



REVISED CLOSURE REPORT

Property:

Trunk A

**32.307411 N, 103.792007 W
Unit H, S17 T23S, R31E
Eddy County, New Mexico
Event Date: June 30, 2016
NMOCD Incident ID: nAB1618857227**

Ensolum Project No. 03B1226302

February 13, 2024

Prepared for:

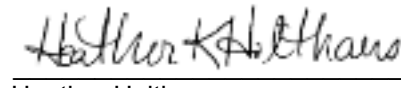
**Enterprise Field Services LLC
PO Box 4324
Houston, TX 77210**

Attn: Thomas Long

Prepared by:



Kelly Lowery
Project Manager



Heather Holthaus
Senior Project Manager



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ENSOLUM

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1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC (Enterprise)
Site Name:	Trunk A
Location:	32.307411 N, 103.792007 W Unit H, S22, T19S, R38E Eddy County, New Mexico
Property:	Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On June 30, 2016, Enterprise was notified of a release on the Trunk A natural gas pipeline. Immediate response action commenced in accordance with the Enterprise *General Release Notification, Response and Remediation Plan* (dated March 2015). Enterprise isolated the leaking portion, and the pipeline section was shut down to carry out repair activities. Approximately 10 barrels (bbls) of natural gas liquids (NGLs) were released from the pipeline and impacted surface soils in the vicinity of the release point. Under the supervision of Enterprise personnel, stained soil was excavated by NMR Pipeline, LLC (NMR). Remediation activities were initiated after Enterprise received notification of the release.

The **Topographic Map** depicting the location of the Site is included as **Figure 1**, and the **Site Vicinity Map** is included as **Figure 2** in **Appendix A**.

1.2 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 and figures associated with the following bullets are provided in **Appendix B**.

- The Site is not located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or 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 a 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 well records identified within 1,000 feet of the Site.
- 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.
- Based on the Karst Occurrence Potential (.kmz) provided by the BLM, the Site is located within a relatively stable area, also referred to as low karst.
- 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

Initial site investigation and remediation activities were conducted by Apex TITAN, Inc. (Apex) in 2016 and 2017 at the Site. Initial excavation activities were conducted to replace the leaking portion of the pipeline in July 2016 by NMR. Excavation activities resumed on November 14, 2016 to over excavate, remove impacted material and collect confirmation soil samples from the excavation sidewalls and floor. Apex was present during this time to provide excavation oversight and collect soil samples for laboratory analysis. Impacted soil was removed from below and surrounding the release point on the Trunk A line. Based on Apex's field screening data generated during field activities, the northwest portion of the excavation floor, directly under the release point, was potholed utilizing heavy equipment to 20 feet below ground surface (bgs). The final excavation dimensions at that time were approximately 60 feet long by 15 to 20 feet wide, with an approximate depth ranging from five to 20 feet bgs.

A remediation plan was submitted by Apex to Enterprise for approval on December 19, 2016. The scope of work detailed in the remediation plan was to backfill the existing excavation with clean fill material and install one soil boring in the vicinity of the release point to define the extent of vertical impact to soil due to the NGL release. The proposed scope of work was based on Apex's review of the previous laboratory analytical results indicating impacted soil remaining in the excavation. The remediation plan was approved by the Enterprise on January 3, 2017, with the understanding that Enterprise would remove the clean fill material from the excavation if laboratory analysis associated with samples collected from the boring indicated elevated benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and/or diesel range organics (DRO) and/or chloride concentrations.

On January 24, 2017, Apex, Enterprise and Talon LPE (Talon) mobilized to the Site to install one soil boring (SB-1) approximately eight lateral feet in the southwest direction from the release point on the Trunk A line. Talon and Enterprise utilized a line finder to locate the line prior to the soil boring advancement. The soil boring was advanced on-Site utilizing a Geoprobe® drilling rig under the supervision of a State of New Mexico licensed driller to a total depth of 30 feet bgs. The sampling equipment was decontaminated by high pressure cleaning prior to soil boring installation. Groundwater was not encountered during drilling activities.

Apex collected a total of eight confirmation soil samples from the excavation area (CS-1 through CS-8) and two soil samples from the soil boring (SB-1 20'-21' and SB-1 27'-28') for laboratory analysis of BTEX, TPH and chloride. The results of the remediation and sampling activities at the Site are detailed in a *Corrective Action Report*, prepared by Apex and dated March 28, 2017. The findings and recommendations from the report are as follows:

- *The primary objective of the corrective actions was to evaluate the presence, magnitude and extent of COCs in the soil affected by the release of NGPL from the Trunk A line.*
- *On-Site remediation included excavation of the affected area impacted by the release of NGPL, starting from the release point. The final excavated area measured approximately 60 feet long by 15 feet wide, with an approximate depth of 20 feet at the release point.*
- *Impacted soil was excavated and staged into one (1) stockpile on-Site. The stockpile transported off-Site for disposal to Lea Landfill, in Eunice, New Mexico. The excavation was backfilled with non-impacted clean fill material and returned to approximate grade.*
- *Based on initial analytical results, one (1) soil boring (SB-1) was installed in the vicinity of the release point on the Trunk A line to determine the vertical depth of NGPL impact to soils. Two (2) soil samples, collected from the from the shallowest native soil (SB-1 20'-21') and the depth interval from 27 to 28 feet bgs (SB-1 27'-28'), were submitted for laboratory analysis. The remainder of the samples were placed on hold pending laboratory analytical results.*
- *The soils remaining in place near the release point on the Trunk A line exhibit benzene, total BTEX, combined TPH GRO/DRO and/or chloride concentrations above the OCD RRALs for a Site Ranking of "10". However, based on the sample results from soil boring SB-1, the maximum depth of the exceeding concentrations is above 21' feet bgs. Based on water well data within three (3)*

miles of the area, the approximate depth to the initial groundwater-bearing zone is approximately 85 feet or greater at the Site. Therefore, based on the soil sample results from the soil boring and the approximate depth to groundwater, it can be assumed that the COC concentrations in the soils left in place above 21 feet bgs will not impact groundwater at the Site.

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

The above referenced *Corrective Action Report* was submitted to the NMOCD, and the Site was denied closure on July 10, 2023, requesting additional information.

In August 2023, Enterprise began excavation activities at the Site. The previous excavation backfill area was removed to the original excavation extent. On August 14, 2023, subsequent to the removal of the backfilled soils, Ensolum collected confirmation composite soil samples from the original excavation floor and sidewalls. The excavated soils were placed in stockpiles adjacent to the excavation, and Ensolum collected composite stockpile soil samples for laboratory analysis. In addition, Ensolum collected confirmation delineation soil samples within 15 feet of the excavation extent, at four separate locations.

Figure 3 is a map that identifies approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix A**).

4.0 SOIL SAMPLING PROGRAM

On November 14, 2016, Apex collected eight confirmation soil samples from the excavation sidewalls and floor. On January 24, 2017, Apex returned to the Site to install soil boring SB-1 and collected soil samples continuously from every one foot interval utilizing a core barrel sampler to the termination depth of 30 feet bgs, or probe refusal due to coarse sandstone. Apex submitted soil samples for laboratory analysis from the shallowest native soil (SB-1 20'-21') and the depth interval from 27 to 28 feet bgs (SB-1 27'-28'). The remainder of the soil samples were placed on hold at the laboratory pending initial analytical results. The details of the sampling and results can be found in the *Corrective Action Report*, prepared by Apex and dated March 28, 2017.

Based on correspondence received from the NMOCD on July 10, 2023, the initial closure request following the submittal of the *Corrective Action Report* for the Site was denied. "*Closure denied. Several confirmation samples exceed closure criteria. Release is now subject to Table 1 Closure Standards, 19.15.29.12 NMAC.*"

On August 14, 2023, Ensolum arrived on-Site and collected a total of 11 composite soil samples from the original excavation floor (FS-01 through FS-11) and 13 composite soil samples from the original excavation sidewalls (SW-01 through SW-13). The composite floor samples were collected at depths ranging from two to 20 feet bgs, and the composite sidewall samples were collected at depths ranging from 0-5 to 0-20 feet bgs. In addition, Ensolum collected four delineation confirmation soil samples (North, East, South and West) at locations within 15 feet outside of the excavation limits. Three composite stockpile soil samples were also collected from the excavated soil stockpiles (STP-1, STP-2 and STP-3). Based on the laboratory analytical data of the composite confirmation soil samples, no additional excavation/remediation is required.

The composite soil 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 Hall Environmental Analysis Laboratory in Albuquerque, New Mexico under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The confirmation soil samples were analyzed for TPH GRO, DRO, and motor oil/lube oil range organics (MRO) using Environmental Protection Agency (EPA) Method 8015M/D, BTEX using EPA Method 8021B, and chlorides using EPA Method 300.0.

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

6.0 DATA EVALUATION

Ensolum compared the TPH GRO/DRO/MRO, BTEX and chloride concentrations and/or laboratory sample detection limits (SDLs) associated with the composite soil samples collected from the excavation floor (FS-01 through FS-11), the excavation sidewalls (SW-01 through SW-13), the delineation confirmation soil samples (North, East, South and West), and the composite soil stockpiles (STP-1, STP-2 and STP-3) to the New Mexico EMNRD OCD (NMOCD) Closure Criteria.

- Laboratory analytical results indicate total benzene concentrations for the composite and confirmation soil samples collected from the excavation floor, sidewalls, soil stockpiles, and the delineation soil samples are below the laboratory SDLs and/or the applicable NMOCD Closure Criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate total BTEX concentrations for the composite and confirmation soil samples collected from the excavation floor, sidewalls, soil stockpiles, and the delineation soil samples are below the laboratory SDLs and/or the applicable NMOCD Closure Criteria of 50 mg/kg.
- Laboratory analytical results indicate combined TPH GRO/DRO/MRO concentrations for the composite and confirmation soil samples collected from the excavation floor, sidewalls, soil stockpiles, and the delineation soil samples 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 and confirmation soil samples collected from the excavation floor, sidewalls, soil stockpiles, and the delineation soil samples are below the laboratory SDLs and/or 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

Subsequent to the results of the confirmation soil sampling, the excavated area was backfilled with the soil stockpiles, and then contoured to the original surrounding grade. A BLM approved seed mixture will be sown into the surface of the backfill for re-vegetation.

8.0 FINDINGS AND RECOMMENDATION

- 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 using the New Mexico EMNRD OCD's NMAC 19.15.29 *Releases* as guidance.
- Based on correspondence received from the NMOCD on July 10, 2023, the initial closure request following the submittal of the *Corrective Action Report*, prepared by Apex and dated March 28, 2017, for the Site was denied. *"Closure denied. Several confirmation samples exceed closure criteria. Release is now subject to Table 1 Closure Standards, 19.15.29.12 NMAC."*
- In August 2023, Enterprise began excavation activities at the Site. The previous excavation backfill area was removed to the original excavation extent. Subsequent to the removal of the backfilled soils, Ensolum collected confirmation composite soil samples from the original excavation floor and sidewalls. The excavated soils were placed in stockpiles adjacent to the excavation, and Ensolum collected composite stockpile soil samples for laboratory analysis. In addition, Ensolum collected confirmation delineation soil samples within 15 feet of the excavation extent, at four separate locations.

On August 14, 2023, Ensolum arrived on-Site and collected a total of 11 composite soil samples from the original excavation floor (FS-01 through FS-11) and 13 composite soil samples from the original excavation sidewalls (SW-01 through SW-13). The composite floor samples were collected at depths ranging from two to 20 feet bgs, and the composite sidewall samples were collected at depths ranging from 0-5 to 0-20 feet bgs. In addition, Ensolum collected four delineation confirmation soil samples (North, East, South and West) at locations within 15 feet outside of the excavation limits at a depth of 0-0.25 feet bgs. Three composite stockpile soil samples were also collected from the excavated soil stockpiles (STP-1, STP-2 and STP-3). Based on the laboratory analytical data of the composite confirmation soil samples, no additional excavation/remediation is required.

- Based on the soil analytical results, soils remaining in place do not exhibit COC concentrations above the applicable NMOCD Closure Criteria.
- Based on the information in the March 28, 2017 *Apex Corrective Action Report*, the final excavation dimensions were approximately 60 feet long by 15 to 20 feet wide, with an approximate depth ranging from five to 20 feet bgs. The final excavation dimensions in August 2023 were approximately 67 feet long by 10 to 35 feet wide, with an approximate depth ranging from 2 to 20 feet bgs.
- Based on laboratory analytical data, COCs above the laboratory SDLs and/or the NMOCD Closure Criteria were not identified in the soils that remain on-Site, and the excavated soils in the soil stockpiles are suitable for use as backfill in the excavation.

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 Crude Pipeline, 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 Transportation Company, 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.



APPENDIX A

Figures

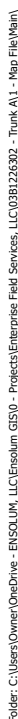
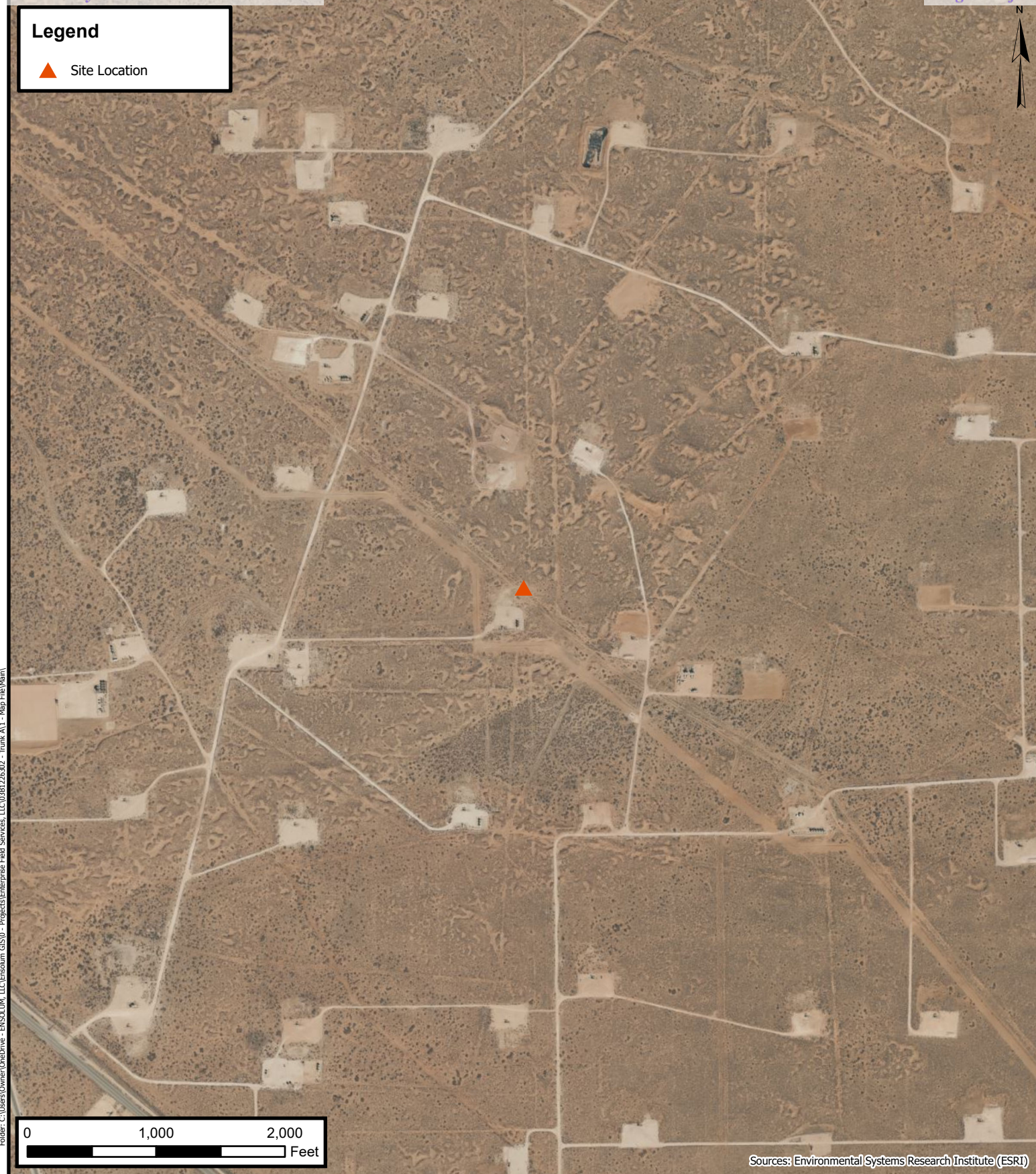


FIGURE
1



Site Vicinity Map

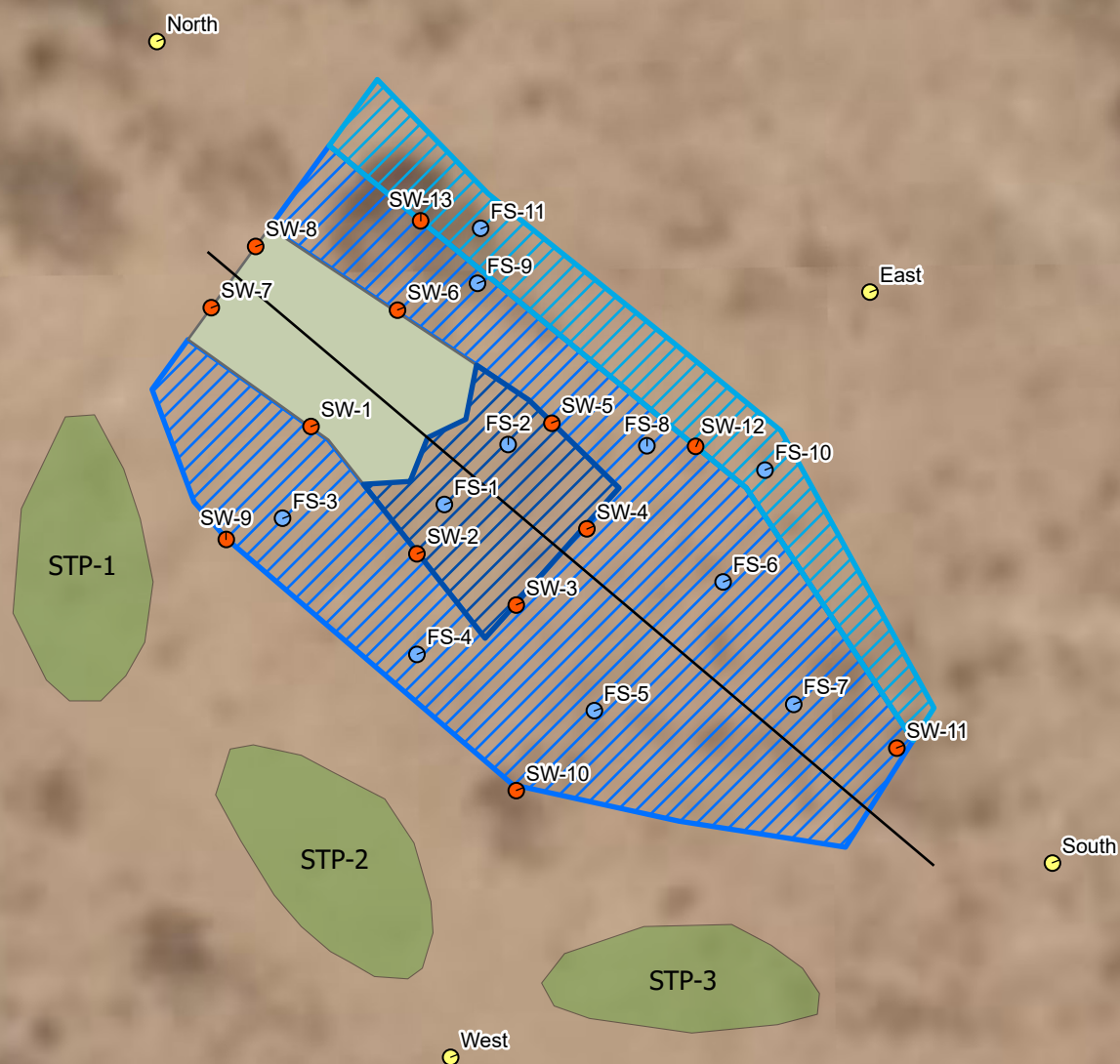
Enterprise Field Services, LLC
Trunk A

Project Number: 03B1226302
32.307411, -103.792007
Eddy County, New Mexico

FIGURE
2

Legend

- Floor Sample
- Sample Outside Excavation
- Sidewall Sample
- Pipeline/Line/Utility
- Stockpile
- Deep Excavation Extent (0-20' BGS)
- Medium Excavation Extent (0-5')
- Shallow Excavation Extent (0-2')
- Ramp



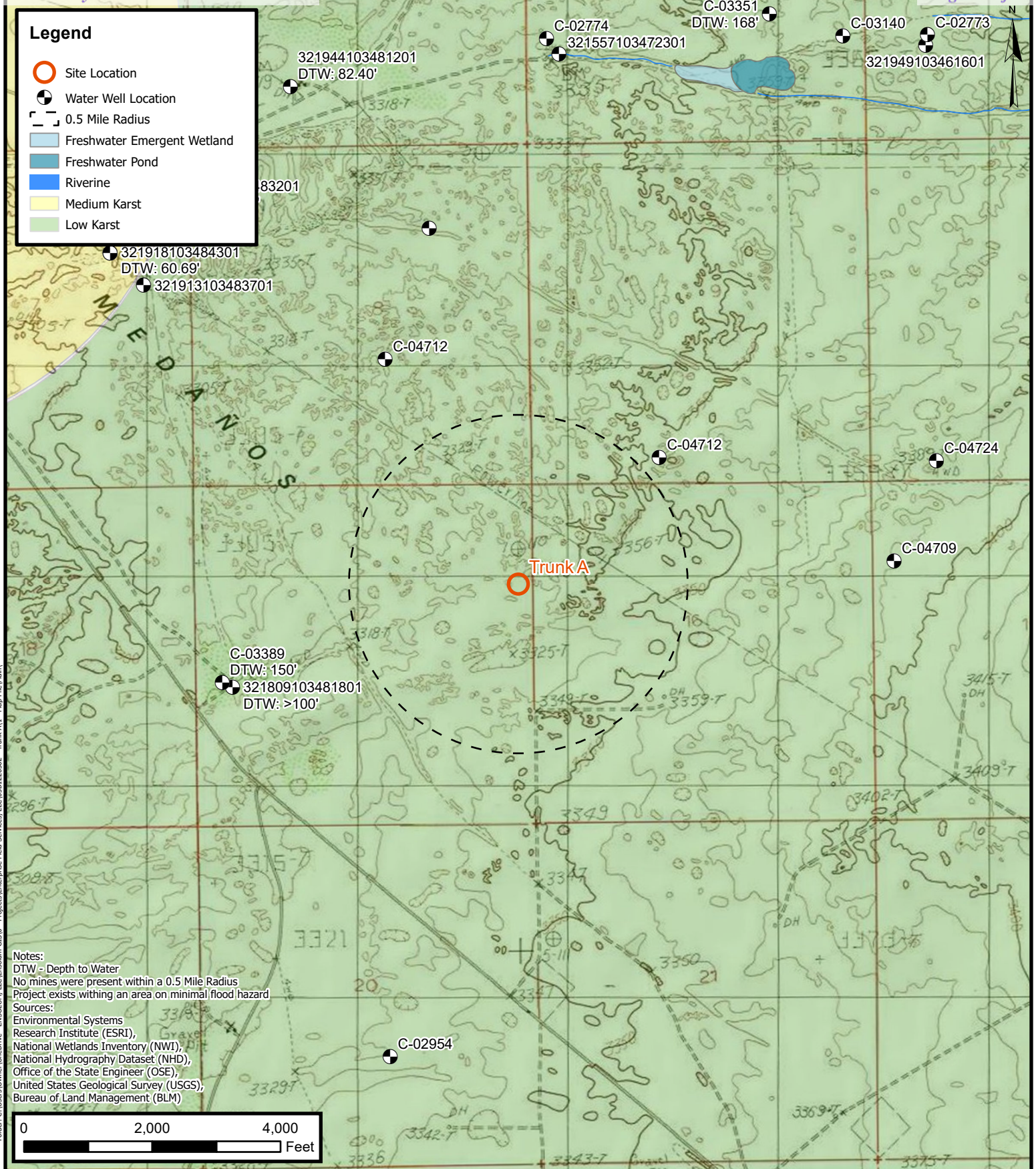
0 15 30
Feet

Sources: Environmental Systems Research Institute (ESRI)

**Site Map**

Enterprise Field Services, LLC
Trunk A
Project Number: 03B1226302
32.307411, -103.792007
Eddy County, New Mexico

FIGURE**3**



Closure Criteria Map

Enterprise Field Services, LLC
Trunk A
Project Number: 03B1226302
32.307411, -103.792007
Eddy County, New Mexico

FIGURE

4





APPENDIX B

Supporting Documentation

From: OCDOnline@state.nm.us
To: [Dunaway, Robert](#)
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 206734
Date: Monday, July 10, 2023 10:11:21 AM

[Use caution with links/attachments]

To whom it may concern (c/o Rob Dunaway for ENTERPRISE PRODUCTS OPERATING, LLC),

The OCD has rejected the submitted *Internal Manual Incident File Supporting Documentation (ENV)* (IM-BNF), for incident ID (n#) nAB1618857227, for the following reasons:

- **Closure denied. Several confirmation samples exceed closure criteria.**
- **Release is now subject to Table 1 Closure Standards, [19.15.29.12](#) NMAC.**
- **Submit a report via the OCD permitting portal by 11/17/2023.**

The rejected IM-BNF can be found in the OCD Online: Permitting - Action Status, under the Application ID: 206734.

Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional IM-BNF.

Thank you,
Ashley Maxwell
Projects Environmental Specialist - A
505-635-5000
Ashley.Maxwell@emnrd.nm.gov

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

Kelly Lowery

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Monday, July 24, 2023 12:51 PM
To: Kelly Lowery
Cc: Bratcher, Michael, EMNRD; Maxwell, Ashley, EMNRD
Subject: RE: [EXTERNAL] Pipeline ROW, Trunk A (Incident ID #nAB1618857227)

[**EXTERNAL EMAIL**]

Hi Kelly,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Administrative Permitting Program
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
(505)469-7520 | Shelly.Wells@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

From: Kelly Lowery <klowery@ensolum.com>
Sent: Monday, July 24, 2023 8:59 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Dunaway, Robert <rhunaway@eprod.com>; Long, Thomas <tjlong@eprod.com>
Subject: [EXTERNAL] Pipeline ROW, Trunk A (Incident ID #nAB1618857227)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good morning,

On behalf of Enterprise Field Services, LLC, Ensolum, LLC would like to provide notification for sampling activities that will be conducted at the Pipeline ROW, Trunk A (Incident ID #nAB1618857227) on Thursday, July 27th. The samples may be used for closure, providing that they meet applicable closure limits.

Thank you



Kelly Lowery, GIT
Project Geologist
214-733-3165
Ensolum, LLC

Kelly Lowery

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Thursday, August 3, 2023 2:10 PM
To: Kelly Lowery
Cc: Bratcher, Michael, EMNRD; Maxwell, Ashley, EMNRD
Subject: RE: [EXTERNAL] Pipeline ROW, Trunk A (Incident ID #nAB1618857227)

You don't often get email from shelly.wells@emnrd.nm.gov. [Learn why this is important](#)

[**EXTERNAL EMAIL**]

Hi Kelly,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Administrative Permitting Program
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
(505)469-7520 | Shelly.Wells@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

From: Kelly Lowery <klowery@ensolum.com>
Sent: Thursday, August 3, 2023 10:51 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Long, Thomas <tjlong@eprod.com>
Subject: [EXTERNAL] Pipeline ROW, Trunk A (Incident ID #nAB1618857227)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good morning,

On behalf of Enterprise Field Services, LLC, Ensolum, LLC would like to provide notification for sampling activities that will be conducted at the Pipeline ROW, Trunk A (Incident ID #nAB1618857227) on Monday, August 7th. The samples may be used for closure, providing that they meet applicable closure limits.

Thank you

Kelly Lowery

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Monday, August 14, 2023 10:31 AM
To: Kelly Lowery
Cc: Maxwell, Ashley, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] Pipeline ROW, Trunk A (Incident ID #nAB1618857227)

You don't often get email from shelly.wells@emnrd.nm.gov. [Learn why this is important](#)

[**EXTERNAL EMAIL**]

Hi Kelly,

Notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

From: Kelly Lowery <klowery@ensolum.com>
Sent: Friday, August 11, 2023 5:21 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Long, Thomas <tjlong@eprod.com>
Subject: [EXTERNAL] Pipeline ROW, Trunk A (Incident ID #nAB1618857227)

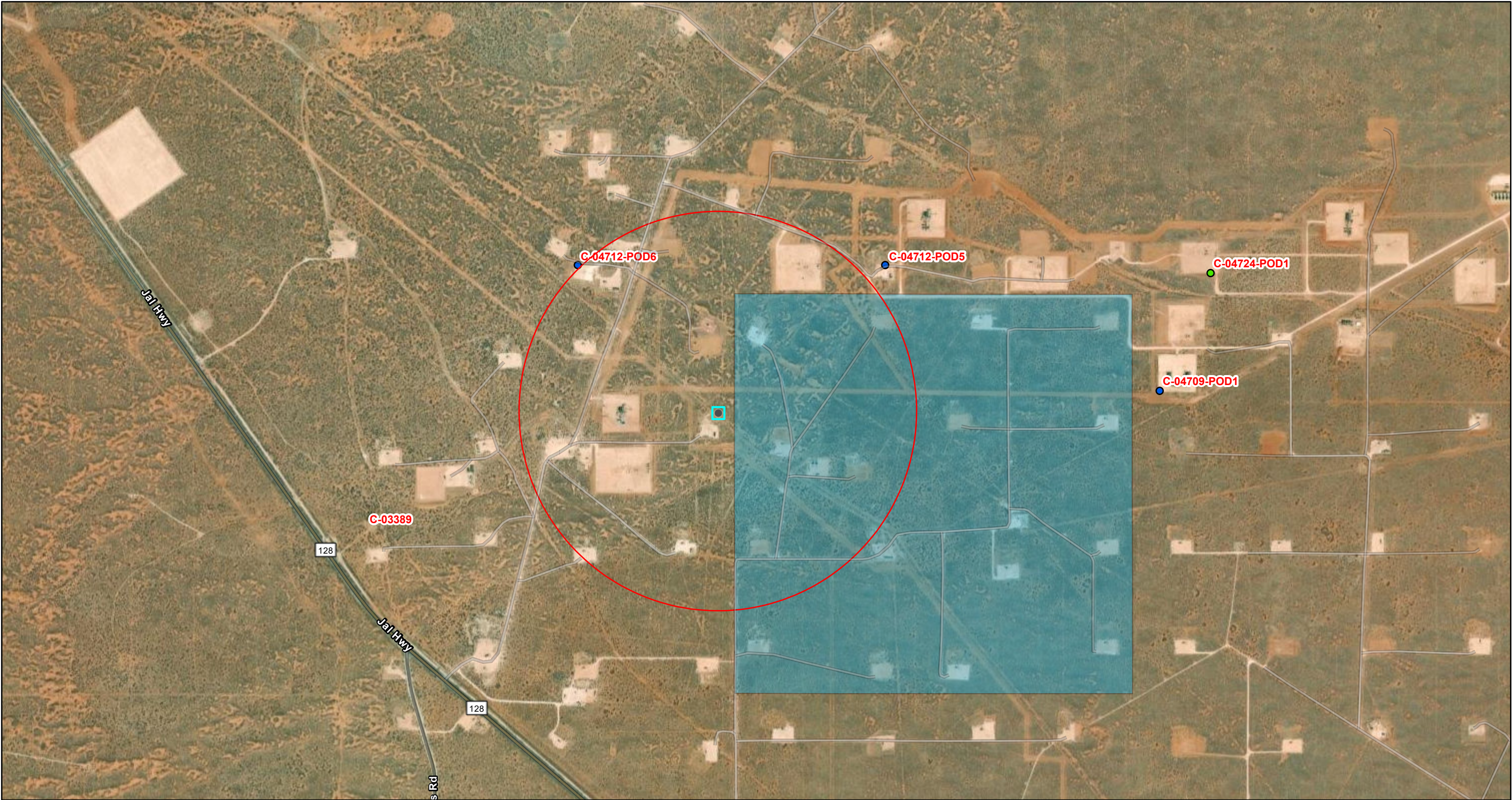
CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good evening,

This email is a notification and a variance request. Ensolum, LLC, on behalf of Enterprise Field Services, LLC, is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Ensolum would like to collect soil samples for laboratory analysis Monday, August 14, 2023 at the Pipeline ROW, Trunk A excavation. Please acknowledge acceptance of this variance request. If you have any questions, please call or email. The samples may be used for closure, providing that they meet applicable closure limits.

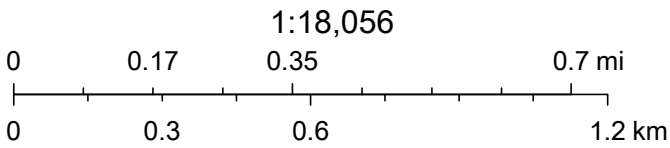
Thank you

OSE POD Location Map



9/15/2023, 2:17:46 PM

- GIS WATERS PODs
- Active
 - Pending
 - OSE District Boundary
 - SiteBoundaries
 - New Mexico State Trust Lands
 - Both Estates




Esri Community Maps Contributors, New Mexico State University, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,


OCD Well Locations and Karst Map






9/15/2023, 2:21:13 PM


Wells - Large Scale Karst Occurrence Potential

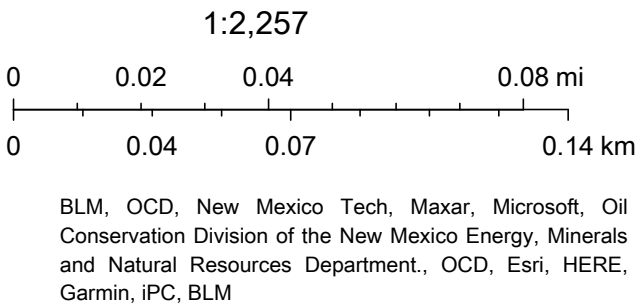
-  Gas, Active

 Oil, Active

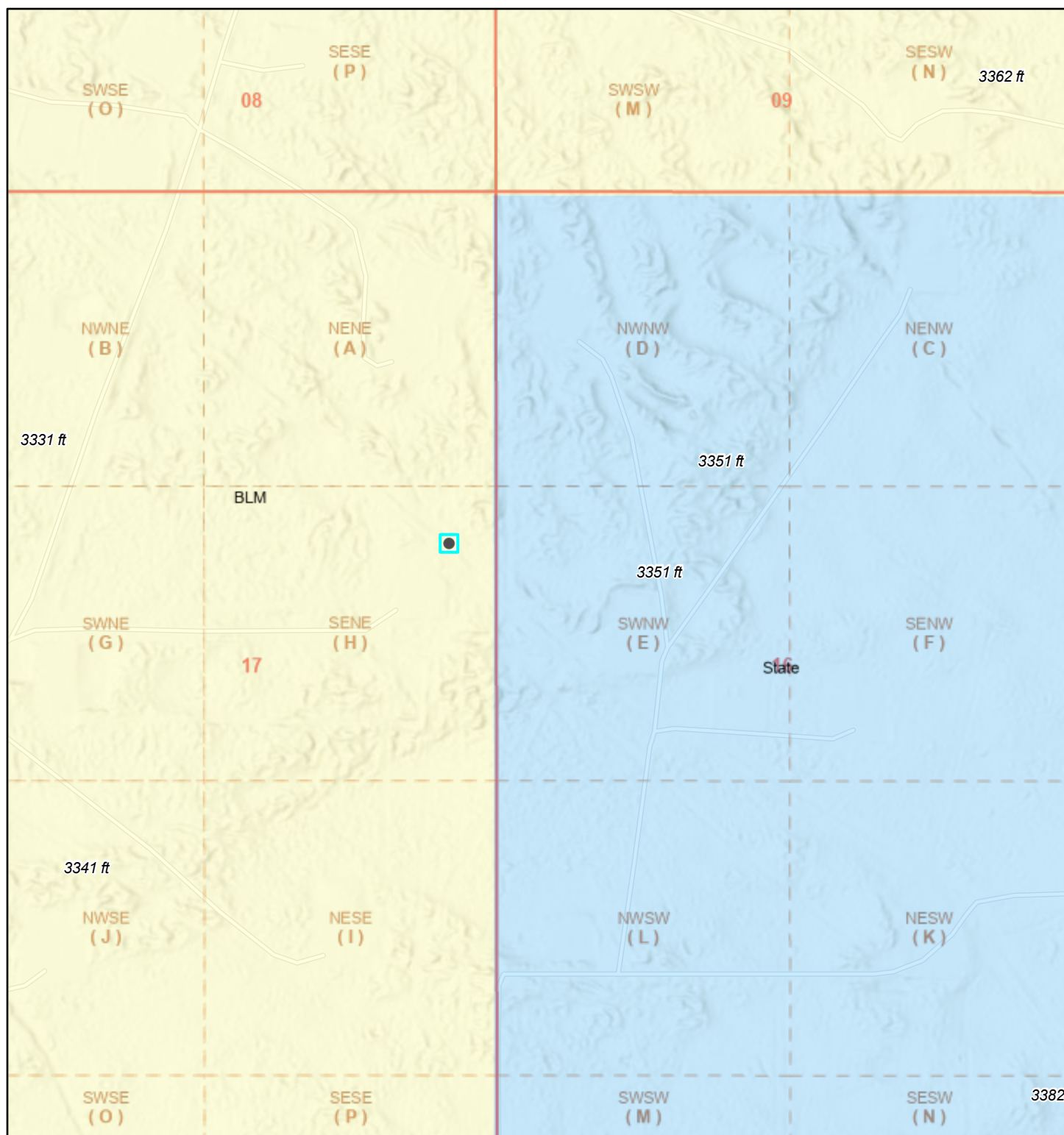
 Oil, Plugged
-  Low

 PLSS Second Division

 PLSS First Division



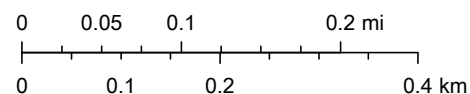
Active Mines in New Mexico



7/20/2023, 9:50:05 AM

Land Ownership PLSS Second Division BLM PLSS First Division S

1:9,028



U.S. BLM, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, New Mexico State University, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,

EMNRD MMD GIS Coordinator

National Flood Hazard Layer FIRMMette



103°47'50"W 32°18'42"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/20/2023 at 10:21 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

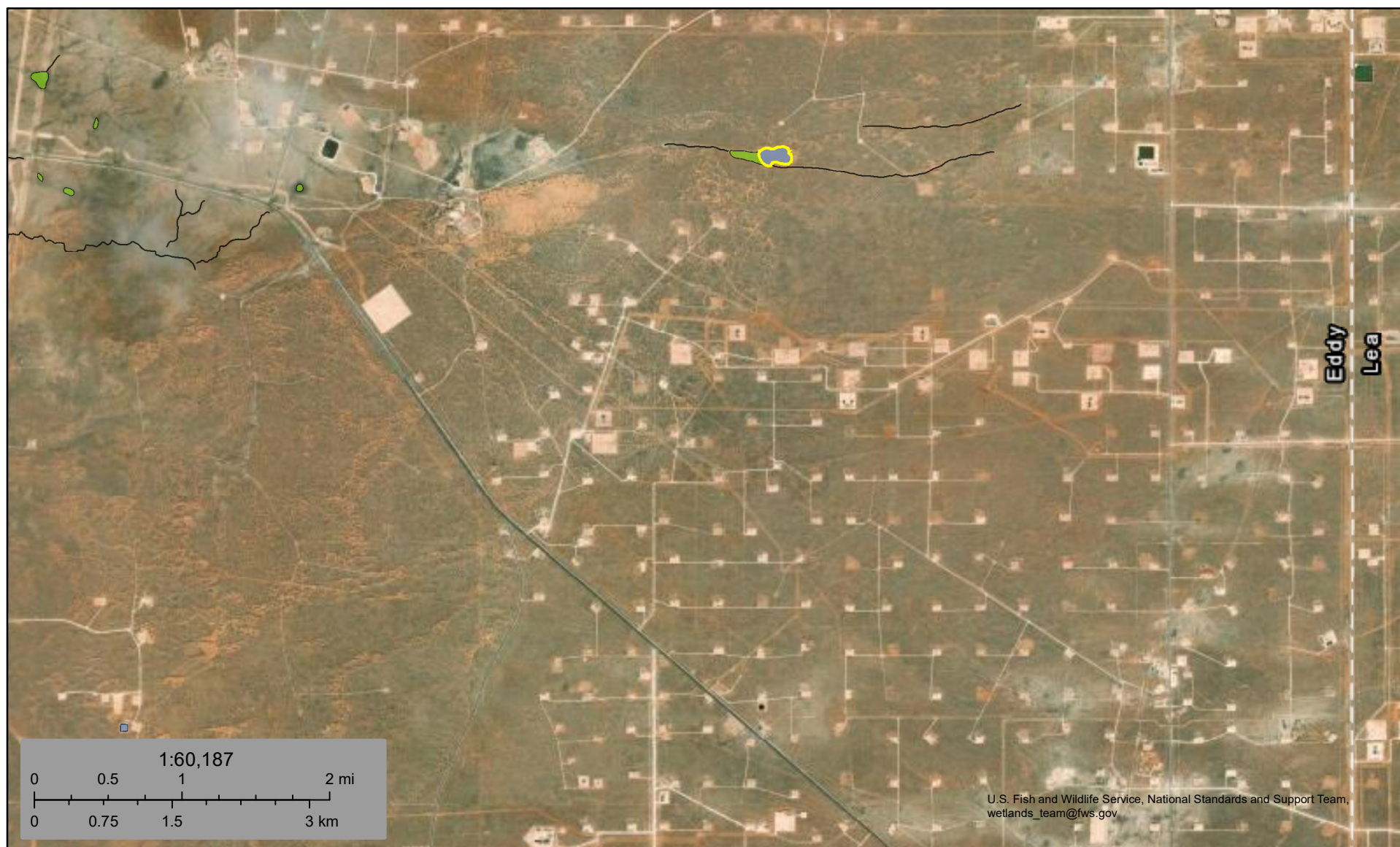
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands



July 20, 2023

Wetlands

- Estuarine and Marine Deepwater
 Freshwater Forested/Shrub Wetland
 Other
- Estuarine and Marine Wetland
 Freshwater Pond
 Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR ☒ Initial Report ☐ Final Report

Name of Company Enterprise Field Services LLC 1000347 Contact Alena Miro
PO Box 4324, Houston, TX 77210 Telephone No. 575-706-4926
 Facility Name Pipeline ROW, Trunk A Facility Type: Gas Gathering Pipeline
 Surface Owner BLM Mineral Owner NA - Pipeline Lease No. NA

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<u>H</u>	<u>17</u>	<u>23S</u>	<u>31E</u>	<u>200</u>	<u>North</u>	<u>200</u>	<u>East</u>	<u>Eddy</u>

Latitude: N 32.307411 Longitude: W -103.792007

NATURE OF RELEASE

Type of Release <u>Natural Gas and pipeline liquid</u>	Volume of Release: <u>296 MCF gas/ 10 bbl liquids</u>	Volume Recovered: <u>N/A</u>
Source of Release <u>Pipeline Leak</u>	Date and Hour of Occurrence <u>6/30/2016 @ 12:30 MST</u>	Date and Hour of Discovery <u>6/30/2016 @ 12:30 MST</u>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

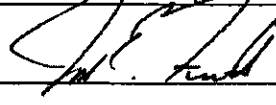

Describe Cause of Problem and Remedial Action Taken.*

Natural gas and pipeline liquid was released due to a pipeline leak. Pipeline segment was isolated, blown down, and will be repaired following standard one-call. Approximately 10 bbls of liquid was released.

Describe Area Affected and Cleanup Action Taken.*

A liquid spill of approximately 10bbls of pipeline liquids occurred as part of the leak. All liquids were confined to the right of way. Remediation actions will follow the Enterprise Products, General Release Notification, Response and Remediation Plan (March 9, 2015).

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: <u>Jon E. Fields</u>	Approved by District Supervisor: 	
Title: <u>Director, Field Environmental</u>	Approval Date: <u>7/1/16</u>	Expiration Date: <u>N/A</u>
E-mail Address: <u>jefields@eprod.com</u>	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines	
Date: <u>7/1/2016</u> Phone: <u>713-381-6684</u>	Attached <input type="checkbox"/> SUBMIT REMEDIATION PROPOSAL NO	

LATER THAN: 7/1/16

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 01 2016

RECEIVED



APPENDIX C

Photographic Documentation

Date & Time: Mon, Aug 14, 2023 at 09:10:37 MDT
Position: +032.307441° / -103.792124° (± 15.1 ft)
Altitude: 3353ft (± 11.6 ft)
Datum: WGS-84
Azimuth/Bearing: 108° S72E 1920mils True ($\pm 15^\circ$)
Elevation Angle: -19.5°
Horizon Angle: -00.2°
Zoom: 0.5X



View of final excavation, facing east (August 14, 2023).

Date & Time: Mon, Aug 14, 2023 at 09:11:01 MDT
Position: +032.307462° / -103.792098° (± 15.6 ft)
Altitude: 3351ft (± 10.9 ft)
Datum: WGS-84
Azimuth/Bearing: 153° S27E 2720mils True ($\pm 15^\circ$)
Elevation Angle: -25.3°
Horizon Angle: -02.8°
Zoom: 0.5X



View of final excavation activities, facing southeast (August 14, 2023).



View of backfilled excavation extent, facing northwest (February 13, 2024).



View of backfilled excavation extent, facing east (February 13, 2024).



APPENDIX D

Table

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS

Trunk A
Enterprise Field Services, LLC
Eddy County, New Mexico
Ensolum Project No. 03B1226302

Sample Designation	Date	Depth (feet 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
Composite Excavation Floor Soil Sample Analytical Results												
FS-01	08/14/2023	20	<0.016	<0.031	<0.031	<0.063	<0.063	<3.1	<9.9	<50	<50	<60
FS-02	08/14/2023	20	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<9.5	<47	<47	<60
FS-03	08/14/2023	5	<0.014	<0.029	<0.029	<0.057	<0.057	<2.9	<9.7	<48	<48	<60
FS-04	08/14/2023	5	<0.017	<0.034	<0.034	<0.068	<0.068	<3.4	<9.3	<46	<46	<60
FS-05	08/14/2023	5	<0.016	<0.032	<0.032	<0.065	<0.065	<3.2	<9.7	<49	<49	<60
FS-06	08/14/2023	5	<0.017	<0.034	<0.034	<0.069	<0.069	<3.4	<9.5	<48	<48	<59
FS-07	08/14/2023	5	<0.016	<0.033	<0.033	<0.065	<0.065	<3.3	<9.4	<47	<47	<60
FS-08	08/14/2023	5	<0.015	<0.031	<0.031	<0.061	<0.061	<3.1	<9.5	<47	<47	<60
FS-09	08/14/2023	5	<0.015	<0.030	<0.030	<0.061	<0.061	<3.0	<9.8	<49	<49	<60
FS-10	08/14/2023	2	<0.017	<0.034	<0.034	<0.069	<0.069	<3.4	<9.5	<47	<47	<60
FS-11	08/14/2023	2	<0.017	<0.033	<0.033	<0.067	<0.067	<3.3	<9.7	<49	<49	<60
Composite Excavation Sidewall Soil Sample Analytical Results												
SW-01	08/14/2023	0 - 20	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<9.9	<50	<50	<60
SW-02	08/14/2023	0 - 20	<0.016	<0.032	<0.032	<0.064	<0.064	<3.2	<9.8	<49	<49	<60
SW-03	08/14/2023	0 - 20	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.9	<49	<49	<60
SW-04	08/14/2023	0 - 20	<0.017	<0.035	<0.035	<0.069	<0.069	<3.5	<9.3	<46	<46	<60
SW-05	08/14/2023	0 - 20	<0.017	<0.035	<0.035	<0.069	<0.069	<3.5	<9.7	<49	<49	<61
SW-06	08/14/2023	0 - 20	<0.017	<0.035	<0.035	<0.070	<0.070	<3.5	<9.7	<48	<48	<61
SW-07	08/14/2023	0 - 20	<0.017	<0.034	<0.034	<0.067	<0.067	<3.4	<9.4	<47	<47	<60
SW-08	08/14/2023	0 - 20	<0.014	<0.029	<0.029	<0.058	<0.058	<2.9	<9.6	<48	<48	<61
SW-09	08/14/2023	0 - 5	<0.014	<0.028	<0.028	<0.055	<0.055	<2.8	<9.7	<48	<48	<60
SW-10	08/14/2023	0 - 5	<0.013	<0.026	<0.026	<0.051	<0.051	<2.6	<9.9	<50	<50	<60
SW-11	08/14/2023	0 - 5	<0.015	<0.030	<0.030	<0.060	<0.060	<3.0	<9.3	<46	<46	110
SW-12	08/14/2023	0 - 5	<0.012	<0.025	<0.025	<0.050	<0.050	<2.5	<9.4	<47	<47	<60
SW-13	08/14/2023	0 - 5	<0.015	<0.031	<0.031	<0.062	<0.062	<3.1	<9.7	<49	<49	<60
Confirmation Delineation Soil Sample Analytical Results												
North	08/14/2023	0 - 0.25	<0.016	<0.031	<0.031	<0.063	<0.063	<3.1	<9.6	<48	<48	<60
East	08/14/2023	0 - 0.25	<0.017	<0.034	<0.034	<0.068	<0.068	<3.4	<9.3	<47	<47	<60
South	08/14/2023	0 - 0.25	<0.016	<0.032	<0.032	<0.065	<0.065	<3.2	<9.4	<47	<47	<60
West	08/14/2023	0 - 0.25	<0.017	<0.035	<0.035	<0.070	<0.070	<3.5	<9.6	<48	<48	<60
Composite Stockpile Soil Sample Analytical Results												
STP-1	08/14/2023	NA	<0.018	<0.035	<0.035	<0.071	<0.071	<3.5	<9.6	<48	<48	<60
STP-2	08/14/2023	NA	<0.016	<0.033	<0.033	<0.066	<0.066	<3.3	<9.4	<47	<47	<60
STP-3	08/14/2023	NA	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<9.8	<49	<49	92.0

bgs - below ground surface

mg/kg - milligrams per kilogram

NA - Not Applicable

NE - Not Established

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



APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 21, 2023

Kelly Lowery
Ensolum LLC
601 Marrenfield #400
Midland, TX 79701
TEL: (214) 733-3165
FAX:

RE: Trunk A

OrderNo.: 2308873

Dear Kelly Lowery:

Hall Environmental Analysis Laboratory received 31 sample(s) on 8/16/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: FS-01

Project: Trunk A

Collection Date: 8/14/2023 9:45:00 AM

Lab ID: 2308873-001

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/16/2023 8:43:27 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/16/2023 8:43:27 PM
Surr: DNOP	114	69-147		%Rec	1	8/16/2023 8:43:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/16/2023 2:32:36 PM
Surr: BFB	93.8	15-244		%Rec	1	8/16/2023 2:32:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.016		mg/Kg	1	8/16/2023 2:32:36 PM
Toluene	ND	0.031		mg/Kg	1	8/16/2023 2:32:36 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/16/2023 2:32:36 PM
Xylenes, Total	ND	0.063		mg/Kg	1	8/16/2023 2:32:36 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	8/16/2023 2:32:36 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 3:40:20 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: FS-02

Project: Trunk A

Collection Date: 8/14/2023 9:48:00 AM

Lab ID: 2308873-002

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/16/2023 8:54:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/16/2023 8:54:29 PM
Surr: DNOP	104	69-147		%Rec	1	8/16/2023 8:54:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/16/2023 2:56:19 PM
Surr: BFB	95.2	15-244		%Rec	1	8/16/2023 2:56:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.018		mg/Kg	1	8/16/2023 2:56:19 PM
Toluene	ND	0.036		mg/Kg	1	8/16/2023 2:56:19 PM
Ethylbenzene	ND	0.036		mg/Kg	1	8/16/2023 2:56:19 PM
Xylenes, Total	ND	0.072		mg/Kg	1	8/16/2023 2:56:19 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	8/16/2023 2:56:19 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 3:52:41 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: FS-03

Project: Trunk A

Collection Date: 8/14/2023 9:51:00 AM

Lab ID: 2308873-003

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/16/2023 9:05:22 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2023 9:05:22 PM
Surr: DNOP	117	69-147		%Rec	1	8/16/2023 9:05:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	8/16/2023 3:19:58 PM
Surr: BFB	95.6	15-244		%Rec	1	8/16/2023 3:19:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.014		mg/Kg	1	8/16/2023 3:19:58 PM
Toluene	ND	0.029		mg/Kg	1	8/16/2023 3:19:58 PM
Ethylbenzene	ND	0.029		mg/Kg	1	8/16/2023 3:19:58 PM
Xylenes, Total	ND	0.057		mg/Kg	1	8/16/2023 3:19:58 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/16/2023 3:19:58 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 4:29:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC Client Sample ID: FS-04
Project: Trunk A Collection Date: 8/14/2023 9:54:00 AM
Lab ID: 2308873-004 Matrix: MEOH (SOIL) Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/16/2023 9:16:22 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/16/2023 9:16:22 PM
Surr: DNOP	94.0	69-147		%Rec	1	8/16/2023 9:16:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/16/2023 3:43:38 PM
Surr: BFB	93.9	15-244		%Rec	1	8/16/2023 3:43:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.017		mg/Kg	1	8/16/2023 3:43:38 PM
Toluene	ND	0.034		mg/Kg	1	8/16/2023 3:43:38 PM
Ethylbenzene	ND	0.034		mg/Kg	1	8/16/2023 3:43:38 PM
Xylenes, Total	ND	0.068		mg/Kg	1	8/16/2023 3:43:38 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	8/16/2023 3:43:38 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 5:06:45 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: FS-05

Project: Trunk A

Collection Date: 8/14/2023 9:57:00 AM

Lab ID: 2308873-005

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/16/2023 9:27:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2023 9:27:16 PM
Surr: DNOP	117	69-147		%Rec	1	8/16/2023 9:27:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/16/2023 4:07:19 PM
Surr: BFB	95.1	15-244		%Rec	1	8/16/2023 4:07:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.016		mg/Kg	1	8/16/2023 4:07:19 PM
Toluene	ND	0.032		mg/Kg	1	8/16/2023 4:07:19 PM
Ethylbenzene	ND	0.032		mg/Kg	1	8/16/2023 4:07:19 PM
Xylenes, Total	ND	0.065		mg/Kg	1	8/16/2023 4:07:19 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/16/2023 4:07:19 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 5:43:48 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: FS-07

Project: Trunk A

Collection Date: 8/14/2023 10:03:00 AM

Lab ID: 2308873-007

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/16/2023 9:49:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/16/2023 9:49:12 PM
Surr: DNOP	96.6	69-147		%Rec	1	8/16/2023 9:49:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/16/2023 4:54:38 PM
Surr: BFB	93.2	15-244		%Rec	1	8/16/2023 4:54:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.016		mg/Kg	1	8/16/2023 4:54:38 PM
Toluene	ND	0.033		mg/Kg	1	8/16/2023 4:54:38 PM
Ethylbenzene	ND	0.033		mg/Kg	1	8/16/2023 4:54:38 PM
Xylenes, Total	ND	0.065		mg/Kg	1	8/16/2023 4:54:38 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	8/16/2023 4:54:38 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 6:08:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: FS-08

Project: Trunk A

Collection Date: 8/14/2023 10:06:00 AM

Lab ID: 2308873-008

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/16/2023 10:00:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/16/2023 10:00:12 PM
Surr: DNOP	93.9	69-147		%Rec	1	8/16/2023 10:00:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/16/2023 5:18:17 PM
Surr: BFB	94.2	15-244		%Rec	1	8/16/2023 5:18:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.015		mg/Kg	1	8/16/2023 5:18:17 PM
Toluene	ND	0.031		mg/Kg	1	8/16/2023 5:18:17 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/16/2023 5:18:17 PM
Xylenes, Total	ND	0.061		mg/Kg	1	8/16/2023 5:18:17 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	8/16/2023 5:18:17 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 6:20:50 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: FS-10

Project: Trunk A

Collection Date: 8/14/2023 10:12:00 AM

Lab ID: 2308873-010

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/16/2023 10:22:04 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/16/2023 10:22:04 PM
Surr: DNOP	93.2	69-147		%Rec	1	8/16/2023 10:22:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/16/2023 6:05:28 PM
Surr: BFB	94.8	15-244		%Rec	1	8/16/2023 6:05:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.017		mg/Kg	1	8/16/2023 6:05:28 PM
Toluene	ND	0.034		mg/Kg	1	8/16/2023 6:05:28 PM
Ethylbenzene	ND	0.034		mg/Kg	1	8/16/2023 6:05:28 PM
Xylenes, Total	ND	0.069		mg/Kg	1	8/16/2023 6:05:28 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/16/2023 6:05:28 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 6:45:32 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: FS-11

Project: Trunk A

Collection Date: 8/14/2023 10:15:00 AM

Lab ID: 2308873-011

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/16/2023 10:32:58 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2023 10:32:58 PM
Surr: DNOP	97.5	69-147		%Rec	1	8/16/2023 10:32:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/16/2023 6:52:45 PM
Surr: BFB	92.5	15-244		%Rec	1	8/16/2023 6:52:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.017		mg/Kg	1	8/16/2023 6:52:45 PM
Toluene	ND	0.033		mg/Kg	1	8/16/2023 6:52:45 PM
Ethylbenzene	ND	0.033		mg/Kg	1	8/16/2023 6:52:45 PM
Xylenes, Total	ND	0.067		mg/Kg	1	8/16/2023 6:52:45 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	8/16/2023 6:52:45 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 6:57:53 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2308873**

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: SW-01

Project: Trunk A

Collection Date: 8/14/2023 10:18:00 AM

Lab ID: 2308873-012

Matrix: MEOH (SOIL) **Received Date:** 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/16/2023 10:43:57 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/16/2023 10:43:57 PM
Surr: DNOP	98.9	69-147		%Rec	1	8/16/2023 10:43:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/16/2023 7:16:27 PM
Surr: BFB	93.5	15-244		%Rec	1	8/16/2023 7:16:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.018		mg/Kg	1	8/16/2023 7:16:27 PM
Toluene	ND	0.036		mg/Kg	1	8/16/2023 7:16:27 PM
Ethylbenzene	ND	0.036		mg/Kg	1	8/16/2023 7:16:27 PM
Xylenes, Total	ND	0.072		mg/Kg	1	8/16/2023 7:16:27 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	8/16/2023 7:16:27 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 7:10:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order **2308873**

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: SW-02

Project: Trunk A

Collection Date: 8/14/2023 10:21:00 AM

Lab ID: 2308873-013

Matrix: MEOH (SOIL) **Received Date:** 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/16/2023 10:54:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2023 10:54:50 PM
Surr: DNOP	96.0	69-147		%Rec	1	8/16/2023 10:54:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/16/2023 7:40:02 PM
Surr: BFB	93.1	15-244		%Rec	1	8/16/2023 7:40:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.016		mg/Kg	1	8/16/2023 7:40:02 PM
Toluene	ND	0.032		mg/Kg	1	8/16/2023 7:40:02 PM
Ethylbenzene	ND	0.032		mg/Kg	1	8/16/2023 7:40:02 PM
Xylenes, Total	ND	0.064		mg/Kg	1	8/16/2023 7:40:02 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	8/16/2023 7:40:02 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 7:22:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: SW-03

Project: Trunk A

Collection Date: 8/14/2023 10:24:00 AM

Lab ID: 2308873-014

Matrix: MEOH (SOIL) Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/16/2023 11:05:48 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2023 11:05:48 PM
Surr: DNOP	97.6	69-147		%Rec	1	8/16/2023 11:05:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/16/2023 8:03:36 PM
Surr: BFB	91.8	15-244		%Rec	1	8/16/2023 8:03:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.019		mg/Kg	1	8/16/2023 8:03:36 PM
Toluene	ND	0.038		mg/Kg	1	8/16/2023 8:03:36 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/16/2023 8:03:36 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/16/2023 8:03:36 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	8/16/2023 8:03:36 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 7:34:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC Client Sample ID: SW-04
Project: Trunk A Collection Date: 8/14/2023 10:27:00 AM
Lab ID: 2308873-015 Matrix: MEOH (SOIL) Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/16/2023 11:16:50 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/16/2023 11:16:50 PM
Surr: DNOP	101	69-147		%Rec	1	8/16/2023 11:16:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/16/2023 8:27:07 PM
Surr: BFB	94.2	15-244		%Rec	1	8/16/2023 8:27:07 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.017		mg/Kg	1	8/16/2023 8:27:07 PM
Toluene	ND	0.035		mg/Kg	1	8/16/2023 8:27:07 PM
Ethylbenzene	ND	0.035		mg/Kg	1	8/16/2023 8:27:07 PM
Xylenes, Total	ND	0.069		mg/Kg	1	8/16/2023 8:27:07 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	8/16/2023 8:27:07 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 8:11:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: SW-09

Project: Trunk A

Collection Date: 8/14/2023 10:42:00 AM

Lab ID: 2308873-020

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/17/2023 12:22:47 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2023 12:22:47 AM
Surr: DNOP	95.7	69-147		%Rec	1	8/17/2023 12:22:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	8/16/2023 10:47:58 PM
Surr: BFB	94.4	15-244		%Rec	1	8/16/2023 10:47:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.014		mg/Kg	1	8/16/2023 10:47:58 PM
Toluene	ND	0.028		mg/Kg	1	8/16/2023 10:47:58 PM
Ethylbenzene	ND	0.028		mg/Kg	1	8/16/2023 10:47:58 PM
Xylenes, Total	ND	0.055		mg/Kg	1	8/16/2023 10:47:58 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/16/2023 10:47:58 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	8/16/2023 9:13:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: SW-13

Project: Trunk A

Collection Date: 8/14/2023 10:54:00 AM

Lab ID: 2308873-024

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/17/2023 1:07:15 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/17/2023 1:07:15 AM
Surr: DNOP	92.6	69-147		%Rec	1	8/17/2023 1:07:15 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/16/2023 11:04:00 PM
Surr: BFB	103	15-244		%Rec	1	8/16/2023 11:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.015		mg/Kg	1	8/16/2023 11:04:00 PM
Toluene	ND	0.031		mg/Kg	1	8/16/2023 11:04:00 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/16/2023 11:04:00 PM
Xylenes, Total	ND	0.062		mg/Kg	1	8/16/2023 11:04:00 PM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	8/16/2023 11:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	8/16/2023 6:36:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: STP-2

Project: Trunk A

Collection Date: 8/14/2023 11:40:00 AM

Lab ID: 2308873-026

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/17/2023 1:29:45 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/17/2023 1:29:45 AM
Surr: DNOP	104	69-147		%Rec	1	8/17/2023 1:29:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/16/2023 11:48:00 PM
Surr: BFB	98.4	15-244		%Rec	1	8/16/2023 11:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.016		mg/Kg	1	8/16/2023 11:48:00 PM
Toluene	ND	0.033		mg/Kg	1	8/16/2023 11:48:00 PM
Ethylbenzene	ND	0.033		mg/Kg	1	8/16/2023 11:48:00 PM
Xylenes, Total	ND	0.066		mg/Kg	1	8/16/2023 11:48:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	8/16/2023 11:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	8/16/2023 7:01:20 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC

Client Sample ID: STP-3

Project: Trunk A

Collection Date: 8/14/2023 11:42:00 AM

Lab ID: 2308873-027

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/17/2023 1:41:00 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/17/2023 1:41:00 AM
Surr: DNOP	94.8	69-147		%Rec	1	8/17/2023 1:41:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/17/2023 12:31:00 AM
Surr: BFB	101	15-244		%Rec	1	8/17/2023 12:31:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.018		mg/Kg	1	8/17/2023 12:31:00 AM
Toluene	ND	0.036		mg/Kg	1	8/17/2023 12:31:00 AM
Ethylbenzene	ND	0.036		mg/Kg	1	8/17/2023 12:31:00 AM
Xylenes, Total	ND	0.072		mg/Kg	1	8/17/2023 12:31:00 AM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/17/2023 12:31:00 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	92	60		mg/Kg	20	8/16/2023 7:13:44 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum LLC

Client Sample ID: East

Project: Trunk A

Collection Date: 8/14/2023 11:46:00 AM

Lab ID: 2308873-029

Matrix: MEOH (SOIL)

Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/17/2023 2:03:22 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/17/2023 2:03:22 AM
Surr: DNOP	97.0	69-147		%Rec	1	8/17/2023 2:03:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/17/2023 1:14:00 AM
Surr: BFB	103	15-244		%Rec	1	8/17/2023 1:14:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.017		mg/Kg	1	8/17/2023 1:14:00 AM
Toluene	ND	0.034		mg/Kg	1	8/17/2023 1:14:00 AM
Ethylbenzene	ND	0.034		mg/Kg	1	8/17/2023 1:14:00 AM
Xylenes, Total	ND	0.068		mg/Kg	1	8/17/2023 1:14:00 AM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	8/17/2023 1:14:00 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	8/16/2023 7:38:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC Client Sample ID: South
Project: Trunk A Collection Date: 8/14/2023 11:48:00 AM
Lab ID: 2308873-030 Matrix: MEOH (SOIL) Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/17/2023 2:14:33 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/17/2023 2:14:33 AM
Surr: DNOP	98.1	69-147		%Rec	1	8/17/2023 2:14:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/17/2023 1:36:00 AM
Surr: BFB	95.7	15-244		%Rec	1	8/17/2023 1:36:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.016		mg/Kg	1	8/17/2023 1:36:00 AM
Toluene	ND	0.032		mg/Kg	1	8/17/2023 1:36:00 AM
Ethylbenzene	ND	0.032		mg/Kg	1	8/17/2023 1:36:00 AM
Xylenes, Total	ND	0.065		mg/Kg	1	8/17/2023 1:36:00 AM
Surr: 4-Bromofluorobenzene	93.2	39.1-146		%Rec	1	8/17/2023 1:36:00 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	8/16/2023 7:50:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2308873

Date Reported: 8/21/2023

CLIENT: Ensolum LLC Client Sample ID: West
Project: Trunk A Collection Date: 8/14/2023 11:50:00 AM
Lab ID: 2308873-031 Matrix: MEOH (SOIL) Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/17/2023 2:25:44 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2023 2:25:44 AM
Surr: DNOP	103	69-147		%Rec	1	8/17/2023 2:25:44 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/17/2023 1:58:00 AM
Surr: BFB	100	15-244		%Rec	1	8/17/2023 1:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.017		mg/Kg	1	8/17/2023 1:58:00 AM
Toluene	ND	0.035		mg/Kg	1	8/17/2023 1:58:00 AM
Ethylbenzene	ND	0.035		mg/Kg	1	8/17/2023 1:58:00 AM
Xylenes, Total	ND	0.070		mg/Kg	1	8/17/2023 1:58:00 AM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/17/2023 1:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	8/16/2023 8:28:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873
21-Aug-23

Client: Ensolum LLC
Project: Trunk A

Sample ID: MB-76907	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76907	RunNo: 99035								
Prep Date: 8/16/2023	Analysis Date: 8/16/2023	SeqNo: 3609562	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76907	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76907	RunNo: 99035								
Prep Date: 8/16/2023	Analysis Date: 8/16/2023	SeqNo: 3609563	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.2	90	110			

Sample ID: MB-76911	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76911	RunNo: 99040								
Prep Date: 8/16/2023	Analysis Date: 8/16/2023	SeqNo: 3610115	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76911	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76911	RunNo: 99040								
Prep Date: 8/16/2023	Analysis Date: 8/16/2023	SeqNo: 3610116	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873

21-Aug-23

Client: Ensolum LLC

Project: Trunk A

Sample ID: 2308873-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: FS-01	Batch ID: 76899	RunNo: 99037
Prep Date: 8/16/2023	Analysis Date: 8/17/2023	SeqNo: 3609645 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	41	9.1 45.75 0 88.9 54.2 135
Surr: DNOP	4.2	4.575 91.6 69 147

Sample ID: 2308873-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: FS-01	Batch ID: 76899	RunNo: 99037
Prep Date: 8/16/2023	Analysis Date: 8/17/2023	SeqNo: 3609646 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	44	9.5 47.35 0 93.0 54.2 135 8.01 29.2
Surr: DNOP	4.5	4.735 94.0 69 147 0 0

Sample ID: 2308873-021AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: SW-10	Batch ID: 76900	RunNo: 99037
Prep Date: 8/16/2023	Analysis Date: 8/17/2023	SeqNo: 3609668 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	43	9.4 46.99 0 91.8 54.2 135
Surr: DNOP	4.5	4.699 95.9 69 147

Sample ID: 2308873-021AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: SW-10	Batch ID: 76900	RunNo: 99037
Prep Date: 8/16/2023	Analysis Date: 8/17/2023	SeqNo: 3609669 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	42	9.4 46.86 0 88.7 54.2 135 3.72 29.2
Surr: DNOP	4.3	4.686 92.5 69 147 0 0

Sample ID: LCS-76899	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 76899	RunNo: 99037
Prep Date: 8/16/2023	Analysis Date: 8/16/2023	SeqNo: 3609682 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	46	10 50.00 0 92.8 61.9 130
Surr: DNOP	4.8	5.000 96.3 69 147

Sample ID: LCS-76900	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 76900	RunNo: 99037
Prep Date: 8/16/2023	Analysis Date: 8/16/2023	SeqNo: 3609683 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873

21-Aug-23

Client: Ensolum LLC

Project: Trunk A

Sample ID: LCS-76900	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 76900		RunNo: 99037							
Prep Date: 8/16/2023	Analysis Date: 8/16/2023		SeqNo: 3609683		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.9	61.9	130			
Surr: DNOP	4.7		5.000		93.8	69	147			

Sample ID: MB-76899	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 76899		RunNo: 99037							
Prep Date: 8/16/2023	Analysis Date: 8/16/2023		SeqNo: 3609686		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.7	69	147			

Sample ID: MB-76900	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 76900		RunNo: 99037							
Prep Date: 8/16/2023	Analysis Date: 8/16/2023		SeqNo: 3609687		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.1	69	147			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873

21-Aug-23

Client: Ensolum LLC

Project: Trunk A

Sample ID: 2.5ug gro lcs	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: GS99012			RunNo: 99012						
Prep Date:	Analysis Date: 8/16/2023			SeqNo: 3608585		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.2	70	130			
Surr: BFB	2000		1000		198	15	244			

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: GS99012			RunNo: 99012						
Prep Date:	Analysis Date: 8/16/2023			SeqNo: 3608602		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.1	15	244			

Sample ID: 2308873-001ams	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: FS-01	Batch ID: GS99012			RunNo: 99012						
Prep Date:	Analysis Date: 8/16/2023			SeqNo: 3609004		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	3.1	15.64	0	87.4	70	130			
Surr: BFB	1200		625.4		191	15	244			

Sample ID: 2308873-001amsd	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: FS-01	Batch ID: GS99012			RunNo: 99012						
Prep Date:	Analysis Date: 8/16/2023			SeqNo: 3609005		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	3.1	15.64	0	87.0	70	130	0.459	20	
Surr: BFB	1200		625.4		196	15	244	0	0	

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: G99010			RunNo: 99010						
Prep Date:	Analysis Date: 8/16/2023			SeqNo: 3609036		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	15	244			

Sample ID: 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: G99010			RunNo: 99010						
Prep Date:	Analysis Date: 8/16/2023			SeqNo: 3609119		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873

21-Aug-23

Client: Ensolum LLC

Project: Trunk A

Sample ID: 2.5UG GRO LCS		SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS		Batch ID: G99010			RunNo: 99010						
Prep Date:		Analysis Date: 8/16/2023			SeqNo: 3609119		Units: mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		23	5.0	25.00	0	91.6	70	130			
Surr: BFB		2200		1000		219	15	244			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873

21-Aug-23

Client: Ensolum LLC

Project: Trunk A

Sample ID: 100ng btex lcs	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: BS99012		RunNo: 99012							
Prep Date:	Analysis Date: 8/16/2023		SeqNo: 3608586		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	70	130			
Toluene	1.1	0.050	1.000	0	107	70	130			
Ethylbenzene	1.1	0.050	1.000	0	107	70	130			
Xylenes, Total	3.3	0.10	3.000	0	109	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	39.1	146			

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: BS99012		RunNo: 99012							
Prep Date:	Analysis Date: 8/16/2023		SeqNo: 3608603		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	39.1	146			

Sample ID: 2308873-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: FS-02	Batch ID: BS99012		RunNo: 99012							
Prep Date:	Analysis Date: 8/16/2023		SeqNo: 3609006		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.018	0.7220	0	104	70	130			
Toluene	0.75	0.036	0.7220	0	105	70	130			
Ethylbenzene	0.76	0.036	0.7220	0	105	70	130			
Xylenes, Total	2.3	0.072	2.166	0	105	70	130			
Surr: 4-Bromofluorobenzene	0.77		0.7220		107	39.1	146			

Sample ID: 2308873-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: FS-02	Batch ID: BS99012		RunNo: 99012							
Prep Date:	Analysis Date: 8/17/2023		SeqNo: 3609007		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.018	0.7220	0	101	70	130	2.95	20	
Toluene	0.73	0.036	0.7220	0	101	70	130	2.97	20	
Ethylbenzene	0.75	0.036	0.7220	0	104	70	130	0.631	20	
Xylenes, Total	2.3	0.072	2.166	0	105	70	130	0.200	20	
Surr: 4-Bromofluorobenzene	0.80		0.7220		110	39.1	146	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2308873
21-Aug-23

Client: Ensolum LLC
Project: Trunk A

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: R99010	RunNo: 99010								
Prep Date:	Analysis Date: 8/16/2023	SeqNo: 3609103	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	39.1	146			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: R99010	RunNo: 99010								
Prep Date:	Analysis Date: 8/16/2023	SeqNo: 3609118	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	70	130			
Toluene	0.94	0.050	1.000	0	93.5	70	130			
Ethylbenzene	0.96	0.050	1.000	0	95.8	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.6	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	39.1	146			

Qualifiers:

*

Value exceeds Maximum Contaminant Level.

D

Sample Diluted Due to Matrix

H

Holding times for preparation or analysis exceeded

ND

Not Detected at the Reporting Limit

PQL

Practical Quantitative Limit

S

% Recovery outside of standard limits. If undiluted results may be estimated.

B

Analyte detected in the associated Method Blank

E

Above Quantitation Range/Estimated Value

J

Analyte detected below quantitation limits

P

Sample pH Not In Range

RL

Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Ensolum LLC

Work Order Number: 2308873

RcptNo: 1

Received By: Tracy Casarrubias 8/16/2023 7:40:00 AM

Completed By: Tracy Casarrubias 8/16/2023 8:14:44 AM

Reviewed By: *m8/16/23*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *SCM 08/16/23*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Yes	Yogi		



APPENDIX F

Previous Report(s)

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Enterprise Field Services LLC	Contact Alena Miro
PO Box 4324, Houston, TX 77210	Telephone No. 575-628-6802
Facility Name Pipeline ROW, Trunk A	Facility Type: Gas Gathering Pipeline
Surface Owner BLM	Mineral Owner NA - Pipeline
	Lease No. NA

LOCATION OF RELEASE

Unit Letter H	Section 17	Township 23S	Range 31E	Feet from the 200	North/South Line North	Feet from the 200	East/West Line East	County Eddy
-------------------------	----------------------	------------------------	---------------------	-----------------------------	----------------------------------	-----------------------------	-------------------------------	-----------------------

Latitude: N 32.307411 Longitude: W -103.792007

NATURE OF RELEASE

Type of Release Natural Gas and pipeline liquid	Volume of Release: 296 MCF gas/ 10 bbl liquids	Volume Recovered: N/A
Source of Release Pipeline Leak	Date and Hour of Occurrence 6/30/2016 @ 12:30 MST	Date and Hour of Discovery 6/30/2016 @ 12:30 MST
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

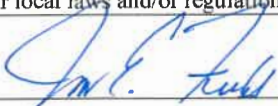
Natural gas and pipeline liquid was released due to a pipeline leak. Pipeline segment was isolated, blown down, and repaired following standard one-call. Approximately 10 bbls of liquid was released.

Describe Area Affected and Cleanup Action Taken.*

A liquid spill of approximately 10bbls of pipeline liquids occurred as part of the leak. All liquids were confined to the right of way. Remediation actions followed the Enterprise Products, General Release Notification, Response and Remediation Plan (March 9, 2015) as demonstrated in the attached remediation plan.

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

OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:	
Printed Name: Jon E. Fields	Approval Date:	Ex piration Date:
Title: Director, Field Environmental	Conditions of Approval:	
E-mail Address: jefields@eprod.com	Attached <input type="checkbox"/>	
Date: 5-9-19 Phone: 713-381-6684		

* Attach Additional Sheets If Necessary



CORRECTIVE ACTION REPORT

Property:

Trunk A Release
32.307411 N, 103.792007
SE¼ NE ¼, S17 T23S R31E
Eddy County, New Mexico
NMOCD RP# 2RP-3764

March 28, 2017
Apex Project No. 725010112223

Prepared for:

Enterprise Field Services LLC
PO Box 4324
Houston, TX 77210
Attn: Ms. Alena Miro

Prepared by:

A handwritten signature in blue ink, appearing to read 'Karolanne Toby'.

Karolanne Toby
Project Manager

A handwritten signature in blue ink, appearing to read 'Liz Scaggs'.

Liz Scaggs, P.G.
Division Manager

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Appendix C:	Photos
Appendix D:	Soil Boring Log
Appendix E:	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F:	NMOCD C-141 Documentation
Appendix G:	Waste Disposal Tickets



CORRECTIVE ACTION REPORT

Trunk A Release

32.307411 N, 103.792007
SE¼ NE ¼, S17 T23S R31E
Eddy County, New Mexico
NMOCD RP# 2RP-3764

Apex Project No. 725010112223

1.0 INTRODUCTION

1.1 Site Description & Background

The Trunk A release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the southeast (SE) ¼ of the northeast (NE) ¼ of Section 17 in Township 23 South and Range 31 East in Eddy County, New Mexico, (32.307411, 103.792007) referred to hereinafter as the "Site". The Site is located on property owned by the Bureau of Land Management (BLM) and is surrounded by native vegetation range land and oil and gas production with adjacent gathering facilities, including the Enterprise Trunk A natural gas gathering pipeline (Trunk A line) which traverses the area from northwest to southeast.

On June 30, 2016, Enterprise was notified of a release on the Trunk A natural gas pipeline. Immediate response action commenced in accordance with the Enterprise *General Release Notification, Response and Remediation Plan* (dated March 2015). Enterprise isolated the leaking portion, and the pipeline section was shut down to carry out repair activities. Approximately 10 barrels (bbls) of natural gas pipeline liquids (NGPL) were released from the pipeline and impacted surface soils in the vicinity of the release point. Under the supervision of Enterprise personnel, stained soil was excavated by NMR Pipeline, LLC (NMR). Remediation activities were initiated after Enterprise received notification of the release.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

The objectives of Apex TITAN, Inc. (Apex's) scope of services were to:

- 1) Conduct field observations during response action activities utilizing visual and olfactory evidence of impairment to evaluate the potential presence and extent of NGPL of impacted on-Site soils.
- 2) Collect soil samples from the release point and excavation areas based on visual and olfactory evidence of impairment for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO), and chloride.

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex utilized information available from the Office of the New Mexico Office of the State Engineer (OSE) online database to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	10
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	0
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			10

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "10". This ranking is based on the following:

- The approximate depth to the initial groundwater-bearing zone is between 50 and 99 feet at the Site.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site.
- The distance to the nearest surface water body is greater than 1,000 feet.

Based on a Total Ranking Score of "10", the recommended COC concentrations for soils remaining in place include:

- 10 milligrams per Kilogram (mg/Kg) for benzene;
- 50 mg/Kg for total BTEX;
- 1,000 mg/Kg for combined TPH GRO and DRO; and
- 500 mg/Kg for chloride, unless background soil samples demonstrate naturally occurring elevated chloride concentrations.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On June 30, 2016, Enterprise was notified of a release on the Enterprise Trunk A natural gas pipeline. Enterprise isolated the leaking portion and the pipeline section was shut down to carry out repair activities. An estimated 10 bbls of NGPL was released from the pipeline within the ROW and impacted surface soils in the vicinity of the release point. Enterprise submitted an initial C-141 form to the NMOCD on July 1, 2016, noting the volume of the pipeline liquids release was estimated at approximately 10 bbls. The C-141 form are provided in Appendix F.

Ms. Alena Miro, Enterprise Field Services, LLC
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Trunk A Release

March 28, 2017

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The initial excavation activities to replace the leaking portion of the pipeline were carried out during July 2016 by NMR. Excavation activities resumed on November 14, 2016, to over excavate, remove impacted material and collect confirmation soil samples from the excavation sidewalls and floor. Apex was present during this time to provide excavation oversight and collect soil samples for laboratory analysis. Impacted soil was removed from below and surrounding the release point on the Trunk A line. Based on Apex's field screening data generated during field activities, the northwest portion of the excavation floor, directly under the release point, was potholed utilizing heavy equipment to 20 feet bgs. Final exaction dimensions were approximately 60 feet long by 15 feet to 20 feet wide, with an approximate depth ranging from five (5) feet to 20 feet bgs.

Impacted soil was staged into one (1) stockpile on Site. The stockpile on-Site was transported to a state approved disposal facility, Lea Land Disposal Facility (Lea Land), located in Eunice, New Mexico. Approximately 48.6 cubic yards of stockpiled soil was transported and disposed of. The excavation was backfilled with non-impacted clean fill material purchased from Lea Land, and was contoured to approximate surface grade. Waste disposal tickets are provided in Appendix G.

3.2 Soil Boring Installation

A remediation plan was submitted by Apex to Enterprise for approval on December 19, 2016. The scope of work detailed in the remediation plan was to backfill the existing excavation with clean fill material and install one (1) soil boring in the vicinity of the release point to define the extent of vertical impact to soil due to the NGPL release. The proposed scope of work was based on Apex's review of the previous laboratory analytical results indicating impacted soil remaining in the excavation. The remediation plan was approved by the Enterprise on January 3, 2017, with the understanding that Enterprise would remove the clean fill material from the excavation if laboratory analysis associated with samples collected from the boring indicated elevated benzene, total BTEX, TPH GRO/DRO and/or chloride concentrations.

On January 24, 2017, Apex, Enterprise and Talon LPE (Talon) mobilized to the Site to install one (1) soil boring (SB-1) approximately eight (8) lateral feet in the southwest direction from the release point on the Trunk A line. Talon and Enterprise utilized a line finder to locate the line prior to the soil boring advancement. The soil boring was advanced on-Site utilizing a Geoprobe® drilling rig under the supervision of the a State of New Mexico licensed driller to a total depth of 30 feet bgs. The sampling equipment was decontaminated by high pressure cleaning prior to soil boring installation. Groundwater was not encountered during drilling activities. A soil boring log for soil boring SB-1 is provided in Appendix D

3.3 Soil Sampling Program

Apex's soil sampling program consisted of collecting confirmation soil samples from the on-Site excavation and soil samples from soil boring SB-1 subsequent to the excavation backfill. Soil samples were observed to document lithology, color, moisture content, and visual and olfactory evidence of petroleum hydrocarbon. Upon retrieval of each core barrel from the borehole, each soil sample was immediately divided into portions designated for field screening or laboratory analysis. Field headspace analysis was conducted by placing the portion of the soil sample designated for field screening into a plastic Ziploc® bag. The plastic bag was sealed and then placed in a warm area to promote volatilization. The air above the sample, the headspace, was then evaluated using a photoionization detector (PID), an instrument capable of detecting the presence of volatile organic compounds (VOCs). The PID was calibrated utilizing an isobutylene standard prior to use in the field.

On November 14, 2016, Apex collected eight (8) confirmation soil samples (CS-1 through CS-8) at the Site from each wall of the excavation and areas along the excavation floor, including directly under the point of release on the Trunk A line. The confirmation soil samples (CS-1

Ms. Alena Miro, Enterprise Field Services, LLC
Corrective Action Report
Trunk A Release

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through CS-4) were collected from the northwest portion of the excavation near the release point from approximate depths ranging from 15 to 20 feet bgs. The confirmation soil samples (CS-5 through CS-8) were collected from the southeast region of the excavation from approximate depths ranging from four (4) to five (5) feet bgs.

On January 24, 2017, Apex collected soil samples continuously from every one (1) foot interval from soil boring SB-1 utilizing a core barrel sampler to the termination depth of 30 feet bgs, or probe refusal due to coarse sandstone. Apex submitted soil samples for laboratory analysis from the shallowest native soil (SB-1 20'–21') and the depth interval from 27 to 28 feet bgs (SB-1 27'–28'). The remainder of the soil samples were placed on hold at the laboratory pending initial analytical results.

Soil samples were collected in laboratory supplied glass containers, cooled to approximately 4°C, and transported under proper chain-of-custody procedures and documentation. Soil samples were submitted for analysis under chain-of-custody control to Xenco Laboratories in Midland, Texas. Soil samples were analyzed for TPH GRO/DRO utilizing Environmental Protection Agency (EPA) Method 8015B, BTEX utilizing EPA Method 8021B and chloride utilizing method EPA 300.

Executed chain-of-custody forms and laboratory data sheets are provided in Appendix E. All samples were analyzed within specified holding times.

Figure 3 (Appendix A) is a Site Map that indicates the approximate location of the excavated area, the soil boring, and the stockpile in relation to pertinent land features.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Remediation Plan*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Excavation Confirmation Soil Samples

Apex compared the benzene, total BTEX, TPH GRO/DRO and chloride concentrations associated with the confirmation soil samples collected from the excavation at the Site to the OCD *Recommended Remediation Action Levels* (RRALs) for sites having a total ranking score of "10".

Benzene

Confirmation soil samples (CS-1, and CS-4 through CS-8) collected from the excavation sidewalls and floor at the Site indicated benzene concentrations ranging from below the laboratory reporting limits to 6.7 mg/Kg, which are below the OCD RRAL of 10 mg/Kg for a Site Ranking of "10".

Confirmation soil samples (CS-2 and CS-3) indicated benzene concentrations of 15.3 mg/Kg and 11.2 mg/Kg, respectively, which are above the OCD RRAL of 10 mg/Kg for a Site Ranking of "10".

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Total BTEX

Confirmation soil samples (CS-4 through CS-8) indicated total BTEX concentrations ranging from below the laboratory reporting limits to 19.6 mg/Kg, which are below the OCD RRAL of 50 mg/Kg for a Site Ranking of "10".

Confirmation soil samples (CS-1 through CS-3) indicated total BTEX concentrations ranging from 60.1 mg/Kg to 99.1 mg/Kg, which are above the OCD RRAL of 50 mg/Kg for a Site Ranking of "10".

TPH

Confirmation soil samples (CS-4 through CS-8) indicated combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 781 mg/Kg, which are below the OCD RRAL of 1,000 mg/Kg for a Site Ranking of "10".

Confirmation soil samples (CS-1 through CS-3) indicated combined TPH GRO/DRO concentrations ranging from 1,360 mg/Kg to 2,170 mg/Kg, which are above the OCD RRAL of 1,000 mg/Kg for a Site Ranking of "10".

Chloride

Confirmation soil samples (CS-2 through CS-8) indicated chloride concentrations ranging from 5.56 mg/Kg to 253 mg/Kg, which are below the OCD RRAL of 500 mg/Kg for a Site Ranking of "10".

Confirmation soil sample CS-1 indicated a chloride concentrations of 617 mg/Kg, which is above the OCD RRAL of 500 mg/Kg for a Site Ranking of "10".

4.2 Soil Boring Samples

Benzene

Soil boring samples (SB-1 20'-21' and SB-1 27'-28') indicated benzene concentrations below the laboratory reporting limits, which are below the OCD RRAL of 10 mg/Kg for a Site Ranking of "10".

Total BTEX

Soil boring samples (SB-1 20'-21' and SB-1 27'-28') indicated total BTEX concentrations below the laboratory reporting limits, which are below the OCD RRAL of 50 mg/Kg for a Site Ranking of "10".

TPH

Soil boring samples (SB-1 20'-21' and SB-1 27'-28') indicated combined TPH GRO/DRO concentrations of 20.4 mg/Kg and 12.1 mg/Kg, respectively, which are below the OCD RRAL of 1,000 mg/Kg for a Site Ranking of "10".

Chloride

Soil boring samples (SB-1 20'-21' and SB-1 27'-28') indicated chloride concentrations of 27.8 mg/Kg and 37.1 mg/Kg, respectively, which are below the OCD RRAL of 500 mg/Kg for a Site Ranking of "10".

Laboratory analytical results are summarized in the table included in Appendix B. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix E.

5.0 FINDINGS AND RECOMMENDATIONS

The Trunk A release site is located within the Enterprise pipeline ROW in the SE ¼ of the NE ¼ of Section 17 in Township 23 South and Range 31 East in Eddy County, New Mexico (32.307411, 103.792007). The Site is located on property owned by the BLM and is surrounded by native vegetation range land and oil and gas production with adjacent gathering facilities, including the Enterprise Trunk A line.

On June 30, 2016, Enterprise was notified of a release on the Trunk A natural gas pipeline. Immediate response action commenced in accordance with the Enterprise *General Release Notification, Response and Remediation Plan* (dated March 2015). Enterprise isolated the leaking portion, and the pipeline section was shut down to carry out repair activities. Approximately 10 bbls of NGPL were released from the pipeline and impacted surface soils near the release point. Under the supervision of Enterprise personnel, stained soil was excavated by NMR. Remediation activities were initiated after Enterprise received notification of the release.

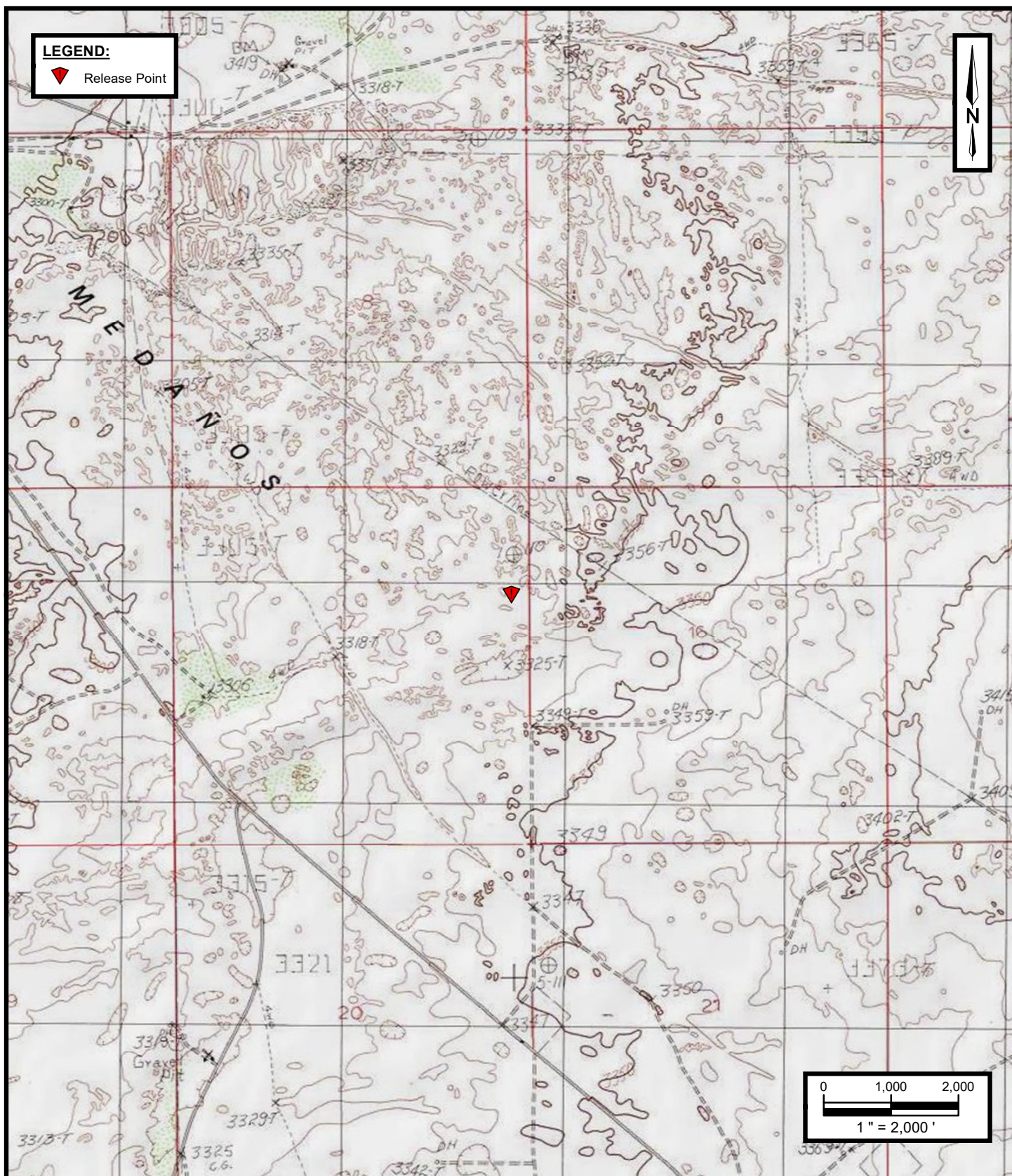
- The primary objective of the corrective actions was to evaluate the presence, magnitude and extent of COCs in the soil affected by the release of NGPL from the Trunk A line.
- On-Site remediation included excavation of the affected area impacted by the release of NGPL, starting from the release point. The final excavated area measured approximately 60 feet long by 15 feet wide, with an approximate depth of 20 feet at the release point.
- Impacted soil was excavated and staged into one (1) stockpile on-Site. The stockpile transported off-Site for disposal to Lea Landfill, in Eunice, New Mexico. The excavation was backfilled with non-impacted clean fill material and returned to approximate grade.
- Based on initial analytical results, one (1) soil boring (SB-1) was installed in the vicinity of the release point on the Trunk A line to determine the vertical depth of NGPL impact to soils. Two (2) soil samples, collected from the from the shallowest native soil (SB-1 20'-21') and the depth interval from 27 to 28 feet bgs (SB-1 27'-28'), were submitted for laboratory analysis. The remainder of the samples were placed on hold pending laboratory analytical results.
- The soils remaining in place near the release point on the Trunk A line exhibit benzene, total BTEX, combined TPH GRO/DRO and/or chloride concentrations above the OCD RRALs for a Site Ranking of "10". However, based on the sample results from soil boring SB-1, the maximum depth of the exceeding concentrations is above 21' feet bgs. Based on water well data within three (3) miles of the area, the approximate depth to the initial groundwater-bearing zone is approximately 85 feet or greater at the Site. Therefore, based on the soil sample results from the soil boring and the approximate depth to groundwater, it can be assumed that the COC concentrations in the soils left in place above 21 feet bgs will not impact groundwater at the Site.

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



APPENDIX A

Figures

**Enterprise Field Services, LLC****Trunk A Release**

Section 17, Township 23 South, Range 31 East
Eddy County, New Mexico
32.307411 N, 103.792007 W

Project No. 725010112223

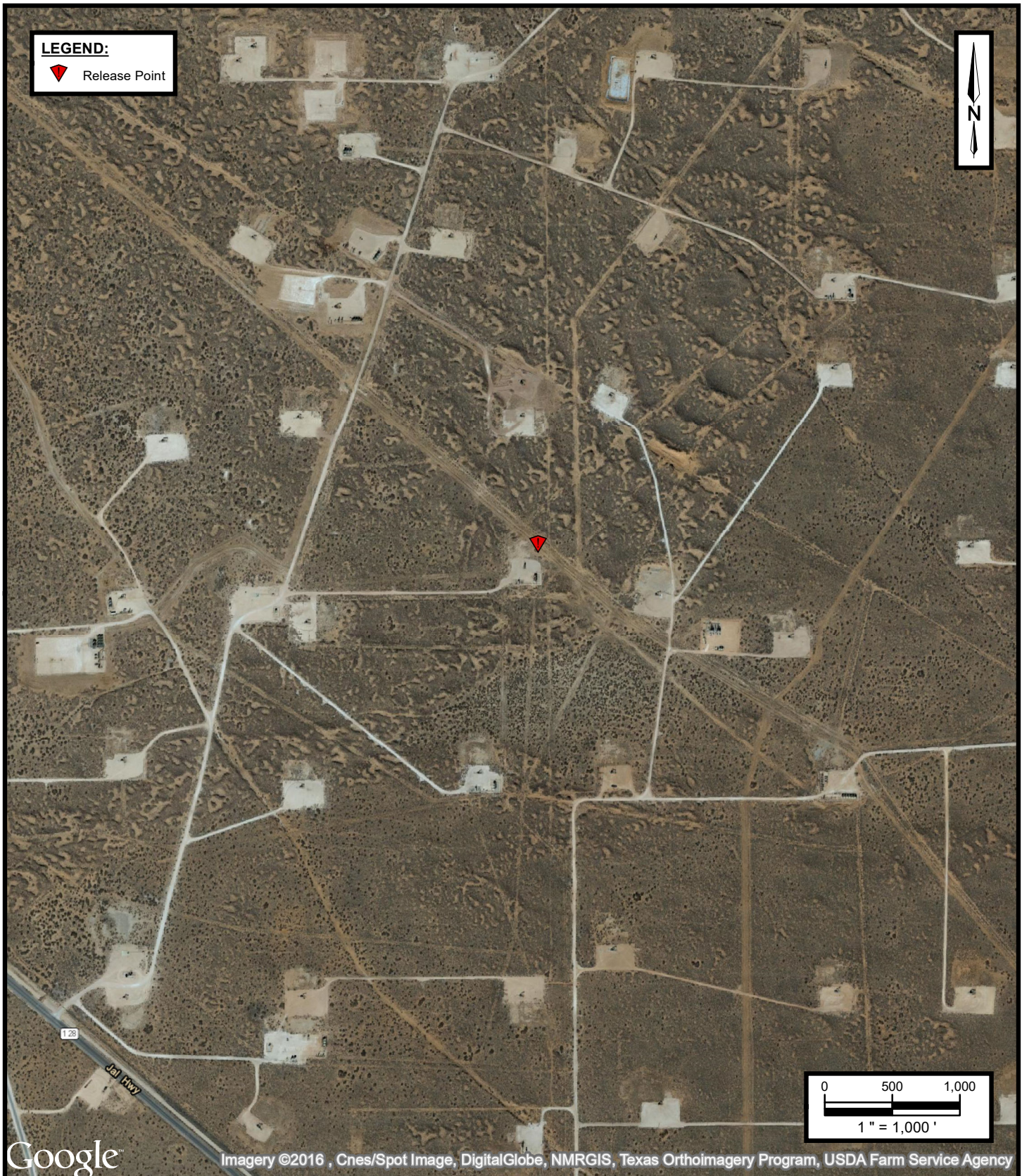
**Apex TITAN, Inc.**

12100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com

A Subsidiary of Apex Companies, LLC

FIGURE 1**Topographic Map****Service Layer Credits:**

Copyright © 2013 National Geographic Society, i-cubed, Los
Medanos New Mexico 7.5-Minute Quadrangle 1985



Enterprise Field Services, LLC
Trunk A Release
 Section 17, Township 23 South, Range 31 East
 Eddy County, New Mexico
 32.307411 N, 103.792007 W

Project No. 725010112223



Apex TITAN, Inc.

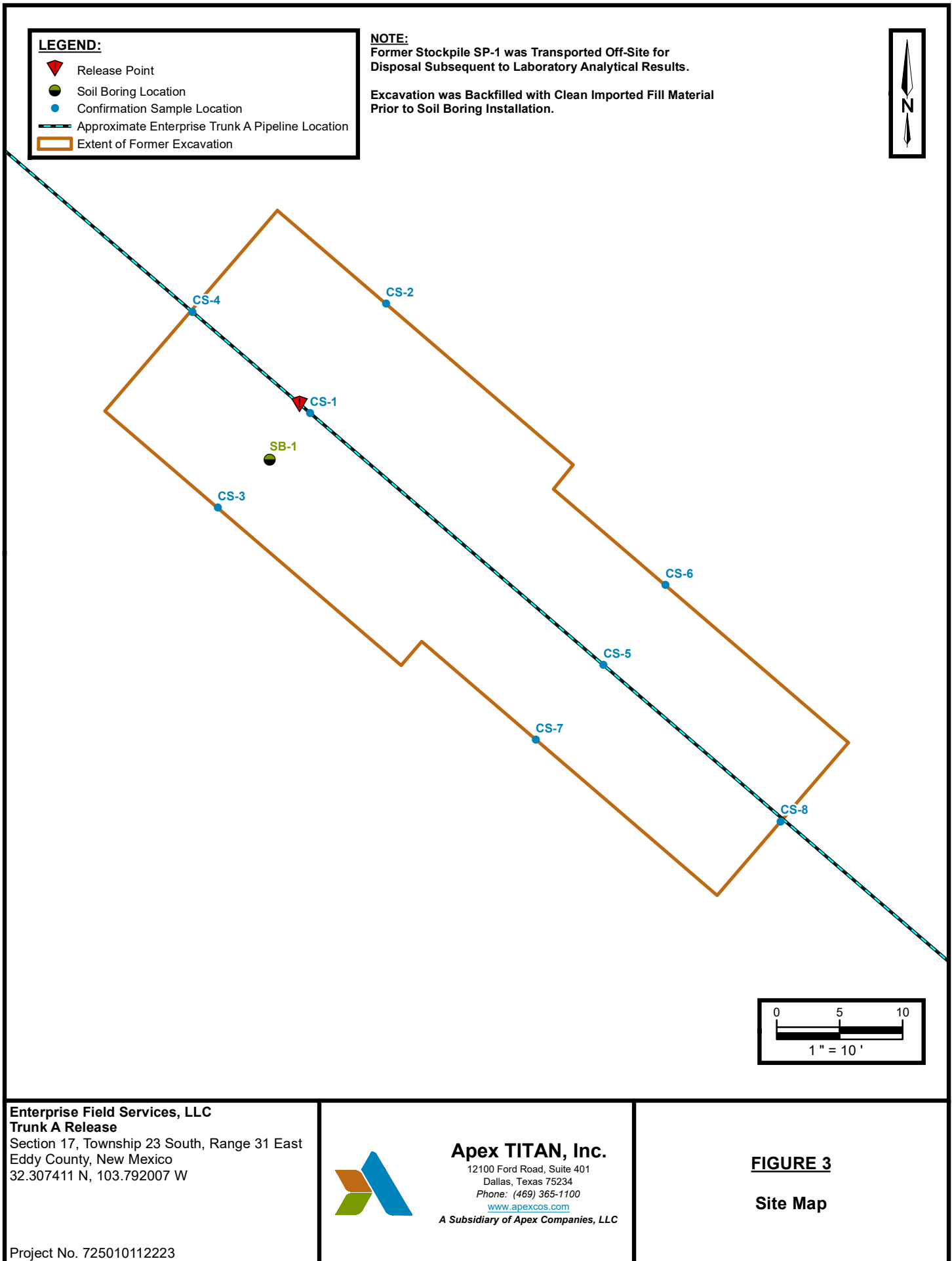
12100 Ford Road, Suite 401
 Dallas, Texas 75234
 Phone: (469) 365-1100
www.apexcos.com

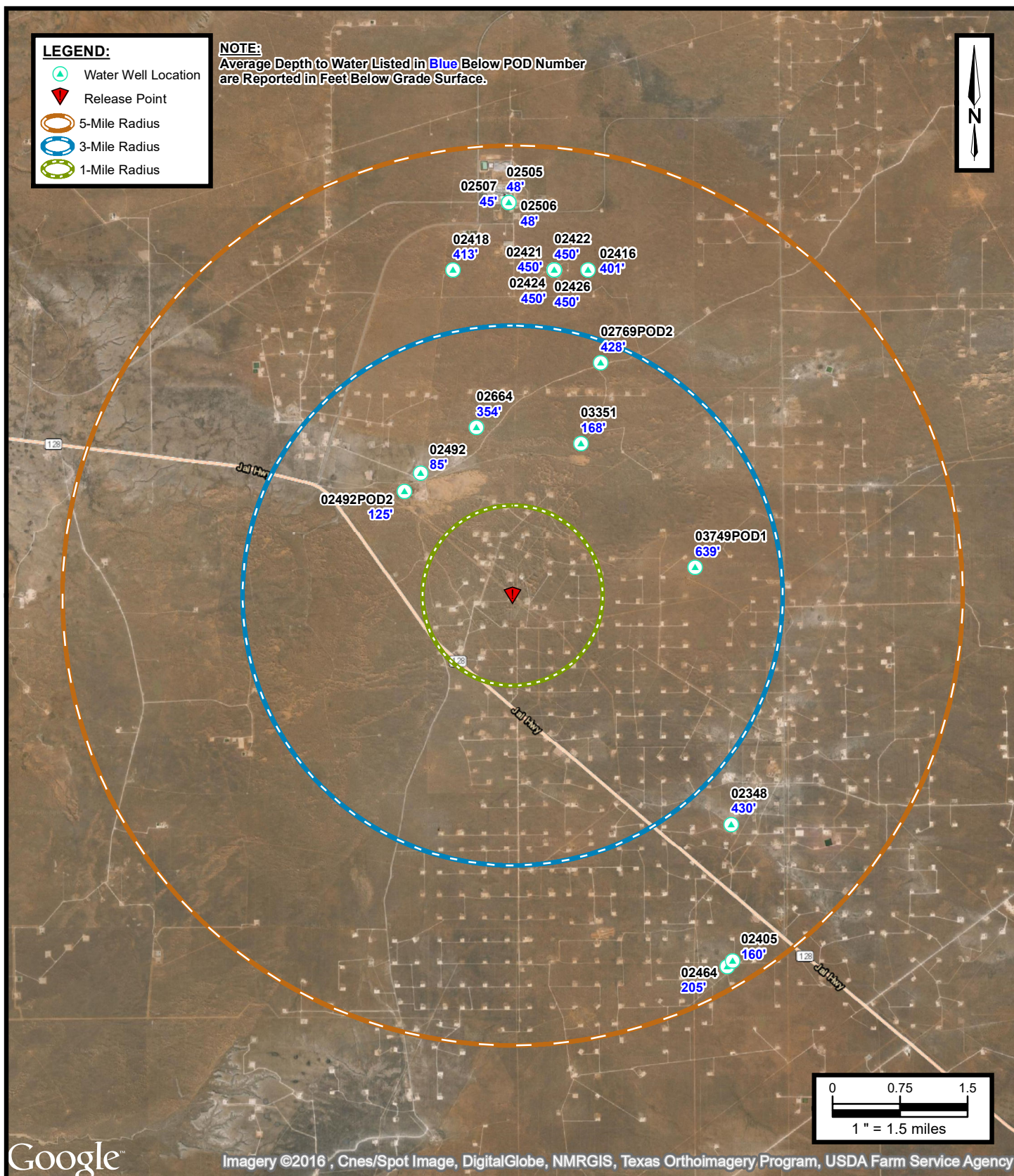
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FIGURE 2

Site Vicinity Map

Service Layer Credits:
 Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap
 contributors, Aerial Photograph February 2014





Enterprise Field Services, LLC
Trunk A Release
 Section 17, Township 23 South, Range 31 East
 Eddy County, New Mexico
 32.307411 N, 103.792007 W

Project No. 725010112223



Apex TITAN, Inc.

12100 Ford Road, Suite 401
 Dallas, Texas 75234
 Phone: (469) 365-1100
www.apexcos.com

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FIGURE 4

Water Well Radius Map

Service Layer Credits:
 Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap
 contributors, Aerial Photograph February 2014, Well Locations
 New Mexico Office of the State Engineer October 2016 Database



APPENDIX B

Tables



TABLE 1

SOIL ANALYTICAL RESULTS
Trunk A Release

Sample I.D.	Sample Date	Sample Depth (feet BGS)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO/DRO (mg/Kg)	Chloride (mg/Kg)
New Mexico Oil Conservation Division (NMOCD) Recommended Remediation Action Levels (RRALs) (Total Ranking Score: 10)											
New Mexico Oil Conservation Division (NMOCD) Recommended Remediation Action Level			10	NE	NE	NE	50	NE	NE	1,000	500
EXCAVATION CONFIRMATION SAMPLE RESULTS											
CS-1	11/14/2016	20	6.7	26.4	5.97	23.9	63	2,110	64.7	2,170	617
CS-2	11/14/2016	15	15.3	46.9	7.95	28.9	99.1	2,020	56.2	2,080	253
CS-3	11/14/2016	15	11.2	28.4	4.07	16.4	60.1	1,320	40.9	1,360	64.5
CS-4	11/14/2016	15	1.91	9.75	1.77	6.17	19.6	755	25.6	781	83.4
CS-5	11/14/2016	5	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	<15.0	<15.0	<15.0	11.7
CS-6	11/14/2016	4	<0.00149	0.00339	<0.00199	<0.00199	0.00339	<15.0	<15.0	<15.0	5.56
CS-7	11/14/2016	4	<0.00150	<0.00200	<0.00200	<0.00200	<0.00150	<15.0	<15.0	<15.0	5.84
CS-8	11/14/2016	4	<0.00149	<0.00198	<0.00198	<0.00198	<0.00149	<15.0	<15.0	<15.0	9.89
SOIL BORING SAMPLE RESULTS											
SB-1	1/24/2017	20 - 21	<0.000655	<0.00105	<0.000958	<0.00125	<0.000655	<7.99	20.4	20.4	27.8
		27 - 28	<0.000334	<0.000535	<0.000488	<0.000636	<0.000334	12.1	<8.12	12.1	37.1

Note: Concentrations in **bold** and yellow exceed the applicable OCD Remediation Action Level

mg/Kg- milligrams per Kilogram

NE - Not Established

bgs - below ground surface

TPH - Total Percent Hydrocarbons

GRO - Gasoline Range Organics

DRO - Diesel Range Organics



APPENDIX C

Photo Documentation



View of initial excavation activities, facing northwest.



View of excavation and stockpiled soils, facing northwest.



Close up view of potholed section of excavation, facing northwest.



Close up view of pipeline in excavation, facing northeast.



View of backfilled excavation prior to soil boring installation, facing northeast.




View of soil boring (SB-1) installation near release point on Enterprise Trunk A pipeline, facing northwest.



APPENDIX D

Soil Boring Log

 Apex TITAN, Inc. 12100 Ford Road, Suite 401 Dallas, Texas 75234 Phone: (469) 365-1100 www.apexcos.com A Subsidiary of Apex Companies, LLC				Enterprise Field Services, LLC Trunk A Release Section 17, Township 23 South, Range 31 East Eddy County, New Mexico 32.307411 N, 103.792007 W Project No. 725010112223				Soil Boring SB-1	
Date Sampled: <u>1/24/2017</u> Drilled by: <u>Talon LPE</u> Driller: <u>Ronnie Rodriguez</u> Logged by: <u>K. Toby</u> Sampler: <u>K. Toby</u> Project Manager: <u>K. Toby</u>				Ground Surface Elevation: <u>N/A</u> Top of Casing Elevation: <u>N/A</u> North Coordinate: <u>N/A</u> West Coordinate: <u>N/A</u> Bench Mark Elevation: <u>N/A</u> Groundwater Depth Observed During Drilling: <u>▽</u>				Borehole Diameter: <u>2"</u> Casing Diameter: <u>N/A</u> Well Materials: <u>N/A</u> Surface Completion: <u>N/A</u> Boring Method: <u>Geoprobe</u>	
Depth (Feet BGS)	Sample Interval	Sample ID	Recovery (%)	PID Value (ppm)	Groundwater Elevation	Geologic Symbol	Geologic Description	Boring/Well Completion (Graphic Depiction)	
0							FILL, Sandy Loam, White/Tan, with Caliche Top Layer. Clean Purchased Fill Material		
5									
10									
15									
20				5.2			SILTY SAND, Brown, Medium to Coarse Grained, Friable, Dry, No Hydrocarbon Odor		
				0.6			-Becoming White/Tan, with Trace 0.25" Clay Nodules at 22 Feet BGS		
				0.2					
				0.0					
25				1.1			-Slight Hydrocarbon Odor from 24 to 25 Feet BGS		
				0.7			-with Hard 0.5" to 1.0" Caliche Nodules at 25.5 Feet BGS		
				0.8					
				0.4					
				1.0					
30				11.1			Refusal at 30 Feet BGS in SANDSTONE, Brown/Tan, Cemented, Coarse Grained, Slightly Moist, No Hydrocarbon Odor		
35									
40									
45									
50									

Z:\Dallas South\Drafting\2016\725010112223\Boring Logs.dwg Modified 1/30/2017 by JSimpson



APPENDIX E

Laboratory Analytical Reports & Chain of Custody Documentation

Analytical Report 540326

for
APEX/Titan

Project Manager: Karolanne Toby

Trunk A

725010112223

16-NOV-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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Chain of Custody	19
Sample Receipt Conformance Report	21



16-NOV-16

Project Manager: **Karolanne Toby**

APEX/Titan

505 N. Big Spring Ste. 301 A

Midland, TX 79701

Reference: XENCO Report No(s): **540326**

Trunk A

Project Address:

Karolanne Toby:

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 XENCO Report Number(s) 540326. 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 XENCO Laboratories. 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. 540326 will be filed for 60 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink, appearing to read 'Kelsey Brooks', written over a horizontal line.

Kelsey Brooks

Project Manager

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Sample Cross Reference 540326

APEX/Titan, Midland, TX

Trunk A

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1	S	11-14-16 13:20	20 ft	540326-001
CS-2	S	11-14-16 13:24	15 ft	540326-002
CS-3	S	11-14-16 15:11	15 ft	540326-003
CS-4	S	11-14-16 15:21	15 ft	540326-004
CS-5	S	11-14-16 11:14	5 ft	540326-005
CS-6	S	11-14-16 11:16	4 ft	540326-006
CS-7	S	11-14-16 11:18	4 ft	540326-007
CS-8	S	11-14-16 11:20	4 ft	540326-008
CS-2	S	11-14-16 12:04	5 ft	Not Analyzed
CS-3	S	11-14-16 11:10	4 ft	Not Analyzed
CS-4	S	11-14-16 11:12	4 ft	Not Analyzed
SP-1	S	11-14-16 15:41	ft	Not Analyzed



CASE NARRATIVE

Client Name: APEX/Titan

Project Name: Trunk A

Project ID: 725010112223
Work Order Number(s): 540326

Report Date: 16-NOV-16
Date Received: 11/14/2016

Sample receipt non conformances and comments:

NM SAMPLES
24 HOUR RUSH

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3003888 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 540326

APEX/Titan, Midland, TX

Project Name: Trunk A

Project Id: 725010112223
 Contact: Karolanne Toby
 Project Location:

Date Received in Lab: Mon Nov-14-16 06:15 pm
 Report Date: 16-NOV-16
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	540326-001	540326-002	540326-003	540326-004	540326-005	540326-006
	<i>Field Id:</i>	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6
	<i>Depth:</i>	20- ft	15- ft	15- ft	15- ft	5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-14-16 13:20	Nov-14-16 13:24	Nov-14-16 15:11	Nov-14-16 15:21	Nov-14-16 11:14	Nov-14-16 11:16
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-15-16 14:30	Nov-15-16 14:30	Nov-15-16 14:30	Nov-15-16 14:30	Nov-15-16 14:30	Nov-15-16 14:30
	<i>Analyzed:</i>	Nov-15-16 21:34	Nov-15-16 21:50	Nov-15-16 22:06	Nov-15-16 22:23	Nov-16-16 07:22	Nov-16-16 13:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		6.70 0.374	15.3 0.372	11.2 0.375	1.91 0.149	<0.00150 0.00150	<0.00149 0.00149
Toluene		26.4 0.499	46.9 0.496	28.4 0.500	9.75 0.199	<0.00200 0.00200	0.00339 0.00199
Ethylbenzene		5.97 0.499	7.95 0.496	4.07 0.500	1.77 0.199	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		18.3 0.499	22.3 0.496	12.9 0.500	4.73 0.199	<0.00200 0.00200	<0.00199 0.00199
o-Xylene		5.62 0.749	6.62 0.744	3.49 0.750	1.44 0.299	<0.00299 0.00299	<0.00298 0.00298
Total Xylenes		23.9 0.499	28.9 0.496	16.4 0.500	6.17 0.199	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		63.0 0.374	99.1 0.372	60.1 0.375	19.6 0.149	<0.00150 0.00150	0.00339 0.00149
Inorganic Anions by EPA 300	<i>Extracted:</i>	Nov-15-16 14:00	Nov-15-16 14:00	Nov-15-16 14:00	Nov-15-16 14:00	Nov-15-16 14:00	Nov-15-16 14:00
	<i>Analyzed:</i>	Nov-15-16 19:22	Nov-15-16 19:29	Nov-15-16 19:36	Nov-15-16 19:44	Nov-15-16 19:51	Nov-15-16 19:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		617 5.00	253 5.00	64.5 5.00	83.4 5.00	11.7 5.00	5.56 5.00
TPH by SW 8015B	<i>Extracted:</i>	Nov-15-16 11:00	Nov-15-16 11:00	Nov-15-16 11:00	Nov-15-16 11:00	Nov-15-16 11:00	Nov-15-16 11:00
	<i>Analyzed:</i>	Nov-15-16 15:55	Nov-15-16 16:18	Nov-15-16 16:44	Nov-15-16 17:32	Nov-15-16 17:56	Nov-15-16 18:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		2110 15.0	2020 15.0	1320 15.0	755 15.0	<15.0 15.0	<15.0 15.0
C10-C28 Diesel Range Hydrocarbons		64.7 15.0	56.2 15.0	40.9 15.0	25.6 15.0	<15.0 15.0	<15.0 15.0
Total TPH		2170 15.0	2080 15.0	1360 15.0	781 15.0	<15.0 15.0	<15.0 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 540326

APEX/Titan, Midland, TX

Project Name: Trunk A

Project Id: 725010112223
Contact: Karolanne Toby
Project Location:

Date Received in Lab: Mon Nov-14-16 06:15 pm
Report Date: 16-NOV-16
Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	540326-007	540326-008				
	Field Id:	CS-7	CS-8				
	Depth:	4- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Nov-14-16 11:18	Nov-14-16 11:20				
BTEX by EPA 8021B	Extracted:	Nov-15-16 14:30	Nov-15-16 14:30				
	Analyzed:	Nov-16-16 07:54	Nov-16-16 08:10				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00150 0.00150	<0.00149 0.00149				
Toluene		<0.00200 0.00200	<0.00198 0.00198				
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198				
m,p-Xylenes		<0.00200 0.00200	<0.00198 0.00198				
o-Xylene		<0.00300 0.00300	<0.00298 0.00298				
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198				
Total BTEX		<0.00150 0.00150	<0.00149 0.00149				
Inorganic Anions by EPA 300	Extracted:	Nov-15-16 14:00	Nov-15-16 14:00				
	Analyzed:	Nov-15-16 20:05	Nov-15-16 20:12				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		5.84 5.00	9.89 5.00				
TPH by SW 8015B	Extracted:	Nov-15-16 11:00	Nov-15-16 11:00				
	Analyzed:	Nov-15-16 18:44	Nov-15-16 19:08				
	Units/RL:	mg/kg RL	mg/kg RL				
C6-C10 Gasoline Range Hydrocarbons		<15.0 15.0	<15.0 15.0				
C10-C28 Diesel Range Hydrocarbons		<15.0 15.0	<15.0 15.0				
Total TPH		<15.0 15.0	<15.0 15.0				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks
Project Manager



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.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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 5332 Blackberry Drive, San Antonio TX 78238
 1211 W Florida Ave, Midland, TX 79701
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Trunk A

Work Orders : 540326,

Project ID: 725010112223

Lab Batch #: 3003941

Sample: 540326-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 15:55

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	52.0	49.9	104	70-135	

Lab Batch #: 3003941

Sample: 540326-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 16:18

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.6	99.7	98	70-135	
o-Terphenyl	50.9	49.9	102	70-135	

Lab Batch #: 3003941

Sample: 540326-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 16:44

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	99.9	97	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

Lab Batch #: 3003941

Sample: 540326-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 17:32

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	99.7	98	70-135	
o-Terphenyl	50.9	49.9	102	70-135	

Lab Batch #: 3003941

Sample: 540326-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 17:56

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	100	95	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Trunk A

Work Orders : 540326,

Project ID: 725010112223

Lab Batch #: 3003941

Sample: 540326-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 18:20

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	99.7	93	70-135	
o-Terphenyl	48.8	49.9	98	70-135	

Lab Batch #: 3003941

Sample: 540326-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 18:44

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.8	94	70-135	
o-Terphenyl	49.3	49.9	99	70-135	

Lab Batch #: 3003941

Sample: 540326-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 19:08

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	99.9	94	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 3003888

Sample: 540326-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 21:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 3003888

Sample: 540326-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 21:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Trunk A

Work Orders : 540326,

Project ID: 725010112223

Lab Batch #: 3003888

Sample: 540326-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 22:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 3003888

Sample: 540326-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 22:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 3003888

Sample: 540326-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/16/16 07:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 3003888

Sample: 540326-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/16/16 07:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0248	0.0300	83	80-120	

Lab Batch #: 3003888

Sample: 540326-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/16/16 08:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Trunk A

Work Orders : 540326,

Project ID: 725010112223

Lab Batch #: 3003888

Sample: 540326-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/16/16 13:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 3003888

Sample: 716124-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/15/16 10:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0344	0.0300	115	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 3003941

Sample: 716126-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/15/16 13:08

SURROGATE RECOVERY STUDY

TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	61.5	50.0	123	70-135	

Lab Batch #: 3003888

Sample: 716124-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/15/16 09:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 3003941

Sample: 716126-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/15/16 13:31

SURROGATE RECOVERY STUDY

TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Trunk A

Work Orders : 540326,

Project ID: 725010112223

Lab Batch #: 3003888

Sample: 716124-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/15/16 09:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	

Lab Batch #: 3003941

Sample: 716126-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/15/16 13:55

SURROGATE RECOVERY STUDY

TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	61.5	50.0	123	70-135	

Lab Batch #: 3003941

Sample: 540172-007 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 14:43

SURROGATE RECOVERY STUDY

TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	124	99.9	124	70-135	
o-Terphenyl	61.0	50.0	122	70-135	

Lab Batch #: 3003888

Sample: 540362-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/16/16 02:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0356	0.0300	119	80-120	

Lab Batch #: 3003941

Sample: 540172-007 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/15/16 15:08

SURROGATE RECOVERY STUDY

TPH by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	123	99.8	123	70-135	
o-Terphenyl	59.8	49.9	120	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

**Form 2 - Surrogate Recoveries****Project Name: Trunk A****Work Orders :** 540326,**Lab Batch #:** 3003888**Sample:** 540362-001 SD / MSD**Project ID:** 725010112223**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 11/16/16 08:43**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries

Project Name: Trunk A

Work Order #: 540326

Project ID: 725010112223

Analyst: PJB

Date Prepared: 11/15/2016

Date Analyzed: 11/15/2016

Lab Batch ID: 3003888

Sample: 716124-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00150	0.100	0.0999	100	0.100	0.0989	99	1	70-130	35	
Toluene	<0.00200	0.100	0.102	102	0.100	0.101	101	1	70-130	35	
Ethylbenzene	<0.00200	0.100	0.103	103	0.100	0.103	103	0	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.212	106	0.200	0.210	105	1	70-135	35	
o-Xylene	<0.00300	0.100	0.102	102	0.100	0.105	105	3	71-133	35	

Analyst: MNR

Date Prepared: 11/15/2016

Date Analyzed: 11/15/2016

Lab Batch ID: 3003961

Sample: 716169-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	243	97	250	260	104	7	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Trunk A

Work Order #: 540326

Project ID: 725010112223

Analyst: ARM

Date Prepared: 11/15/2016

Date Analyzed: 11/15/2016

Lab Batch ID: 3003941

Sample: 716126-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	952	95	1000	982	98	3	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	976	98	1000	964	96	1	70-135	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Trunk A

Work Order #: 540326

Project ID: 725010112223

Lab Batch ID: 3003888

QC- Sample ID: 540362-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/16/2016

Date Prepared: 11/15/2016

Analyst: PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.0998	0.0851	85	0.0994	0.109	110	25	70-130	35	
Toluene	<0.00200	0.0998	0.0850	85	0.0994	0.114	115	29	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0846	85	0.0994	0.106	107	22	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.174	87	0.199	0.230	116	28	70-135	35	
o-Xylene	<0.00299	0.0998	0.0887	89	0.0994	0.109	110	21	71-133	35	

Lab Batch ID: 3003961

QC- Sample ID: 540334-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/15/2016

Date Prepared: 11/15/2016

Analyst: MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2520	1250	3850	106	1250	3840	106	0	90-110	20	

Lab Batch ID: 3003961

QC- Sample ID: 540364-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/15/2016

Date Prepared: 11/15/2016

Analyst: MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	246	98	250	262	105	6	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: Trunk A

Work Order #: 540326

Project ID: 725010112223

Lab Batch ID: 3003941

QC- Sample ID: 540172-007 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/15/2016

Date Prepared: 11/15/2016

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	945	95	998	937	94	1	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	999	957	96	998	946	95	1	70-135	35	

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
 Relative Percent Difference $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



APEX

Office Location Midland, TX

Project Manager H. Tobey

Sampler's Name

Kallen Kaul

Proj. No.

725010112223

Project Name

Trunk A

No/Type of Containers

121 Glass

Laboratory: XPCCO
Address: _____
Contact: _____
Phone: _____

PO/SO #: 725010112223

Sampler's Signature

Kallen Kaul

ANALYSIS REQUESTED

TPH (DRO/GRO)
BTEX (8021B)
Chloride (EPA300)
HOLD

CHAIN OF CUSTODY RECORD

Lab use only
Due Date: _____

Temp: IR D:R:8
CF: + 0.1
Corrected Temp: 38°C
Page 1 of 2

Lab Sample ID (Lab Use Only)

540336

Matrix	Date	Time	C o m p	G r a b	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml Glass Jar	P/O	ANALYSIS REQUESTED	Lab Sample ID (Lab Use Only)
S	11-14-16	1320		X	CS-1		20'			X		X	
		1324			CS-2		15'					X	
		1511			CS-3		15'					X	
		1521			CS-4		15'					X	
		1114			CS-5		5'					X	
		1116			CS-6		4'					X	
		1118			CS-7		4'					X	
		1120			CS-8		4'					X	
		1204			CS-2		5'					X	
S	11-14-16	1110		X	CS-3		4'			X		X	

Turn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% Rush

Relinquished by (Signature) Kallen Kaul Date: 11-14-16 Time: 1815 Received by (Signature) Bell Date: 11-14-16 Time: 1811

Relinquished by (Signature) _____ Date: _____ Time: _____ Received by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____ Received by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____ Received by (Signature) _____ Date: _____ Time: _____

NOTES:

* New Mexico
24 Hour Rush

Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil
Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other



APEX

Office Location Midland, TX

Laboratory: XEROX

Address: _____

Contact: _____

Phone: _____

PO/ISO #: 725010112223

Project Manager K. Tobey

Sampler's Signature _____

Proj. No. 725010112223

Project Name Trunk A

No./Type of Containers 12/6 Glass

Matrix WW - Wastewater

Date 11-14-16

Time 1541

Identifying Marks of Sample(s) CS-4

Start Depth 4'

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Lab Sample ID (Lab Use Only) 54083210

Matrix S

Date 11-14-16

Time 1541

Identifying Marks of Sample(s) SP-1

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix S

Date 11-14-16

Time 1541

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Matrix _____

Date _____

Time _____

Identifying Marks of Sample(s) _____

Start Depth _____

End Depth _____

VOA _____

A/G 1 Lt. _____

250 ml Glass Jar _____

P/O _____

Lab use only
Due Date: _____

Temp: IR ID-R-8

CF: + 0.1

Corrected Temp: 33.8

Page 2 of 2

CHAIN OF CUSTODY RECORD

Apex TITAN, Inc. • 505 N. Big Springs Drive, Suite 301A • Midland, Texas 79701 • Office: 432-695-6016



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: APEX/Titan

Date/ Time Received: 11/14/2016 06:15:00 PM

Work Order #: 540326

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.9
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Jessica Kramer

Date: 11/15/2016

Checklist reviewed by:

Kelsey Brooks

Date: 11/15/2016

Analytical Report 544863

for
APEX/TITAN

Project Manager: Karolanne Toby

Trunk A Release

725010112223

06-FEB-17

Collected By: Client



**9701 Harry Hines Blvd
Dallas, TX 75220**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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06-FEB-17

Project Manager: **Karolanne Toby**

APEX/TITAN

12100 Ford Rd Suite 401

Dallas, TX 75234

Reference: XENCO Report No(s): **544863**

Trunk A Release

Project Address: NM

Karolanne Toby:

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 XENCO Report Number(s) 544863. 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 XENCO Laboratories. 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. 544863 will be filed for 60 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink, appearing to read 'Kelsey Brooks', written over a horizontal line.

Kelsey Brooks

Project Manager

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Sample Cross Reference 544863

APEX/TITAN, Dallas, TX

Trunk A Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1	S	01-24-17 10:20	20 - 21 ft	544863-001
SB-1	S	01-24-17 10:55	27 - 28 ft	544863-008
SB-1	S	01-24-17 10:25	21 - 22 ft	Not Analyzed
SB-1	S	01-24-17 10:30	22 - 23 ft	Not Analyzed
SB-1	S	01-24-17 10:35	23 - 24 ft	Not Analyzed
SB-1	S	01-24-17 10:40	24 - 25 ft	Not Analyzed
SB-1	S	01-24-17 10:45	25 - 26 ft	Not Analyzed
SB-1	S	01-24-17 10:50	26 - 27 ft	Not Analyzed
SB-1	S	01-24-17 11:00	28 - 29 ft	Not Analyzed
SB-1	S	01-24-17 11:05	29 - 30 ft	Not Analyzed



CASE NARRATIVE SUMMARY



Client Name: APEX/TITAN

Project Name: Trunk A Release

Project ID: 725010112223

Work Order Number: 544863

Report Date: 06-FEB-17

Date Received: 25-JAN-17

A handwritten signature in black ink, appearing to read 'Kelsey Brooks'. The signature is fluid and cursive, written over a horizontal line.

Kelsey Brooks
Project Manager



Certificate of Analytical Results

544863

APEX/TITAN, Dallas, TX

Trunk A Release

Sample Id: **SB-1** Matrix: Soil Sample Depth: 20 - 21 ft
 Lab Sample Id: 544863-001 Date Collected: 01.24.17 10.20 Date Received: 01.25.17 11.30
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Analyst: MGO % Moist: Tech: MGO
 Seq Number: 3009002 Date Prep: 01.30.17 17.08
 Subcontractor: SUB: T104704400 Prep seq: 719268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	27.8	4.81	0.825	mg/kg	01.31.17 15:49		1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005
 Analyst: ARM % Moist: Tech: ARM
 Seq Number: 3008771 Date Prep: 01.28.17 13.00
 Subcontractor: SUB: T104704400 Prep seq: 719243

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	PHC610	<7.99	15.0	7.99	mg/kg	01.28.17 18:13	U	1
C10-C28 Diesel Range Organics	C10C28DRO	20.4	15.0	8.11	mg/kg	01.28.17 18:13		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	<8.11	15.0	8.11	mg/kg	01.28.17 18:13	U	1
Total TPH	PHC635	20.4		7.99	mg/kg	01.28.17 18:13		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
 Analyst: ALJ % Moist: Tech: ALJ
 Seq Number: 3008851 Date Prep: 01.30.17 09.00
 Subcontractor: SUB: T104704400 Prep seq: 719276

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000655	0.00293	0.000655	mg/kg	01.30.17 11:14	U	2
Toluene	108-88-3	<0.00105	0.00391	0.00105	mg/kg	01.30.17 11:14	U	2
Ethylbenzene	100-41-4	<0.000958	0.00391	0.000958	mg/kg	01.30.17 11:14	U	2
m,p-Xylenes	179601-23-1	<0.00125	0.00391	0.00125	mg/kg	01.30.17 11:14	U	2
o-Xylene	95-47-6	<0.00165	0.00586	0.00165	mg/kg	01.30.17 11:14	U	2
Total Xylenes	1330-20-7	<0.00125		0.00125	mg/kg	01.30.17 11:14	U	
Total BTEX		<0.000655		0.000655	mg/kg	01.30.17 11:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	97	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



Certificate of Analytical Results

544863



APEX/TITAN, Dallas, TX

Trunk A Release

Sample Id: **SB-1**

Matrix: Soil

Sample Depth: 27 - 28 ft

Lab Sample Id: 544863-008

Date Collected: 01.24.17 10.55

Date Received: 01.25.17 11.30

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Analyst: MGO

% Moist:

Tech: MGO

Seq Number: 3009037

Date Prep: 02.01.17 07.52

Subcontractor: SUB: T104704400

Prep seq: 719335

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	37.1	2.00	0.343	mg/kg	02.01.17 12:19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3008999

Date Prep: 01.31.17 18.00

Subcontractor: SUB: T104704400

Prep seq: 719349

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	PHC610	12.1	15.0	7.99	mg/kg	02.01.17 10:34	J	1
C10-C28 Diesel Range Organics	C10C28DRO	<8.12	15.0	8.12	mg/kg	02.01.17 10:34	U	1
Total TPH	PHC635	12.1		7.99	mg/kg	02.01.17 10:34	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ALJ

% Moist:

Tech: ALJ

Seq Number: 3009103

Date Prep: 02.01.17 08.15

Subcontractor: SUB: T104704400

Prep seq: 719423

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000334	0.00149	0.000334	mg/kg	02.01.17 11:41	U	1
Toluene	108-88-3	<0.000535	0.00199	0.000535	mg/kg	02.01.17 11:41	U	1
Ethylbenzene	100-41-4	<0.000488	0.00199	0.000488	mg/kg	02.01.17 11:41	U	1
m,p-Xylenes	179601-23-1	<0.000636	0.00199	0.000636	mg/kg	02.01.17 11:41	U	1
o-Xylene	95-47-6	<0.000842	0.00299	0.000842	mg/kg	02.01.17 11:41	U	1
Total Xylenes	1330-20-7	<0.000636		0.000636	mg/kg	02.01.17 11:41	U	
Total BTEX		<0.000334		0.000334	mg/kg	02.01.17 11:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	80 - 120	%		
4-Bromofluorobenzene	118	80 - 120	%		



Certificate of Analytical Results

544863

APEX/TITAN, Dallas, TX

Trunk A Release

Sample Id: **719243-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 719243-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3008771

Date Prep: 01.28.17 13.00

Subcontractor: SUB: T104704400

Prep seq: 719243

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	PHC610	<8.00	15.0	8.00	mg/kg	01.28.17 17:04	U	1
C10-C28 Diesel Range Organics	C10C28DRO	<8.13	15.0	8.13	mg/kg	01.28.17 17:04	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	<8.13	15.0	8.13	mg/kg	01.28.17 17:04	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	01.28.17 17:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	113	70 - 135	%		

Sample Id: **719268-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 719268-1-BLK

Date Collected:

Date Received:

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Analyst: MGO

% Moist:

Tech: MGO

Seq Number: 3009002

Date Prep: 01.30.17 17.08

Subcontractor: SUB: T104704400

Prep seq: 719268

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.855	4.98	0.855	mg/kg	01.31.17 13:15	U	1
Nitrate as N	14797-55-8	<0.156	0.996	0.156	mg/kg	01.31.17 13:15	U	1
Nitrite as N	14797-65-0	0.306	0.996	0.158	mg/kg	01.31.17 13:15	J	1



Certificate of Analytical Results

544863



APEX/TITAN, Dallas, TX

Trunk A Release

Sample Id: **719276-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 719276-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ALJ

% Moist:

Tech: ALJ

Seq Number: 3008851

Date Prep: 01.30.17 09.00

Subcontractor: SUB: T104704400

Prep seq: 719276

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000336	0.00150	0.000336	mg/kg	01.30.17 10:10	U	1
Toluene	108-88-3	<0.000539	0.00200	0.000539	mg/kg	01.30.17 10:10	U	1
Ethylbenzene	100-41-4	<0.000491	0.00200	0.000491	mg/kg	01.30.17 10:10	U	1
m,p-Xylenes	179601-23-1	<0.000640	0.00200	0.000640	mg/kg	01.30.17 10:10	U	1
o-Xylene	95-47-6	<0.000847	0.00301	0.000847	mg/kg	01.30.17 10:10	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	81	80 - 120	%		

Sample Id: **719335-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 719335-1-BLK

Date Collected:

Date Received:

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Analyst: MGO

% Moist:

Tech: MGO

Seq Number: 3009037

Date Prep: 02.01.17 07.52

Subcontractor: SUB: T104704400

Prep seq: 719335

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.846	4.93	0.846	mg/kg	02.01.17 13:25	U	1



Certificate of Analytical Results

544863



APEX/TITAN, Dallas, TX

Trunk A Release

Sample Id: 719349-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 719349-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3008999

Date Prep: 01.31.17 18.00

Subcontractor: SUB: T104704400

Prep seq: 719349

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	PHC610	<8.00	15.0	8.00	mg/kg	02.01.17 08:32	U	1
C10-C28 Diesel Range Organics	C10C28DRO	<8.13	15.0	8.13	mg/kg	02.01.17 08:32	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	02.01.17 08:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	113	70 - 135	%		

Sample Id: 719423-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 719423-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ALJ

% Moist:

Tech: ALJ

Seq Number: 3009103

Date Prep: 02.01.17 08.15

Subcontractor: SUB: T104704400

Prep seq: 719423

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000338	0.00151	0.000338	mg/kg	02.01.17 11:25	U	1
Toluene	108-88-3	<0.000542	0.00202	0.000542	mg/kg	02.01.17 11:25	U	1
Ethylbenzene	100-41-4	<0.000494	0.00202	0.000494	mg/kg	02.01.17 11:25	U	1
m,p-Xylenes	179601-23-1	<0.000643	0.00202	0.000643	mg/kg	02.01.17 11:25	U	1
o-Xylene	95-47-6	<0.000852	0.00302	0.000852	mg/kg	02.01.17 11:25	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		



CHRONOLOGY OF HOLDING TIMES



Analytical Method : Inorganic Anions by EPA 300

Client : APEX/TITAN

Work Order #: 544863

Project ID: 725010112223

Date Received: 01/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
SB-1	544863-001	01/24/17				01/31/17	28	7	P
SB-1	544863-008	01/24/17				02/01/17	28	8	P



CHRONOLOGY OF HOLDING TIMES



Analytical Method : Percent Moisture by SM2540G

Client : APEX/TITAN

Work Order #: **544863**

Project ID: 725010112223

Date Received: 01/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
SB-1	544863-001	01/24/17				01/30/17	180	6	P
SB-1	544863-008	01/24/17				02/01/17	180	8	P



CHRONOLOGY OF HOLDING TIMES



Analytical Method : TPH by SW8015 Mod

Client : APEX/TITAN

Work Order #: **544863**

Project ID: 725010112223

Date Received: 01/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
SB-1	544863-001	01/24/17	01/28/17	14	4	01/28/17	14	0	P
SB-1	544863-008	01/24/17	01/31/17	14	7	02/01/17	14	1	P



CHRONOLOGY OF HOLDING TIMES



Analytical Method : BTEX by EPA 8021B

Client : APEX/TITAN

Work Order #: **544863**

Project ID: 725010112223

Date Received: 01/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
SB-1	544863-001	01/24/17				01/30/17	14	6	P
SB-1	544863-008	01/24/17				02/01/17	14	8	P

F = These samples were analyzed outside the recommended holding time.

P = Samples analyzed within the recommended holding time.



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.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

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(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	

Analytical Log

Analytical Method:	<u>TPH by SW8015 Mod</u>	Batch #:	<u>3008771</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-001</u>	<u>SMP</u>
<u></u>	<u>544963-001 S</u>	<u>MS</u>
<u></u>	<u>544963-001 SD</u>	<u>MSD</u>
<u></u>	<u>719243-1-BKS</u>	<u>BKS</u>
<u></u>	<u>719243-1-BLK</u>	<u>BLK</u>
<u></u>	<u>719243-1-BSD</u>	<u>BSD</u>

Analytical Log

Analytical Method:	<u>BTEX by EPA 8021B</u>	Batch #:	<u>3008851</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-001</u>	<u>SMP</u>
<u></u>	<u>545114-001 S</u>	<u>MS</u>
<u></u>	<u>545114-001 SD</u>	<u>MSD</u>
<u></u>	<u>719276-1-BKS</u>	<u>BKS</u>
<u></u>	<u>719276-1-BLK</u>	<u>BLK</u>
<u></u>	<u>719276-1-BSD</u>	<u>BSD</u>

Analytical Log

Analytical Method:	<u>TPH by SW8015 Mod</u>	Batch #:	<u>3008999</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-008</u>	<u>SMP</u>
<u></u>	<u>545369-001 S</u>	<u>MS</u>
<u></u>	<u>545369-001 SD</u>	<u>MSD</u>
<u></u>	<u>719349-1-BKS</u>	<u>BKS</u>
<u></u>	<u>719349-1-BLK</u>	<u>BLK</u>
<u></u>	<u>719349-1-BSD</u>	<u>BSD</u>

Analytical Log

Analytical Method:	<u>Percent Moisture by SM2540G</u>	Batch #:	<u>3009000</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-001</u>	<u>SMP</u>
<u></u>	<u>3009000-1-BLK</u>	<u>BLK</u>
<u></u>	<u>544814-001 D</u>	<u>MD</u>

Analytical Log

Analytical Method:	<u>Inorganic Anions by EPA 300</u>	Batch #:	<u>3009002</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-001</u>	<u>SMP</u>
<u></u>	<u>544863-001 S</u>	<u>MS</u>
<u></u>	<u>544863-001 SD</u>	<u>MSD</u>
<u></u>	<u>545196-001 S</u>	<u>MS</u>
<u></u>	<u>545196-001 SD</u>	<u>MSD</u>
<u></u>	<u>719268-1-BKS</u>	<u>BKS</u>
<u></u>	<u>719268-1-BLK</u>	<u>BLK</u>
<u></u>	<u>719268-1-BSD</u>	<u>BSD</u>

Analytical Log

Analytical Method:	<u>Inorganic Anions by EPA 300</u>	Batch #:	<u>3009037</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-008</u>	<u>SMP</u>
<u></u>	<u>544834-001 S</u>	<u>MS</u>
<u></u>	<u>544834-001 SD</u>	<u>MSD</u>
<u></u>	<u>719335-1-BKS</u>	<u>BKS</u>
<u></u>	<u>719335-1-BLK</u>	<u>BLK</u>
<u></u>	<u>719335-1-BSD</u>	<u>BSD</u>

Analytical Log

Analytical Method:	<u>BTEX by EPA 8021B</u>	Batch #:	<u>3009103</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-008</u>	<u>SMP</u>
<u>SB-1 DL</u>	<u>544863-008</u>	<u>DL</u>
<u></u>	<u>544863-008 S</u>	<u>MS</u>
<u></u>	<u>719423-1-BKS</u>	<u>BKS</u>
<u></u>	<u>719423-1-BLK</u>	<u>BLK</u>
<u></u>	<u>719423-1-BSD</u>	<u>BSD</u>

Analytical Log

Analytical Method:	<u>Percent Moisture by SM2540G</u>	Batch #:	<u>3009325</u>
Project Name:	<u>Trunk A Release</u>	Project ID:	<u>725010112223</u>
Client Name:	<u>APEX/TITAN</u>	WO Number:	<u>544863</u>

Client Sample Id	Lab Sample Id	QC Types
<u>SB-1</u>	<u>544863-008</u>	<u>SMP</u>
<u></u>	<u>3009325-1-BLK</u>	<u>BLK</u>
<u></u>	<u>544863-008 D</u>	<u>MD</u>

Form 2 - Surrogate Recoveries

Project Name: Trunk A Release

Work Orders : 544863,

Project ID: 725010112223

Lab Batch #: 3008851

Sample: 719276-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/30/17 08:49	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0277	0.0300	92	80-120
4-Bromofluorobenzene		0.0341	0.0300	114	80-120

Lab Batch #: 3008851

Sample: 719276-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/30/17 09:04	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0327	0.0300	109	80-120
4-Bromofluorobenzene		0.0291	0.0300	97	80-120

Lab Batch #: 3008851

Sample: 545114-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/30/17 09:21	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0340	0.0300	113	80-120
4-Bromofluorobenzene		0.0340	0.0300	113	80-120

Lab Batch #: 3008851

Sample: 545114-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/30/17 09:37	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0313	0.0300	104	80-120
4-Bromofluorobenzene		0.0354	0.0300	118	80-120

Lab Batch #: 3008851

Sample: 719276-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/30/17 10:10	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0244	0.0300	81	80-120
4-Bromofluorobenzene		0.0242	0.0300	81	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Trunk A Release

Work Orders : 544863,

Project ID: 725010112223

Lab Batch #: 3009103

Sample: 719423-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 02/01/17 10:04	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0348	0.0300	116	80-120
4-Bromofluorobenzene		0.0356	0.0300	119	80-120

Lab Batch #: 3009103

Sample: 719423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 02/01/17 10:20	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0339	0.0300	113	80-120
4-Bromofluorobenzene		0.0356	0.0300	119	80-120

Lab Batch #: 3009103

Sample: 544863-008 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 02/01/17 10:53	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0293	0.0300	98	80-120
4-Bromofluorobenzene		0.0330	0.0300	110	80-120

Lab Batch #: 3009103

Sample: 719423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 02/01/17 11:25	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0295	0.0300	98	80-120
4-Bromofluorobenzene		0.0297	0.0300	99	80-120

Lab Batch #: 3008771

Sample: 719243-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/28/17 17:04	SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1-Chlorooctane		103	100	103	70-135
o-Terphenyl		56.3	50.0	113	70-135

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Trunk A Release

Work Orders : 544863,

Project ID: 725010112223

Lab Batch #: 3008771

Sample: 719243-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 01/28/17 17:26		SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		127	100	127	70-135
o-Terphenyl		64.9	50.0	130	70-135

Lab Batch #: 3008771

Sample: 719243-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 01/28/17 17:49		SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		129	100	129	70-135
o-Terphenyl		64.2	50.0	128	70-135

Lab Batch #: 3008771

Sample: 544963-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/28/17 18:36		SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		99.3	99.9	99	70-135
o-Terphenyl		47.8	50.0	96	70-135

Lab Batch #: 3008771

Sample: 544963-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/28/17 18:58		SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		99.0	99.8	99	70-135
o-Terphenyl		48.7	49.9	98	70-135

Lab Batch #: 3008999

Sample: 719349-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 02/01/17 08:32		SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		107	100	107	70-135
o-Terphenyl		56.5	50.0	113	70-135

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries**Project Name: Trunk A Release****Work Orders :** 544863,**Project ID:** 725010112223**Lab Batch #:** 3008999**Sample:** 719349-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 02/01/17 08:56**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 3008999**Sample:** 719349-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 02/01/17 09:20**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	53.6	50.0	107	70-135	

Lab Batch #: 3008999**Sample:** 545369-001 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 02/01/17 09:45**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.8	109	70-135	
o-Terphenyl	54.3	49.9	109	70-135	

Lab Batch #: 3008999**Sample:** 545369-001 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 02/01/17 10:09**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	49.1	49.9	98	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries



Project Name: Trunk A Release

Work Order #: 544863

Project ID: 725010112223

Analyst: ALJ

Date Prepared: 01/30/2017

Date Analyzed: 01/30/2017

Lab Batch ID: 3008851

Sample: 719276-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000337	0.101	0.0965	96	0.100	0.0972	97	1	70-130	35	
Toluene	<0.000541	0.101	0.0884	88	0.100	0.0889	89	1	70-130	35	
Ethylbenzene	<0.000493	0.101	0.0957	95	0.100	0.0971	97	1	71-129	35	
m,p-Xylenes	<0.000642	0.201	0.187	93	0.200	0.188	94	1	70-135	35	
o-Xylene	<0.000850	0.101	0.0896	89	0.100	0.0907	91	1	71-133	35	

Analyst: ALJ

Date Prepared: 02/01/2017

Date Analyzed: 02/01/2017

Lab Batch ID: 3009103

Sample: 719423-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000333	0.0994	0.102	103	0.100	0.0928	93	9	70-130	35	
Toluene	<0.000534	0.0994	0.0894	90	0.100	0.0837	84	7	70-130	35	
Ethylbenzene	<0.000487	0.0994	0.109	110	0.100	0.0998	100	9	71-129	35	
m,p-Xylenes	<0.000634	0.199	0.211	106	0.200	0.194	97	8	70-135	35	
o-Xylene	<0.000840	0.0994	0.105	106	0.100	0.0930	93	12	71-133	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Trunk A Release

Work Order #: 544863

Project ID: 725010112223

Analyst: MGO

Date Prepared: 01/30/2017

Date Analyzed: 01/31/2017

Lab Batch ID: 3009002

Sample: 719268-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	258	103	250	254	102	2	90-110	20	

Analyst: MGO

Date Prepared: 02/01/2017

Date Analyzed: 02/01/2017

Lab Batch ID: 3009037

Sample: 719335-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.429	125	123	98	125	127	102	3	90-110	20	

Analyst: ARM

Date Prepared: 01/28/2017

Date Analyzed: 01/28/2017

Lab Batch ID: 3008771

Sample: 719243-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<8.00	1000	885	89	1000	1030	103	15	70-135	35	
C10-C28 Diesel Range Organics	<8.13	1000	933	93	1000	1040	104	11	70-135	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Trunk A Release

Work Order #: 544863

Project ID: 725010112223

Analyst: ARM

Date Prepared: 01/31/2017

Date Analyzed: 02/01/2017

Lab Batch ID: 3008999

Sample: 719349-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<8.00	1000	947	95	1000	952	95	1	70-135	35	
C10-C28 Diesel Range Organics	<8.13	1000	948	95	1000	969	97	2	70-135	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Trunk A Release

Work Order #: 544863

Lab Batch #: 3009103

Project ID: 725010112223

Date Analyzed: 02/01/2017

Date Prepared: 02/01/2017

Analyst: ALJ

QC- Sample ID: 544863-008 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

BTEX by EPA 8021B		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes							
Benzene		<0.000335	0.0998	0.0804	81	70-130	
Toluene		<0.000537	0.0998	0.0766	77	70-130	
Ethylbenzene		<0.000489	0.0998	0.0837	84	71-129	
m,p-Xylenes		<0.000637	0.200	0.161	81	70-135	
o-Xylene		<0.000844	0.0998	0.0783	78	71-133	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$ Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Trunk A Release

Work Order #: 544863

Project ID: 725010112223

Lab Batch ID: 3008851

QC- Sample ID: 545114-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/30/2017

Date Prepared: 01/30/2017

Analyst: ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000335	0.0998	0.0984	99	0.100	0.0931	93	6	70-130	35	
Toluene	<0.000537	0.0998	0.0860	86	0.100	0.0849	85	1	70-130	35	
Ethylbenzene	<0.000489	0.0998	0.0926	93	0.100	0.116	116	22	71-129	35	
m,p-Xylenes	<0.000637	0.200	0.175	88	0.201	0.203	101	15	70-135	35	
o-Xylene	<0.000844	0.0998	0.0819	82	0.100	0.101	101	21	71-133	35	

Lab Batch ID: 3009002

QC- Sample ID: 544863-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/31/2017

Date Prepared: 01/30/2017

Analyst: MGO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	27.8	240	266	99	240	265	99	0	90-110	20	

Lab Batch ID: 3009002

QC- Sample ID: 545196-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/31/2017

Date Prepared: 01/30/2017

Analyst: MGO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	260	248	508	100	248	505	99	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: Trunk A Release

Work Order #: 544863

Project ID: 725010112223

Lab Batch ID: 3009037

QC- Sample ID: 544834-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/01/2017

Date Prepared: 02/01/2017

Analyst: MGO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1640	245	1830	78	245	1840	82	1	90-110	20	X

Lab Batch ID: 3008771

QC- Sample ID: 544963-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/28/2017

Date Prepared: 01/28/2017

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<7.99	999	921	92	998	984	99	7	70-135	35	
C10-C28 Diesel Range Organics	476	999	1370	89	998	1490	102	8	70-135	35	

Lab Batch ID: 3008999

QC- Sample ID: 545369-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/01/2017

Date Prepared: 01/31/2017

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	47.5	998	956	91	997	938	89	2	70-135	35	
C10-C28 Diesel Range Organics	367	998	1440	108	997	1430	107	1	70-135	35	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: Trunk A Release

Work Order #: 544863

Lab Batch #: 3009000

Project ID: 725010112223

Date Analyzed: 01/30/2017 13:25

Date Prepared: 01/30/2017

Analyst: WRU

QC- Sample ID: 544814-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture by SM2540G	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	22.7	14.7	43	20	F

Lab Batch #: 3009325

Date Analyzed: 02/01/2017 11:05

Date Prepared: 02/01/2017

Analyst: WRU

QC- Sample ID: 544863-008 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture by SM2540G	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	16.3	16.5	1	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Attachment A Laboratory Data Package Cover Page

Project Name: **Trunk A Release**Laboratory Number: **544863**This Data package consists of : Laboratory Batch No(s) **719276, 719423, 719335, 719349, 3009000,**


This signature page, the laboratory review checklist, and the following reportable data:

- ☒ R1 Field chain-of-custody documentation;
- ☒ R2 Sample identification cross-reference;
- ☒ R3 Test reports (analytical data sheets) for each environmental sample that includes:
- Items consistent with NELAC 5
 - dilution factors,
 - preparation methods,
 - cleanup methods, and
 - if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery data including:
- Calculated recovery (%R), and
 - The laboratory's surrogate QC limits.
- ☒ R5 Test reports/summary forms for blank samples;
- ☒ R6 Test reports/summary forms for laboratory control samples (LCSs) including:
- LCS spiking amounts,
 - Calculated %R for each analyte, and
 - The laboratory's LCS QC limits.
- ☒ R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
- Samples associated with the MS/MSD clearly identified,
 - MS/MSD spiking amounts,
 - Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - Calculated %Rs and relative percent differences (RPDs) and
 - The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicate (if applicable) recovery and precision:
- the amount of analyte measured in the duplicate,
 - the calculated RPD, and
 - the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies.
- ☒ Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. 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 in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: ☐ This laboratory meets an exception under 30 TAC 25.6 and was last inspection by ☐ TCEQ or ☐ _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Kelsey Brooks
Name (Printed)


Signature

Project Manager
Official Title (printed)

06-FEB-17
Date

A1

Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data

Laboratory Name:		XENCO LABORATORIES		LRC Date :		06-FEB-17	
Project Name:		Trunk A Release		Laboratory Job Number :		544863	
Reviewer Name:		KEB		Batch Number(s) :		719276, 719423, 719335, 719349, 3009000, 3009325, 719243, 719268	
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-Custody (COC)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and Quality Control (QC) Identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test Reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results <MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?		X			1
		If required for the project, were TICs reported?			X		
R4	O	Surrogate Recovery Data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test Reports/Summary Forms for Blank Samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency ?	X				
		Were method blanks taken through the entire analytical procedure, including preparation and, if applicable, cleanup procedures ?	X				
		Were Blank Concentrations <MQL?	X				
R6	OI	Laboratory Control Samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within the QC limits?	X				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within the laboratory QC limits?	X				
R8	OI	Analytical Duplicate Data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			2
R9	OI	Method Quantitation Limits (MQLs)					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other Problems/Anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				

Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data

Laboratory Name:		XENCO LABORATORIES		LRC Date :		06-FEB-17	
Project Name:		Trunk A Release		Laboratory Job Number :		544863	
Reviewer Name:		KEB		Batch Number(s) :		719276, 719423, 719335, 719349, 3009000, 3009325, 719243, 719268	
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial Calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and the highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			X		
S3	O	Mass Spectral Tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal Standard (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw Data (NELAC 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual Column Confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) Results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial Dilutions, Post Digestions Spikes, and Method of Standard Additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method Detection Limit (MDL) Studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency Test Reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)					
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed?	X				

- Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
- NA = Not applicable;
- NR = Not reviewed;
- ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review Checklist: Exception Reports	
Laboratory Name: XENCO LABORATORIES	LRC Date: 06-FEB-17
Project Name: Trunk A Release	Laboratory Job Number: 544863
Reviewer Name: KEB	Batch Number(s) : 719276, 719423, 719335, 719349, 3009000, 3009325, 719243, 719268
ER# 1	DESCRIPTION
1	Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
2	SM2540G-MOIST Batch 3009000, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity. Samples in the analytical batch are: 544863-001.

1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC).

544803-D
CHAIN OF CUSTODY RECORD

		Laboratory: <u>Xeno Laboratories</u>										
Office Location <u>Dallas, TX</u>		Address: <u>9701 Harry Hines Blvd</u> <u>Dallas, TX 75220</u>										
Project Manager <u>Karolanne Tobey</u>		Contact: <u>Alex Montoya</u>										
Sampler's Name <u>Karolanne Tobey</u>		Phone: <u>214-902-0300</u>										
Project No. <u>725010112223</u>		PO/ISO #: _____										
Project Name <u>Trunk A Release</u>		Sampler's Signature										
Matrix	Date	Time	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	ANALYSIS REQUESTED	
S	1/24/17	1020	X	SB-1	20' 21'				X		BTEX (8021B)	
		1025			21' 22'				X		TPH GRO/DRO/MRO (8015)	
		1030			22' 23'				X		Chloride (300)	
		1035			23' 24'				X		HOLD	
		1040			24' 25'				X			
		1045			25' 26'				X			
		1050			26' 27'				X			
		1055			27' 28'				X			
		1100			28' 29'				X			
S	1/24/17	1105	X	SB-1	29' 30'				X			
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush											Lab use only	
Relinquished by (Signature)											Due Date: _____	
Relinquished by (Signature) _____											Temp. of coolers when received (C°) <u>24.6</u>	
Relinquished by (Signature) _____											1 _____ 2 _____ 3 _____ 4 _____ 5 _____	
Relinquished by (Signature) _____											Page _____ of _____	
Relinquished by (Signature) _____											Lab Sample ID (Lab Use Only)	
Relinquished by (Signature) _____											NOTES: <u>- samples collected in NM.</u>	

Matrix Container: WW - Wastewater VOA - 40 ml vial W - Water A/G - Amber / Or Glass 1 Liter S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: APEX/TITAN

Date/ Time Received: 01/25/2017 11:30:03 AM

Work Order #: 544863

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : XDA

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.3	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seal present on shipping container/ cooler?	N/A	
#5 *Custody Seals intact on shipping container/ cooler?	N/A	
#6 Custody Seals intact on sample bottles?	N/A	
#7 *Custody Seals Signed and dated?	N/A	
#8 *Chain of Custody present?	Yes	
#9 Sample instructions complete on Chain of Custody?	Yes	
#10 Any missing/extra samples?	No	
#11 Chain of Custody signed when relinquished/ received?	Yes	
#12 Chain of Custody agrees with sample label(s)?	Yes	
#13 Container label(s) legible and intact?	Yes	
#14 Sample matrix/ properties agree with Chain of Custody?	Yes	
#15 Samples in proper container/ bottle?	Yes	
#16 Samples properly preserved?	Yes	
#17 Sample container(s) intact?	Yes	
#18 Sufficient sample amount for indicated test(s)?	Yes	
#19 All samples received within hold time?	Yes	
#20 Subcontract of sample(s)?	Yes	Xenco Odessa
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A	
#22 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A	
#23 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Angelica Martinez

Date: 01/25/2017

Checklist reviewed by:

Kelsey Brooks

Date: 01/25/2017



APPENDIX F

NMOCD C-141 Documentation

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

FAB1532933808
NAB1618857227

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Enterprise Field Services LLC 1000347	Contact	Alena Miro
	PO Box 4324, Houston, TX 77210	Telephone No.	575-706-4926
Facility Name	Pipeline ROW, Trunk A	Facility Type	Gas Gathering Pipeline

Surface Owner	BLM	Mineral Owner	NA - Pipeline	Lease No.	NA
---------------	-----	---------------	---------------	-----------	----

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	17	23S	31E	200	North	200	East	Eddy

Latitude: N 32.307411 Longitude: W -103.792007

NATURE OF RELEASE

Type of Release	Natural Gas and pipeline liquid	Volume of Release:	296 MCF gas/ 10 bbl liquids	Volume Recovered:	N/A
Source of Release	Pipeline Leak	Date and Hour of Occurrence	6/30/2016 @ 12:30 MST	Date and Hour of Discovery	6/30/2016 @ 12:30 MST
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Natural gas and pipeline liquid was released due to a pipeline leak. Pipeline segment was isolated, blown down, and will be repaired following standard one-call. Approximately 10 bbls of liquid was released.

Describe Area Affected and Cleanup Action Taken.*

A liquid spill of approximately 10bbls of pipeline liquids occurred as part of the leak. All liquids were confined to the right of way. Remediation actions will follow the Enterprise Products, General Release Notification, Response and Remediation Plan (March 9, 2015).

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

OIL CONSERVATION DIVISION

Signature:

Printed Name: Jon E. Fields

Title: Director, Field Environmental

E-mail Address: jefields@eprod.com

Date: 7/1/2016 Phone: 713-381-6684

Approved by District Supervisor:

Approval Date:

7/1/16

Expiration Date:

N/A

Conditions of Approval:

Remediation per O.C.D. Rules & Guidelines

Attached ☐

SUBMIT REMEDIATION PROPOSAL NO

LATER THAN:

7/1/16

2RP 3164

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 01 2016

RECEIVED

* Attach Additional Sheets If Necessary



APPENDIX G

Waste Manifests

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: Thomas Long	Contact Telephone: 505-599-2286
Contact email: tjlong@eprod.com	Incident # (assigned by OCD) nAB1618857227
Contact mailing address: 614 Reilly Ave, Farmington, NM 87401	

Location of Release Source

Latitude 32.307411	Longitude -103.792007	(NAD 83 in decimal degrees to 5 decimal places)
Site Name Trunk A	Site Type Natural Gas Gathering Pipeline	
Date Release Discovered: 06/30/2016	Serial Number (if applicable): N/A	

Unit Letter	Section	Township	Range	County
H	17	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)		
<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls): Estimated 10 BBLs	Volume Recovered (bbls): None
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf): 296 MCF	Volume Recovered (Mcf): None
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)
Cause of Release On June 30, 2016, Enterprise had a release of natural gas and natural gas liquids from the Trunk A pipeline. The pipeline was isolated, depressurized, locked and tagged out. No fire nor injuries occurred. Initial site investigation and remediation activities were conducted by Apex TITAN, Inc. (Apex) in 2016 and 2017 at the Site. The first Corrective Action Report was submitted in 2019 and it was denied by NMOCD on July 10, 2023, due to closure criteria exceedances. Subsequent investigation/remediation activities were performed by Ensolum, LLC in August 2023. No contaminants of concern exceeding NMOCD closure criteria were identified.		

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Thomas Long Title: Senior Environmental Scientist

Signature:  Date: 2-7-2024

email: tjlong@eprod.com Telephone: (505) 599-2286

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: _____

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QUESTIONS

Action 314622

QUESTIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID:
	241602
	Action Number:
	314622
Action Type:	
[C-141] Reclamation Report C-141 (C-141-v-Reclamation)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1618857227
Incident Name	NAB1618857227 PIPELINE ROW, TRUNK A @ 0
Incident Type	Natural Gas Release
Incident Status	Reclamation Report Received
Incident Facility	[fAB1532933808] Pipeline ROW, Trunk A

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PIPELINE ROW, TRUNK A
Date Release Discovered	06/30/2016
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Natural Gas Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Cause: Other Pipeline (Any) [OBSOLETE] Natural Gas (Methane) Released: 296 MCF Recovered: 0 MCF Lost: 296 MCF.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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Action 314622

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID:	241602
	Action Number:	314622
	Action Type:	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	Yes, according to supplied volumes this appears to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

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
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 02/15/2024
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QUESTIONS, Page 3

Action 314622

QUESTIONS (continued)

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	314622
Action Type:	
[C-141] Reclamation Report C-141 (C-141-v-Reclamation)	

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 500 and 1000 (ft.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	110
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	50
GRO+DRO (EPA SW-846 Method 8015M)	50
BTEX (EPA SW-846 Method 8021B or 8260B)	0.1
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	08/14/2023
On what date will (or did) the final sampling or liner inspection occur	08/14/2023
On what date will (or was) the remediation complete(d)	08/14/2023
What is the estimated surface area (in square feet) that will be reclaimed	2345
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	2345
What is the estimated volume (in cubic yards) that will be remediated	0

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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Action 314622

QUESTIONS (continued)

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	Action Number:	314622
	Action Type:	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	<i>Not answered.</i>
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	<i>Not answered.</i>
(In Situ) Soil Vapor Extraction	<i>Not answered.</i>
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	<i>Not answered.</i>
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	<i>Not answered.</i>
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	<i>Not answered.</i>
Ground Water Abatement pursuant to 19.15.30 NMAC	<i>Not answered.</i>
OTHER (Non-listed remedial process)	<i>Yes</i>
Other Non-listed Remedial Process. Please specify	<i>No remediation required.</i>
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 02/15/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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Action 314622

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 314622
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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Action 314622

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID:
	241602
	Action Number:
	314622
Action Type:	
[C-141] Reclamation Report C-141 (C-141-v-Reclamation)	

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	312275
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/14/2023
What was the (estimated) number of samples that were to be gathered	25
What was the sampling surface area in square feet	200

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	2345
What was the total volume (cubic yards) remediated	0
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	2345
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	No remediation required.

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 02/15/2024
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Action 314622

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID:	241602
	Action Number:	314622
	Action Type:	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	2345
What was the total volume of replacement material (in cubic yards) for this site	0
<i>Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.</i>	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	06/01/2024
Summarize any additional reclamation activities not included by answers (above)	None.
<i>The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 02/15/2024

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Action 314622

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID:
	241602
	Action Number:
	314622
Action Type:	
[C-141] Reclamation Report C-141 (C-141-v-Reclamation)	

QUESTIONS

Revegetation Report	
<i>Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.</i>	
Requesting a restoration complete approval with this submission	No
<i>Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.</i>	

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CONDITIONS

Action 314622

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 314622
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	2/15/2024