring, motor windings, and plastic components that were up to 40 feet away from the tanks experienced damage.
- On December 11, 2020, Ensolum arrived at the Site and collected six (6) composite soil samples (CS-1 through CS-6) at a depth of two (2) inches bgs as well as one (1) composite stockpile soil sample (STP-1).
- Subsequent to additional excavation activities by Strike, composite soil samples CS-1, CS-3, CS-4, and CS-6 were resampled by Ensolum for TPH on December 21, 2020.
- The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD Closure Criteria for Soils Impacted by a Release using the New Mexico EMNRD OCD's NMAC 19.15.29 *Releases* as guidance.

- A total of 10 composite soil samples from six (6) locations were collected from the excavation area and one (1) stockpile soil sample was collected from the on-site remediated stockpile. Based on the final soil sample analytical results, the final composite soil samples (CS-1 through CS-6) and composite stockpile soil sample (STP-1) are below the applicable NMOCD Closure Criteria.

Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

9.1 Standard of Care

Ensolum's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client, as detailed in our proposal.

9.2 Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings, and recommendations are based solely upon data available to Ensolum at the time of these services.

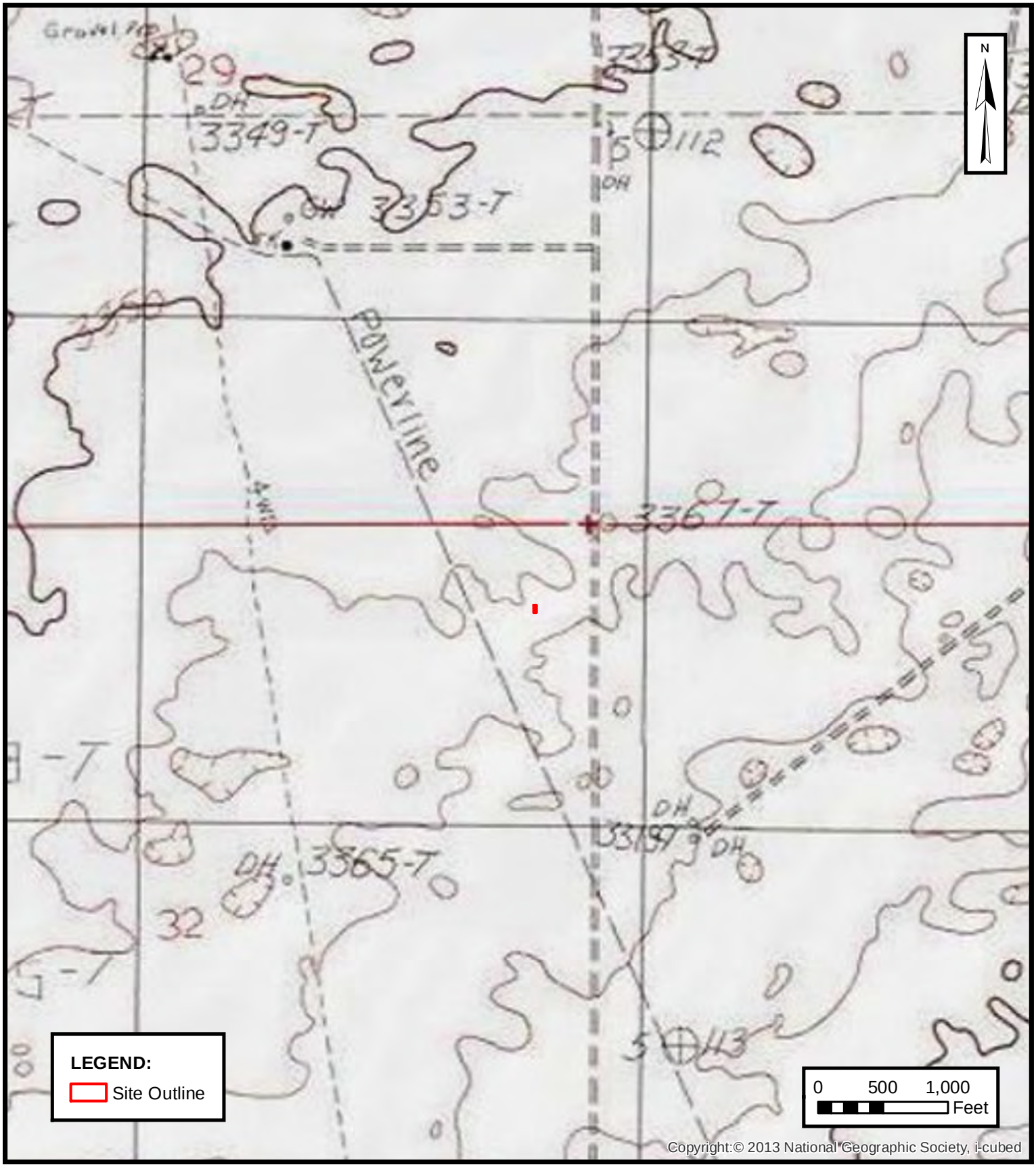
9.3 Reliance

This report has been prepared for the exclusive use of Enterprise Field Services, LLC, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise Field Services, LLC and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

ENSOLUM

APPENDIX A

Figures



ENSOLUM
Environmental & Hydrogeologic Consultants

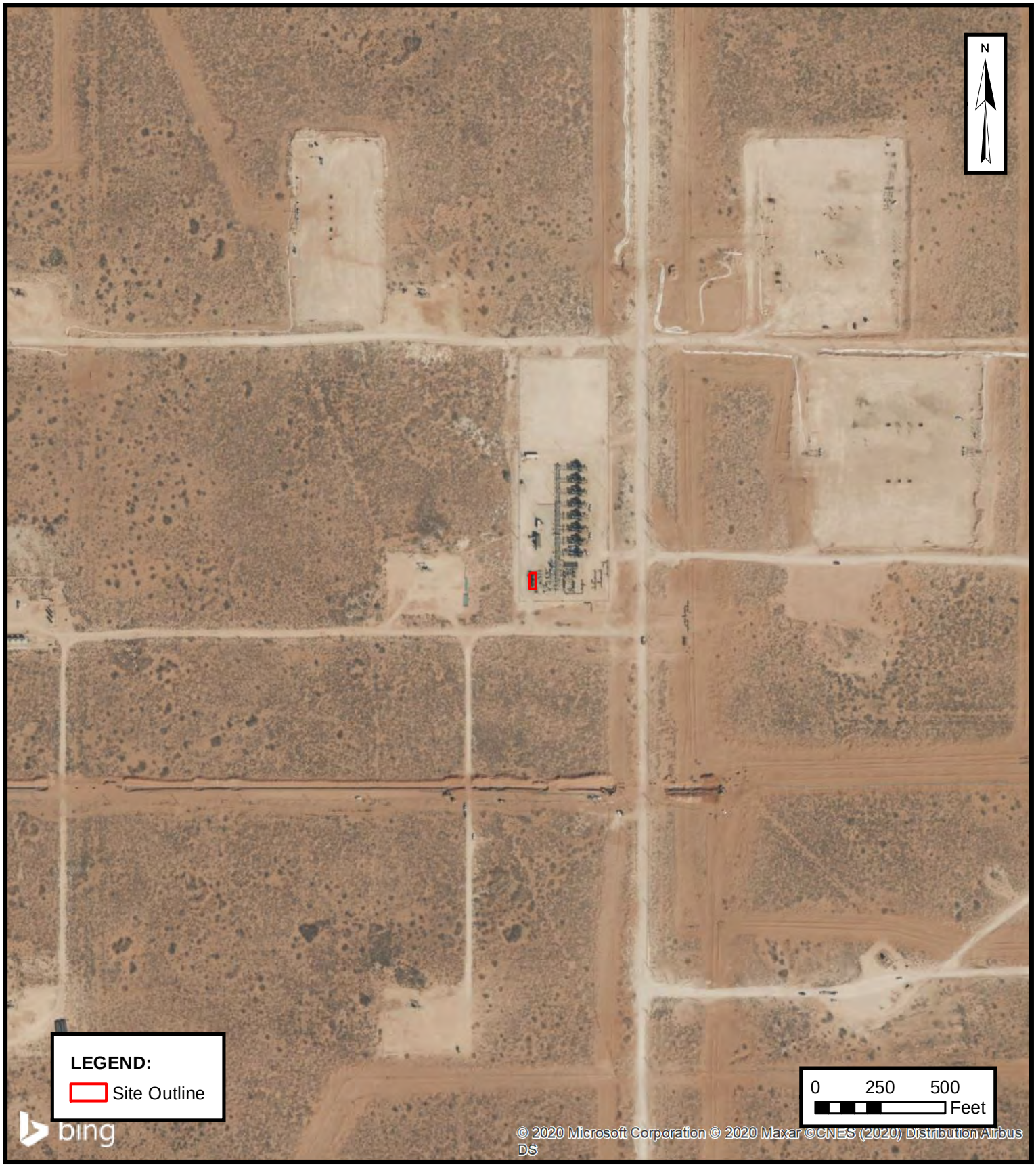
TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
OXY SAND DUNES NORTH
Eddy County, New Mexico
32.266889° N, 103.792056° W

PROJECT NUMBER: 03B1226035

FIGURE

1



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Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
OXY SAND DUNES NORTH
Eddy County, New Mexico
32.266889° N, 103.792056° W

PROJECT NUMBER: 03B1226035

FIGURE
2

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Environmental & Hydrogeologic Consultants

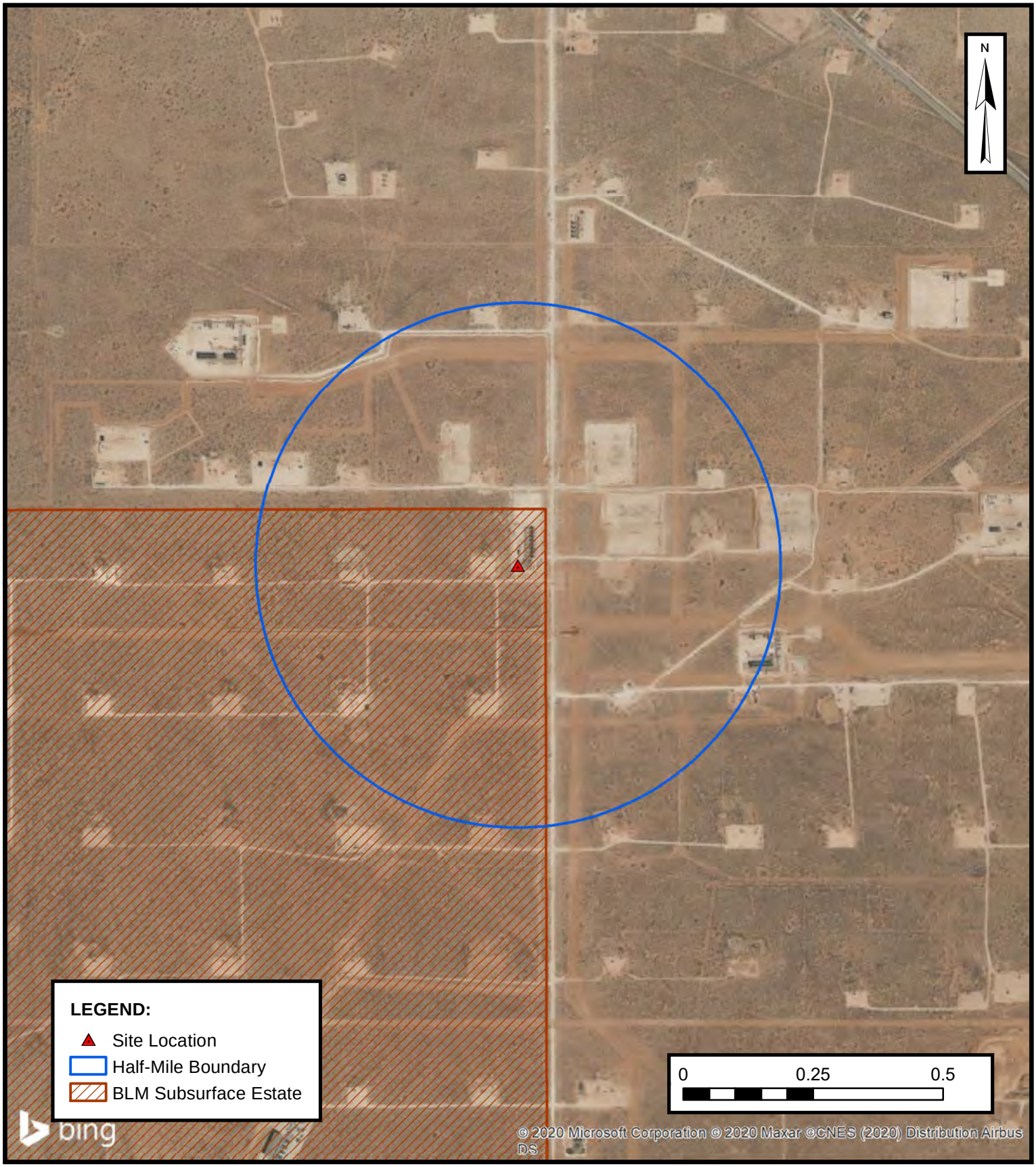
SITE MAP

ENTERPRISE FIELD SERVICES, LLC
OXY SAND DUNES NORTH
Eddy County, New Mexico
32.266889° N, 103.792056° W

PROJECT NUMBER: 03B1226035

FIGURE

3



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CLOSURE CRITERIA MAP

ENTERPRISE FIELD SERVICES, LLC
OXY SAND DUNES NORTH
Eddy County, New Mexico
32.266889° N, 103.792056° W

PROJECT NUMBER: 03B1226035

FIGURE

4

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APPENDIX B

Supporting Documentation

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: C 02661 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: 0 **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: SANDIA NATIONAL LABORATORIES

Contact: RICHARD JEPSEN

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
164828	REPAR	1999-06-24	PMT	APR	C 02661	T	0	0	
164795	DCL	1999-06-24	DCL	PRC	C 02661	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02661			3	3	1	04	24S	31E	613969	3568485*	

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0	0		MON		GW	

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 02661	3	3	1	04	24S	31E	613969	3568485*

Driller License: **Driller Company:**

Driller Name: PENNSYLVANIA DRILLING

Drill Start Date:		**Drill Finish Date:**	08/28/1979	**Plug Date:**	
Log File Date:		**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	708 feet	**Depth Water:**	

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

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APPENDIX C

Photographic Documentation

View of excavated area during remediation activities, facing west.

View of excavated area and stockpile during remediation activities, facing north.

View of excavated area during remediation activities, facing northwest.

View of excavated area during remediation activities, facing northeast.

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APPENDIX D

Table

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Enterprise Field Services, LLC - Oxy Sand Dunes North
Eddy County, New Mexico

Ensolum Project No. 03B1226035

Sample I.D.	Sample Date	Sample Depth (inches bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**100**	**600**
Confirmation Soil Sample Analytical Results												
CS-1	12/11/2020	2	**0.00103 J**	**0.00126 J**	**0.000920 J**	**0.002580**	**0.005790**	<15.0	**57.4**	**79.1**	**136.5**	**32.3**
	12/21/2020	6	NS				NS	<15.0	<15.0	<15.0	<15.0	NS
CS-2	12/11/2020	2	**0.000862 J**	**0.00104 J**	<0.000566	<0.0003450	**0.001902 J**	<14.9	<14.9	<14.9	<14.90	**169**
CS-3	12/11/2020	2	**0.00728**	**0.228**	**0.107**	**0.6250**	**0.9673**	**57.2**	**57.8**	**67.5**	**182.5**	**178**
	12/21/2020	6	NS				NS	<15.0	<15.0	<15.0	<15.0	NS
CS-4	12/11/2020	2	**0.00371**	**0.0147**	**0.00624**	**0.04090**	**0.06555**	**27.2 J**	**81.3**	**95.1**	**203.6**	**403**
	12/21/2020	6	NS				NS	<15.0	<15.0	<15.0	<15.0	NS
CS-5	12/11/2020	2	**0.00153 J**	**0.00243**	<0.000559	**0.001230 J**	**0.005190**	<15.0	<15.0	<15.0	<15.00	**42.3**
CS-6	12/11/2020	2	**0.00206**	**0.00189 J**	<0.000563	**0.009930**	**0.01388**	<14.9	**40.8 J**	**71.7**	**112.5**	**127**
	12/21/2020	6	NS				NS	<15.0	<15.0	<15.0	<15.0	NS
Stockpile Soil Sample Analytical Results												
STP-1	12/11/2020	NA	**0.00290**	**0.00326**	**0.00327**	**0.07380**	**0.08323**	**17.3 J**	**20.1 J**	<15.0	**37.40 J**	**82.6**

*Concentrations in **bold** and yellow exceed the New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)*

Over Ecavated and/or Re-Sampled

bgs: below ground surface

J: The target analyte was positively identified below the quantitation limit and above the detection limit.

mg/kg: milligrams per kilogram

NA: Not Applicable

NE: Not Established

NS: Not Sampled

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon

ENSOLUM

APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation

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Certificate of Analysis Summary 680875

Ensolum, Dallas, TX

Project Name: Sand Dune North Comp STA

Project Id: 03B1226035
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Mon 12.14.2020 08:34
Report Date: 12.15.2020 17:18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	680875-001		680875-002		680875-003		680875-004		680875-005		680875-006	
	Field Id:	CS-1		CS-2		CS-3		CS-4		CS-5		CS-6	
	Depth:	2- In		2- In		2- In		2- In		2- In		2- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	12.11.2020 14:00		12.11.2020 14:05		12.11.2020 14:10		12.11.2020 14:15		12.11.2020 14:20		12.11.2020 14:25	
BTEX by EPA 8021B	***Extracted:***	12.14.2020 13:00		12.14.2020 13:00		12.14.2020 13:00		12.14.2020 13:00		12.15.2020 12:30		12.14.2020 13:00	
	Analyzed:	12.14.2020 19:36		12.14.2020 20:02		12.14.2020 20:29		12.14.2020 20:55		12.15.2020 14:02		12.14.2020 21:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00103 JX	0.00200	0.000862 J	0.00200	0.00728	0.00200	0.00371	0.00200	0.00153 J	0.00198	0.00206	0.00199
Toluene		0.00126 JX	0.00200	0.00104 J	0.00200	0.228	0.00200	0.0147	0.00200	0.00243	0.00198	0.00189 J	0.00199
Ethylbenzene		0.000920 JX	0.00200	<0.000566	0.00200	0.107	0.00200	0.00624	0.00200	<0.000559	0.00198	<0.000563	0.00199
m,p-Xylenes		0.00169 JXF	0.00400	<0.00102	0.00401	0.416	0.00401	0.0217	0.00399	0.00123 J	0.00396	0.00718	0.00398
o-Xylene		0.000890 JX	0.00200	<0.000345	0.00200	0.209	0.00200	0.0192	0.00200	<0.000341	0.00198	0.00275	0.00199
Total Xylenes		0.002580	0.002000	<0.0003450	0.002000	0.6250	0.002000	0.04090	0.002000	0.001230 J	0.001980	0.009930	0.001990
Total BTEX		0.005790	0.002000	0.001902 J	0.002000	0.9673	0.002000	0.06555	0.002000	0.005190	0.001980	0.01388	0.001990
Chloride by EPA 300	***Extracted:***	12.14.2020 13:20		12.14.2020 13:20		12.14.2020 13:20		12.14.2020 13:20		12.14.2020 13:20		12.14.2020 13:20	
	Analyzed:	12.15.2020 09:34		12.15.2020 09:50		12.15.2020 09:55		12.15.2020 10:00		12.15.2020 10:06		12.15.2020 10:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		32.3	5.05	169	4.98	178	24.8	403	25.0	42.3	4.99	127	5.02
TPH by SW8015 Mod	***Extracted:***	12.14.2020 11:00		12.14.2020 11:00		12.14.2020 11:00		12.14.2020 11:00		12.14.2020 11:00		12.14.2020 11:00	
	Analyzed:	12.14.2020 12:40		12.14.2020 13:35		12.14.2020 13:54		12.14.2020 14:13		12.14.2020 14:32		12.14.2020 14:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	50.0	<14.9	49.8	57.2	50.0	27.2 J	49.9	<15.0	49.9	<14.9	49.8
Diesel Range Organics (DRO)		57.4	50.0	<14.9	49.8	57.8	50.0	81.3	49.9	<15.0	49.9	40.8 J	49.8
Motor Oil Range Hydrocarbons (MRO)		79.1	50.0	<14.9	49.8	67.5	50.0	95.1	49.9	<15.0	49.9	71.7	49.8
Total TPH		136.5	50.00	<14.90	49.80	182.5	50.00	203.6	49.90	<15.00	49.90	112.5	49.80

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 680875

Ensolum, Dallas, TX

Project Name: Sand Dune North Comp STA

Project Id: 03B1226035
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Mon 12.14.2020 08:34
Report Date: 12.15.2020 17:18
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	680875-007						
	Field Id:	STP-1						
	Depth:							
	Matrix:	SOIL						
	Sampled:	12.11.2020 14:30						
BTEX by EPA 8021B	***Extracted:***	12.14.2020 13:00						
	Analyzed:	12.14.2020 22:13						
	Units/RL:	mg/kg	RL					
Benzene		0.00290	0.00199					
Toluene		0.00326	0.00199					
Ethylbenzene		0.00327	0.00199					
m,p-Xylenes		0.0321	0.00398					
o-Xylene		0.0417	0.00199					
Total Xylenes		0.07380	0.001990					
Total BTEX		0.08323	0.001990					
Chloride by EPA 300	***Extracted:***	12.14.2020 13:20						
	Analyzed:	12.15.2020 10:26						
	Units/RL:	mg/kg	RL					
Chloride		82.6	4.97					
TPH by SW8015 Mod	***Extracted:***	12.14.2020 11:00						
	Analyzed:	12.14.2020 15:09						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		17.3 J	50.0					
Diesel Range Organics (DRO)		20.1 J	50.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0	50.0					
Total TPH		37.40 J	50.00					

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 680875

for

Ensolum

Project Manager: Beaux Jennings

Sand Dune North Comp STA

03B1226035

12.15.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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12.15.2020

Project Manager: **Beaux Jennings**
Ensolum
2351 W Northwest Highway
Suite 1203
Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **680875**
Sand Dune North Comp STA
Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 680875. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 680875 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1	S	12.11.2020 14:00	2 In	680875-001
CS-2	S	12.11.2020 14:05	2 In	680875-002
CS-3	S	12.11.2020 14:10	2 In	680875-003
CS-4	S	12.11.2020 14:15	2 In	680875-004
CS-5	S	12.11.2020 14:20	2 In	680875-005
CS-6	S	12.11.2020 14:25	2 In	680875-006
STP-1	S	12.11.2020 14:30		680875-007

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CASE NARRATIVE

Client Name: Ensolum

Project Name: Sand Dune North Comp STA

Project ID: *03B1226035*
Work Order Number(s): *680875*

Report Date: *12.15.2020*
Date Received: *12.14.2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144835 BTEX by EPA 8021B

m,p-Xylenes Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 680875-001, -002, -003, -004, -006, -007

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected;
Samples affected are: 680875-001 SD.

Lab Sample ID 680875-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 680875-001, -002, -003, -004, -006, -007.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3144975 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 680977-001 S,680977-001 SD.

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Certificate of Analytical Results 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-1**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-001	Date Collected:	12.11.2020 14:00	Sample Depth:	2 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC				
Analyst:	CHE	Date Prep:	12.14.2020 13:20	% Moisture:	
Seq Number:	3144883			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.3**	5.05	0.867	mg/kg	12.15.2020 09:34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.14.2020 11:00	% Moisture:	
Seq Number:	3144886			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.14.2020 12:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**57.4**	50.0	15.0	mg/kg	12.14.2020 12:40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**79.1**	50.0	15.0	mg/kg	12.14.2020 12:40		1
Total TPH	PHC635	**136.5**	50.00	15.00	mg/kg	12.14.2020 12:40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	12.14.2020 12:40	
o-Terphenyl	84-15-1	117	%	70-130	12.14.2020 12:40	

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Certificate of Analytical Results 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-1**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-001	Date Collected:	12.11.2020 14:00	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.14.2020 13:00	% Moisture:	
Seq Number:	3144835			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00103**	0.00200	0.000385	mg/kg	12.14.2020 19:36	JX	1
Toluene	108-88-3	**0.00126**	0.00200	0.000456	mg/kg	12.14.2020 19:36	JX	1
Ethylbenzene	100-41-4	**0.000920**	0.00200	0.000565	mg/kg	12.14.2020 19:36	JX	1
m,p-Xylenes	179601-23-1	**0.00169**	0.00400	0.00101	mg/kg	12.14.2020 19:36	JXF	1
o-Xylene	95-47-6	**0.000890**	0.00200	0.000344	mg/kg	12.14.2020 19:36	JX	1
Total Xylenes	1330-20-7	**0.002580**	0.002000	0.0003440	mg/kg	12.14.2020 19:36		1
Total BTEX		**0.005790**	0.002000	0.0003440	mg/kg	12.14.2020 19:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	83	%	70-130	12.14.2020 19:36	
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.14.2020 19:36	

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Certificate of Analytical Results 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-2**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-002	Date Collected:	12.11.2020 14:05	Sample Depth:	2 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC				
Analyst:	CHE	Date Prep:	12.14.2020 13:20	% Moisture:	
Seq Number:	3144883			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**169**	4.98	0.855	mg/kg	12.15.2020 09:50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.14.2020 11:00	% Moisture:	
Seq Number:	3144886			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	12.14.2020 13:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	12.14.2020 13:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	12.14.2020 13:35	U	1
Total TPH	PHC635	<14.90	49.80	14.90	mg/kg	12.14.2020 13:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	12.14.2020 13:35	
o-Terphenyl	84-15-1	113	%	70-130	12.14.2020 13:35	

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Certificate of Analytical Results 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-2**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-002	Date Collected:	12.11.2020 14:05	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.14.2020 13:00	% Moisture:	
Seq Number:	3144835			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.000862**	0.00200	0.000386	mg/kg	12.14.2020 20:02	J	1
Toluene	108-88-3	**0.00104**	0.00200	0.000457	mg/kg	12.14.2020 20:02	J	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	12.14.2020 20:02	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	12.14.2020 20:02	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	12.14.2020 20:02	U	1
Total Xylenes	1330-20-7	<0.0003450	0.002000	0.0003450	mg/kg	12.14.2020 20:02	U	1
Total BTEX		**0.001902**	0.002000	0.0003450	mg/kg	12.14.2020 20:02	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.14.2020 20:02	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.14.2020 20:02	

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Certificate of Analytical Results 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-3**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-003	Date Collected:	12.11.2020 14:10	Sample Depth:	2 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC				
Analyst:	CHE	Date Prep:	12.14.2020 13:20	% Moisture:	
Seq Number:	3144883			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**178**	24.8	4.25	mg/kg	12.15.2020 09:55		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.14.2020 11:00	% Moisture:	
Seq Number:	3144886			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**57.2**	50.0	15.0	mg/kg	12.14.2020 13:54		1
Diesel Range Organics (DRO)	C10C28DRO	**57.8**	50.0	15.0	mg/kg	12.14.2020 13:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**67.5**	50.0	15.0	mg/kg	12.14.2020 13:54		1
Total TPH	PHC635	**182.5**	50.00	15.00	mg/kg	12.14.2020 13:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	12.14.2020 13:54	
o-Terphenyl	84-15-1	112	%	70-130	12.14.2020 13:54	

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Certificate of Analytical Results 680875

Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-3**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-003	Date Collected:	12.11.2020 14:10	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.14.2020 13:00	% Moisture:	
Seq Number:	3144835			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00728**	0.00200	0.000386	mg/kg	12.14.2020 20:29		1
Toluene	108-88-3	**0.228**	0.00200	0.000457	mg/kg	12.14.2020 20:29		1
Ethylbenzene	100-41-4	**0.107**	0.00200	0.000566	mg/kg	12.14.2020 20:29		1
m,p-Xylenes	179601-23-1	**0.416**	0.00401	0.00102	mg/kg	12.14.2020 20:29		1
o-Xylene	95-47-6	**0.209**	0.00200	0.000345	mg/kg	12.14.2020 20:29		1
Total Xylenes	1330-20-7	**0.6250**	0.002000	0.0003450	mg/kg	12.14.2020 20:29		1
Total BTEX		**0.9673**	0.002000	0.0003450	mg/kg	12.14.2020 20:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	181	%	70-130	12.14.2020 20:29	**
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.14.2020 20:29	

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Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-4**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-004	Date Collected:	12.11.2020 14:15	Sample Depth:	2 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC				
Analyst:	CHE	Date Prep:	12.14.2020 13:20	% Moisture:	
Seq Number:	3144883			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**403**	25.0	4.29	mg/kg	12.15.2020 10:00		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.14.2020 11:00	% Moisture:	
Seq Number:	3144886			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**27.2**	49.9	15.0	mg/kg	12.14.2020 14:13	J	1
Diesel Range Organics (DRO)	C10C28DRO	**81.3**	49.9	15.0	mg/kg	12.14.2020 14:13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**95.1**	49.9	15.0	mg/kg	12.14.2020 14:13		1
Total TPH	PHC635	**203.6**	49.90	15.00	mg/kg	12.14.2020 14:13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	12.14.2020 14:13	
o-Terphenyl	84-15-1	115	%	70-130	12.14.2020 14:13	

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Sand Dune North Comp STA

Sample Id:	**CS-4**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-004	Date Collected:	12.11.2020 14:15	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.14.2020 13:00	% Moisture:	
Seq Number:	3144835			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00371**	0.00200	0.000384	mg/kg	12.14.2020 20:55		1
Toluene	108-88-3	**0.0147**	0.00200	0.000455	mg/kg	12.14.2020 20:55		1
Ethylbenzene	100-41-4	**0.00624**	0.00200	0.000564	mg/kg	12.14.2020 20:55		1
m,p-Xylenes	179601-23-1	**0.0217**	0.00399	0.00101	mg/kg	12.14.2020 20:55		1
o-Xylene	95-47-6	**0.0192**	0.00200	0.000344	mg/kg	12.14.2020 20:55		1
Total Xylenes	1330-20-7	**0.04090**	0.002000	0.0003440	mg/kg	12.14.2020 20:55		1
Total BTEX		**0.06555**	0.002000	0.0003440	mg/kg	12.14.2020 20:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	12.14.2020 20:55	
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.14.2020 20:55	

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Sand Dune North Comp STA

Sample Id:	**CS-5**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-005	Date Collected:	12.11.2020 14:20	Sample Depth:	2 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC				
Analyst:	CHE	Date Prep:	12.14.2020 13:20	% Moisture:	
Seq Number:	3144883			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.3**	4.99	0.857	mg/kg	12.15.2020 10:06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.14.2020 11:00	% Moisture:	
Seq Number:	3144886			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	12.14.2020 14:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	12.14.2020 14:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	12.14.2020 14:32	U	1
Total TPH	PHC635	<15.00	49.90	15.00	mg/kg	12.14.2020 14:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	12.14.2020 14:32	
o-Terphenyl	84-15-1	114	%	70-130	12.14.2020 14:32	

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Sand Dune North Comp STA

Sample Id:	**CS-5**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-005	Date Collected:	12.11.2020 14:20	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.15.2020 12:30	% Moisture:	
Seq Number:	3144975			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00153**	0.00198	0.000381	mg/kg	12.15.2020 14:02	J	1
Toluene	108-88-3	**0.00243**	0.00198	0.000451	mg/kg	12.15.2020 14:02		1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	12.15.2020 14:02	U	1
m,p-Xylenes	179601-23-1	**0.00123**	0.00396	0.00100	mg/kg	12.15.2020 14:02	J	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	12.15.2020 14:02	U	1
Total Xylenes	1330-20-7	**0.001230**	0.001980	0.0003410	mg/kg	12.15.2020 14:02	J	1
Total BTEX		**0.005190**	0.001980	0.0003410	mg/kg	12.15.2020 14:02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.15.2020 14:02	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.15.2020 14:02	

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Sand Dune North Comp STA

Sample Id:	**CS-6**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-006	Date Collected:	12.11.2020 14:25	Sample Depth:	2 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC				
Analyst:	CHE	Date Prep:	12.14.2020 13:20	% Moisture:	
Seq Number:	3144883			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	5.02	0.862	mg/kg	12.15.2020 10:21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.14.2020 11:00	% Moisture:	
Seq Number:	3144886			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	12.14.2020 14:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**40.8**	49.8	14.9	mg/kg	12.14.2020 14:50	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**71.7**	49.8	14.9	mg/kg	12.14.2020 14:50		1
Total TPH	PHC635	**112.5**	49.80	14.90	mg/kg	12.14.2020 14:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	12.14.2020 14:50	
o-Terphenyl	84-15-1	113	%	70-130	12.14.2020 14:50	

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Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**CS-6**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-006	Date Collected:	12.11.2020 14:25	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.14.2020 13:00	% Moisture:	
Seq Number:	3144835			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00206**	0.00199	0.000383	mg/kg	12.14.2020 21:47		1
Toluene	108-88-3	**0.00189**	0.00199	0.000454	mg/kg	12.14.2020 21:47	J	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	12.14.2020 21:47	U	1
m,p-Xylenes	179601-23-1	**0.00718**	0.00398	0.00101	mg/kg	12.14.2020 21:47		1
o-Xylene	95-47-6	**0.00275**	0.00199	0.000343	mg/kg	12.14.2020 21:47		1
Total Xylenes	1330-20-7	**0.009930**	0.001990	0.0003430	mg/kg	12.14.2020 21:47		1
Total BTEX		**0.01388**	0.001990	0.0003430	mg/kg	12.14.2020 21:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.14.2020 21:47	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.14.2020 21:47	

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Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id: **STP-1** Matrix: Soil Date Received:12.14.2020 08:34

Lab Sample Id: 680875-007 Date Collected: 12.11.2020 14:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 12.14.2020 13:20 % Moisture:

Seq Number: 3144883 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**82.6**	4.97	0.853	mg/kg	12.15.2020 10:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.14.2020 11:00 % Moisture:

Seq Number: 3144886 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.3**	50.0	15.0	mg/kg	12.14.2020 15:09	J	1
Diesel Range Organics (DRO)	C10C28DRO	**20.1**	50.0	15.0	mg/kg	12.14.2020 15:09	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.14.2020 15:09	U	1
Total TPH	PHC635	**37.40**	50.00	15.00	mg/kg	12.14.2020 15:09	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	12.14.2020 15:09	
o-Terphenyl	84-15-1	115	%	70-130	12.14.2020 15:09	

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Ensolum, Dallas, TX

Sand Dune North Comp STA

Sample Id:	**STP-1**	Matrix:	Soil	Date Received:	12.14.2020 08:34
Lab Sample Id:	680875-007	Date Collected:	12.11.2020 14:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.14.2020 13:00	% Moisture:	
Seq Number:	3144835			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00290**	0.00199	0.000383	mg/kg	12.14.2020 22:13		1
Toluene	108-88-3	**0.00326**	0.00199	0.000453	mg/kg	12.14.2020 22:13		1
Ethylbenzene	100-41-4	**0.00327**	0.00199	0.000561	mg/kg	12.14.2020 22:13		1
m,p-Xylenes	179601-23-1	**0.0321**	0.00398	0.00101	mg/kg	12.14.2020 22:13		1
o-Xylene	95-47-6	**0.0417**	0.00199	0.000342	mg/kg	12.14.2020 22:13		1
Total Xylenes	1330-20-7	**0.07380**	0.001990	0.0003420	mg/kg	12.14.2020 22:13		1
Total BTEX		**0.08323**	0.001990	0.0003420	mg/kg	12.14.2020 22:13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	12.14.2020 22:13	
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.14.2020 22:13	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 680875

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Ensolum

Sand Dune North Comp STA

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144883 — Matrix: Solid — Date Prep: 12.14.2020
MB Sample Id: 7717047-1-BLK — LCS Sample Id: 7717047-1-BKS — LCSD Sample Id: 7717047-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	256	102	256	102	90-110	0	20	mg/kg	12.15.2020 09:24	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144883 — Matrix: Soil — Date Prep: 12.14.2020
Parent Sample Id: 680737-063 — MS Sample Id: 680737-063 S — MSD Sample Id: 680737-063 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.9	248	301	106	297	104	90-110	1	20	mg/kg	12.15.2020 10:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144883 — Matrix: Soil — Date Prep: 12.14.2020
Parent Sample Id: 680875-001 — MS Sample Id: 680875-001 S — MSD Sample Id: 680875-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.3	253	309	109	304	107	90-110	2	20	mg/kg	12.15.2020 09:40	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144886 — Matrix: Solid — Date Prep: 12.14.2020
MB Sample Id: 7717089-1-BLK — LCS Sample Id: 7717089-1-BKS — LCSD Sample Id: 7717089-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1020	102	1030	103	70-130	1	20	mg/kg	12.14.2020 12:03	
Diesel Range Organics (DRO)	<15.0	1000	1110	111	1120	112	70-130	1	20	mg/kg	12.14.2020 12:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		123		116		70-130	%	12.14.2020 12:03
o-Terphenyl	107		121		120		70-130	%	12.14.2020 12:03

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144886 — Matrix: Solid — Date Prep: 12.14.2020
MB Sample Id: 7717089-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	12.14.2020 11:44	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 680875

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Ensolum

Sand Dune North Comp STA

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144886 — Matrix: Soil — Date Prep: 12.14.2020
Parent Sample Id: 680875-001 — MS Sample Id: 680875-001 S — MSD Sample Id: 680875-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	947	95	979	98	70-130	3	20	mg/kg	12.14.2020 12:59	
Diesel Range Organics (DRO)	57.4	998	1000	94	1040	99	70-130	4	20	mg/kg	12.14.2020 12:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		129		70-130	%	12.14.2020 12:59
o-Terphenyl	116		125		70-130	%	12.14.2020 12:59

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144835 — Matrix: Solid — Date Prep: 12.14.2020
MB Sample Id: 7717091-1-BLK — LCS Sample Id: 7717091-1-BKS — LCSD Sample Id: 7717091-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.103	103	0.0887	89	70-130	15	35	mg/kg	12.14.2020 16:08	
Toluene	<0.000456	0.100	0.104	104	0.0909	91	70-130	13	35	mg/kg	12.14.2020 16:08	
Ethylbenzene	<0.000565	0.100	0.104	104	0.0982	98	70-130	6	35	mg/kg	12.14.2020 16:08	
m,p-Xylenes	<0.00101	0.200	0.203	102	0.191	96	70-130	6	35	mg/kg	12.14.2020 16:08	
o-Xylene	<0.000344	0.100	0.104	104	0.0978	98	70-130	6	35	mg/kg	12.14.2020 16:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		101		97		70-130	%	12.14.2020 16:08
4-Bromofluorobenzene	73		109		105		70-130	%	12.14.2020 16:08

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144975 — Matrix: Solid — Date Prep: 12.15.2020
MB Sample Id: 7717155-1-BLK — LCS Sample Id: 7717155-1-BKS — LCSD Sample Id: 7717155-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0743	74	0.0979	98	70-130	27	35	mg/kg	12.15.2020 11:00	
Toluene	<0.000456	0.100	0.0733	73	0.0900	90	70-130	20	35	mg/kg	12.15.2020 11:00	
Ethylbenzene	<0.000565	0.100	0.0885	89	0.100	100	70-130	12	35	mg/kg	12.15.2020 11:00	
m,p-Xylenes	<0.00101	0.200	0.175	88	0.198	99	70-130	12	35	mg/kg	12.15.2020 11:00	
o-Xylene	<0.000344	0.100	0.0887	89	0.0994	99	70-130	11	35	mg/kg	12.15.2020 11:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		104		70-130	%	12.15.2020 11:00
4-Bromofluorobenzene	109		103		103		70-130	%	12.15.2020 11:00

MS/MSD Percent Recovery — [D] = 100*(C-A) / B
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery — [D] = 100 * (C) / [B]
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample — MS = Matrix Spike
A = Parent Result — B = Spike Added
C = MS/LCS Result — D = MSD/LCSD % Rec
E = MSD/LCSD Result

QC Summary 680875

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Ensolum

Sand Dune North Comp STA

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144835 Matrix: Soil Date Prep: 12.14.2020
Parent Sample Id: 680875-001 MS Sample Id: 680875-001 S MSD Sample Id: 680875-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00103	0.100	0.0630	62	0.0600	59	70-130	5	35	mg/kg	12.14.2020 17:28	X
Toluene	0.00126	0.100	0.0641	63	0.0491	48	70-130	27	35	mg/kg	12.14.2020 17:28	X
Ethylbenzene	0.000920	0.100	0.0631	62	0.0442	43	70-130	35	35	mg/kg	12.14.2020 17:28	X
m,p-Xylenes	0.00169	0.200	0.123	61	0.0813	40	70-130	41	35	mg/kg	12.14.2020 17:28	XF
o-Xylene	0.000890	0.100	0.0621	61	0.0450	44	70-130	32	35	mg/kg	12.14.2020 17:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		70-130	%	12.14.2020 17:28
4-Bromofluorobenzene	89		67	**	70-130	%	12.14.2020 17:28

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Soil Date Prep: 12.15.2020
Parent Sample Id: 680977-001 MS Sample Id: 680977-001 S MSD Sample Id: 680977-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	2.72	0.0990	1.39	0	1.36	0	70-130	2	35	mg/kg	12.15.2020 11:41	X
Toluene	3.46	0.0990	2.31	0	2.33	0	70-130	1	35	mg/kg	12.15.2020 11:41	X
Ethylbenzene	0.448	0.0990	0.405	0	0.367	0	70-130	10	35	mg/kg	12.15.2020 11:41	X
m,p-Xylenes	0.858	0.198	0.836	0	0.761	0	70-130	9	35	mg/kg	12.15.2020 11:41	X
o-Xylene	0.299	0.0990	0.315	16	0.275	0	70-130	14	35	mg/kg	12.15.2020 11:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	129		125		70-130	%	12.15.2020 11:41
4-Bromofluorobenzene	133	**	131	**	70-130	%	12.15.2020 11:41

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 6900875

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

www.xenco.com Page 1 of 1

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W. Wadley 210	Address:	
City, State ZIP:	MIDLAND TX 79707	City, State ZIP:	
Phone:	432 230 3344	Email:	bjennings@ensolum.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:	Sand Dune North Comp Sta	Turn Around	
Project Number:	03B1226035	Routine	☐
P.O. Number:	03B1226035	Rush:	24
Sampler's Name:	SHANE DILLER	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	13/1.8	Thermometer ID	
Received Intact:	(Yes) No	1-R8	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	.5
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	BTEX	TPH 8015	Chlorides
CS-1	S	12-11-20	1400	2"	1	x	x	x
CS-2	S	12-11-20	1405	2"	1	x	x	x
CS-3	S	12-11-20	1410	2"	1	x	x	x
CS-4	S	12-11-20	1415	2"	1	x	x	x
CS-5	S	12-11-20	1420	2"	1	x	x	x
CS-6	S	12-11-20	1425	2"	1	x	x	x
STP-1	S	12-11-20	1430		1	x	x	x

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		12.14.20 8:34	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 12.14.2020 08.34.00 AM

Work Order #: 680875

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 12.14.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12.14.2020
Jessica Kramer

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Certificate of Analysis Summary 682052

Ensolum, Dallas, TX

Project Name: Sand Dunes North CS

Project Id: 03B1226035
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Mon 12.21.2020 14:10
Report Date: 12.22.2020 16:39
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	682052-001		682052-002		682052-003		682052-004			
	Field Id:	CS-1		CS-3		CS-4		CS-6			
	Depth:	6- In		6- In		6- In		6- In			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	12.21.2020 10:30		12.21.2020 10:32		12.21.2020 10:34		12.21.2020 10:36			
TPH by SW8015 Mod	***Extracted:***	12.22.2020 10:00		12.22.2020 10:00		12.22.2020 10:00		12.22.2020 10:00			
	Analyzed:	12.22.2020 14:32		12.22.2020 15:28		12.22.2020 15:47		12.22.2020 16:11			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	50.0	<15.0	50.0	<15.0	50.0	<15.0	49.9		
Diesel Range Organics (DRO)		<15.0	50.0	<15.0	50.0	<15.0	50.0	<15.0	49.9		
Motor Oil Range Hydrocarbons (MRO)		<15.0	50.0	<15.0	50.0	<15.0	50.0	<15.0	49.9		
Total TPH		<15.0	50.0	<15.0	50.0	<15.0	50.0	<15.0	49.9		

BRL - Below Reporting Limit

Jessica Kramer

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

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Analytical Report 682052

for

Ensolum

Project Manager: Beaux Jennings

Sand Dunes North CS

03B1226035

12.22.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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12.22.2020

Project Manager: **Beaux Jennings**
Ensolum
2351 W Northwest Highway
Suite 1203
Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **682052**
Sand Dunes North CS
Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 682052. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 682052 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 682052

Ensolum, Dallas, TX

Sand Dunes North CS

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1	S	12.21.2020 10:30	6 In	682052-001
CS-3	S	12.21.2020 10:32	6 In	682052-002
CS-4	S	12.21.2020 10:34	6 In	682052-003
CS-6	S	12.21.2020 10:36	6 In	682052-004

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CASE NARRATIVE

Client Name: Ensolum

Project Name: Sand Dunes North CS

Project ID: *03B1226035*
Work Order Number(s): *682052*

Report Date: *12.22.2020*
Date Received: *12.21.2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 682052

Ensolum, Dallas, TX

Sand Dunes North CS

Sample Id:	**CS-1**	Matrix:	Soil	Date Received:	12.21.2020 14:10
Lab Sample Id:	682052-001	Date Collected:	12.21.2020 10:30	Sample Depth:	6 In
Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.22.2020 10:00	% Moisture:	
Seq Number:	3145744			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.22.2020 14:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.22.2020 14:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.22.2020 14:32	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	12.22.2020 14:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	12.22.2020 14:32	
o-Terphenyl	84-15-1	106	%	70-130	12.22.2020 14:32	

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Certificate of Analytical Results 682052

Ensolum, Dallas, TX

Sand Dunes North CS

Sample Id:	**CS-3**	Matrix:	Soil	Date Received:	12.21.2020 14:10
Lab Sample Id:	682052-002	Date Collected:	12.21.2020 10:32	Sample Depth:	6 In
Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.22.2020 10:00	% Moisture:	
Seq Number:	3145744			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.22.2020 15:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.22.2020 15:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.22.2020 15:28	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	12.22.2020 15:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	12.22.2020 15:28	
o-Terphenyl	84-15-1	105	%	70-130	12.22.2020 15:28	

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Certificate of Analytical Results 682052

Ensolum, Dallas, TX

Sand Dunes North CS

Sample Id:	**CS-4**	Matrix:	Soil	Date Received:	12.21.2020 14:10
Lab Sample Id:	682052-003	Date Collected:	12.21.2020 10:34	Sample Depth:	6 In
Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.22.2020 10:00	% Moisture:	
Seq Number:	3145744			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.22.2020 15:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.22.2020 15:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.22.2020 15:47	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	12.22.2020 15:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	12.22.2020 15:47	
o-Terphenyl	84-15-1	102	%	70-130	12.22.2020 15:47	

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Certificate of Analytical Results 682052

Ensolum, Dallas, TX

Sand Dunes North CS

Sample Id:	**CS-6**	Matrix:	Soil	Date Received:	12.21.2020 14:10
Lab Sample Id:	682052-004	Date Collected:	12.21.2020 10:36	Sample Depth:	6 In
Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	12.22.2020 10:00	% Moisture:	
Seq Number:	3145744			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	12.22.2020 16:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	12.22.2020 16:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	12.22.2020 16:11	U	1
Total TPH	PHC635	<15.0	49.9	15.0	mg/kg	12.22.2020 16:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-130	12.22.2020 16:11	
o-Terphenyl	84-15-1	106	%	70-130	12.22.2020 16:11	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 682052

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Ensolum

Sand Dunes North CS

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145744 — Matrix: Solid — Date Prep: 12.22.2020
MB Sample Id: 7717667-1-BLK — LCS Sample Id: 7717667-1-BKS — LCSD Sample Id: 7717667-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	915	92	921	92	70-130	1	20	mg/kg	12.22.2020 13:55	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1020	102	70-130	1	20	mg/kg	12.22.2020 13:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		107		102		70-130	%	12.22.2020 13:55
o-Terphenyl	100		106		106		70-130	%	12.22.2020 13:55

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145744 — Matrix: Solid — Date Prep: 12.22.2020
MB Sample Id: 7717667-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	12.22.2020 13:37	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145744 — Matrix: Soil — Date Prep: 12.22.2020
Parent Sample Id: 682052-001 — MS Sample Id: 682052-001 S — MSD Sample Id: 682052-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	908	91	1060	106	70-130	15	20	mg/kg	12.22.2020 14:51	
Diesel Range Organics (DRO)	<15.0	997	1020	102	1070	107	70-130	5	20	mg/kg	12.22.2020 14:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		113		70-130	%	12.22.2020 14:51
o-Terphenyl	105		115		70-130	%	12.22.2020 14:51

MS/MSD Percent Recovery — [D] = 100*(C-A) / B
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery — [D] = 100 * (C) / [B]
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Final 1.000

Chain of Custody

Work Order No: 68 2052

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum, LLC	Company Name:	
Address:	705 W. Wadley Ave, Suite 210	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	210-219-8858 Email:	bjennings@ensolum.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:	Sand Dunes North CS	Turn Around	
Project Number:	03B1226035	Routine: ☐	
P.O. Number:	03B1226035	Rush: 24hr	
Sampler's Name:	Beaux Jennings	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	9/1.4	Thermometer ID		
Received Intact:	Yes No	R8		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	.5	
Sample Custody Seals:	Yes No N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH 8015M
CS-1	S	12/21/20	1030	6"	1	X
CS-3	S	12/21/20	1032	6"	1	X
CS-4	S	12/21/20	1034	6"	1	X
CS-6	S	12/21/20	1036	6"	1	X

NFE 35
12/24/20

ANALYSIS REQUEST

Work Order Notes

-New Mexico Samples
-24hr Rush

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		12/21/20 1410	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

682052

CUSTODY

Cole-Parmer CUSTODY SEAL

Person Collecting Sample _____ Sample No. —
(signature)

Date Collected 12/2/20 Time Collected —

ENSOLUM

APPENDIX F

C-141

OCD Permitting

NAPP2035042855 OXY SAND DUNES NORTH @ A-32-23S-31E 0N 0E

General Incident Information

Site Name: Oxy Sand Dunes North
Well:
Facility:
Operator: [241602] Enterprise Field Services, LLC
Status: Closure Not Approved
Type: Oil Release
District: Artesia
Severity: Major
Surface Owner: Federal
County: Eddy (15)

Incident Location: A-32-23S-31E 0 FNL 0 FEL
Lat/Long: 32.266889,-103.792056 NAD83
Directions:

Notes

Source of Referral: Industry Rep
Action / Escalation:
Resulted In Fire: ☑
Will or Has Reached Watercourse: ☐
Endangered Public Health: ☐
Property Or Environmental Damage: ☐
Fresh Water Contamination: ☐

Contact Details

Contact Name:
Contact Title:

Event Dates

Date of Discovery: 08/02/2020
OCD Notified of Major Release: 12/15/2020
Extension Date:
Cancelled Date:
Initial C-141 Received:
Characterization Report Received:
Characterization Report Approved:
Remediation Plan Received:
Remediation Plan Approved:
Remediation Due:
Closure Report Received:
Closure Report Approved:

Incidents Materials

Cause	Source	Material	Volume Unk.	Volume Spilled	Volume Recovered	Volume Lost	Units
Fire	Gas Compressor Station	Condensate	☐	250	0	250	BBL

Incident Events

Date	Detail
12/15/2020	An application was submitted to OCD for review. It was submitted, indicating that it was an: [C-141A] Notification of a release The operator was emailed confirmation of this event.
12/15/2020	The (12/15/2020, C-141A) application was assigned to this incident.
12/15/2020	Additional Details provided by the operator: Gas detector located near the condensate pumps sensed a flammable gas and the station ESD was activated automatically. Several minutes later, a producer notified an Enterprise pipeline tech that there was a fire at the facility. Due to the severity of the damage from the heat of the fire, the Investigation Team was unable to determine the exact origin of the source of fuel that started the fire.
12/15/2020	Initial Response question & answers at the time of notification were as follows. • The source of the release has been stopped: True. • The impacted area has been secured to protect human health and the environment: True. • Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices: True. • All free liquids and recoverable materials have been removed and managed appropriately: True.
12/15/2020	New incident created by the operator, upon the submission of notification of release.
08/02/2020	Release discovered by the operator.

Orders

No Orders Found

Quick Links
- General Incident Information
- Materials
- Events
- Orders

Associated Images
- Incident Files (0)

New Searches
- New Facility Search
- New Incident Search
- New Operator Search
- New Pit Search
- New Spill Search
- New Tank Search
- New Well Search

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 24970

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 24970
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2035042855 OXY SAND DUNES NORTH, thank you. This closure is approved.	8/11/2021