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District II
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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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NCS1833329440**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.794997** Longitude **-107.733385** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Pump Canyon Compressor Station**	Site Type **Natural Gas Compressor Station**
Date Release Discovered: **11/25/2018 at 7:00 a.m.**	Serial Number *(if applicable)*: **NM 080782**

Unit Letter	Section	Township	Range	County
K	**24**	**30N**	**9W**	**San Juan**

NMOCD
DEC 07 2018
DISTRICT III

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls):	Volume Recovered (bbls):
☒ Natural Gas	Volume Released (Mcf): **7,031 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release Cause of Release: On November 25, 2018, a compression technician was dispatched to Pump Canyon Station for compressor unit #4 being offline. Upon arrival at the station the technician discovered that the unit vent valve was blowing gas. A calculated amount 7,031 MCF was release to atmosphere. No fluids were released to the ground surface. No remediation activities were required.

2

State of New Mexico
Oil Conservation Division

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: Jon E. Fields
Title: Director, Field Environmental
Signature:
Date: 12-3-18
email: jefields@eprod.com
Telephone: (713) 381-6684

OCD Only

Received by: Vanessa Fields
Date: 12/26/2018

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: 12/26/2018
Printed Name: Vanessa Fields
Title: Environmental Specialist

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Santa Fe, NM 87505

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

Incident ID	
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Facility ID	
Application ID	

Release Notification

NMOCD
DEC 06 2018
DISTRICT III

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	Ncs 1833939663

Location of Release Source

Latitude 36.821676 Longitude -108.036399 *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Utton #100**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **11/16/2018**	Serial # *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
M	**7**	**30N**	**11W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown at this time.**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown at this time**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On November 16, 2018, a land owner notified Enterprise of a natural gas release on the Utton #100 well tie. The land owner also notified San Juan County Fire Department as a precaution. The pipeline was isolated, depressurized, locked out and tagged out. An area of approximately eight feet in diameter was impacted with condensate. Enterprise has determined this release is required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX and 100 ppm TPH). A third party corrective action report will be submitted with the "Final C-141."

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields

Title: Director, Field Environmental

Signature:

Date: 11-27-18

email: jefields@eprod.com

Telephone: 713-381-6684

OCD Only

Received by: ____________________

Date: __________

District I
1625 N. French Dr., Hobbs, NM 88240
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Facility ID	
Application ID	

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DEC 24 2018
DISTRICT III

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1836228041

Location of Release Source

Latitude **36.884325** Longitude **-107.702855** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **MB-18 6 Inch**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/11/2018**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
F	**20**	**31N**	**8W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown at this time**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown at this time.**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On December 11, 2018, a contractor performing pipeline patrols discovered a possible release on the MB-18 6 Inch pipeline. An Enterprise technician was dispatched and confirmed the release. The pipeline was isolated, depressurized, locked out and tagged out. The release is located in a wash (blue line on a USGS topographic map). There were no fluids observed on the ground surface. Enterprise has determined this release is required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX, 100 ppm TPH and 600 ppm Chloride). A third party closure report will be submitted with the "Final C-141."

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notification to NMOCD Vanessa Fields and Jim Griswold December 11, 2018 by phone call and email.

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 12-18-18

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Vanessa Fields Date: 12/18/18

District I
1625 N. French Dr., Hobbs, NM 88240
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Revised August 24, 2018
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Facility ID	
Application ID	

Release Notification

NMOCD
DEC 24 2018
DISTRICT III

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1836228602

Location of Release Source

Latitude **36.879542** Longitude **-107.696093** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Quinn 340S**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/11/2018**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
O	**20**	**31N**	**8W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown at this time**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown at this time.**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On December 11, 2018, a contractor performing pipeline patrols discovered a possible release on the Quinn 340S pipeline. An Enterprise technician was dispatched and confirmed the release. The pipeline was isolated, depressurized, locked out and tagged out. The release is located in a wash (blue line on a USGS topographic map). There were no fluids observed on the ground surface. Enterprise has determined this release is required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX, 100 ppm TPH and 600 ppm Chloride). A third party closure report will be submitted with the "Final C-141."

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notification to NMOCD Vanessa Fields and Jim Griswold December 11, 2018 by phone call and email.

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 12-18-18

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Vanessa Fields Date: 12/24/18

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

Form C-141
Revised August 24, 2018
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Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

FVF1831328262

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NCS1829551947**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.50456** Longitude **-108.91551** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Trunk 2C Pipeline**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **8/9/2018 at 10:30 a.m.**	Serial Number *(if applicable)*: **NM 0 015563**

Unit Letter	Section	Township	Range	County
G	**8**	**26N**	**10W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **8-10 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **1.88 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release Cause of Release: On August 9, 2018 an Enterprise technician discovered a release of natural gas on the Trunk 2C pipeline. The pipeline was isolated, depressurized, locked out and tagged out. Repairs are remediation were completed on August 17, 2018. The contaminant mass was removed by mechanical excavation. The final excavation dimensions measured approximately 18 feet long by 12 feet wide by 10 feet deep. Approximately 160 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

NMOCD
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Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
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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: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Field Date: 10/29/18

email: jefields@eprod.com Telephone: (713) 381-6684

OCD Only

Received by: Vanessa Fields Date: 11/1/2018

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: 11/9/2018

Printed Name: Vanessa Fields Title: Environmental Specialist

APEX

CLOSURE REPORT

Property:

Trunk 2C Pipeline Release (2018)
NE 1/4, S8 T26N R10W
San Juan County, New Mexico

October 12, 2018
Apex Project No. 725040112497

NMOCD
NOV 01 2018
DISTRICT III

Prepared for:

Enterprise Field Services, LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Ranee Deechilly

Ranee Deechilly
Project Scientist

Kyle Summers

Kyle Summers, CPG
Branch Manager / Senior Geologist

Apex TITAN, Inc., a subsidiary of Apex Companies, LLC
606 S Rio Grande, Unit A, Aztec, NM 87410 T 505.334.5200 F 505.334.5204 www.apexcos.com

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Appendix A: Figure 1 – Topographic Map
Figure 2 – Site Vicinity Map
Figure 3 – Site Map with Soil Analytical Results

Appendix B: Executed C-138 Solid Waste Acceptance Form

Appendix C: Photographic Documentation

Appendix D: Table

Appendix E: Laboratory Data Sheets &
Chain of Custody Documentation

CLOSURE REPORT

Trunk 2C Pipeline Release (2018)
NE 1/4, S8 T26N R10W
San Juan County, New Mexico

Apex Project No. 725040112497

1.0 INTRODUCTION

1.1 Site Description & Background

The Trunk 2C Pipeline Release site, referred to hereinafter as the "Site", is located in the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 8, Township 26 North, Range 10 West, in rural San Juan County, New Mexico (36.50456N, 107.91552W). The Site is located on land managed by the Bureau of Land Management (BLM). The Site is surrounded by rangeland that is periodically interrupted by oil and gas production and gathering facilities, including one (1) Enterprise natural gas pipeline which traverses the area from approximately northwest to southeast.

On August 9, 2018, a release of natural gas occurred on the Trunk 2C pipeline. On August 14, 2018, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from 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 closure activities was to reduce constituent of concern (COC) concentrations in the on-Site soils to below the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) closure criteria using the New Mexico EMNRD OCD's New Mexico Administrative Code (NMAC) 19.15.29 *Releases* as guidance.

2.0 CLOSURE CRITERIA

In accordance with the New Mexico ENMRD OCD's NMAC 19.15.29 *Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the implementation of closure activities 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.

- No water wells were identified within a half a mile of the Site on the OSE Water Rights Reporting System (WRSS) database. Two (2) cathodic protection wells (Huerfano Unit #70, #230 (Unit NW, Sec 8 T26 R10W) and Huerfano Unit #222 (Unit SE, Sec 8 T26 R10W)) were identified within half a mile from the Site with depths to water of 30 feet below grade surface (bgs) and 130 feet bgs.

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse. The Site is located adjacent to an ephemeral wash that is identified as a "blue line" on the United States Geological Survey (USGS) topographic map.
- The Site is located within 200 feet of a dry stock pond. The pond is located approximately 90 feet east (topographically upgradient) of the release.
- The Site is not located within 300 feet from a permanent residence, school, hospital, institution or church.
- No springs or private, domestic fresh water wells used by less than five (5) households from domestic or stock water purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were 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.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

Based on the evaluation of the site characterization, 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 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On August 9, 2018, a release of natural gas was identified on the Trunk 2C pipeline. The pipeline was temporarily taken out of service pending repairs. On August 14, 2018, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service. During the pipeline repair and corrective action activities, Foutz and Bursum Construction Co. Inc., provided heavy equipment and labor support, and Apex provided environmental support.

The final primary excavation measured approximately 18 feet long by 12 feet wide. The maximum depth of the excavation measured approximately ten (10) feet bgs. The excavated flow path measured approximately six (6) feet long by nine (9) feet wide, and three (3) feet bgs in depth.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand and silty clay.

A total of approximately 160 cubic yards of petroleum hydrocarbon affected soils and five (5) barrels (bbls) of hydro-excavation cuttings and water were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation was backfilled with imported fill and contoured to surrounding grade.

Figure 3 is a map with soil sample locations that depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

3.2 Soil Sampling Program

Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

On August 17, 2018, five (5) composite soil samples (S-1 through S-5) were collected from the sidewalls and the base of the final excavation for laboratory analysis. In addition, one (1) composite soil sample (FP-1) was collected from the flow path for laboratory analysis.

The samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

3.3 Laboratory Analytical Methods

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0.

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

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 NMAC 19.15.29 *Releases*. which establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Soil Samples

Apex compared the BTEX, TPH, and chloride concentrations or laboratory practical quantitation limits (PQLs) associated with the composite soil samples (S-1 through S-5 and FP-1) to the New Mexico EMNRD OCD closure criteria.

- The laboratory analyses of the composite soil samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analyses of the composite soil samples collected from soils remaining in place do not indicate total BTEX concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analysis of composite soil sample FP-1 collected from soils remaining in place indicates a combined TPH GRO/DRO/MRO concentration of 77 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analyses of the remaining composite soil samples collected from soils remaining in place do not indicate combined TPH GRO/DRO/MRO concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analyses of the composite soil samples collected from soils remaining in place indicate chloride concentrations ranging from below the laboratory PQLs to 370 mg/kg (S-4), which are below the New Mexico OCD closure criteria of 600 mg/kg.

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

5.0 RECLAMATION AND RE-VEGETATION

The excavation was backfilled with imported fill and contoured to the surrounding grade. The site will be re-seeded with a BLM Farmington Field Office approved seeding mixture at the beginning of the next favorable growing season.

6.0 FINDINGS AND RECOMMENDATIONS

The Trunk 2C Pipeline Release Site is located in the Enterprise pipeline ROW in the NE ¼ of Section 8, Township 26 North, Range 10 West, in rural San Juan County, New Mexico. The Site is located on land managed by the BLM. The Site is surrounded by rangeland that is periodically interrupted by oil and gas production and gathering facilities, including one (1) Enterprise natural gas pipeline which traverses the area from approximately northwest to southeast.

On August 9, 2018, a release of natural gas occurred on the Trunk 2C pipeline. On August 14, 2018, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release.

- The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the New Mexico EMNRD OCD closure criteria using the New Mexico EMNRD OCD's NMAC 19.15.29 *Releases* as guidance.

- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand and silty clay.

- The final primary excavation measured approximately 18 feet long by 12 feet wide. The maximum depth of the excavation measured approximately 10 feet bgs. The excavated flow path measured approximately six (6) feet long by nine (9) feet wide, and three (3) feet bgs in depth.

- Prior to backfilling, five (5) composite soil samples were collected from the excavation along with one (1) flow path sample. Based on soil analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.

- A total of approximately 160 cubic yards of petroleum hydrocarbon affected soils and five (5) bbls of hydro-excavation cuttings and water were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and contoured to surrounding grade.

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

7.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

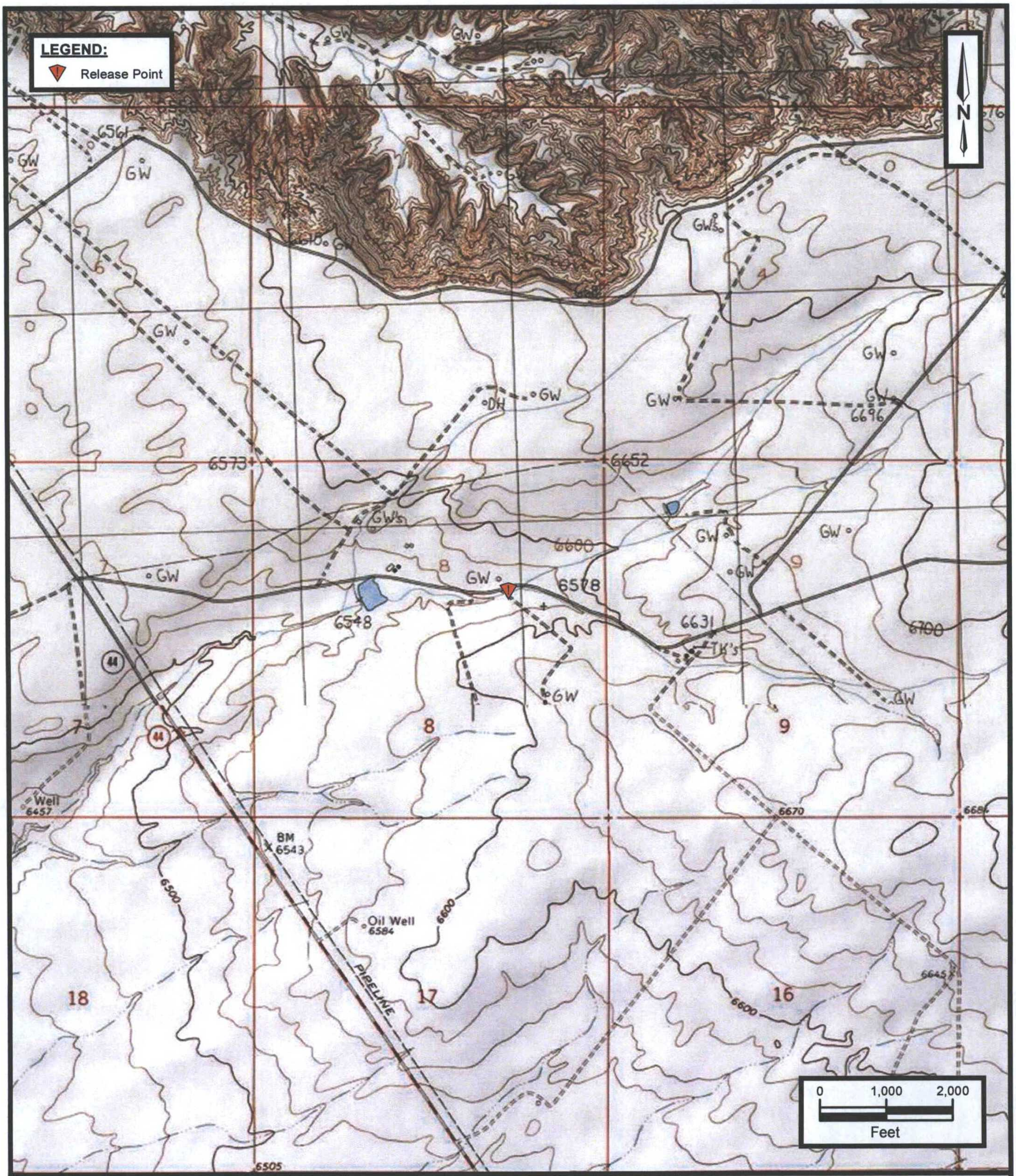
Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work 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.

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 Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. 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 proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

APPENDIX A

Figures



Trunk 2C (2018) Pipeline Release
NE1/4 S8 T26N R10W
San Juan County, New Mexico
36.50456 N, 107.91552 W

Project No. 725040112497

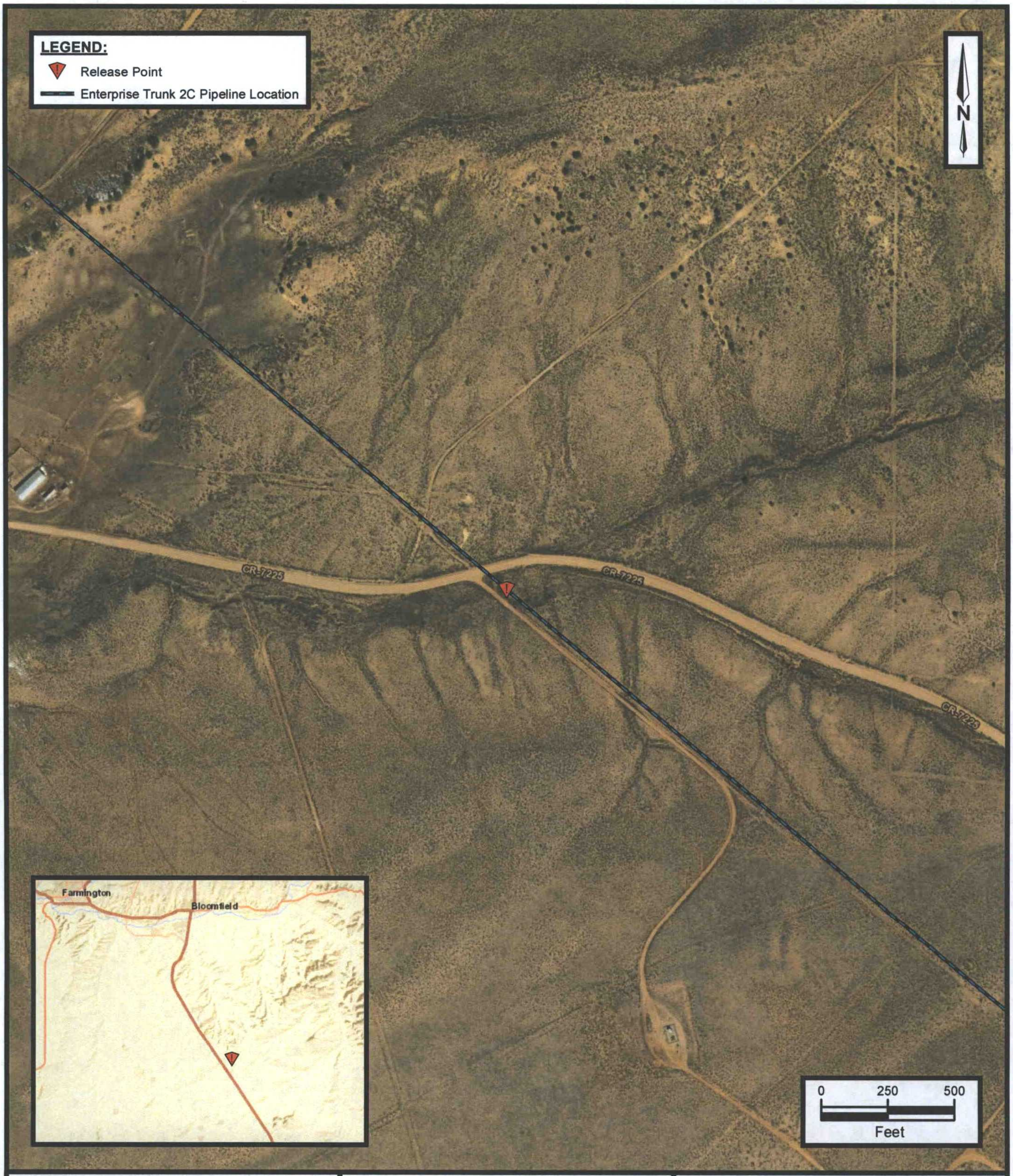
Apex TITAN, Inc.
606 South Rio Grande, Suite A
Aztec, New Mexico 87410
Phone: (505) 334-5200
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

Service Layer Credits:
Copyright:© 2013 National Geographic Society, i-cubed, East Fork Kutz Canyon and Huerfano Trading Post NW New Mexico 7.5-Minute Quadrangles 1985

Q:\Projects\725040112497\Figure 1.mxd Modified 8/30/2018 by JSimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System



Trunk 2C (2018) Pipeline Release
NE1/4 S8 T26N R10W
San Juan County, New Mexico
36.50456 N, 107.91552 W

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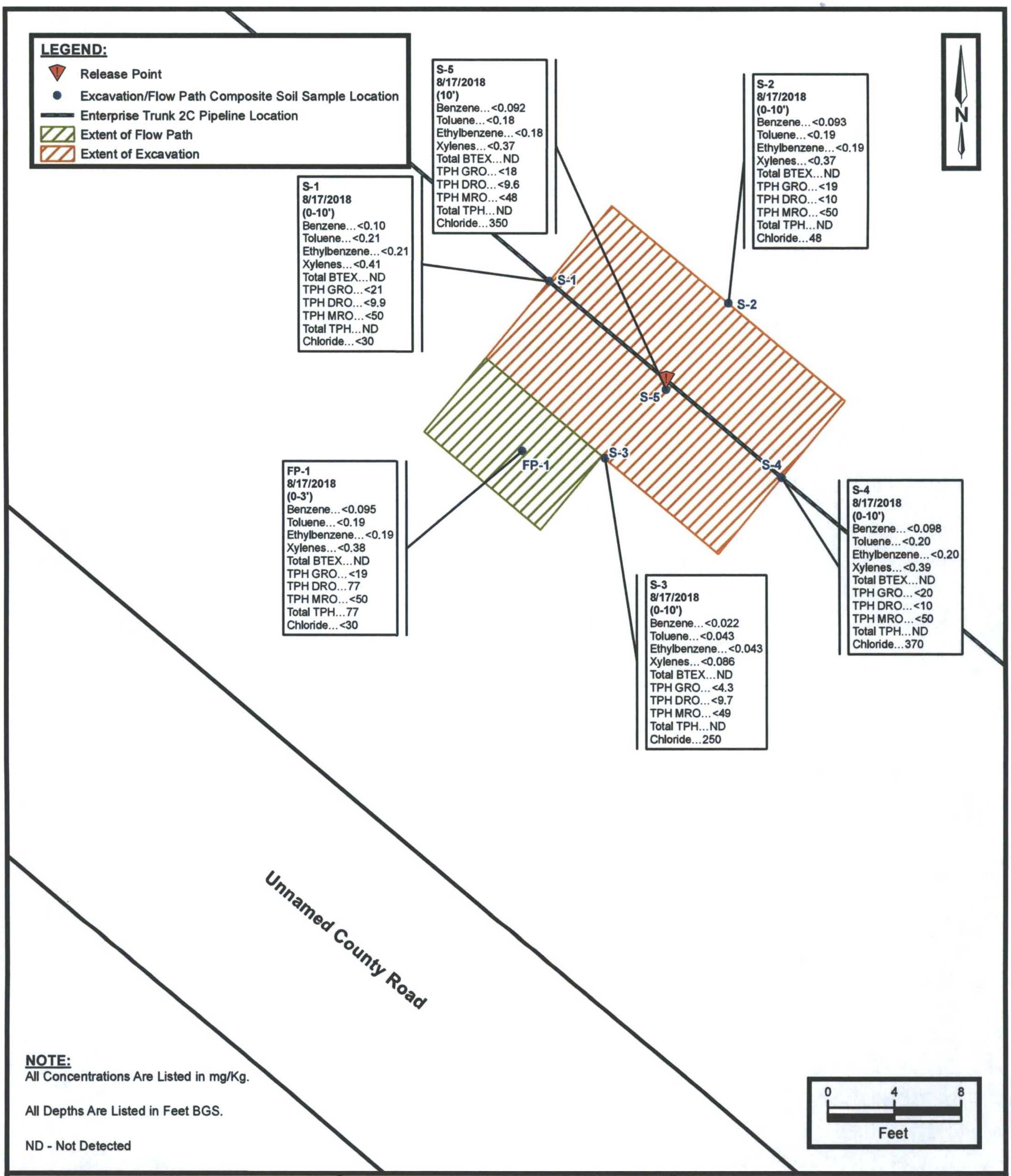
A Subsidiary of Apex Companies, LLC

FIGURE 2

Site Vicinity Map

Service Layer Credits:
Esri, HERE, Garmin, © OpenStreetMap contributors, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Aerial Photograph March 2016

Q:\Projects\725040112497\Figure 2.mxd Modified 8/30/2018 by JSimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System



S-5
8/17/2018
(10')
Benzene...<0.092
Toluene...<0.18
Ethylbenzene...<0.18
Xylenes...<0.37
Total BTEX...ND
TPH GRO...<18
TPH DRO...<9.6
TPH MRO...<48
Total TPH...ND
Chloride...350

S-2
8/17/2018
(0-10')
Benzene...<0.093
Toluene...<0.19
Ethylbenzene...<0.19
Xylenes...<0.37
Total BTEX...ND
TPH GRO...<19
TPH DRO...<10
TPH MRO...<50
Total TPH...ND
Chloride...48

S-1
8/17/2018
(0-10')
Benzene...<0.10
Toluene...<0.21
Ethylbenzene...<0.21
Xylenes...<0.41
Total BTEX...ND
TPH GRO...<21
TPH DRO...<9.9
TPH MRO...<50
Total TPH...ND
Chloride...<30

FP-1
8/17/2018
(0-3')
Benzene...<0.095
Toluene...<0.19
Ethylbenzene...<0.19
Xylenes...<0.38
Total BTEX...ND
TPH GRO...<19
TPH DRO...77
TPH MRO...<50
Total TPH...77
Chloride...<30

S-4
8/17/2018
(0-10')
Benzene...<0.098
Toluene...<0.20
Ethylbenzene...<0.20
Xylenes...<0.39
Total BTEX...ND
TPH GRO...<20
TPH DRO...<10
TPH MRO...<50
Total TPH...ND
Chloride...370

S-3
8/17/2018
(0-10')
Benzene...<0.022
Toluene...<0.043
Ethylbenzene...<0.043
Xylenes...<0.086
Total BTEX...ND
TPH GRO...<4.3
TPH DRO...<9.7
TPH MRO...<49
Total TPH...ND
Chloride...250

NOTE:
All Concentrations Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

ND - Not Detected

Trunk 2C (2018) Pipeline Release
NE1/4 S8 T26N R10W
San Juan County, New Mexico
36.50456 N, 107.91552 W

Project No. 725040112497

Apex TITAN, Inc.
606 South Rio Grande, Suite A
Aztec, New Mexico 87410
Phone: (505) 334-5200
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 3

Site Map with Soil Analytical Results

Q:\Projects\725040112497\Figure 3.mxd Modified 10/9/2018 by jsimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System

APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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

97057-0939

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Trunk 2C Pipeline

Invoice Information: PM: Aaron Lucero
Non AFE: N37753
Pay Key: CM22355

3. Location of Material (Street Address, City, State or ULSTR):
UL G Section 8 T26N R10W; 36.50456, -107.91551

August 2018

4. Source and Description of Waste: @
Source: ~~Overtopping of a storage tank.~~
Description: Hydrocarbon/Condensate impacted soil associated with the remediation of a natural gas pipeline leak.
Estimated Volume 50 [✓ yd³] bbls Known Volume (to be entered by the operator at the end of the haul) 160/5 [✓ yd³ / bbls]

5.
GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 8-14-18, representative for Enterprise Products Operating authorizes Envirotech, Inc to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, ____, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: TBD Foutz + Bursum, DeHerrera

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

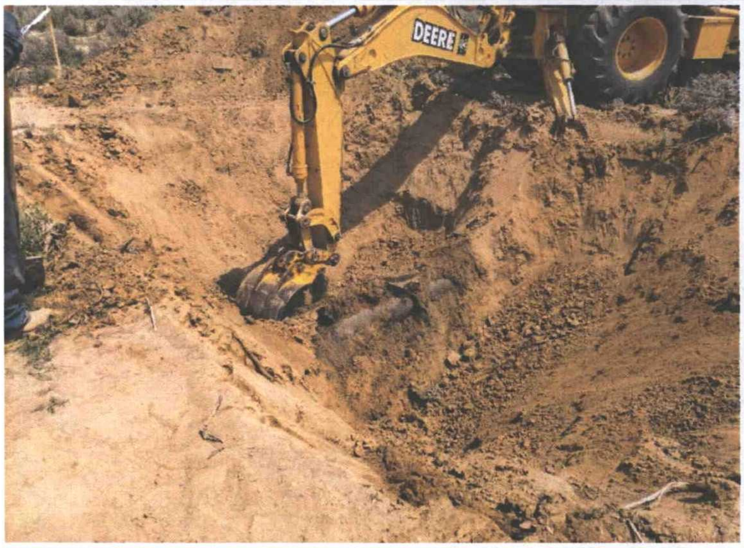
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree
SIGNATURE: ____
Surface Waste Management Facility Authorized Agent

TITLE: Environmental Manager DATE: 8/14/18
TELEPHONE NO.: 505-632-0615

APPENDIX C

Photographic Documentation

Photograph 1 View of the release point.	
Photograph 2 View of the in-process excavation activities.	
Photograph 3 View of the in-process excavation activities, facing northeast.	

Photograph 4 View of the in-process excavation activities.	
Photograph 5 View of the in-process excavation activities, facing northwest.	
Photograph 6 View of the final excavation, facing southwest.	

Photograph 7

View of the final excavation, facing northwest.

Photograph 8

View of the final excavation, facing northeast.

Photograph 9

View of the final excavation after initial restoration.

Appendix D

Table

APEX

TABLE 1
Trunk 2C Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Total Combined TPH (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Flowpath Composite Soil Sample													
FP-1	8.17.18	C	0 to 3	<0.095	<0.19	<0.19	<0.38	ND	<19	77	<50	77	<30
Excavation Composite Soil Samples													
S-1	8.17.18	C	0 to 10	<0.10	<0.21	<0.21	<0.41	ND	<21	<9.9	<50	ND	<30
S-2	8.17.18	C	0 to 10	<0.093	<0.19	<0.19	<0.37	ND	<19	<10	<50	ND	48
S-3	8.17.18	C	0 to 10	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.7	<49	ND	250
S-4	8.17.18	C	0 to 10	<0.098	<0.20	<0.20	<0.39	ND	<20	<10	<50	ND	370
S-5	8.17.18	C	10	<0.092	<0.18	<0.18	<0.37	ND	<18	<9.6	<48	ND	350

ND = Not Detected above the Practical Quantitation Limits
NA = Not Analyzed
NE = Not established
mg/kg = milligram per kilogram
BTEX = benzene, toluene, ethylbenzene, and total xylenes
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
MRO = Motor Oil/Lube Oil Range Organics
TPH = Total Petroleum Hydrocarbon

Appendix E

Laboratory Data Sheets & Chain of Custody Documentation

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 22, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk 2C

OrderNo.: 1808B59

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/18/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808B59**
Date Reported: **8/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Trunk 2C
Lab ID: 1808B59-001 **Matrix:** SOIL

Client Sample ID: FP-01
Collection Date: 8/17/2018 9:00:00 AM
Received Date: 8/18/2018 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/20/2018 10:31:03 AM	39874
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	8/20/2018 10:29:59 AM	A53553
Surr: BFB	110	70-130		%Rec	5	8/20/2018 10:29:59 AM	A53553
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	77	10		mg/Kg	1	8/20/2018 12:40:17 PM	39869
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2018 12:40:17 PM	39869
Surr: DNOP	109	50.6-138		%Rec	1	8/20/2018 12:40:17 PM	39869
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.095		mg/Kg	5	8/20/2018 10:29:59 AM	R53553
Toluene	ND	0.19		mg/Kg	5	8/20/2018 10:29:59 AM	R53553
Ethylbenzene	ND	0.19		mg/Kg	5	8/20/2018 10:29:59 AM	R53553
Xylenes, Total	ND	0.38		mg/Kg	5	8/20/2018 10:29:59 AM	R53553
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	5	8/20/2018 10:29:59 AM	R53553
Surr: Toluene-d8	95.9	70-130		%Rec	5	8/20/2018 10:29:59 AM	R53553

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Trunk 2C
Lab ID: 1808B59-002
Matrix: SOIL

Client Sample ID: S-1
Collection Date: 8/17/2018 9:05:00 AM
Received Date: 8/18/2018 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/20/2018 10:43:28 AM	39874
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	8/20/2018 10:53:05 AM	A53553
Surr: BFB	107	70-130		%Rec	5	8/20/2018 10:53:05 AM	A53553
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/20/2018 1:04:51 PM	39869
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2018 1:04:51 PM	39869
Surr: DNOP	110	50.6-138		%Rec	1	8/20/2018 1:04:51 PM	39869
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.10		mg/Kg	5	8/20/2018 10:53:05 AM	R53553
Toluene	ND	0.21		mg/Kg	5	8/20/2018 10:53:05 AM	R53553
Ethylbenzene	ND	0.21		mg/Kg	5	8/20/2018 10:53:05 AM	R53553
Xylenes, Total	ND	0.41		mg/Kg	5	8/20/2018 10:53:05 AM	R53553
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	5	8/20/2018 10:53:05 AM	R53553
Surr: Toluene-d8	95.3	70-130		%Rec	5	8/20/2018 10:53:05 AM	R53553

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Trunk 2C
Lab ID: 1808B59-003 **Matrix:** SOIL

Client Sample ID: S-2
Collection Date: 8/17/2018 9:10:00 AM
Received Date: 8/18/2018 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	48	30		mg/Kg	20	8/20/2018 10:55:52 AM	39874
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	8/20/2018 11:16:05 AM	A53553
Surr: BFB	106	70-130		%Rec	5	8/20/2018 11:16:05 AM	A53553
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2018 1:29:25 PM	39869
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2018 1:29:25 PM	39869
Surr: DNOP	106	50.6-138		%Rec	1	8/20/2018 1:29:25 PM	39869
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.093		mg/Kg	5	8/20/2018 11:16:05 AM	R53553
Toluene	ND	0.19		mg/Kg	5	8/20/2018 11:16:05 AM	R53553
Ethylbenzene	ND	0.19		mg/Kg	5	8/20/2018 11:16:05 AM	R53553
Xylenes, Total	ND	0.37		mg/Kg	5	8/20/2018 11:16:05 AM	R53553
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	5	8/20/2018 11:16:05 AM	R53553
Surr: Toluene-d8	97.5	70-130		%Rec	5	8/20/2018 11:16:05 AM	R53553

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1808B59**
Date Reported: **8/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Trunk 2C
Lab ID: 1808B59-004
Matrix: SOIL

Client Sample ID: S-3
Collection Date: 8/17/2018 9:15:00 AM
Received Date: 8/18/2018 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	250	30		mg/Kg	20	8/20/2018 11:08:16 AM	39874
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/20/2018 11:39:11 AM	A53553
Surr: BFB	107	70-130		%Rec	1	8/20/2018 11:39:11 AM	A53553
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/20/2018 1:54:04 PM	39869
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/20/2018 1:54:04 PM	39869
Surr: DNOP	106	50.6-138		%Rec	1	8/20/2018 1:54:04 PM	39869
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.022		mg/Kg	1	8/20/2018 11:39:11 AM	R53553
Toluene	ND	0.043		mg/Kg	1	8/20/2018 11:39:11 AM	R53553
Ethylbenzene	ND	0.043		mg/Kg	1	8/20/2018 11:39:11 AM	R53553
Xylenes, Total	ND	0.086		mg/Kg	1	8/20/2018 11:39:11 AM	R53553
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	8/20/2018 11:39:11 AM	R53553
Surr: Toluene-d8	96.7	70-130		%Rec	1	8/20/2018 11:39:11 AM	R53553

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Trunk 2C
Lab ID: 1808B59-005
Matrix: SOIL

Client Sample ID: S-4
Collection Date: 8/17/2018 9:20:00 AM
Received Date: 8/18/2018 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	370	30		mg/Kg	20	8/20/2018 11:20:41 AM	39874
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	8/20/2018 12:02:16 PM	A53553
Surr: BFB	110	70-130		%Rec	5	8/20/2018 12:02:16 PM	A53553
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2018 2:18:44 PM	39869
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2018 2:18:44 PM	39869
Surr: DNOP	104	50.6-138		%Rec	1	8/20/2018 2:18:44 PM	39869
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.098		mg/Kg	5	8/20/2018 12:02:16 PM	R53553
Toluene	ND	0.20		mg/Kg	5	8/20/2018 12:02:16 PM	R53553
Ethylbenzene	ND	0.20		mg/Kg	5	8/20/2018 12:02:16 PM	R53553
Xylenes, Total	ND	0.39		mg/Kg	5	8/20/2018 12:02:16 PM	R53553
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	5	8/20/2018 12:02:16 PM	R53553
Surr: Toluene-d8	93.4	70-130		%Rec	5	8/20/2018 12:02:16 PM	R53553

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Trunk 2C
Lab ID: 1808B59-006
Matrix: SOIL

Client Sample ID: S-5
Collection Date: 8/17/2018 9:25:00 AM
Received Date: 8/18/2018 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	350	30		mg/Kg	20	8/20/2018 11:33:06 AM	39874
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	8/20/2018 12:25:24 PM	A53553
Surr: BFB	109	70-130		%Rec	5	8/20/2018 12:25:24 PM	A53553
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/20/2018 2:43:18 PM	39869
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/20/2018 2:43:18 PM	39869
Surr: DNOP	108	50.6-138		%Rec	1	8/20/2018 2:43:18 PM	39869
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.092		mg/Kg	5	8/20/2018 12:25:24 PM	R53553
Toluene	ND	0.18		mg/Kg	5	8/20/2018 12:25:24 PM	R53553
Ethylbenzene	ND	0.18		mg/Kg	5	8/20/2018 12:25:24 PM	R53553
Xylenes, Total	ND	0.37		mg/Kg	5	8/20/2018 12:25:24 PM	R53553
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	5	8/20/2018 12:25:24 PM	R53553
Surr: Toluene-d8	100	70-130		%Rec	5	8/20/2018 12:25:24 PM	R53553

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B59**

22-Aug-18

Client: APEX TITAN

Project: Trunk 2C

Sample ID **LCS-39874**		SampType: **lcs**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **LCSS**		Batch ID: **39874**			RunNo: **53555**					
Prep Date: **8/20/2018**		Analysis Date: **8/20/2018**			SeqNo: **1766307**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Sample ID **MB-39874**		SampType: **mblk**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **PBS**		Batch ID: **39874**			RunNo: **53555**					
Prep Date: **8/20/2018**		Analysis Date: **8/20/2018**			SeqNo: **1766308**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B59**

22-Aug-18

Client: APEX TITAN

Project: Trunk 2C

Sample ID **MB-39869** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **39869** RunNo: **53552**
Prep Date: **8/20/2018** Analysis Date: **8/20/2018** SeqNo: **1765700** 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	10		10.00		105	50.6	138			

Sample ID **LCS-39869** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **39869** RunNo: **53552**
Prep Date: **8/20/2018** Analysis Date: **8/20/2018** SeqNo: **1765701** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.2	70	130			
Surr: DNOP	5.1		5.000		102	50.6	138			

Sample ID **MB-39897** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **39897** RunNo: **53552**
Prep Date: **8/21/2018** Analysis Date: **8/21/2018** SeqNo: **1766570** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.3	50.6	138			

Sample ID **LCS-39897** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **39897** RunNo: **53552**
Prep Date: **8/21/2018** Analysis Date: **8/21/2018** SeqNo: **1766571** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.6		5.000		72.2	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B59**
22-Aug-18

Client: APEX TITAN
Project: Trunk 2C

Sample ID **100ng lcs** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **R53553** RunNo: **53553**
Prep Date: Analysis Date: **8/20/2018** SeqNo: **1765339** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.7	80	120			
Toluene	1.1	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	0.54		0.5000		109	70	130			
Surr: Toluene-d8	0.49		0.5000		98.8	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **R53553** RunNo: **53553**
Prep Date: Analysis Date: **8/20/2018** SeqNo: **1765346** 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	0.59		0.5000		117	70	130			
Surr: Toluene-d8	0.48		0.5000		96.6	70	130			

Sample ID **1808b59-002ams** SampType: **MS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-1** Batch ID: **R53553** RunNo: **53553**
Prep Date: Analysis Date: **8/20/2018** SeqNo: **1766082** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.1	0.10	4.115	0	100	80	120			
Toluene	4.4	0.21	4.115	0	107	80	120			
Ethylbenzene	4.4	0.21	4.115	0	107	82	121			
Xylenes, Total	13	0.41	12.34	0.08131	105	80.2	120			
Surr: 4-Bromofluorobenzene	2.3		2.058		110	70	130			
Surr: Toluene-d8	2.0		2.058		96.0	70	130			

Sample ID **1808b59-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-1** Batch ID: **R53553** RunNo: **53553**
Prep Date: Analysis Date: **8/20/2018** SeqNo: **1766083** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.9	0.10	4.115	0	94.6	80	120	5.68	20	
Toluene	4.2	0.21	4.115	0	102	80	120	5.41	20	
Ethylbenzene	4.2	0.21	4.115	0	103	82	121	4.55	20	
Xylenes, Total	12	0.41	12.34	0.08131	99.5	80.2	120	5.34	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B59**

22-Aug-18

Client: APEX TITAN
Project: Trunk 2C

Sample ID **1808b59-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-1** Batch ID: **R53553** RunNo: **53553**
Prep Date: Analysis Date: **8/20/2018** SeqNo: **1766083** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2.3		2.058		111	70	130	0	0	
Surr: Toluene-d8	1.9		2.058		94.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808B59

22-Aug-18

Client: APEX TITAN
Project: Trunk 2C

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**		
Client ID: **LCSS**	Batch ID: **A53553**	RunNo: **53553**		
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1765336**	Units: **mg/Kg**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB	500		500.0		99.9	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**		
Client ID: **PBS**	Batch ID: **A53553**	RunNo: **53553**		
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1765337**	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	520		500.0		104	70	130			

Sample ID **1808b59-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**		
Client ID: **FP-01**	Batch ID: **A53553**	RunNo: **53553**		
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766080**	Units: **mg/Kg**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	98	19	94.70	6.174	97.0	64.7	142			
Surr: BFB	2000		1894		106	70	130			

Sample ID **1808b59-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**		
Client ID: **FP-01**	Batch ID: **A53553**	RunNo: **53553**		
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766081**	Units: **mg/Kg**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	95	19	94.70	6.174	94.0	64.7	142	2.94	20	
Surr: BFB	2000		1894		103	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC

Work Order Number: 1808B59

RcptNo: 1

Received By: Anne Thorne 8/18/2018 11:15:00 AM Anne Th

Completed By: Anne Thorne 8/20/2018 7:39:14 AM Anne Th

Reviewed By: JO 8/20/18

Labeled by: AT 08/20/17

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)
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? Yes ☑ No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: ________
(<2 or >12 unless noted)
Adjusted? ________
Checked by: ________

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: Custody Seals intact on Soil Jars / AT 08/20/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environment Lab
Address: 4901 Hawkins NE
Albuquerque NM 87107
Contact: A Freeman
Phone: 505 345 3975
PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 2.1-CF-1.0=1.1

1	2	3	4	5

Page 1 of 1

Sampler's Name: Chad DAponti
Sampler's Signature:

Proj. No.: 7250410112497
Project Name: Trunk 2C

ANALYSIS REQUESTED: BTEX 8021; TPH GRO/DRO/MRO 8015; Chloride 300

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	8/17/18	900	X		FP-1	0	3				1		X	X	X	1808B59-001
S	8/17/18	905	X		S-1	0	10				1		X	X	X	002
S	8/17/18	910	X		S-2	0	10				1		X	X	X	003
S	8/17/18	915	X		S-3	0	10				1		X	X	X	004
S	8/17/18	920	X		S-4	0	10				1		X	X	X	005
S	8/17/18	925	X		S-5	-	10				1		X	X	X	006

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	8-17-18	1043		8/17/18	1043
	8/17/18	1839		08/18/18	1115

NOTES:
Pay Key # CM22355
PM Tom Long
AFE # N37753
Same Day 8-20-18

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

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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*:**NVF1818428423**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.7762** Longitude **-107.9442** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral H-46 Pipeline**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **6/22//2018 at 1:30 p.m.**	Serial Number *(if applicable)*: **NM 102484**

Unit Letter	Section	Township	Range	County
N	25	30N	11W	San Juan

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

NMOCD
DEC 10 2018
DISTRICT III

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **15-20 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **5.64 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release Cause of Release: On June 22, 2018 an Enterprise technician discovered a release of natural gas on the Lateral H-46 pipeline. The pipeline was isolated, depressurized, locked out and tagged out. Repairs and remediation were completed on August 29, 2018. The contaminant mass was removed by mechanical excavation. The final excavation dimensions measured approximately 43 feet long by 13 feet wide by 21 feet deep. Approximately 1,063 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

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: Jon E. Fields
Title: Director, Field Environmental

Signature: Jon E. Fields
Date: 12-3-18

email: jefields@eprod.com
Telephone: (713) 381-6684

OCD Only

Received by: Vanessa Fields
Date: 12/10/2018

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: 1/2/2019

Printed Name: Vanessa Fields
Title: Environmental Specialist

APEX

CLOSURE REPORT

Property:

Lateral H-46 Pipeline Release (2018)
SW 1/4, S25 T30N R11W
San Juan County, New Mexico

November 15, 2018
Apex Project No. 725040112481

Prepared for:

Enterprise Field Services, LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Chad D'Aponti
Project Scientist

Kyle Summers, CPG
Branch Manager / Senior Geologist

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Appendix B:	Executed C-138 Solid Waste Acceptance Form
Appendix C:	Photographic Documentation
Appendix D:	Table
Appendix E:	Laboratory Data Sheets & Chain of Custody Documentation

CLOSURE REPORT

Lateral H-46 Pipeline Release (2018)
SW 1/4, S25 T30N R11W
San Juan County, New Mexico

Apex Project No. 725040112481

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral H-46 Pipeline Release site, referred to hereinafter as the "Site", is located in the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 25, Township 30 North, Range 11 West, in rural San Juan County, New Mexico (36.7762N, 107.9442W). The Site is located on land managed by the Bureau of Land Management (BLM). The Site is surrounded by rangeland that is periodically interrupted by oil and gas production and gathering facilities, including two (2) Enterprise natural gas pipelines which traverses the area from approximately northwest to southeast.

On June 22, 2018, a release of natural gas occurred from the Lateral H-46 pipeline. On August 21, 2018, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from 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 closure activities was to reduce constituent of concern (COC) concentrations in the on-Site soils to below the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) closure criteria using the New Mexico EMNRD OCD's New Mexico Administrative Code (NMAC) 19.15.29 *Releases* as guidance.

2.0 CLOSURE CRITERIA

In accordance with the New Mexico ENMRD OCD's NMAC 19.15.29 *Releases,* Apex TITAN, Inc. (Apex) utilized the general Site characteristics obtained during the implementation of closure activities 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.

- No water wells were identified within a mile of the Site on the OSE Water Rights Reporting System (WRSS) database. Two (2) cathodic protection wells (Seymour Com #3 (Unit C, Sec 36 T30N R11W) and Kessler Com #3 (Unit O, Sec 25 T30N R11W)) were identified within half a mile from the site with depths to water of 80 feet below grade surface (bgs) and 180 feet bgs.

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse. The Site is located within an ephemeral wash that is identified as a "blue line" on the United States Geological Survey (USGS) topographic map.
- 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.
- No springs or private, domestic fresh water wells used by less than five (5) households for domestic or stock water purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were 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.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

Based on the evaluation of the site characterization, closure criteria 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 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On June 22, 2018, a release of natural gas was identified from the Lateral H-46 pipeline. The pipeline was temporarily taken out of service pending repairs. On August 21, 2018, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. During the pipeline repair and corrective action activities, OFT Construction, Inc. provided heavy equipment and labor support, and Apex provided environmental support.

The final primary excavation measured approximately 43 feet long by 31 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 21 feet bgs.

The lithology encountered during the completion of closure activities consisted primarily of unconsolidated silty sand.

A total of approximately 1,063 cubic yards of petroleum hydrocarbon affected soils were transported to the Industrial Ecosystems, Inc. (IEI) landfarm near Aztec, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation will be backfilled with imported fill and contoured to surrounding grade once permanent pipeline repairs are completed.

Figure 3 is a map with soil sample locations that depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

3.2 Soil Sampling Program

Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of 18 composite soil samples (S-1 through S-18) from the sidewalls and the base of the final excavation for laboratory analysis.

The samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

3.3 Laboratory Analytical Methods

The composite soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) utilizing Environmental Protection Agency (EPA) SW-846 Method #8021, and total petroleum hydrocarbon (TPH) gasoline range organics (GRO) diesel range organics (DRO) and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0

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

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 NMAC 19.15.29 *Releases*. This guidance document establishes investigation and abatement action requirements for oil and gas sites subject to reporting and/or corrective action.

4.1 Soil Samples

Apex compared the BTEX, TPH, and chloride concentrations or laboratory practical quantitation limits (PQLs) associated with the composite soil samples (S-1 through S-5, and S-8 through S-18) remaining in place to the New Mexico EMNRD OCD closure criteria. Soils associated with sidewall composite soil samples S-6 and S-7 were removed by excavation and transported to IEI landfarm for disposal/remediation and are not included in the following bullet point discussions. Following further excavation, composite soil samples S-6 and S-7 were replaced by sidewall composite samples S-8, S-9, S-11 through S-17, and composite floor samples S-10 and S-18.

- The laboratory analyses of the composite soil samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analysis of composite soil sample S-8 collected from soils remaining in place indicates a combined total BTEX concentration of 0.15 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 50 mg/kg. The laboratory analyses of the remaining composite soil samples collected from soil remaining in place do not indicate total BTEX concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analysis of composite soil sample S-8 collected from soils remaining in place indicates a combined TPH GRO/DRO/MRO concentration of 6.6 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analyses of the remaining composite soil samples collected from soils remaining in place do not indicate combined TPH GRO/DRO/MRO concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analyses of composite soil samples S-16 and S-17 collected from soils remaining in place indicate chloride concentrations of 280 mg/kg and 310 mg/kg, respectively, which are below the New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analyses of the remaining composite soil samples collected from soils remaining in place do not indicate chloride concentrations above the laboratory PQLs, which are below the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

5.0 RECLAMATION AND RE-VEGETATION

As of November 15, 2018, the excavation is still partially open, awaiting permanent pipeline repairs. The excavation will be backfilled with imported fill and contoured to the surrounding grade once permanent pipeline repairs are completed. Enterprise will re-seed the Site with a BLM Farmington Field Office approved seeding mixture at the beginning of the next favorable growing season.

6.0 FINDINGS AND RECOMMENDATIONS

The Lateral H-46 Pipeline Release Site is located in the Enterprise pipeline ROW in the SW ¼ of Section 25, Township 30 North, Range 11 West, in rural San Juan County, New Mexico. The Site is located on land managed by the BLM. The Site is surrounded by rangeland that is periodically interrupted by oil and gas production and gathering facilities, including two (2) Enterprise natural gas pipelines which traverse the area from approximately northwest to southeast.

On June 22, 2018, a release of natural gas occurred from the Lateral H-46 pipeline. On August 21, 2018, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release.

- 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.
- The lithology encountered during the completion of the closure activities consisted primarily of unconsolidated silty sand.
- The final primary excavation measured approximately 43 feet long by 31 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 21 feet bgs.
- Prior to backfilling, 18 composite soil samples were collected from the excavation. Based on soil analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.
- A total of approximately 1,063 cubic yards of petroleum hydrocarbon affected soils were transported to the IEI landfarm near Aztec, New Mexico for disposal/remediation. The excavation will be backfilled with imported fill and contoured to surrounding grade once permanent pipeline repairs are completed.

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

7.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

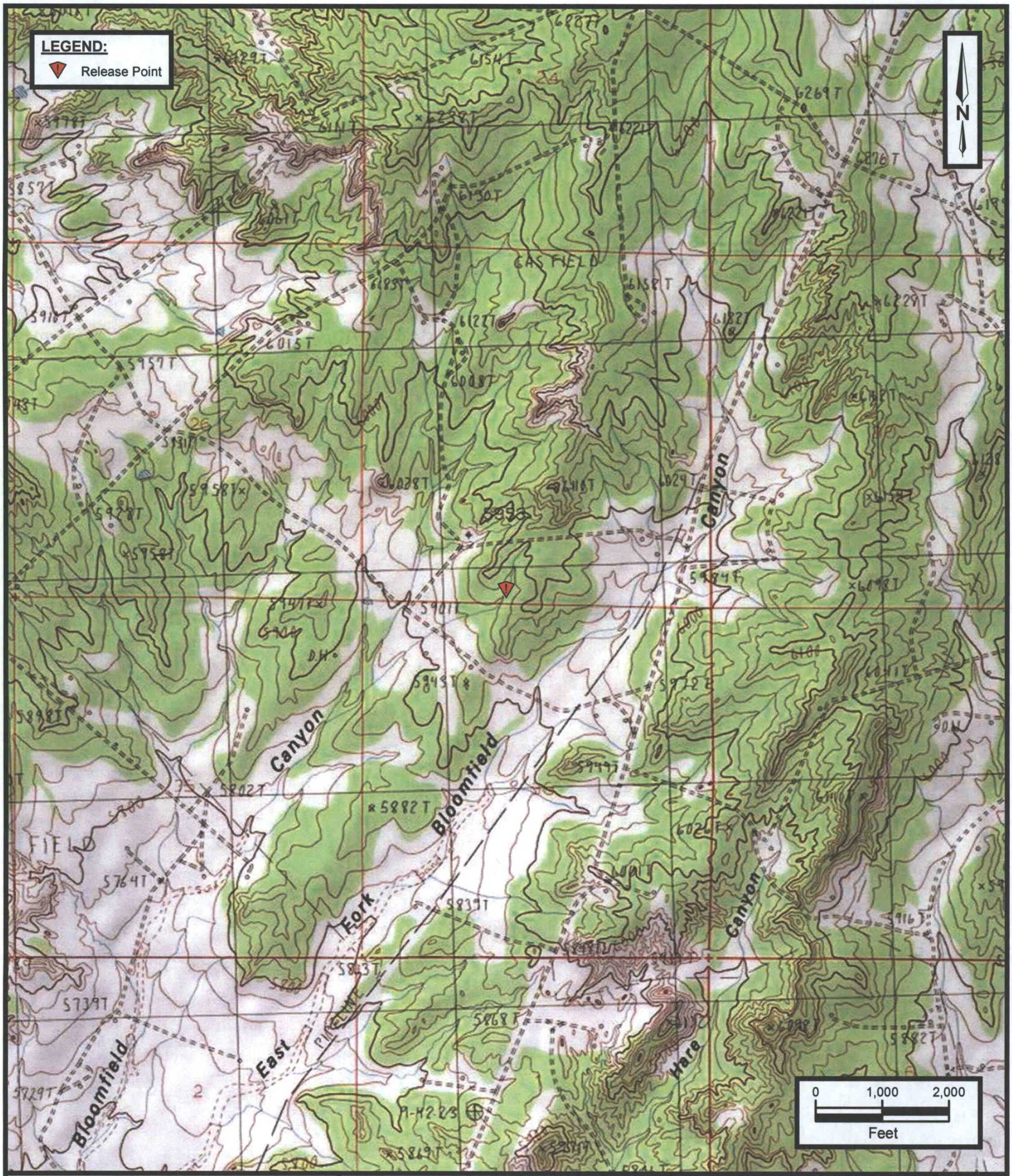
Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work 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.

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 Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. 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 proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

APPENDIX A

Figures



Lateral H-46
SW1/4 S25 T30N R11W
San Juan County, New Mexico
36.7762 N, 107.9442 W

Project No. 725040112481

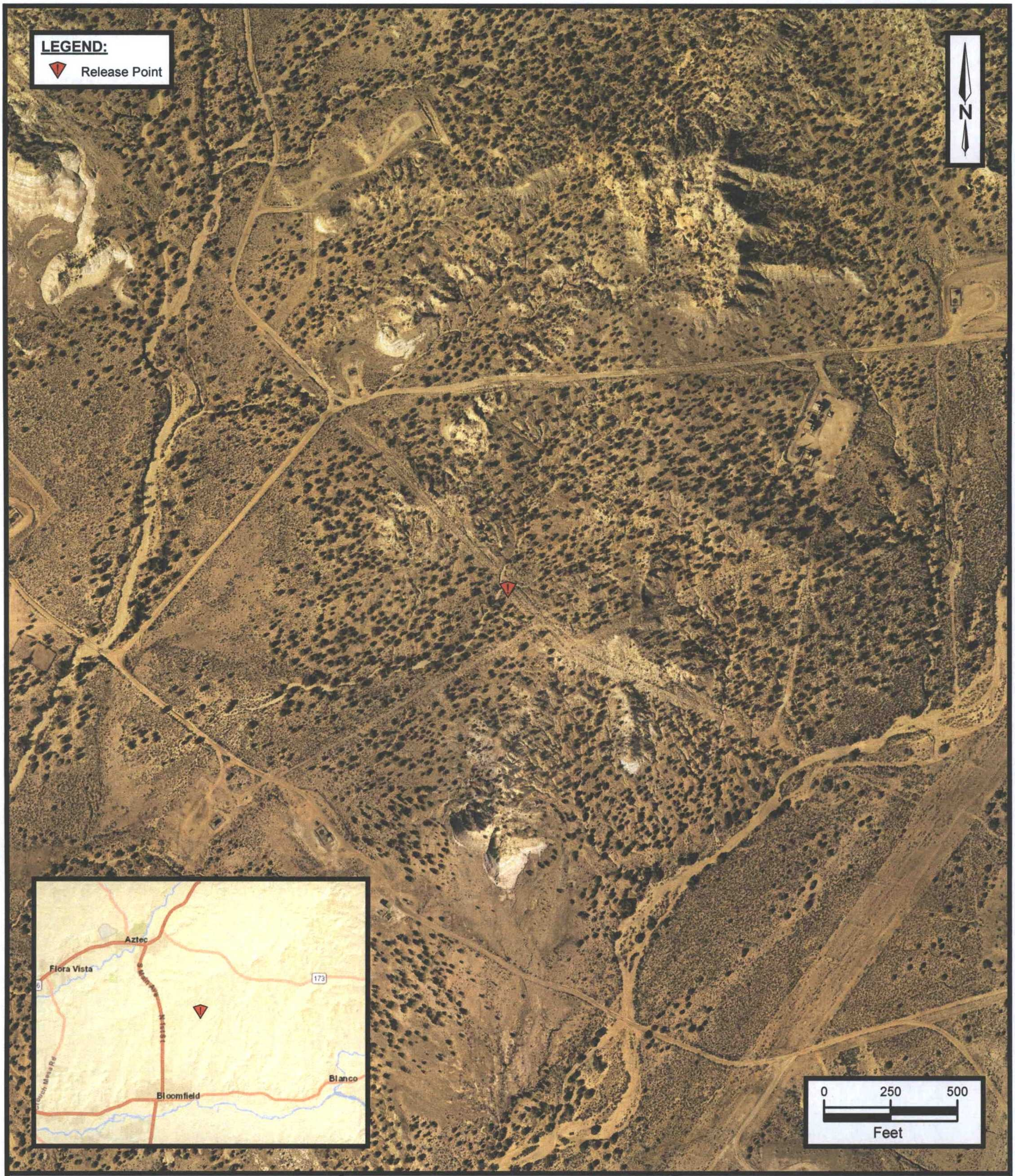
Apex TITAN, Inc.
606 South Rio Grande, Suite A
Aztec, New Mexico 87410
Phone: (505) 334-5200
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

Service Layer Credits:
Copyright:© 2013 National Geographic Society, i-cubed, Aztec New Mexico 7.5-Minute Quadrangle 1985

Q:\Projects\725040112481\Figure 1.mxd Modified 9/5/2018 by JC Simpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System



Lateral H-46
SW1/4 S25 T30N R11W
San Juan County, New Mexico
36.7762 N, 107.9442 W

Project No. 725040112481

Apex TITAN, Inc.
606 South Rio Grande, Suite A
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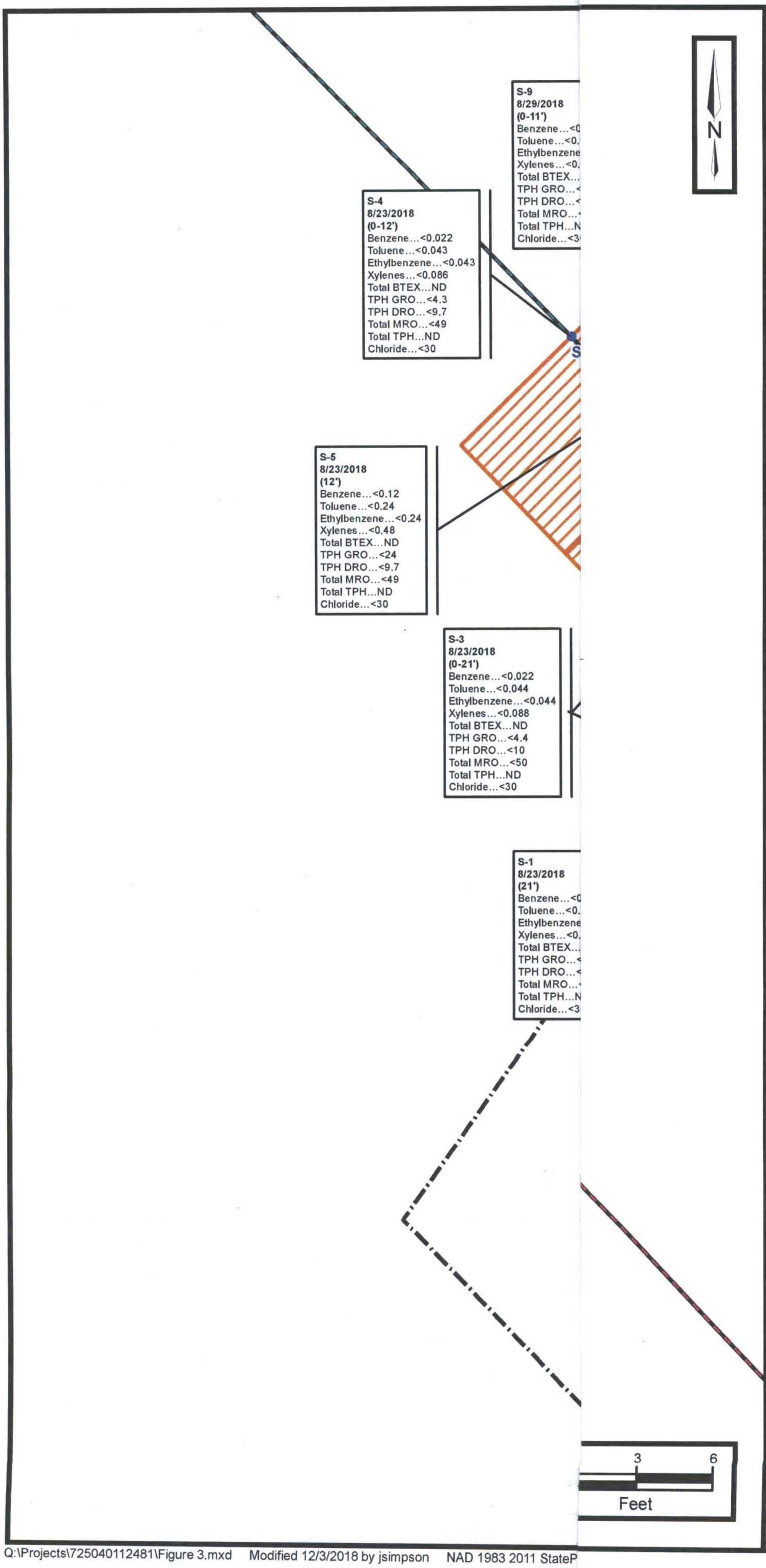
FIGURE 2

Site Vicinity Map

Service Layer Credits:
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community, NAIP Aerial Photograph 2015

Q:\Projects\725040112481\Figure 2.mxd Modified 9/5/2018 by JC Simpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System



LEGEND:

- ▼ Release Point
- ● Excavation Composite Soil Sample Location
- ● Excavation Composite Soil Sample Location Removed by Excavation
- ▬ ▬ Extent of Former Excavation (Removed Sidewall)
- ▬ Lateral H-46 Pipeline Location
- ▬ Lateral H-46/David M Pipeline Location
- ▨ Extent of Excavation (Approx. 11-Feet BGS)
- ▨ Extent of Excavation (Approx. 13-Feet BGS)
- ☒ Extent of Excavation (18 to 21-Feet BGS)
- ☐ Excavation Access Ramp

NOTE:

All Concentrations Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

Concentrations in Red Exceed the Applicable NM EMNRD OCD Closure Criteria.

Callouts in Gray Denote Sample Location Removed by Excavation.

ND - Not Detected

Apex TITAN, Inc.
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A Subsidiary of Apex Companies, LLC

Lateral H-46
SW1/4 S25 T30N R11W
San Juan County, New Mexico
36.7762 N, 107.9442 W

Project No. 725040112481

FIGURE 3

Site Map with Soil Analytical Results

Q:\Projects\725040112481\Figure 3.mxd Modified 12/3/2018 by jsimpson NAD 1983 2011 StateP

TABLE 1
Lateral H-46 Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Total Combined TPH (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				10	NE	NE	NE	50				100	600
Soil Samples removed by excavation													
S-6	8.23.18	C	0 to 21	**13**	86	19	210	**328**	1,800	300	<49	**2,100**	<30
S-7	8.23.18	C	0 to 18	0.18	4.7	1.7	19	26	180	11	<48	**191**	<30
Excavation Composite Soil Samples													
S-1	8.23.18	C	21	<0.019	<0.038	<0.038	<0.075	ND	<3.8	<9.9	<49	ND	<30
S-2	8.23.18	C	2 to 18	<0.11	<0.22	<0.22	<0.43	ND	<22	<10	<50	ND	<30
S-3	8.23.18	C	0 to 21	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<10	<50	ND	<30
S-4	8.23.18	C	0 to 12	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.7	<49	ND	<30
S-5	8.23.18	C	12	<0.12	<0.24	<0.24	<0.48	ND	<24	<9.7	<49	ND	<30
S-8	8.29.18	C	0 to 17	<0.019	<0.037	<0.037	0.15	0.15	6.6	<9.9	<49	6.6	<30
S-9	8.29.18	C	0 to 11	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<10	<50	ND	<30
S-10	8.29.18	C	17	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.9	<50	ND	<30
S-11	8.29.18	C	0 to 17	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.7	<49	ND	<30
S-12	8.29.18	C	0 to 17	<0.019	<0.037	<0.037	<0.075	ND	<3.7	<9.9	<50	ND	<30
S-13	8.29.18	C	0 to 18	<0.021	<0.041	<0.041	<0.082	ND	<4.1	<9.9	<50	ND	<30
S-14	8.29.18	C	0 to 18	<0.023	<0.046	<0.046	<0.092	ND	<4.6	<10	<50	ND	<30
S-15	8.29.18	C	0 to 18	<0.021	<0.043	<0.043	<0.085	ND	<4.3	<9.7	<49	ND	<30
S-16	8.29.18	C	0 to 18	<0.021	<0.041	<0.041	<0.083	ND	<4.1	<9.7	<48	ND	280
S-17	8.29.18	C	0 to 18	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.8	<49	ND	310
S-18	8.29.18	C	18	<0.020	<0.039	<0.039	<0.079	ND	<3.9	<10	<50	ND	<30

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits
NA = Not Analyzed
NE = Not established
mg/kg = milligram per kilogram
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 B

Executed C-138 Solid Waste Acceptance Form

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
strict IV
0 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Invoicing Information
AFE: N37491
PM: Chad Timmerman
PayKey:CM22355

2. Originating Site:
Lateral H-46 Pipeline Davis M Line.

3. Location of Material (Street Address, City, State or ULSTR):
Section 25 T30N R11W; 36.77623, -107.94424

8/28/18- 153yd
8/27/18 - 179yd
8/23/18- 306yd
8/22/18- 253yd

4. Source and Description of Waste:
Source: Hydro excavation Spoils from a Leak from a Natural Gas Gathering Line
Description: Soil impacted with Natural Gas Liquids (Condensate and Water)
Estimated Volume 50 [✓ yd³] / bbls Known Volume (to be entered by the operator at the end of the haul) 172 [✓ yd³] / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agen 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mix on-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste s by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazar eck the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in I

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 8-20-17, representative for Enterprise Products Operating authorizes IEI, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, Celia representative for IEI, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: West States Energy Contractors and Subcontractors

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * **Permit #: NM 01-0010B**
Address of Facility: **#49 CR 3150 Aztec, New Mexico**

Cl- <128

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other PH-7

Waste Acceptance Status:
☑ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

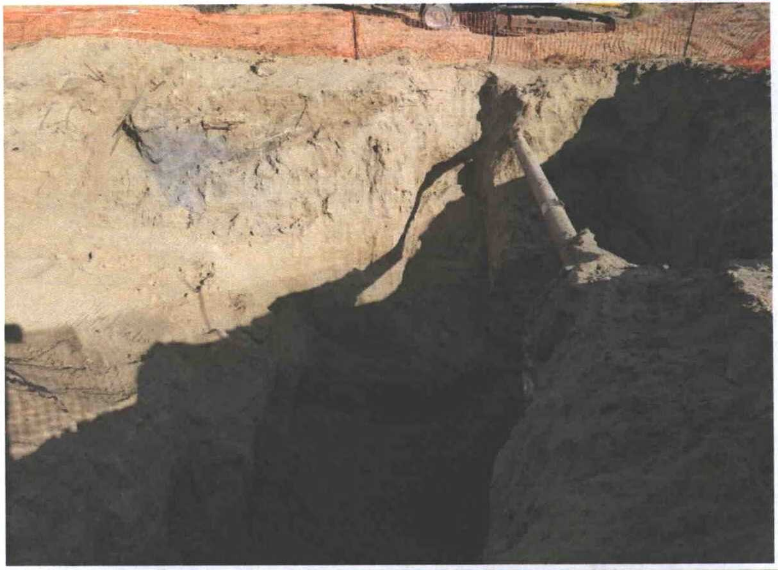
RINT NAME: Celia Sanchez TITLE: Clerk DATE: 8/20/18
SIGNATURE: Celia Sanchez TELEPHONE NO.: 505-632-1782
Surface Waste Management Facility Authorized Agent

8/20/18

APPENDIX C

Photographic Documentation

Photograph 1 View of excavation activities, facing northwest.	
Photograph 2 View of excavation activities, facing northwest.	
Photograph 3 View of excavation activities.	

Photograph 4 View of excavation activities, facing northwest.	
Photograph 5 View of excavation activities, facing south.	
Photograph 6 View of excavation activities, facing southeast.	

Photograph 7

View of excavation activities, facing southeast.

Photograph 8

View of the main excavation.

Photograph 9

View of the main excavation.

Appendix D

Table

APEX

Appendix E

Laboratory Data Sheets & Chain of Custody Documentation

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 27, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral H-46

OrderNo.: 1808F05

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/24/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808F05**
Date Reported: **8/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Lateral H-46
Lab ID: 1808F05-001

Matrix: MEOH (SOIL)

Client Sample ID: S-1
Collection Date: 8/23/2018 8:30:00 AM
Received Date: 8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 11:24:28 AM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/24/2018 10:28:26 AM	A53694
Surr: BFB	107	70-130		%Rec	1	8/24/2018 10:28:26 AM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/24/2018 10:49:05 AM	39973
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2018 10:49:05 AM	39973
Surr: DNOP	104	50.6-138		%Rec	1	8/24/2018 10:49:05 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.019		mg/Kg	1	8/24/2018 10:28:26 AM	B53694
Toluene	ND	0.038		mg/Kg	1	8/24/2018 10:28:26 AM	B53694
Ethylbenzene	ND	0.038		mg/Kg	1	8/24/2018 10:28:26 AM	B53694
Xylenes, Total	ND	0.075		mg/Kg	1	8/24/2018 10:28:26 AM	B53694
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	8/24/2018 10:28:26 AM	B53694
Surr: Toluene-d8	95.7	70-130		%Rec	1	8/24/2018 10:28:26 AM	B53694

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H-46
Lab ID: 1808F05-002
Matrix: MEOH (SOIL)
Client Sample ID: S-2
Collection Date: 8/23/2018 8:35:00 AM
Received Date: 8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 11:36:53 AM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	8/24/2018 10:51:37 AM	A53694
Surr: BFB	98.5	70-130		%Rec	5	8/24/2018 10:51:37 AM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/24/2018 11:13:36 AM	39973
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/24/2018 11:13:36 AM	39973
Surr: DNOP	102	50.6-138		%Rec	1	8/24/2018 11:13:36 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.11		mg/Kg	5	8/24/2018 10:51:37 AM	B53694
Toluene	ND	0.22		mg/Kg	5	8/24/2018 10:51:37 AM	B53694
Ethylbenzene	ND	0.22		mg/Kg	5	8/24/2018 10:51:37 AM	B53694
Xylenes, Total	ND	0.43		mg/Kg	5	8/24/2018 10:51:37 AM	B53694
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	5	8/24/2018 10:51:37 AM	B53694
Surr: Toluene-d8	99.5	70-130		%Rec	5	8/24/2018 10:51:37 AM	B53694

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT:	APEX TITAN	**Client Sample ID:**	S-3
Project:	Lateral H-46	**Collection Date:**	8/23/2018 8:40:00 AM
Lab ID:	1808F05-003 **Matrix:** MEOH (SOIL)	**Received Date:**	8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 11:49:18 AM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/24/2018 11:14:46 AM	A53694
Surr: BFB	106	70-130		%Rec	1	8/24/2018 11:14:46 AM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/24/2018 11:37:56 AM	39973
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/24/2018 11:37:56 AM	39973
Surr: DNOP	104	50.6-138		%Rec	1	8/24/2018 11:37:56 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.022		mg/Kg	1	8/24/2018 11:14:46 AM	B53694
Toluene	ND	0.044		mg/Kg	1	8/24/2018 11:14:46 AM	B53694
Ethylbenzene	ND	0.044		mg/Kg	1	8/24/2018 11:14:46 AM	B53694
Xylenes, Total	ND	0.088		mg/Kg	1	8/24/2018 11:14:46 AM	B53694
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	8/24/2018 11:14:46 AM	B53694
Surr: Toluene-d8	95.7	70-130		%Rec	1	8/24/2018 11:14:46 AM	B53694

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT:	APEX TITAN	**Client Sample ID:**	S-4
Project:	Lateral H-46	**Collection Date:**	8/23/2018 8:45:00 AM
Lab ID:	1808F05-004 **Matrix:** MEOH (SOIL)	**Received Date:**	8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 12:01:42 PM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/24/2018 11:37:52 AM	A53694
Surr: BFB	109	70-130		%Rec	1	8/24/2018 11:37:52 AM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/24/2018 11:09:29 AM	39973
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2018 11:09:29 AM	39973
Surr: DNOP	107	50.6-138		%Rec	1	8/24/2018 11:09:29 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.022		mg/Kg	1	8/24/2018 11:37:52 AM	B53694
Toluene	ND	0.043		mg/Kg	1	8/24/2018 11:37:52 AM	B53694
Ethylbenzene	ND	0.043		mg/Kg	1	8/24/2018 11:37:52 AM	B53694
Xylenes, Total	ND	0.086		mg/Kg	1	8/24/2018 11:37:52 AM	B53694
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	8/24/2018 11:37:52 AM	B53694
Surr: Toluene-d8	100	70-130		%Rec	1	8/24/2018 11:37:52 AM	B53694

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H-46
Lab ID: 1808F05-005

Client Sample ID: S-5
Collection Date: 8/23/2018 8:50:00 AM
Matrix: MEOH (SOIL)
Received Date: 8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 12:14:07 PM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	8/24/2018 12:01:01 PM	A53694
Surr: BFB	103	70-130		%Rec	5	8/24/2018 12:01:01 PM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/24/2018 10:47:19 AM	39973
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2018 10:47:19 AM	39973
Surr: DNOP	106	50.6-138		%Rec	1	8/24/2018 10:47:19 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.12		mg/Kg	5	8/24/2018 12:01:01 PM	B53694
Toluene	ND	0.24		mg/Kg	5	8/24/2018 12:01:01 PM	B53694
Ethylbenzene	ND	0.24		mg/Kg	5	8/24/2018 12:01:01 PM	B53694
Xylenes, Total	ND	0.48		mg/Kg	5	8/24/2018 12:01:01 PM	B53694
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	5	8/24/2018 12:01:01 PM	B53694
Surr: Toluene-d8	103	70-130		%Rec	5	8/24/2018 12:01:01 PM	B53694

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H-46
Lab ID: 1808F05-006
Matrix: MEOH (SOIL)
Client Sample ID: S-6
Collection Date: 8/23/2018 8:55:00 AM
Received Date: 8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 12:26:32 PM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	1800	34		mg/Kg	10	8/24/2018 12:24:09 PM	A53694
Surr: BFB	99.8	70-130		%Rec	10	8/24/2018 12:24:09 PM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	300	9.9		mg/Kg	1	8/24/2018 10:25:17 AM	39973
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2018 10:25:17 AM	39973
Surr: DNOP	103	50.6-138		%Rec	1	8/24/2018 10:25:17 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	13	0.17		mg/Kg	10	8/24/2018 12:24:09 PM	B53694
Toluene	86	3.4		mg/Kg	100	8/24/2018 5:49:00 PM	B53694
Ethylbenzene	19	0.34		mg/Kg	10	8/24/2018 12:24:09 PM	B53694
Xylenes, Total	210	6.9		mg/Kg	100	8/24/2018 5:49:00 PM	B53694
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	10	8/24/2018 12:24:09 PM	B53694
Surr: Toluene-d8	103	70-130		%Rec	10	8/24/2018 12:24:09 PM	B53694

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H-46
Lab ID: 1808F05-007

Matrix: MEOH (SOIL)

Client Sample ID: S-7
Collection Date: 8/23/2018 9:00:00 AM
Received Date: 8/24/2018 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/24/2018 12:38:57 PM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	180	34		mg/Kg	10	8/24/2018 12:47:21 PM	A53694
Surr: BFB	96.6	70-130		%Rec	10	8/24/2018 12:47:21 PM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	8/24/2018 10:03:06 AM	39973
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/24/2018 10:03:06 AM	39973
Surr: DNOP	105	50.6-138		%Rec	1	8/24/2018 10:03:06 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	0.18	0.17		mg/Kg	10	8/24/2018 12:47:21 PM	B53694
Toluene	4.7	0.34		mg/Kg	10	8/24/2018 12:47:21 PM	B53694
Ethylbenzene	1.7	0.34		mg/Kg	10	8/24/2018 12:47:21 PM	B53694
Xylenes, Total	19	0.68		mg/Kg	10	8/24/2018 12:47:21 PM	B53694
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	10	8/24/2018 12:47:21 PM	B53694
Surr: Toluene-d8	103	70-130		%Rec	10	8/24/2018 12:47:21 PM	B53694

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Lateral H-46

Sample ID **MB-39976**		SampType: **mblk**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **PBS**		Batch ID: **39976**			RunNo: **53692**					
Prep Date: **8/24/2018**		Analysis Date: **8/24/2018**			SeqNo: **1771696**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-39976**		SampType: **lcs**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **LCSS**		Batch ID: **39976**			RunNo: **53692**					
Prep Date: **8/24/2018**		Analysis Date: **8/24/2018**			SeqNo: **1771697**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1808F05**

Hall Environmental Analysis Laboratory, Inc.

27-Aug-18

Client: APEX TITAN
Project: Lateral H-46

Sample ID **MB-39973** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **39973** RunNo: **53686**
Prep Date: **8/24/2018** Analysis Date: **8/24/2018** SeqNo: **1770890** 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	11		10.00		106	50.6	138			

Sample ID **LCS-39973** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **39973** RunNo: **53686**
Prep Date: **8/24/2018** Analysis Date: **8/24/2018** SeqNo: **1770891** 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	70	130			
Surr: DNOP	4.9		5.000		98.7	50.6	138			

Sample ID **1808F05-007AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-7** Batch ID: **39973** RunNo: **53685**
Prep Date: **8/24/2018** Analysis Date: **8/24/2018** SeqNo: **1771119** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	49.95	10.84	79.6	53.5	126			
Surr: DNOP	5.6		4.995		113	50.6	138			

Sample ID **1808F05-007AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-7** Batch ID: **39973** RunNo: **53685**
Prep Date: **8/24/2018** Analysis Date: **8/24/2018** SeqNo: **1771120** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	9.9	49.65	10.84	88.7	53.5	126	8.08	21.7	
Surr: DNOP	6.1		4.965		122	50.6	138	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Lateral H-46

Sample ID **100ng lcs** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **B53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771142** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	80	120			
Toluene	1.1	0.050	1.000	0	111	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **B53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771150** 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	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.49		0.5000		98.8	70	130			

Sample ID **1808f05-002ams** SampType: **MS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-2** Batch ID: **B53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771421** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.2	0.11	4.314	0	98.2	80	120			
Toluene	4.6	0.22	4.314	0.02563	105	80	120			
Ethylbenzene	4.6	0.22	4.314	0	107	82	121			
Xylenes, Total	14	0.43	12.94	0.1116	106	80.2	120			
Surr: 4-Bromofluorobenzene	2.2		2.157		104	70	130			
Surr: Toluene-d8	2.1		2.157		99.4	70	130			

Sample ID **1808f05-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-2** Batch ID: **B53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771422** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.1	0.11	4.314	0	95.7	80	120	2.60	20	
Toluene	4.5	0.22	4.314	0.02563	103	80	120	2.12	20	
Ethylbenzene	4.6	0.22	4.314	0	106	82	121	0.951	20	
Xylenes, Total	13	0.43	12.94	0.1116	103	80.2	120	2.64	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F05**

27-Aug-18

Client: APEX TITAN

Project: Lateral H-46

Sample ID **1808f05-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **S-2** Batch ID: **B53694** RunNo: **53694**

Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771422** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2.3		2.157		104	70	130	0	0	
Surr: Toluene-d8	2.2		2.157		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F05**

27-Aug-18

Client: APEX TITAN

Project: Lateral H-46

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **A53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771139** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB	470		500.0		93.9	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **A53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771140** 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	480		500.0		95.9	70	130			

Sample ID **1808f05-001ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-1** Batch ID: **A53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771419** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.8	18.81	0.7900	90.6	64.7	142			
Surr: BFB	400		376.2		107	70	130			

Sample ID **1808f05-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-1** Batch ID: **A53694** RunNo: **53694**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771420** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.8	18.81	0.7900	86.2	64.7	142	4.80	20	
Surr: BFB	380		376.2		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC   Work Order Number: 1808F05   RcptNo: 1

Received By: Jazzmine Burkhead   8/24/2018 7:45:00 AM

Completed By: Ashley Gallegos   8/24/2018 8:30:33 AM

Reviewed By: AT 08/24/18   Labeled by: ENM 8/24/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
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? Yes ☑ No ☐
    (If no, notify customer for authorization.)

~~# of preserved bottles checked for pH: ______ (<2 or >12 unless noted)~~
~~Adjusted? ______~~
~~Checked by: ______~~
ENM 8/24/18

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A Aztec NM 77410

Project Manager K Summers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87109

Contact: A Freeman

Phone: 505-345-3975

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 4.6

1	2	3	4	5

Page 1 of 1

Sampler's Name: Chad DAponti

Sampler's Signature:

Proj. No. 7350400112481

Project Name: Lateral H-46

ANALYSIS REQUESTED

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300							Lab Sample ID (Lab Use Only)
S	8/23/18	830	X		S-1	–	21				1		X	X	X							1808F05-001
S	8/23/18	835	X		S-2	2	18				1		X	X	X							-002
S	8/23/18	840	X		S-3	0	21				1		X	X	X							-003
S	8/23/18	845	X		S-4	0	12				1		X	X	X							-004
S	8/23/18	850	X		S-5	–	12				1		X	X	X							-005
S	8/23/18	855	X		S-6	0	21				1		X	X	X							-006
S	8/23/18	900	X		S-7	0	18				1		X	X	X							-007

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	8-23-18	1359		8/23/18	1359
	8/23/18	1901		08/24/18	07:45

NOTES: Pay Key # CM 22355
Bill to Tom Long (EPROD)
AFE # N37491

Same Day 8-24-18

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

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 31, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral H 46 OrderNo.: 1808H72

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 11 sample(s) on 8/30/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808H72**
Date Reported: **8/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	**Client Sample ID:**	S-8
Project:	Lateral H 46	**Collection Date:**	8/29/2018 10:00:00 AM
Lab ID:	1808H72-001 **Matrix:** SOIL	**Received Date:**	8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 10:47:04 AM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	6.6	3.7		mg/Kg	1	8/30/2018 10:15:59 AM	A53826
Surr: BFB	108	70-130		%Rec	1	8/30/2018 10:15:59 AM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2018 9:54:38 AM	40064
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2018 9:54:38 AM	40064
Surr: DNOP	116	50.6-138		%Rec	1	8/30/2018 9:54:38 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.019		mg/Kg	1	8/30/2018 10:15:59 AM	R53826
Toluene	ND	0.037		mg/Kg	1	8/30/2018 10:15:59 AM	R53826
Ethylbenzene	ND	0.037		mg/Kg	1	8/30/2018 10:15:59 AM	R53826
Xylenes, Total	0.15	0.074		mg/Kg	1	8/30/2018 10:15:59 AM	R53826
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	8/30/2018 10:15:59 AM	R53826
Surr: Toluene-d8	96.4	70-130		%Rec	1	8/30/2018 10:15:59 AM	R53826

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-002
Matrix: SOIL

Client Sample ID: S-9
Collection Date: 8/29/2018 10:05:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 10:59:29 AM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/30/2018 10:39:07 AM	A53826
Surr: BFB	109	70-130		%Rec	1	8/30/2018 10:39:07 AM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/30/2018 10:17:03 AM	40064
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2018 10:17:03 AM	40064
Surr: DNOP	120	50.6-138		%Rec	1	8/30/2018 10:17:03 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.019		mg/Kg	1	8/30/2018 10:39:07 AM	R53826
Toluene	ND	0.038		mg/Kg	1	8/30/2018 10:39:07 AM	R53826
Ethylbenzene	ND	0.038		mg/Kg	1	8/30/2018 10:39:07 AM	R53826
Xylenes, Total	ND	0.077		mg/Kg	1	8/30/2018 10:39:07 AM	R53826
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	8/30/2018 10:39:07 AM	R53826
Surr: Toluene-d8	96.4	70-130		%Rec	1	8/30/2018 10:39:07 AM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-003
Matrix: SOIL
Client Sample ID: S-10
Collection Date: 8/29/2018 10:10:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 11:11:53 AM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/30/2018 11:02:14 AM	A53826
Surr: BFB	107	70-130		%Rec	1	8/30/2018 11:02:14 AM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2018 10:38:58 AM	40064
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2018 10:38:58 AM	40064
Surr: DNOP	113	50.6-138		%Rec	1	8/30/2018 10:38:58 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.019		mg/Kg	1	8/30/2018 11:02:14 AM	R53826
Toluene	ND	0.038		mg/Kg	1	8/30/2018 11:02:14 AM	R53826
Ethylbenzene	ND	0.038		mg/Kg	1	8/30/2018 11:02:14 AM	R53826
Xylenes, Total	ND	0.077		mg/Kg	1	8/30/2018 11:02:14 AM	R53826
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	8/30/2018 11:02:14 AM	R53826
Surr: Toluene-d8	98.1	70-130		%Rec	1	8/30/2018 11:02:14 AM	R53826

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-004
Matrix: SOIL
Client Sample ID: S-11
Collection Date: 8/29/2018 10:15:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 11:24:17 AM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/30/2018 11:25:16 AM	A53826
Surr: BFB	107	70-130		%Rec	1	8/30/2018 11:25:16 AM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2018 11:01:06 AM	40064
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2018 11:01:06 AM	40064
Surr: DNOP	110	50.6-138		%Rec	1	8/30/2018 11:01:06 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.020		mg/Kg	1	8/30/2018 11:25:16 AM	R53826
Toluene	ND	0.040		mg/Kg	1	8/30/2018 11:25:16 AM	R53826
Ethylbenzene	ND	0.040		mg/Kg	1	8/30/2018 11:25:16 AM	R53826
Xylenes, Total	ND	0.080		mg/Kg	1	8/30/2018 11:25:16 AM	R53826
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	8/30/2018 11:25:16 AM	R53826
Surr: Toluene-d8	95.1	70-130		%Rec	1	8/30/2018 11:25:16 AM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1808H72**
Date Reported: **8/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	**Client Sample ID:**	S-12
Project:	Lateral H 46	**Collection Date:**	8/29/2018 10:20:00 AM
Lab ID:	1808H72-005 **Matrix:** SOIL	**Received Date:**	8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 11:36:41 AM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/30/2018 11:48:24 AM	A53826
Surr: BFB	105	70-130		%Rec	1	8/30/2018 11:48:24 AM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2018 11:23:03 AM	40064
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2018 11:23:03 AM	40064
Surr: DNOP	109	50.6-138		%Rec	1	8/30/2018 11:23:03 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.019		mg/Kg	1	8/30/2018 11:48:24 AM	R53826
Toluene	ND	0.037		mg/Kg	1	8/30/2018 11:48:24 AM	R53826
Ethylbenzene	ND	0.037		mg/Kg	1	8/30/2018 11:48:24 AM	R53826
Xylenes, Total	ND	0.075		mg/Kg	1	8/30/2018 11:48:24 AM	R53826
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	8/30/2018 11:48:24 AM	R53826
Surr: Toluene-d8	94.9	70-130		%Rec	1	8/30/2018 11:48:24 AM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-006
Matrix: SOIL

Client Sample ID: S-13
Collection Date: 8/29/2018 10:25:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	8/30/2018 11:49:05 AM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/30/2018 12:11:33 PM	A53826
Surr: BFB	110	70-130		%Rec	1	8/30/2018 12:11:33 PM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2018 11:45:08 AM	40064
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2018 11:45:08 AM	40064
Surr: DNOP	110	50.6-138		%Rec	1	8/30/2018 11:45:08 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.021		mg/Kg	1	8/30/2018 12:11:33 PM	R53826
Toluene	ND	0.041		mg/Kg	1	8/30/2018 12:11:33 PM	R53826
Ethylbenzene	ND	0.041		mg/Kg	1	8/30/2018 12:11:33 PM	R53826
Xylenes, Total	ND	0.082		mg/Kg	1	8/30/2018 12:11:33 PM	R53826
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	8/30/2018 12:11:33 PM	R53826
Surr: Toluene-d8	97.9	70-130		%Rec	1	8/30/2018 12:11:33 PM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-007 **Matrix:** SOIL

Client Sample ID: S-14
Collection Date: 8/29/2018 10:30:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 12:01:29 PM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/30/2018 12:34:39 PM	A53826
Surr: BFB	108	70-130		%Rec	1	8/30/2018 12:34:39 PM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/30/2018 12:07:07 PM	40064
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2018 12:07:07 PM	40064
Surr: DNOP	112	50.6-138		%Rec	1	8/30/2018 12:07:07 PM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.023		mg/Kg	1	8/30/2018 12:34:39 PM	R53826
Toluene	ND	0.046		mg/Kg	1	8/30/2018 12:34:39 PM	R53826
Ethylbenzene	ND	0.046		mg/Kg	1	8/30/2018 12:34:39 PM	R53826
Xylenes, Total	ND	0.092		mg/Kg	1	8/30/2018 12:34:39 PM	R53826
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	8/30/2018 12:34:39 PM	R53826
Surr: Toluene-d8	93.9	70-130		%Rec	1	8/30/2018 12:34:39 PM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-008
Matrix: SOIL
Client Sample ID: S-15
Collection Date: 8/29/2018 10:35:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 12:13:53 PM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/30/2018 12:57:42 PM	A53826
Surr: BFB	112	70-130		%Rec	1	8/30/2018 12:57:42 PM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2018 12:11:19 PM	40064
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2018 12:11:19 PM	40064
Surr: DNOP	83.6	50.6-138		%Rec	1	8/30/2018 12:11:19 PM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.021		mg/Kg	1	8/30/2018 12:57:42 PM	R53826
Toluene	ND	0.043		mg/Kg	1	8/30/2018 12:57:42 PM	R53826
Ethylbenzene	ND	0.043		mg/Kg	1	8/30/2018 12:57:42 PM	R53826
Xylenes, Total	ND	0.085		mg/Kg	1	8/30/2018 12:57:42 PM	R53826
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	8/30/2018 12:57:42 PM	R53826
Surr: Toluene-d8	101	70-130		%Rec	1	8/30/2018 12:57:42 PM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1808H72**
Date Reported: **8/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-009 **Matrix:** SOIL

Client Sample ID: S-16
Collection Date: 8/29/2018 10:40:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	280	30		mg/Kg	20	8/30/2018 12:51:07 PM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/30/2018 1:20:50 PM	A53826
Surr: BFB	108	70-130		%Rec	1	8/30/2018 1:20:50 PM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2018 11:46:59 AM	40064
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2018 11:46:59 AM	40064
Surr: DNOP	91.1	50.6-138		%Rec	1	8/30/2018 11:46:59 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.021		mg/Kg	1	8/30/2018 1:20:50 PM	R53826
Toluene	ND	0.041		mg/Kg	1	8/30/2018 1:20:50 PM	R53826
Ethylbenzene	ND	0.041		mg/Kg	1	8/30/2018 1:20:50 PM	R53826
Xylenes, Total	ND	0.083		mg/Kg	1	8/30/2018 1:20:50 PM	R53826
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	8/30/2018 1:20:50 PM	R53826
Surr: Toluene-d8	98.5	70-130		%Rec	1	8/30/2018 1:20:50 PM	R53826

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-010
Matrix: SOIL

Client Sample ID: S-17
Collection Date: 8/29/2018 10:45:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	310	30		mg/Kg	20	8/30/2018 1:03:31 PM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/30/2018 1:43:59 PM	A53826
Surr: BFB	111	70-130		%Rec	1	8/30/2018 1:43:59 PM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2018 11:22:21 AM	40064
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2018 11:22:21 AM	40064
Surr: DNOP	87.3	50.6-138		%Rec	1	8/30/2018 11:22:21 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.020		mg/Kg	1	8/30/2018 1:43:59 PM	R53826
Toluene	ND	0.040		mg/Kg	1	8/30/2018 1:43:59 PM	R53826
Ethylbenzene	ND	0.040		mg/Kg	1	8/30/2018 1:43:59 PM	R53826
Xylenes, Total	ND	0.080		mg/Kg	1	8/30/2018 1:43:59 PM	R53826
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	8/30/2018 1:43:59 PM	R53826
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/30/2018 1:43:59 PM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Lateral H 46
Lab ID: 1808H72-011
Matrix: SOIL

Client Sample ID: S-18
Collection Date: 8/29/2018 10:50:00 AM
Received Date: 8/30/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	8/30/2018 1:15:56 PM	40066
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/30/2018 2:07:01 PM	A53826
Surr: BFB	105	70-130		%Rec	1	8/30/2018 2:07:01 PM	A53826
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/30/2018 10:57:54 AM	40064
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2018 10:57:54 AM	40064
Surr: DNOP	88.8	50.6-138		%Rec	1	8/30/2018 10:57:54 AM	40064
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.020		mg/Kg	1	8/30/2018 2:07:01 PM	R53826
Toluene	ND	0.039		mg/Kg	1	8/30/2018 2:07:01 PM	R53826
Ethylbenzene	ND	0.039		mg/Kg	1	8/30/2018 2:07:01 PM	R53826
Xylenes, Total	ND	0.079		mg/Kg	1	8/30/2018 2:07:01 PM	R53826
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	8/30/2018 2:07:01 PM	R53826
Surr: Toluene-d8	95.6	70-130		%Rec	1	8/30/2018 2:07:01 PM	R53826

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1808H72**

Hall Environmental Analysis Laboratory, Inc.

31-Aug-18

Client: APEX TITAN
Project: Lateral H 46

Sample ID **MB-40066** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **40066** RunNo: **53830**
Prep Date: **8/30/2018** Analysis Date: **8/30/2018** SeqNo: **1776658** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-40066** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **40066** RunNo: **53830**
Prep Date: **8/30/2018** Analysis Date: **8/30/2018** SeqNo: **1776659** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H72**

31-Aug-18

Client: APEX TITAN

Project: Lateral H 46

Sample ID **LCS-40064** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **40064** RunNo: **53813**

Prep Date: **8/30/2018** Analysis Date: **8/30/2018** SeqNo: **1775783** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.4	70	130			
Surr: DNOP	5.1		5.000		102	50.6	138			

Sample ID **MB-40064** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **40064** RunNo: **53813**

Prep Date: **8/30/2018** Analysis Date: **8/30/2018** SeqNo: **1775784** 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	11		10.00		110	50.6	138			

Sample ID **LCS-40046** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **40046** RunNo: **53809**

Prep Date: **8/29/2018** Analysis Date: **8/30/2018** SeqNo: **1776771** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		75.6	50.6	138			

Sample ID **MB-40046** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **40046** RunNo: **53809**

Prep Date: **8/29/2018** Analysis Date: **8/30/2018** SeqNo: **1776772** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		96.5	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Lateral H 46

Sample ID **100ng lcs** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776191** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.2	80	120			
Toluene	1.1	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.9	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776203** 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	0.55		0.5000		109	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID **1808h72-002ams** SampType: **MS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-9** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776519** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.019	0.7692	0	94.5	80	120			
Toluene	0.80	0.038	0.7692	0	104	80	120			
Ethylbenzene	0.79	0.038	0.7692	0	103	82	121			
Xylenes, Total	2.4	0.077	2.308	0.01971	105	80.2	120			
Surr: 4-Bromofluorobenzene	0.44		0.3846		114	70	130			
Surr: Toluene-d8	0.37		0.3846		96.3	70	130			

Sample ID **1808h72-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-9** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776520** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.019	0.7692	0	93.4	80	120	1.21	20	
Toluene	0.78	0.038	0.7692	0	101	80	120	2.45	20	
Ethylbenzene	0.80	0.038	0.7692	0	105	82	121	1.56	20	
Xylenes, Total	2.4	0.077	2.308	0.01971	105	80.2	120	0.294	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1808H72**

Hall Environmental Analysis Laboratory, Inc.

31-Aug-18

Client: APEX TITAN
Project: Lateral H 46

Sample ID **1808h72-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-9** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776520** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.45		0.3846		117	70	130	0	0	
Surr: Toluene-d8	0.38		0.3846		98.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1808H72**

Hall Environmental Analysis Laboratory, Inc.

31-Aug-18

Client: APEX TITAN
Project: Lateral H 46

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **A53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776187** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	70	130			
Surr: BFB	470		500.0		93.3	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **A53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776188** 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	490		500.0		97.2	70	130			

Sample ID **1808h72-001ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-8** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776521** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	390		370.1		105	70	130			

Sample ID **1808h72-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-8** Batch ID: **R53826** RunNo: **53826**
Prep Date: Analysis Date: **8/30/2018** SeqNo: **1776522** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	400		370.1		107	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC　　Work Order Number: 1808H72　　RcptNo: 1

Received By: Anne Thorne　8/30/2018 7:00:00 AM

Completed By: Anne Thorne　8/30/2018 7:14:11 AM

Reviewed By: JAB 08/30/18

Labeled by: AT 08/30/18

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° 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. VOA vials have zero headspace?　Yes ☐　No ☐　No VOA Vials ☑
10. Were any sample containers received broken?　Yes ☐　No ☑
11. Does paperwork match bottle labels?　Yes ☑　No ☐
(Note discrepancies on chain of custody)
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?　Yes ☑　No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: ______
(<2 or >12 unless noted)
Adjusted? ______
Checked by: ______

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: custody seals intact on Soil Jars / AT 08/30/18

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A Aztec NM 87410
Project Manager K. Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE Albuquerque NM 87109
Contact: A, Freeman
Phone: 505-348-3975
PO/SO #:

Sampler's Name Chad DAponti
Sampler's Signature

Proj. No. 725040112481
Project Name Lateral H-46

ANALYSIS REQUESTED

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.1
[✓ 1] 2 3 4 5
Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	8/29/18	1000	X		S-8	0	17				1		X	X	X	1808H72-001
S	8/29/18	1005	X		S-9	0	11				1		X	X	X	-002
S	8/29/18	1010	X		S-10	–	17				1		X	X	X	-003
S	8/29/18	1015	X		S-11	0	17				1		X	X	X	-004
S	8/29/18	1020	X		S-12	0	17				1		X	X	X	-005
S	8/29/18	1025	X		S-13	0	18				1		X	X	X	-006
S	8/29/18	1030	X		S-14	0	18				1		X	X	X	-007
S	8/29/18	1035	X		S-15	0	18				1		X	X	X	-008
S	8/29/18	1040	X		S-16	0	18				1		X	X	X	-009
S	8/29/18	1045	X		S-17	0	18				1		X	X	X	-010

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	8-29-18	1311		8/29/18	1311
	8/29/18	1817		08/30/18	0700

NOTES: Pay Key # Cm 22355
Bill to Tom Long (EPROD)
AFE # N37491
* Same Day 8-30-18

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

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
ABQ NM 87109
Contact: A Freeman
Phone: 505 · 348-3975
PO/SO #:

ANALYSIS REQUESTED

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.1

(1) 2 3 4 5

Page 2 of 2

Sampler's Name: C D'Aponti

Sampler's Signature

Proj. No.:

Project Name: Lateral H-46

No/Type of Containers

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300							Lab Sample ID (Lab Use Only)
S	8/29/18	1050	X		S-18	–	18				1		X	X	X							1808H72 011

NFS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	8/29/18	1311		8/29/18	1311
	8/29/18	1817		8/30/18	0700

NOTES: Pay Key #CM22355
Bill to Tom Long
AFE #N37491

Same day 8-30-18

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

District I
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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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1900853403

Location of Release Source

Latitude 36.987093 Longitude -107.875699 *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **MD 7 Loop**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/4/2018**	Serial # *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
E	15	32N	10W	San Juan

NMOCD
JAN 08 2019
DISTRICT III

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown at this time.**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown at this time**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On December 4, 2018, Enterprise dispatched a technician to investigate a possible leak on the MD-7 Loop pipeline. The leak was confirmed and the pipeline was isolated, depressurized, locked out and tagged out. No fluids were observed on the ground surface. Enterprise determined this release reportable per NMOCD regulation on December 17, 2018 by the volume of impacted subsurface soil. This release is required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX and 100 ppm TPH). A third party corrective action report will be submitted with the "Final C-141."

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 12-31-18

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Vanessa Fields Date: 1/8/2019

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1900853946

Location of Release Source

Latitude **36.911549** Longitude **-107.713513** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Oxnard #332**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/12/2018**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
J	**7**	**31N**	**8W**	**San Juan**

NMOCD
JAN 08 2019
DISTRICT III

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown at this time**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown at this time.**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On December 12, 2018, a contractor performing pipeline patrols discovered a possible release on the Oxnard #332 pipeline. An Enterprise technician was dispatched and confirmed the release. The pipeline was isolated, depressurized, locked out and tagged out. There were no fluids observed on the ground surface. Enterprise determined this release reportable on December 21, 2018 due the volume of impacted subsurface soils. Enterprise has determined this release is required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX, 100 ppm TPH and 600 ppm Chloride). A third party closure report will be submitted with the "Final C-141."

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 1-4-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Vanessa Fields Date: 1/8/2019

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1901749164

Location of Release Source

Latitude **36.7737** Longitude **-107.6324** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **EPNG D Com #5A**	Site Type **Natural Gas Metering Tube**
Date Release Discovered: **1/2/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
D	36	30N	8W	San Juan

NMOCD
JAN 17 2019
DISTRICT III

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 1-2**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **1,197**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On January 2, 2019, a third party notified Enterprise of blowing gas from a valve on the EPNG D Com #5A meter tube. An Enterprise technician was dispatched and the meter tube was isolated, depressurized, locked out and tagged out. A gas loss of 1, 197 MCF was calculated. An area on the snow of approximately 12 feet long by 12 feet wide was affected by released fluids. The affect snow was removed and transported to a New Mexico Oil Conservation Division approved land farm facility. Soil evaluation will be conducted when snow pack has receded. A final C-141 will be submitted upon completion of soil evaluation.

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? This release is a major release because it exceeds 500 MCF.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notification was given to Vanessa Fields and Jim Griswold via phone call and email on January 2, 2019 at 3:35 p.m.

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 1-15-19

email: jefields@eprod.com Telephone: 713-381-6684

<u>OCD Only</u>

Received by: Vanessa Fields Date: 1/17/2019

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
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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	1012
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NCS1903153382

Location of Release Source

Latitude **36.323769** Longitude **-107.532816** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral 2C-116**	Site Type **Natural Gas Metering Tube**
Date Release Discovered: **1/9/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
M	**12**	**24N**	**7W**	**Rio Arriba**

NMOCD
JAN 31 2019
DISTRICT III

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 1-2**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On January 9, 2019, an Enterprise technician discovered a release on the Lateral 2C-116 pipeline. The pipeline was isolated, depressurized, locked out and tagged out. An area on the ground surface of approximately three feet in diameter was affected by released fluids. On January 17, 2019, Enterprise determined the release reportable per NMOCD regulation due to the volume of impacted subsurface soil. Enterprise has determined this release is required to be remediated to the third tier NMOCD remediation standard of 10 ppm Benzene, 50 ppm BTEX, GRO+DRO = 1, 000 ppm, 2,500 ppm TPH and 20,000 ppm Chloride. A third party closure report will be submitted with the "Final C-141."

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Field Date: 1-28-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: OCD CS Date: 1/31/19

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

NMOCD
FEB 01 2019
DISTRICT III

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1904250458

Location of Release Source

Latitude **36.820587** Longitude **-108.036771** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Utton #100 Dog Leg**	Site Type **Natural Gas Pipeline Dog Leg**
Date Release Discovered: **1/10/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
M	**7**	**30N**	**11W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 5 BBLs**	Volume Recovered (bbls): **None**
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On January 10, 2019, a property owner reported condensate dripping from a valve on a dog leg valve on the Utton #100 pipeline. An area on the ground surface of approximately two feet in diameter was affected by released fluids. Due to the inclement weather, muddy conditions and at the land owner request, Enterprise did not initiate remediation activities until January 17, 2019 and continued remediation activities on January 22, 2019. Enterprise determined this release reportable per NMOCD regulation on January 22, 2019 due to the volume of impacted subsurface soil. A third party closure report will be submitted with the "Final C-141."

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields
Title: Director, Field Environmental

Signature:
Date: 1-29-19

email: jefields@eprod.com
Telephone: 713-381-6684

OCD Only

Received by:
Date: 2/11/2019

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	1011
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NCS1904355294

NMOCD
FEB 1 1 2019
DISTRICT III

Location of Release Source

Latitude **36.651985** Longitude **-107.671788** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Federal 13-22 #2**	Site Type **Natural Gas Pipeline**
Date Release Discovered: **1/10/2019**	Serial # *(if applicable)* **NM 113113**

Unit Letter	Section	Township	Range	County
C	**22**	**28N**	**8W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **Unknown**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On January 10, 2019, an Enterprise technician discovered a release on the Federal 13-22 #2 pipeline. The pipeline was isolated, depressurized, locked out and tagged out. An area on the ground surface of approximately two feet in diameter was affected by released fluids. On January 24, 2019, Enterprise determined the release reportable per NMOCD regulation due to the volume of impacted subsurface soil. Enterprise has determined this release is required to be remediated to the third tier NMOCD remediation standard of 10 ppm Benzene, 50 ppm BTEX, GRO+DRO = 1, 000 ppm, 2,500 ppm TPH and 20,000 ppm Chloride. A third party closure report will be submitted with the "Final C-141."

②

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields
Title: Director, Field Environmental

Signature:
Date: 2-4-19

email: jefeilds@eprod.com
Telephone: 713-381-6684

OCD Only

Received by: OCD Cory
Date: 2/12/19

<u>District I</u>
1625 N. French Dr., Hobbs, NM 88240
<u>District II</u>
811 S. First St., Artesia, NM 88210
<u>District III</u>
1000 Rio Brazos Road, Aztec, NM 87410
<u>District IV</u>
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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*:
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NCS1828938721

Location of Release Source

Latitude **36.731732** Longitude **-107.966570** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Blanco Storage/Liquid Recovery**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **9/5/2018**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
D	**14**	**29N**	**11W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* **Enterprise Field Services, LLC**)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **>25 Barrels**	Volume Recovered (bbls): **2-3 Barrels**
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On September 5, 2018, an Enterprise technician discovered a release of condensate from the transfer pump located at the Trunk O Pump House during pigging operations. The pump was shutdown, locked out and tagged out. The released fluid flowed approximately 437 feet to the south along erosional feature. Enterprise mobilized a vacuum truck to recover the standing liquids. In addition, a contract crew removed the saturated soils utilizing hand tools. From September 27, 2018 to October 16, 2018 release was remediated. The final excavation dimensions measured approximately 437 feet long by 14 feet wide ranging from one foot to three feet deep. Approximately 143 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

NMOCD
FEB 20 2019
DISTRICT III

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State of New Mexico
Oil Conservation Division

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: Jon E. Fields
Title: Director, Field Environmental

Signature:
Date: 2-8-19

email: jefields@eprod.com
Telephone: (713) 381-6684

OCD Only

Received by: Vanessa Fields
Date: 2/20/2019

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: 2/27/2019

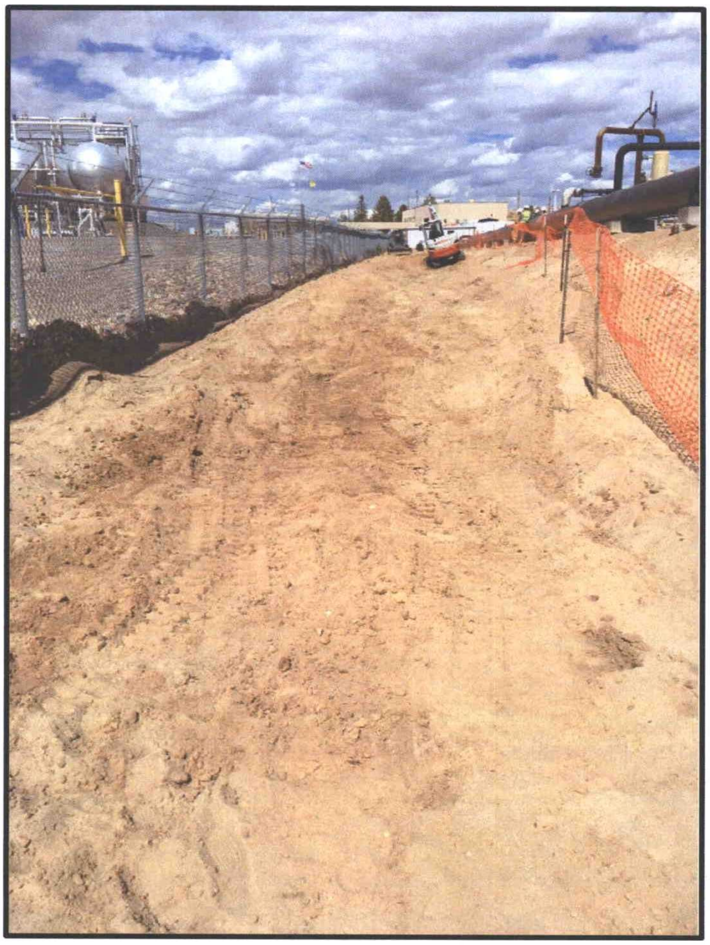
Printed Name: Vanessa Fields
Title: Environmental Specialist

Enterprise Products

Blanco Storage/Liquid Recovery Release: Release Assessment and Final Remediation

Latitude 36.731732°, Longitude -107.966570°
NW 1/4 of NW 1/4 of Section 14, T29N, R11W
San Juan County, New Mexico

November 20, 2018



Submitted To:
Enterprise Products
Field Environmental-San Juan Basin
614 Reilly Avenue
Farmington, NM 87401

Submitted By:
Souder, Miller & Associates
401 West Broadway
Farmington, NM 87401
(505) 325-7535

Enterprise Products

SMA

NMOCD
FEB 20 2019
DISTRICT III

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Appendix B: NMOSE Wells Report
Appendix C: Field Notes
Appendix D: Site Photography
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Appendix F: Executed C-138 Form

1.0 Executive Summary

On September 5, 2018, Souder, Miller & Associates (SMA) was contacted by an Enterprise field representative regarding a potential hydrocarbon release at the Blanco Storage/Liquid Recovery facility. Surface and subsurface soil samples from the spill path associated with the release at the transfer pump were collected and verified to be contaminated through field screening methods.

From September 7 to October 16, 2018, SMA oversaw excavation of contaminated soils from the hydrocarbon impacted area south of the transfer pump. The New Mexico Oil Conservation Division (NMOCD) witnessed confirmation sampling of the walls and base of the final excavation. Final laboratory results for the walls and base demonstrated hydrocarbon concentrations below NMOCD regulatory standards for closure criteria. The excavation was approved for backfill with clean soil.

The table below summarizes information about the remediation activities.

Table 1: Release Information and Closure Criteria

Name	Blanco Storage/Liquid Recovery	Company	Enterprise Field Services, LLC
API Number	NA	Location	36.731732 -107.966570
Date of Release	September 5, 2018	Date Reported to NMOCD	September 5, 2018
Land Owner	Private	Reported To	NMOCD
Source of Release	Transfer pump		
Released Volume	>25 bbls	Released Material	Condensate
Recovered Volume	2-3 bbls	Net Release	<31 bbls
NMOCD Closure Criteria	<50 feet to groundwater		
SMA Response Dates	September 7th and 24th, 2018, October 15, 2018		

2.0 Introduction

On September 5, 2018, a release was discovered at the Blanco Storage/Liquid Recovery facility due to failure of a transfer pump. Initial response activities were conducted by Enterprise, and included source elimination, site security; and containment activities, which recovered approximately 2-3 barrels of fluid and contaminated soil. Fluid and contaminated soil was hauled to and disposed of at Envirotech Landfarm in Bloomfield, NM. Figure 1 illustrates the vicinity and site location, Figure 2 illustrates the release location.

3.0 Site Ranking and Land Jurisdiction

The Blanco Storage/Liquid Recovery is located in Bloomfield, New Mexico on privately-owned land at an elevation of approximately 5,591 feet above mean sea level (amsl).

Based upon groundwater well data (Appendix B), depth to groundwater in the area is estimated to be seventeen (17) feet below grade surface (bgs). There are five (5) known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 11/1/2018). The nearest significant watercourse is Citizens Ditch, located approximately 850 feet to the south.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of less than 50 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

4.0 Remediation Activities

On September 7, 2018, SMA personnel arrived on site in response to the release associated with the Blanco Storage/Liquid Recovery. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field-screened for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp.

From September 24, 2018 to October 15, 2018, SMA returned to the site to guide the excavation of contaminated soil. SMA guided the excavation activities by collecting soil samples for field screening. Samples were screened for hydrocarbon impacts using a PID and for hydrocarbon impacts using a Dexsil® PetroFLAG TPH Analyzer. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met.

On September 27, 2018 and October 16, 2018, an NMOCD representative was on site to witness confirmation sampling of the excavation, which measured approximately 467 feet long. While on site, the NMOCD representative approved an alternative sampling plan allowing for varying lengths between sample locations. The northern end of the excavation, closest to the pump building, was excavated to three (3) feet bgs and is represented by composite samples SC-12 and SC-12R. Samples SC-11 and SC-11R were collected approximately twenty (20) feet south of SC-12, where the excavation depth was two (2) feet bgs. All other sample locations (SC-1 through SC-10R) were excavated to a depth of one (1) foot bgs.

Confirmation samples were comprised of five-point composites of the excavated area. Samples SC-1, SC-10, SC-11, and SC-12 were resampled due to exceedances of Closure Criteria standards.

A total of sixteen (16) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Laboratory samples were collected in accordance with the sampling protocol included in Appendix C. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Envirotech Analytical Laboratory in Farmington, New Mexico (Appendix E).

Figure 3 shows the extent of the excavation and sample locations. Laboratory results are summarized in Table 3. Laboratory reports are included in Appendix E.

Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at Envirotech Landfarm, Bloomfield, New Mexico, an NMOCD permitted disposal facility.

5.0 Closure and Limitations

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the San Juan Basin in New Mexico.

If there are any questions regarding this report, please contact either Ashley Maxwell or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

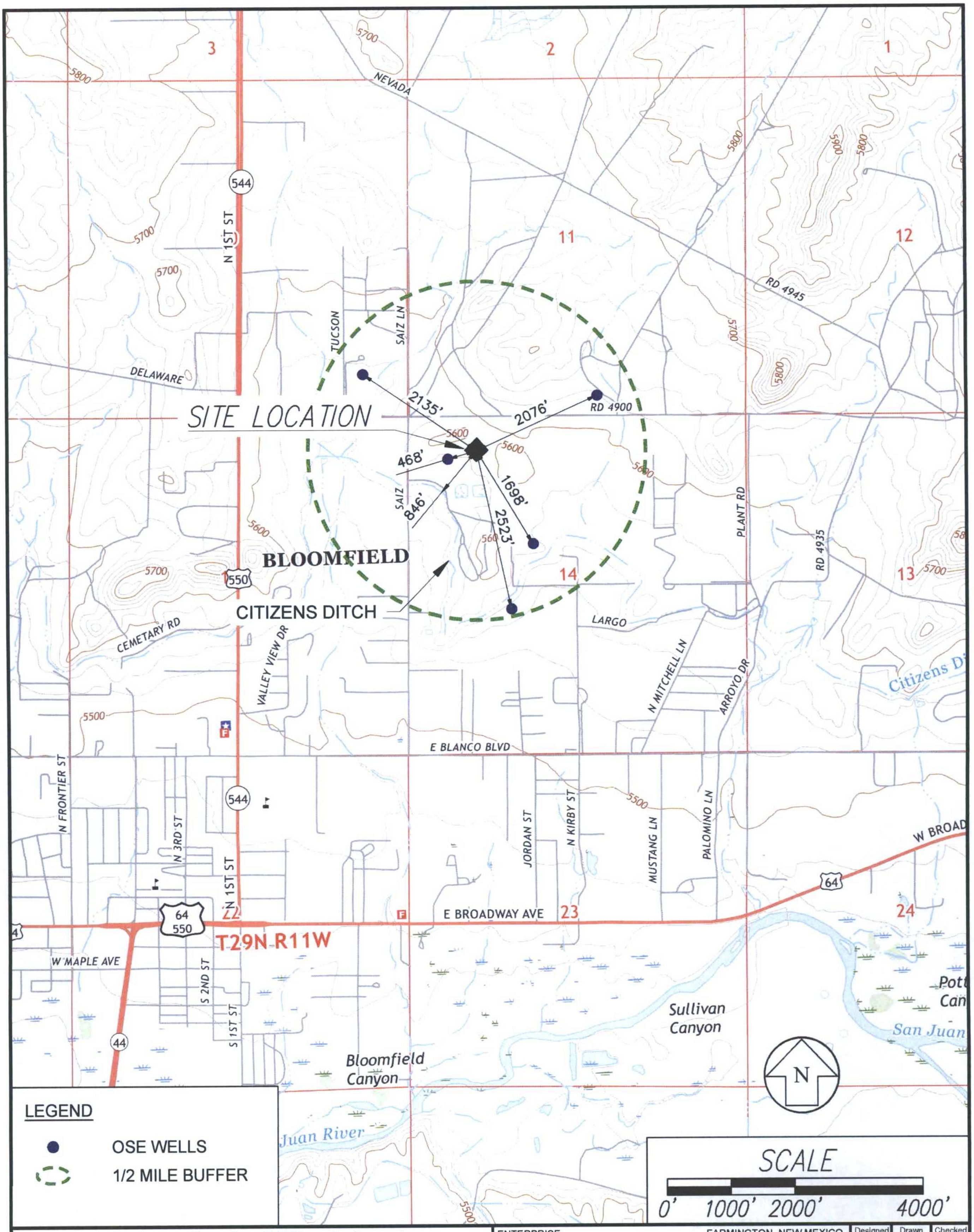
Ashley Maxwell
Project Scientist

Reviewed by:

Shawna Chubbuck

Shawna Chubbuck
Senior Scientist

FIGURES



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www.soudermiller.com
Serving the Southwest & Rocky Mountains

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ENTERPRISE
FARMINGTON, NEW MEXICO

VICINITY MAP
BLANCO STORAGE/LIQUID RECOVERY
SECTION 14, T29N, R11W

SAN JUAN COUNTY

Designed	Drawn	Checked
AM	DJB	RSA

Date: November 2018
Scale: Horiz: 1" = 2000' Vert: NA
Project No: 5126788
FIGURE 1

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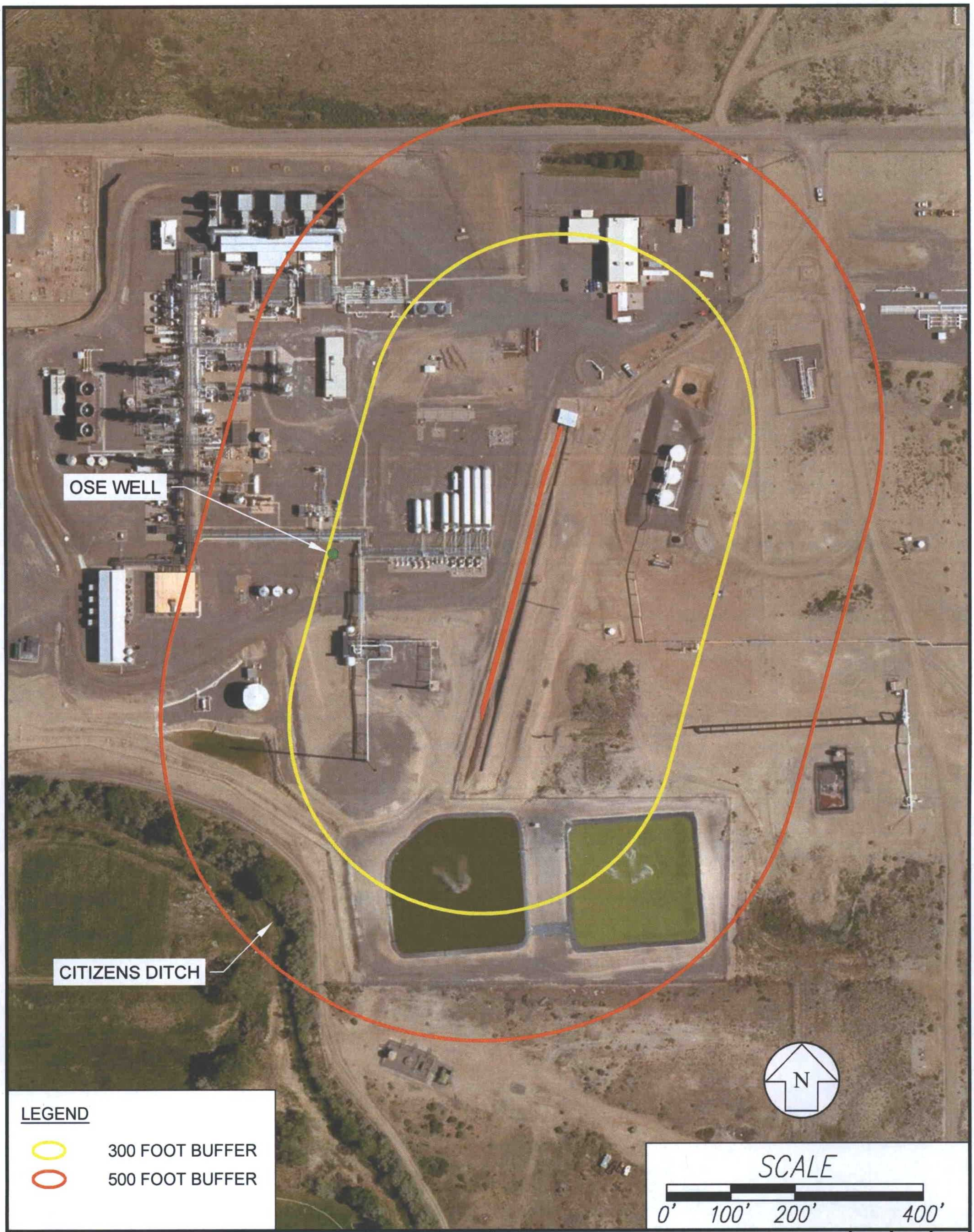

Souder, Miller & Associates

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Farmington, NM 87401-5907
Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045
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Environmental
Surveying

ENTERPRISE FARMINGTON, NEW MEXICO

SITE MAP
BLANCO STORAGE/LIQUID RECOVERY
SECTION 14, T29N, R11W

SAN JUAN COUNTY

Designed	Drawn	Checked
AM	DJB	RSA

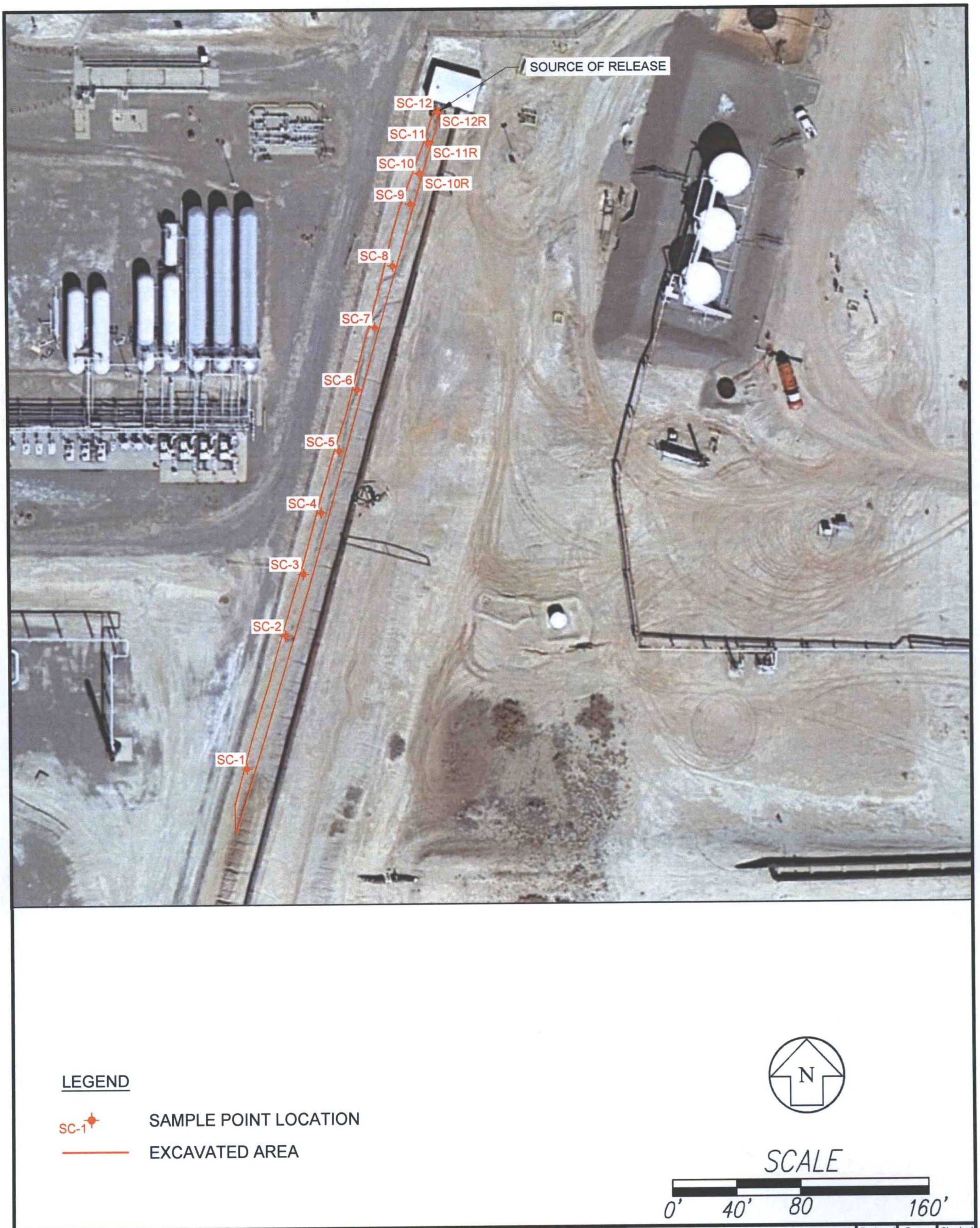
Date: November 2018

Scale: Horiz: 1" = 200'
Vert: NA

Project No: 5126788

FIGURE 2

W:\5-Enterprise MSA 2018 FMO (5126788)\Release Sites\BG15 - Blanco\CAD-Figures\5126788 Blanco 9-27-2018.dwg, DJB, 11/19/2018 3:36 PM



Souder, Miller & Associates

SMA
Engineering
Environmental
Surveying

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ENTERPRISE
FARMINGTON, NEW MEXICO

SITE MAP
BLANCO STORAGE/LIQUID RECOVERY
SECTION 14, T29N, R11W

SAN JUAN COUNTY

Designed	Drawn	Checked
AM	DJB	RSA

Date: November 2018
Scale: Horiz: 1" = 80' Vert: NA
Project No: 5126788
FIGURE 3

W:\5-Enterprise MSA 2018 FMO (5126788)\Release Sites\BG15 - Blanco\CAD-Figures\5126788 Blanco 9-27-2018.dwg, DJB, 11/19/2018 3:35 PM

TABLES

Table 2:
NMOCD Closure Criteria

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	17	NMOSE
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	~300	NMOSE
Hortizontal Distance to Nearest Significant Watercourse (ft)	850	7.5 minute quadrangle map

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
		Closure Criteria (units in mg/kg)				
Depth to Groundwater		**Chloride** *numerical limit or background, whichever is greater	**TPH**	**GRO + DRO**	**BTEX**	**Benzene**
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	**yes or no**	**if yes, then**				
<300' from continuously flowing watercourse or other significant watercourse?	No	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	No					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	No					
<1000' from fresh water well or spring?	No					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	No					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	No					
<100' from wetland?	No					
within area overlying a subsurface mine	No					
within an unstable area?	No					
within a 100-year floodplain?	No					

Table 3:
Summary of Soil Analytical Results

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10				100	600
SC-1	9/27/2018	1	<0.1	<0.1	<20.0	34.8	93.5	**128.3**	<20.0
	10/15/2018	1	<0.1	<0.1	<20.0	<25.0	<50.0	<95.0	--
SC-2	9/27/2018	1	<0.1	<0.1	<20.0	<25.0	57.5	57.5	<20.0
SC-3	9/27/2018	1	<0.1	<0.1	<20.0	<25.0	50.3	50.3	<20.0
SC-4	9/27/2018	1	<0.1	<0.1	<20.0	<25.0	<50.0	<95.0	<20.0
SC-5	9/27/2018	1	<0.1	<0.1	<20.0	<25.0	54.1	54.1	24.1
SC-6	9/27/2018	1	<0.1	<0.1	<20.0	35.3	<50.0	35.3	<20
SC-7	9/27/2018	1	<0.1	<0.1	<20.0	<25.0	<50.0	<95.0	22.6
SC-8	9/27/2018	1	<0.1	<0.1	<20.0	40.0	<50.0	40.0	47.1
SC-9	9/27/2018	1	<0.1	<0.1	<20.0	<25.0	<50.0	<95.0	<20.0
SC-10	9/27/2018	1	<0.1	<0.1	<20.0	69.2	181	**250.2**	<20.0
SC-10R	10/16/2018	1	<0.1	<0.1	<20.0	<25.0	<50.0	<95.0	--
SC-11	9/27/2018	2	<0.1	<0.1	<20.0	47.6	93.2	**140.8**	<20.0
SC-11R	10/16/2018	2	<0.1	<0.1	<20.0	<25.0	<50.0	<95.0	--
SC-12	9/27/2018	3	<0.1	<0.1	<20.0	29.4	149	**178.4**	<20.0
SC-12R	10/16/2018	3	<0.1	<1.0	<20.0	<25.0	<50.0	<95.0	--

"--" = Not Analyzed

APPENDIX A
FORM C-141

Enterprise
Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

September 13, 2018

7015 3010 0000 3041 3121
Return Receipt Requested

EMNRD Oil Conservation Division
Aztec District III Office
Attention: Cory Smith
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Release Notification
Enterprise Field Services, LLC
Blanco Storage/Liquid Recovery

Mr. Smith:

Enterprise Field Services, LLC is submitting a Release Notification Report for the release of condensate on the Blanco Storage that occurred on September 5, 2018.

If you have any questions or require additional information, please contact Thomas Long, Senior Field Environmental Scientist at (505) 599-2286 or Brian Stone, Field Environmental Manager at (970) 263-3020.

Thank you,

Jon E. Fields
Director, Field Environmental

Rodney M. Sartor
Senior Director, Environmental

/mbp
Enclosure

P.O. BOX 4324
HOUSTON, TEXAS 77210-4324
713.381.6500

1100 LOUISIANA STREET
HOUSTON, TEXAS 77002-5227
www.enterpriseproducts.com

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

Location of Release Source

Latitude **36.731732** Longitude **-107.966570** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Blanco Storage/Liquid Recovery**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **9/5/2018**	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
D	**14**	**29N**	**11W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* **Enterprise Field Services, LLC**)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **>25 Barrels**	Volume Recovered (bbls): **Estimated 2-3 barrels**
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On September 5, 2018, an Enterprise technician discovered a release of condensate from the transfer pump located at the Trunk O Pump House during pigging operations. The pump was shutdown, locked out and tagged out. The released fluid flowed approximately 412 feet to the south along erosional feature. Enterprise mobilized a vacuum truck to recover the standing liquids. In addition, a contract crew removed the saturated soils utilizing hand tools. Enterprise plans to remove the residual impacted soil by mechanical excavation once utility one calls and safety plans are completed.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The calculated release amount ranged from 16-33 barrels of condensate.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notification was performed by Thomas Long. Notification was sent by phone call and follow-up email to Cory Smith and Jim Griswold on 9/5/18 at 12:10 p.m.

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields
Title: Director, Field Environmental

Signature:
Date: 9/13/18

email: jefields@eprod.com
Telephone: 713-381-6684

OCD Only

Received by: ____________________ Date: __________

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	~20 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☒ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☐ Field data
☐ Data table of soil contaminant concentration data
☐ Depth to water determination
☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☐ Boring or excavation logs
☐ Photographs including date and GIS information
☐ Topographic/Aerial maps
☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

APPENDIX B

NMOSE WELLS REPORT

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
SJ 01426		SJM2	SJ		4	1	14	29N	11W	235366	4068747*	546	155	10	145
SJ 01851		SJM2	SJ		4	4	10	29N	11W	234586	4069572*	614	125	48	77
SJ 02466		SJM2	SJ	3	3	4	11	29N	11W	235694	4069436*	644	66		
SJ 02466 S		SJM2	SJ	3	3	4	11	29N	11W	235694	4069436*	644	65		
SJ 03550		SJM2	SJ	1	2	3	14	29N	11W	235252	4068445*	789	10		
SJ 03733 POD1		SJM2	SJ	1	2	4	15	29N	11W	234444	4068469*	986	64	20	44
SJ 00007		SJM2	SJ	3	2	2	14	29N	11W	236085	4069024*	1015	752		
SJ 01774		SJM2	SJ	2	4	3	14	29N	11W	235440	4068045*	1223	82	6	76
SJ 03360		SJM2	SJ	2	4	3	14	29N	11W	235440	4068045*	1223	40		
SJ 03164		SJM2	SJ	1	2	4	14	29N	11W	236060	4068423*	1255	75	56	19
SJ 03175		SJM2	SJ	1	2	4	14	29N	11W	236060	4068423*	1255	60	24	36
SJ 03847 POD1		SJM2	SJ	3	3	3	14	29N	11W	234873	4067937	1297	74	27	47
SJ 03579		SJM2	SJ	1	4	4	15	29N	11W	234431	4068068*	1323	83	30	53
SJ 02378		SJM2	SJ	2	3	4	15	29N	11W	234229	4068080*	1424	75	12	63

Average Depth to Water: **25 feet**

Minimum Depth: **6 feet**

Maximum Depth: **56 feet**

Record Count: 14

UTMNAD83 Radius Search (in meters):

Easting (X): 235087.88 **Northing (Y):** 4069216.93 **Radius:** 1608

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

APPENDIX C

FIELD NOTES

0

onsite 11:40

Field Screening Form

Location Name: Blanco Storage Yard

Date: 9-24-2018

Location Name	Description	Depth (Feet BGS)	Time Collected	PID Reading (ppm)	Time Screened	PetroFLAG Reading	Time Screened
SC-1	South end of spill path 86'x2'	3"	12:02	0.0	12:53	49	13:58
SC-2	South end moving north	1'	12:27	0.4	12:53	0	13:58
SC-3	south end moving north	0.5-1	12:38	0.0	12:54	—	—
SC-4	south end moving north	1'	13:01	0.0	13:27	—	—
SC-5	South end moving north	1'	13:11	0.1	1327	50	13:59
SC-6	mid flow path	1'	13:22	0.0	13:32	—	—
SC-7	mid flow path	1'	14:36	389	15:03	38	1527
SC-8	mid flow path	1'	14:42	316	15:04	26	1526
SC-9	mid flow path	1'	1450	397	15:05	18	1526
SC-10	mid flow path	1'	14:55	262	15:05	183	1525

Notes: Sampled in 20' Sections. Approx. 10' wide
Envirotech Land Farm

SMA

9:00 AM

8:15

10

Field Screening Form

Location Name	Date
Blanco Storage Yard	9-25-2018

Location Name	Description	Depth (Feet BGS)	Time Collected	PID Reading (ppm)	Time Screened	PetroFLAG Reading	Time Screened
SC-11	mid flow path	1'	8:22	363	8:53	168	9:28
SC-12	mid flow path	1'	8:26	6.3	8:53	—	—
SC-13	north heading to pumphouse	1'	8:30	399	8:54	129	9:28
SC-14	north heading to pumphouse	1'	8:32	27.5	8:55	—	—
SC-15	north heading to pump house	1'	8:35	374	8:57	27	9:29
SC-16	north heading to pumphouse	1'	8:38	85.6	8:57	—	—
SC-17	South of pump house prior excav area	1'	9:07	376	9:22	60	9:29
SC-18	south of pumphouse prior excavation	1'	11:59	365	12:18	141	12:18
SC-19	Spill path at source of release	0-3	13:14	226	13:33	44	13:41
SW-1	NW of SC-19 wall	0-2	13:14	367	13:53	59	13:41
SW-2	NE of SC-19 wall	0-3	13:15	128	13:34	71	13:41

Notes: SC-19 smell at 2', continued to excavate around source of release

ASMA

Field Screening Form

Location Name: Blanco Yard

Date: 10-15-2018

Location Name	Description	Depth (Feet BGS)	Time Collected	PID Reading (ppm)	Time Screened	PetroFLAG Reading	Time Screened
SC-1	scraped 6" resample	6"	12:15	0.4	12:49	172	12:53
SC-10	1' excavated resample	1'	12:44	0.0	13:02	25	13:03
SC-1	scraped 3"	9"	13:15	0.0	13:31	138	13:40
SC-1	scraped 3"	12"	13:55	4.1	14:14	170	13:20
SC-1	Collected sample	12"	14:26	—	—	—	—
SC-12	Excavate resample	1-3'	15:09	2.2	15:26	86	1533
SC-11	Excavate resample	1-2'	15:11	0.5	15:26	31	15:33

Notes: onsite 11:00

10-16-18 onsite 8:30 of Site 9:15

SMA

APPENDIX D

SITE PHOGRAPHY

Site Photographs
Blanco Storage/Liquid Recovery Facility

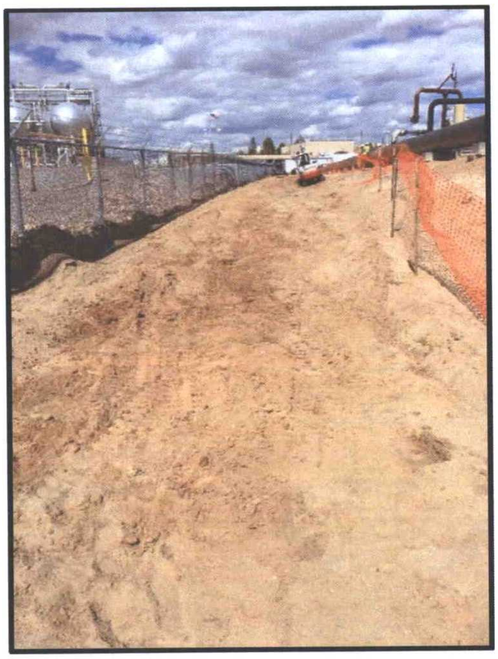

Figure 1. View of excavated area facing north.

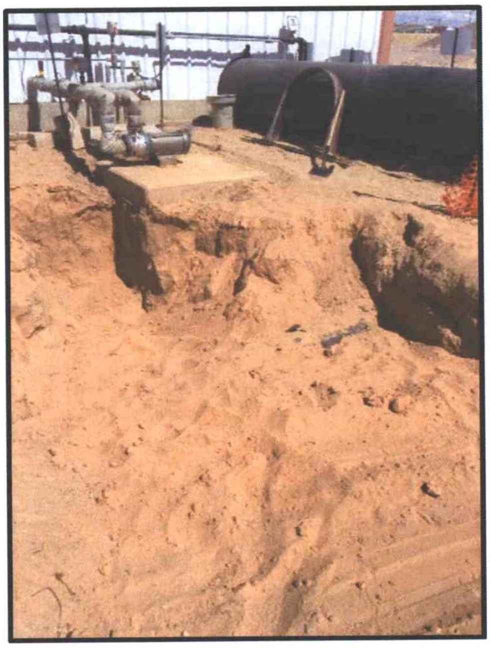

Figure 2. Excavation at the source of the release.

APPENDIX E

LABORATORY ANALYTICAL REPORTS

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Souder Miller & Associates
Chain Of Custody Number:
Samples Received: 9/27/2018 10:57:00AM
Job Number: 97057-0352
Work Order: P809062
Project Name/Location: Blanco

Report Reviewed By: Walter Hinchman Date: 10/4/18

Walter Hinchman, Laboratory Director

Date: 10/4/18

Tim Cain, Project Manager

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

Souder Miller & Associates	Project Name:	Blanco		
401 W. Broadway	Project Number:	97057-0352		**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell		10/04/18 15:20

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SC-1	P809062-01A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-2	P809062-02A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-3	P809062-03A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-4	P809062-04A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-5	P809062-05A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-6	P809062-06A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-7	P809062-07A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-8	P809062-08A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-9	P809062-09A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-10	P809062-10A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-11	P809062-11A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.
SC-12	P809062-12A	Soil	09/27/18	09/27/18	Glass Jar, 4 oz.

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/04/18 15:20

SC-1

P809062-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**34.8**	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**93.5**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.9 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*95.5 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/04/18 15:20

SC-2
P809062-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**57.5**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.6 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*96.4 %*		*50-200*	*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
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SC-3

P809062-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**50.3**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.0 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*95.2 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
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SC-4
P809062-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.6 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*94.9 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
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SC-5

P809062-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**54.1**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.9 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*94.8 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**24.1**	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
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SC-6
P809062-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**35.3**	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.6 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*96.6 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
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P809062-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.5 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*96.5 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**22.6**	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
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P809062-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**40.0**	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*97.8 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*94.7 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**47.1**	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

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401 W. Broadway	Project Number:	97057-0352		**Reported:**
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SC-9
P809062-09 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.4 %*	*50-150*		*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*95.3 %*	*50-200*		*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

SC-10

P809062-10 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**69.2**	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**181**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.0 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*95.0 %*		*50-200*	*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
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SC-11
P809062-11 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**47.6**	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**93.2**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.9 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*96.1 %*		*50-200*	*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/02/18	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
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SC-12
P809062-12 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1839025	09/28/18	10/02/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1839025	09/28/18	10/02/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**29.4**	25.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**149**	50.0	mg/kg	1	1839027	09/28/18	10/02/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.4 %*		*50-150*	*1839025*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Surrogate: n-Nonane		*95.5 %*		*50-200*	*1839027*	*09/28/18*	*10/02/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1840009	10/02/18	10/03/18	EPA 300.0/9056A	

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1839025 - Purge and Trap EPA 5030A										
Blank (1839025-BLK1)				Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*8100*		*"*	*8000*		*101*	*50-150*			
LCS (1839025-BS1)				Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Benzene	5320	100	ug/kg	5000		106	70-130			
Toluene	5350	100	"	5000		107	70-130			
Ethylbenzene	5400	100	"	5000		108	70-130			
p,m-Xylene	11000	200	"	10000		110	70-130			
o-Xylene	5330	100	"	5000		107	70-130			
Total Xylenes	16400	100	"	15000		109	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8170*		*"*	*8000*		*102*	*50-150*			
Matrix Spike (1839025-MS1)	**Source: P809062-01**			Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Benzene	5590	100	ug/kg	5000	ND	112	54.3-133			
Toluene	5620	100	"	5000	ND	112	61.4-130			
Ethylbenzene	5680	100	"	5000	ND	114	61.4-133			
p,m-Xylene	11600	200	"	10000	ND	116	63.3-131			
o-Xylene	5620	100	"	5000	ND	112	63.3-131			
Total Xylenes	17300	100	"	15000	ND	115	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8160*		*"*	*8000*		*102*	*50-150*			
Matrix Spike Dup (1839025-MSD1)	**Source: P809062-01**			Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Benzene	6080	100	ug/kg	5000	ND	122	54.3-133	8.45	20	
Toluene	6100	100	"	5000	ND	122	61.4-130	8.32	20	
Ethylbenzene	6160	100	"	5000	ND	123	61.4-133	8.09	20	
p,m-Xylene	12600	200	"	10000	ND	126	63.3-131	7.70	20	
o-Xylene	6070	100	"	5000	ND	121	63.3-131	7.74	20	
Total Xylenes	18600	100	"	15000	ND	124	63.3-131	7.71	20	
Surrogate: 4-Bromochlorobenzene-PID	*8010*		*"*	*8000*		*100*	*50-150*			

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/04/18 15:20

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1839025 - Purge and Trap EPA 5030A										
Blank (1839025-BLK1)				Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.95*		"	*8.00*		*99.4*	*50-150*			
LCS (1839025-BS2)				Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Gasoline Range Organics (C6-C10)	50.5	20.0	mg/kg	50.0		101	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.99*		"	*8.00*		*99.9*	*50-150*			
Matrix Spike (1839025-MS2)	**Source: P809062-01**			Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Gasoline Range Organics (C6-C10)	56.0	20.0	mg/kg	50.0	ND	112	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.04*		"	*8.00*		*101*	*50-150*			
Matrix Spike Dup (1839025-MSD2)	**Source: P809062-01**			Prepared: 09/28/18 0 Analyzed: 10/02/18 1						
Gasoline Range Organics (C6-C10)	49.4	20.0	mg/kg	50.0	ND	98.9	70-130	12.5	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.99*		"	*8.00*		*99.9*	*50-150*			

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/04/18 15:20

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1839027 - DRO Extraction EPA 3570										
Blank (1839027-BLK1)				Prepared: 09/28/18 1 Analyzed: 10/02/18 0						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*47.4*		"	*50.0*		*94.8*	*50-200*			
LCS (1839027-BS1)				Prepared: 09/28/18 1 Analyzed: 10/02/18 0						
Diesel Range Organics (C10-C28)	423	25.0	mg/kg	500		84.5	38-132			
Surrogate: n-Nonane	*46.1*		"	*50.0*		*92.1*	*50-200*			
Matrix Spike (1839027-MS1)	**Source: P809062-01**			Prepared: 09/28/18 1 Analyzed: 10/02/18 0						
Diesel Range Organics (C10-C28)	447	25.0	mg/kg	500	34.8	82.5	38-132			
Surrogate: n-Nonane	*48.7*		"	*50.0*		*97.5*	*50-200*			
Matrix Spike Dup (1839027-MSD1)	**Source: P809062-01**			Prepared: 09/28/18 1 Analyzed: 10/02/18 0						
Diesel Range Organics (C10-C28)	481	25.0	mg/kg	500	34.8	89.2	38-132	7.22	20	
Surrogate: n-Nonane	*49.0*		"	*50.0*		*97.9*	*50-200*			

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/04/18 15:20

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1840009 - Anion Extraction EPA 300.0/9056A										
Blank (1840009-BLK1)				Prepared: 10/02/18 0 Analyzed: 10/02/18 1						
Chloride	ND	20.0	mg/kg							
LCS (1840009-BS1)				Prepared: 10/02/18 0 Analyzed: 10/02/18 1						
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1840009-MS1)	**Source: P810001-02**			Prepared: 10/02/18 0 Analyzed: 10/02/18 1						
Chloride	258	20.0	mg/kg	250	ND	103	80-120			
Matrix Spike Dup (1840009-MSD1)	**Source: P810001-02**			Prepared: 10/02/18 0 Analyzed: 10/02/18 1						
Chloride	258	20.0	mg/kg	250	ND	103	80-120	0.108	20	

Souder Miller & Associates	Project Name:	Blanco	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/04/18 15:20

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page 1 of 2

Client: SMA
Project: Blanco
Project Manager: Ashley Maxwell
Address: 401 W Broadway
City, State, Zip Farmington, NM 87401
Phone: 505 325-7535
Email: ashley.maxwell@scudermiller.com

Report Attention
Report due by: Standard
Attention: Ashley Maxwell
Address: 401 W Broadway
City, State, Zip Farmington, NM 87401
Phone: 505-325-7535
Email: ashley.maxwell@scudermiller.com

Lab Use Only		TAT		EPA Program		
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDW
P809062	97057-0352					

State: NM ☒ CO UT

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/~~ORO~~ MRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1						Remarks
9:13	9/27 2018	Soil	1	SC-1	1	X	X	X			X							DRO/MRO GRO chlorides
9:17				SC-2	2													
9:21				SC-3	3													
9:25				SC-4	4													
9:30				SC-5	5													
9:33				SC-6	6													
9:37				SC-7	7													
9:43				SC-8	8													
9:47				SC-9	9													
9:53	↓	↓	↓	SC-10	10													↓

Additional Instructions: Bill Enterprise CC Tom Long Vis. Ice in cooler - [illegible]

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Ashley Maxwell

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/27/18	10:56		9-27-18	10:57

Lab Use Only
Received on ice: [✓ Y] / N
T1 ____ T2 ____ T3 ____
AVG Temp °C 4.0

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ________

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboaotry is limited to the amount paid for on the report.

Project Information

Chain of Custody

Page 2 of 2

Client: SmA	**Report Attention**
Project: Blanco	Report due by:
Project Manager: Ashley Maxwell	Attention: Ashley Maxwell
Address: 401 W Broadway	Address: 401 W Broadway
City, State, Zip Farmington, NM 87401	City, State, Zip Farmington, NM
Phone: 505-325-7535	Phone: 505-325-7535
Email: ashley.maxwell@souldermiller.com	Email: ashley.maxwell@souldermiller.com

Lab Use Only		TAT		EPA Program		
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDWA
P 809062	97057-0352					

State: NM X, CO, UT, AZ

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
956	9/27 2018	soil	1	SC-11	11	X	X	X			X		DRO/MRO/GRO Chlorides
10:02	|	|	1	SC-12	12	|	|	|					|

Additional Instructions: Vis. ice in cooler ty

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Ashley Maxwell

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/27/18	10:56		09-27-18	10:57

Lab Use Only

Received on ice: [✓ Y] / N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4.0

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ______

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboaratry is limited to the amount paid for on the report.

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Souder Miller & Associates
Chain Of Custody Number:
Samples Received: 10/15/2018 3:59:00PM
Job Number: 97057-0352
Work Order: P810046
Project Name/Location: Blanco Storage Yard

Report Reviewed By: Walter Hinchman
Walter Hinchman, Laboratory Director
Date: 10/17/18

Tim Cain, Project Manager
Date: 10/17/18

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/17/18 16:19

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SC-1	P810046-01A	Soil	10/15/18	10/15/18	Glass Jar, 4 oz.

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/17/18 16:19

SC-1
P810046-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1842006	10/15/18	10/16/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*50-150*		*1842006*	*10/15/18*	*10/16/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1842006	10/15/18	10/16/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1842010	10/16/18	10/16/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1842010	10/16/18	10/16/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.2 %*	*50-150*		*1842006*	*10/15/18*	*10/16/18*	*EPA 8015D*	
Surrogate: n-Nonane		*130 %*	*50-200*		*1842010*	*10/16/18*	*10/16/18*	*EPA 8015D*	

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1842006 - Purge and Trap EPA 5030A										
Blank (1842006-BLK1)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*8120*		*"*	*8000*		*101*	*50-150*			
LCS (1842006-BS1)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Benzene	6120	100	ug/kg	5000		122	70-130			
Toluene	6160	100	"	5000		123	70-130			
Ethylbenzene	6200	100	"	5000		124	70-130			
p,m-Xylene	12700	200	"	10000		127	70-130			
o-Xylene	6110	100	"	5000		122	70-130			
Total Xylenes	18800	100	"	15000		125	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8180*		*"*	*8000*		*102*	*50-150*			
Matrix Spike (1842006-MS1)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Benzene	4890	100	ug/kg	5000	ND	97.8	54.3-133			
Toluene	4920	100	"	5000	ND	98.4	61.4-130			
Ethylbenzene	4940	100	"	5000	ND	98.9	61.4-133			
p,m-Xylene	10100	200	"	10000	ND	101	63.3-131			
o-Xylene	4870	100	"	5000	ND	97.4	63.3-131			
Total Xylenes	15000	100	"	15000	ND	100	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8110*		*"*	*8000*		*101*	*50-150*			
Matrix Spike Dup (1842006-MSD1)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/17/18 1						
Benzene	4930	100	ug/kg	5000	ND	98.7	54.3-133	0.868	20	D1
Toluene	4950	100	"	5000	ND	99.0	61.4-130	0.605	20	D1
Ethylbenzene	4960	100	"	5000	ND	99.3	61.4-133	0.422	20	D1
p,m-Xylene	10200	200	"	10000	ND	102	63.3-131	0.237	20	D1
o-Xylene	4940	100	"	5000	ND	98.8	63.3-131	1.42	20	D1
Total Xylenes	15100	100	"	15000	ND	101	63.3-131	0.624	20	D1
Surrogate: 4-Bromochlorobenzene-PID	*8180*		*"*	*8000*		*102*	*50-150*			

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1842006 - Purge and Trap EPA 5030A										
Blank (1842006-BLK1)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.49*		*"*	*8.00*		*93.7*	*50-150*			
LCS (1842006-BS2)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	48.7	20.0	mg/kg	50.0		97.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.59*		*"*	*8.00*		*94.9*	*50-150*			
Matrix Spike (1842006-MS2)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	52.7	20.0	mg/kg	50.0	ND	105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.64*		*"*	*8.00*		*95.5*	*50-150*			
Matrix Spike Dup (1842006-MSD2)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	48.5	20.0	mg/kg	50.0	ND	97.1	70-130	8.19	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.73*		*"*	*8.00*		*96.6*	*50-150*			

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1842010 - DRO Extraction EPA 3570										
Blank (1842010-BLK1)				Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*58.9*		*"*	*50.0*		*118*	*50-200*			
LCS (1842010-BS1)				Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	448	25.0	mg/kg	500		89.6	38-132			
Surrogate: n-Nonane	*57.4*		*"*	*50.0*		*115*	*50-200*			
Matrix Spike (1842010-MS1)		**Source: P810046-01**		Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	461	25.0	mg/kg	500	ND	92.1	38-132			
Surrogate: n-Nonane	*60.4*		*"*	*50.0*		*121*	*50-200*			
Matrix Spike Dup (1842010-MSD1)		**Source: P810046-01**		Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	460	25.0	mg/kg	500	ND	92.0	38-132	0.0853	20	
Surrogate: n-Nonane	*60.1*		*"*	*50.0*		*120*	*50-200*			

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/17/18 16:19

Notes and Definitions

D1	Duplicates or Matrix Spike Duplicates or Laboratory Control Sample Duplicates Relative Percent Difference is outside of control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

97057-0352 Page 1 of 1

Client: SMA	**Report Attention**
Project: Blanco Storage Yard	Report due by: 10/16/2018
Project Manager: Ashley Maxwell	Attention:
Address: 401 W Broadway	Address:
City, State, Zip Farmington, NM 87401	City, State, Zip
Phone: 505 325 7535	Phone:
Email: ashley.maxwell @soudermiller	Email:

Lab Use Only		TAT		EPA Program		
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDWA
P810046	03117-0014 10/15/18	X				

State

NM	CO	UT	AZ
X			

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1						Remarks
14:26	10/15/18	Soil	1	SC-1	1	X	X	X										same day Turnaround

Additional Instructions: CC Tom Long Bill Enterprise

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: ______________________

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date 10/15/18	Time 15:57	Received by: (Signature) Irene Zizzi	Date 10-15-18	Time 15:59
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: [✓ Y] / N

T1 ________ T2 ________ T3 ________

AVG Temp °C 4.0

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ________

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, **v** - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboraotry is limited to the amount paid for on the report.

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Souder Miller & Associates
Chain Of Custody Number:
Samples Received: 10/16/2018 9:47:00AM
Job Number: 97057-0352
Work Order: P810048
Project Name/Location: Blanco Storage Yard

Report Reviewed By: Walter Hinchman Date: 10/18/18
Walter Hinchman, Laboratory Director

Date: 10/18/18
Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

**Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.**

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SC-10R	P810048-01A	Soil	10/16/18	10/16/18	Glass Jar, 4 oz.
SC-11R	P810048-02A	Soil	10/16/18	10/16/18	Glass Jar, 4 oz.
SC-12R	P810048-03A	Soil	10/16/18	10/16/18	Glass Jar, 4 oz.

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

SC-10R
P810048-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1842006*	*10/16/18*	*10/16/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1842006	10/16/18	10/16/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1842010	10/16/18	10/17/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1842010	10/16/18	10/17/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.3 %*		*50-150*	*1842006*	*10/16/18*	*10/16/18*	*EPA 8015D*	
Surrogate: n-Nonane		*120 %*		*50-200*	*1842010*	*10/16/18*	*10/17/18*	*EPA 8015D*	

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

SC-11R

P810048-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*50-150*		*1842006*	*10/16/18*	*10/16/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1842006	10/16/18	10/16/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1842010	10/16/18	10/17/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1842010	10/16/18	10/17/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.8 %*	*50-150*		*1842006*	*10/16/18*	*10/16/18*	*EPA 8015D*	
Surrogate: n-Nonane		*123 %*	*50-200*		*1842010*	*10/16/18*	*10/17/18*	*EPA 8015D*	

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

SC-12R
P810048-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1842006	10/16/18	10/16/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*		*50-150*	*1842006*	*10/16/18*	*10/16/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1842006	10/16/18	10/16/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1842010	10/16/18	10/17/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1842010	10/16/18	10/17/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.5 %*		*50-150*	*1842006*	*10/16/18*	*10/16/18*	*EPA 8015D*	
Surrogate: n-Nonane		*129 %*		*50-200*	*1842010*	*10/16/18*	*10/17/18*	*EPA 8015D*	

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1842006 - Purge and Trap EPA 5030A										
Blank (1842006-BLK1)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*8120*		*"*	*8000*		*101*	*50-150*			
LCS (1842006-BS1)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Benzene	6120	100	ug/kg	5000		122	70-130			
Toluene	6160	100	"	5000		123	70-130			
Ethylbenzene	6200	100	"	5000		124	70-130			
p,m-Xylene	12700	200	"	10000		127	70-130			
o-Xylene	6110	100	"	5000		122	70-130			
Total Xylenes	18800	100	"	15000		125	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8180*		*"*	*8000*		*102*	*50-150*			
Matrix Spike (1842006-MS1)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Benzene	4890	100	ug/kg	5000	ND	97.8	54.3-133			
Toluene	4920	100	"	5000	ND	98.4	61.4-130			
Ethylbenzene	4940	100	"	5000	ND	98.9	61.4-133			
p,m-Xylene	10100	200	"	10000	ND	101	63.3-131			
o-Xylene	4870	100	"	5000	ND	97.4	63.3-131			
Total Xylenes	15000	100	"	15000	ND	100	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8110*		*"*	*8000*		*101*	*50-150*			
Matrix Spike Dup (1842006-MSD1)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/17/18 1						
Benzene	4930	100	ug/kg	5000	ND	98.7	54.3-133	0.868	20	D1
Toluene	4950	100	"	5000	ND	99.0	61.4-130	0.605	20	D1
Ethylbenzene	4960	100	"	5000	ND	99.3	61.4-133	0.422	20	D1
p,m-Xylene	10200	200	"	10000	ND	102	63.3-131	0.237	20	D1
o-Xylene	4940	100	"	5000	ND	98.8	63.3-131	1.42	20	D1
Total Xylenes	15100	100	"	15000	ND	101	63.3-131	0.624	20	D1
Surrogate: 4-Bromochlorobenzene-PID	*8180*		*"*	*8000*		*102*	*50-150*			

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1842006 - Purge and Trap EPA 5030A										
Blank (1842006-BLK1)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.49*		*"*	*8.00*		*93.7*	*50-150*			
LCS (1842006-BS2)				Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	48.7	20.0	mg/kg	50.0		97.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.59*		*"*	*8.00*		*94.9*	*50-150*			
Matrix Spike (1842006-MS2)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	52.7	20.0	mg/kg	50.0	ND	105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.64*		*"*	*8.00*		*95.5*	*50-150*			
Matrix Spike Dup (1842006-MSD2)	**Source: P810029-01**			Prepared: 10/15/18 1 Analyzed: 10/16/18 1						
Gasoline Range Organics (C6-C10)	48.5	20.0	mg/kg	50.0	ND	97.1	70-130	8.19	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.73*		*"*	*8.00*		*96.6*	*50-150*			

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1842010 - DRO Extraction EPA 3570										
Blank (1842010-BLK1)				Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*58.9*		*"*	*50.0*		*118*	*50-200*			
LCS (1842010-BS1)				Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	448	25.0	mg/kg	500		89.6	38-132			
Surrogate: n-Nonane	*57.4*		*"*	*50.0*		*115*	*50-200*			
Matrix Spike (1842010-MS1)	**Source: P810046-01**			Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	461	25.0	mg/kg	500	ND	92.1	38-132			
Surrogate: n-Nonane	*60.4*		*"*	*50.0*		*121*	*50-200*			
Matrix Spike Dup (1842010-MSD1)	**Source: P810046-01**			Prepared: 10/16/18 0 Analyzed: 10/16/18 1						
Diesel Range Organics (C10-C28)	460	25.0	mg/kg	500	ND	92.0	38-132	0.0853	20	
Surrogate: n-Nonane	*60.1*		*"*	*50.0*		*120*	*50-200*			

Souder Miller & Associates	Project Name:	Blanco Storage Yard	
401 W. Broadway	Project Number:	97057-0352	**Reported:**
Farmington NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56

Notes and Definitions

D1	Duplicates or Matrix Spike Duplicates or Laboratory Control Sample Duplicates Relative Percent Difference is outside of control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page 1 of 1

Page 10 of 10

Client: SMA
Project: Blanco Storage Yard
Project Manager: Ashley Maxwell
Address: 401 W Broadway
City, State, Zip Farmington, NM 87401
Phone: 505-325-7535
Email: ashley.maxwell@soudermiller

Report Attention
Report due by: 10-17-18
Attention: Ashley Maxwell
Address:
City, State, Zip
Phone:
Email:

Lab Use Only		TAT		EPA Program		
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDW
P810048	97057-0352	X				

State			
NM	CO	UT	A
X			

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1						Remarks
9:03	10-16-18	Soil	1	SC-10R	1	X	X	X										
9:09			1	SC-11R	2	X	X	X										
9:11			1	SC-12R	3	X	X	X										

Additional Instructions: CC Tom Long
Invoice Enterprise

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: A. Maxwell AM

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date 10-16-18	Time 9:47	Received by: (Signature)	Date 10-16-18	Time 9:47
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: [✓ Y] / N
T1 T2 T3
AVG Temp °C 4.0

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ________

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboaotry is limited to the amount paid for on the report.

APPENDIX F

EXECUTED C-138 FORM

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

97057-0927

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Blanco Storage

3. Location of Material (Street Address, City, State or ULSTR):
NW ¼ NW ¼ Section 14 T 29 N R 11W, San Juan County, NM; 36.731541, -107.966013 Sep. 2018

4. Source and Description of Waste:
Source: Overtopping of a storage tank.
Description: Hydrocarbon/Condensate impacted soil/sludge/tank bottoms associated with cleaning a storage tank.
Estimated Volume _60__ yd³ [✓ bbls] Known Volume (to be entered by the operator at the end of the haul) 110/2105 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 9-4-18, representative for Enterprise Products Operating authorizes Envirotech, Inc to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Reilly Industrial, Stan Horn, OFT

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Environmental Manager DATE: 9/11/18
SIGNATURE:
Surface Waste Management Facility Authorized Agent
TELEPHONE NO.: 505-632-0615

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

97057-0927

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Blanco Storage Liquid Recovery

3. Location of Material (Street Address, City, State or ULSTR):
NW ¼ NW ¼ Section 14 T 29 N R 11W, San Juan County, NM; 36.731637, -107.966617 Oct. 2018

4. Source and Description of Waste:
Source: Leak transfer pump.
Description: Hydrocarbon/Condensate impacted soil/sludge from remediation activities associated with a leak a transfer pump.
Estimated Volume 50 [✓ yd³] bbls Known Volume (to be entered by the operator at the end of the haul) 33 [✓ yd³] bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 10-22-18, representative for Enterprise Products Operating authorizes Envirotech, Inc to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: OFT or subcontractors, Rosenbaum

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Environmental Manager DATE: 10/15/18
SIGNATURE: Surface Waste Management Facility Authorized Agent TELEPHONE NO.: 505-632-0615

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	

NMOCD
MAR 04 2019
DISTRICT III

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.431197** Longitude **-107.442322** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Canyon Largo #147 Drip Tank**	Site Type **Natural Gas Liquids Collection Tank**
Date Release Discovered: **2/8/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
D	**2**	**25N**	**6W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 3-5 BBLs**	Volume Recovered (bbls):
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On February 8, 2019, an Enterprise technician discovered a release of condensate on the Canyon Largo #147 Drip tank. An area of approximately 10 feet long by 10 feet wide was impacted by the released fluids. The release was a result of a cracked valve on the drip tank. The valve was repaired. Enterprise began remediation activities on February 13, 2019 and on February 14, 2019, Enterprise determined the release reportable per NMOCD regulation due to the volume of impacted subsurface soil. Enterprise has determined this release is required to be remediated to the second tier NMOCD remediation standard of 10 ppm Benzene, 50 ppm BTEX, GRO+DRO = 1, 000 ppm, 2,500 ppm TPH and 10,000 ppm Chloride. A third party closure report will be submitted with the "Final C-141."

②

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 2-27-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Date: 3/1/2019

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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A** NCS1907433625
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

NMOCD
MAR 1 1 2019
DISTRICT III

Location of Release Source

Latitude **36.670267** Longitude **-108.158470** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral 3C-2 Pipeline**	Site Type **Natural Gas Pipeline**
Date Release Discovered: **2/21/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
M	**7**	**28N**	**12W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 3-5 BBLs**	Volume Recovered (bbls):
☒ Natural Gas	Volume Released (Mcf): **Unknown**	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On February 21, 2019, an Enterprise technician discovered a release of natural gas and natural gas liquids on the Lateral 3C-2 pipeline. An area of approximately three feet in diameter was impacted by the released fluids. The pipeline was blown down, depressurized, locked out and tagged out. Enterprise recovered the released fluids as much as practicable and barricaded off the affected area. On February 28, 2019, Enterprise began the initial repairs and remediation and determined this release reportable per NMOCD regulation due the volume of impacted subsurface soil. Permanent repairs and remediation are in the scheduling process. A third party closure report will be submitted with the "Final C-141."

②

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 3-8-19

email: jefields@eprod.com Telephone: 713-381-6595

OCD Only

Received by: Date: 3/11/19

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	

NMOCD
MAR 11 2019
DISTRICT III

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	NVF1907733404

Location of Release Source

Latitude **36.590988** Longitude **-107.747339** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral C-11 Drip Tank**	Site Type **Natural Gas Condensate Tank**
Date Release Discovered: **2/24/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
E	**12**	**27N**	**9W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 10-20 BBLs**	Volume Recovered (bbls):
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On February 24, 2019, an Enterprise technician discovered a release of condensate on the Lateral C-11 Drip Tank. The release was a result of someone shooting holes in the tank. The condensate was released inside a lined secondary containment structure. The condensate tank was pumped down by utilizing a vacuum truck. The condensate released inside the secondary containment was also removed by vacuum truck. Enterprise will coordinated with NMOCD to inspect the liner after the liner has been properly cleaned. A third party inspection report will be submitted with the "Final C-141."

2

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 3-7-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Date: 3/11/2019

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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NVF1821453521**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.871913** Longitude **-107.729414** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Buena Vista Compressor Station**	Site Type **Natural Gas Metering Compressor Station**
Date Release Discovered: **5/15/2018**	Serial Number *(if applicable)*: **NM 093684**

Unit Letter	Section	Township	Range	County
B	**13**	**30N**	**9W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 5-7 BBLs**	Volume Recovered (bbls): **None**
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On May 15, 2018, an emergency shut down valve test was conducted at the Buena Vista Compressor Station. As a result fluids were ejected from the facility blow down vent. An estimated 5-7 barrels of condensate and water impacted an area of approximately 200 feet long by 150 feet wide. Enterprise determined this release was required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX and 100 ppm TPH). Several events were required to complete the remediation of this release. The initial remediation began on June 7, 2018. The remediation was completed after the November 28, 2018 event. Approximately 112 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

Verified Sampling ES 23,24
21,22 ~~[illegible]~~ Samples E7/E8 Removed

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Form C-141
Page 2

State of New Mexico
Oil Conservation Division

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: Jon E. Fields　　Title: Director, Field Environmental

Signature:　　Date: 3-8-19

email: jefields@eprod.com　　Telephone: 713-381-6684

OCD Only

Received by: Vanessa Fields　　Date: 3/15/2019

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: 3/18/2019

Printed Name: Vanessa Fields　　Title: Environmental Specialist

Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

March 8, 2019

7015 0640 0003 1834 8422
Return Receipt Requested

EMNRD Oil Conservation Division
Aztec District III Office
Attention: Vanessa Fields
1000 Rio Brazos Road
Aztec, New Mexico 87410

7015 0640 0003 1834 8415
Return Receipt Requested

BLM Farmington Field Office
Lands Team
Attention: Whitney Thomas
6251 College Blvd.
Farmington, New Mexico 87401

NMOCD
MAR 15 2019
DISTRICT III

RE: Release of Natural Gas and Condensate Closure Report
Enterprise Field Services, LLC – Buena Vista Compressor Station
San Juan County

Sir or Madam:

Enterprise Field Services, LLC is submitting the closure report on the Buena Vista Compressor Station release of condensate that occurred on May 15, 2018.

If you have questions or require additional information, please contact Thomas Long, Senior Field Environmental Scientist at (505) 599-2286 or Brian Stone, Field Environmental Manager at (970) 263-3020.

Thank you,

Jon E. Fields
Director, Field Environmental

Rodney M. Sartor
Senior Director, Environmental

/mbp
Attachments

P.O. BOX 4324
HOUSTON, TEXAS 77210-4324
713.381.6500

1100 LOUISIANA STREET
HOUSTON, TEXAS 77002-5227
www.enterpriseproducts.com

ENSOLUM

CLOSURE REPORT

Property:

Buena Vista Compressor Station Stack Release
NE ¼, S13 T30N R9W
San Juan County, New Mexico

February 28, 2019
Ensolum Project No. 05A1226030

Prepared for:

Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

NMOCD
MAR 15 2019
DISTRICT III

Prepared by:

Ranee Deechilly
Ranee Deechilly
Staff Scientist

Kyle Summers
Kyle Summers, CPG
Sr. Project Manager

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  1.1 SITE DESCRIPTION & BACKGROUND 1
  1.2 PROJECT OBJECTIVE 1

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Appendix F: **BLM Vegetation Monitoring-Photo Points**

CLOSURE REPORT

Buena Vista Compressor Station Stack Release
NE ¼, S13 T30N R9W
San Juan County, New Mexico

Ensolum Project No. 05A1226030

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Buena Vista Compressor Station (Site)
Location:	36.817905° North, 107.729466° West Northeast (NE) ¼ of Section 13, Township 30 North, Range 9 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

During May 2018, a release from the vent stack resulted in the ejection of accumulated liquids from the blow down vent stack during an emergency shutdown at the Buena Vista facility. On June 7, 2018, Enterprise initiated remediation activities to address petroleum hydrocarbon impact resulting from 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.

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.

- No water wells were identified within a half-mile of the Site on the OSE Water Rights Reporting System (WRRS) database. Two (2) cathodic-protection well records were found in the New Mexico EMNRD OCD imaging database within the approximate half-mile search radius. The closest cathodic-protection wells identified in the database (approximately 0.2 miles southeast of the Site) indicate depths to water of between 30 feet and 78 feet below grade surface (bgs) (Shaw #1R, Shaw #3, Shaw #250), at an elevation approximately 80 feet higher than the Site. Due to the proximity of the Site to Pump Canyon Wash, the depth to groundwater at the site is anticipated to be less than 50 feet bgs

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse. An ephemeral wash (considered a first-order tributary) is located approximately 269 feet west of the Site, and feeds into a "blue line" ephemeral wash (Pump Canyon Wash) which is located approximately 664 feet east of the Site.
- 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.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were 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.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

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

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

3.0 SOIL REMEDIATION ACTIVITIES

On June 7, 2018, Enterprise initiated remediation activities to address on-Site petroleum hydrocarbon impact that resulted from the release. During the earthwork activities, Halo Services Inc., provided heavy equipment and labor support, while Apex Companies, LLC (Apex) provided environmental consulting support.

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

The final remediated area inside the facility measured approximately 220 feet long by 120 feet wide at the maximum extents, with a maximum depth of approximately 0.25 feet bgs. The trench surrounding the vent stack measured approximately 13 feet long by 10 feet wide, with a maximum depth of approximately 1.5 feet bgs.

Overspray from the release affected approximately 0.2 acres southeast and north of the facility. On August 2, 2018, Enterprise applied a MicroBlaze® solution to the soil and vegetation affected by the overspray.

On November 11, 2018, Enterprise remediated a portion of the road adjacent to the facility that exhibited hydrocarbon impact above the applicable New Mexico EMNRD OCD closure criteria. The remediated portion of the road measured approximately 40 feet long by 25 feet wide, with a depth of approximately 0.50 feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of semi-consolidated silty sand and imported gravel.

A total of approximately 112 cubic yards (cy) of petroleum hydrocarbon affected soils and four (4) barrels (bbls) of hydro-excavation soil cuttings and water were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance forms are provided in **Appendix B**. The excavation was backfilled with imported fill and resurfaced with gravel to the original grade to provide a suitable driving surface.

Soil sample locations and the approximate remediated areas are presented in **Figure 3** in (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Based on information supplied by Enterprise, Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of 10 composite soil samples (CS-1 through CS-10) from the final excavation inside the facility for laboratory analysis. In addition, 20 composite soil samples (ES-1 through ES-20) were collected from the overspray area to assess the effectiveness of the MicroBlaze® application. Soils associated with composite soil samples ES-7 and ES-8 (road adjacent to Site) were removed by excavation and transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The affected portion of the road was resampled as composite soil samples ES-21 through ES-24, bringing the total number of samples collected at the Site to 34.

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 the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/#8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, 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 BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with the composite soil samples (CS-1 through CS-10, ES-1 through ES-6, and ES-9 through ES-24) to the New Mexico EMNRD OCD closure criteria. Soils associated with composite soil samples ES-7 and ES-8 were removed by excavation and transported to Envirotech landfarm for disposal/remediation and are not included in the following discussion.

- Laboratory analytical results indicate benzene concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate total BTEX concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- The laboratory analytical results for composite soil sample ES-6 collected from soil remaining in place indicate a combined TPH GRO/DRO/MRO concentration of 60 mg/kg that is below the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical results for composite soil samples CS-9, ES-3, ES-5, ES-15, and ES-21 through ES-24 collected from soils remaining in place indicate chloride concentrations ranging from 36 mg/kg (ES-15) to 170 mg/kg (ES-23); these concentrations are below the New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

7.0 RECLAMATION AND RE-VEGETATION

Enterprise backfilled the remediated portion of the excavated areas with imported fill and resurfaced it with gravel to provide a suitable driving surface. Enterprise received approval to apply MicroBlaze® solution to other areas potentially affected by the overspray. At the request of the BLM, Enterprise established photographic datum points at the Site to allow continued documentation of the potentially affected vegetation in the overspray area. The first two (2) sets of photographs (July and October 2018) are provided in **Appendix F**.

8.0 FINDINGS AND RECOMMENDATION

During May 2018, a release from the vent stack resulted in the ejection of accumulated liquids from the blow down vent stack during an emergency shutdown at the Buena Vista facility. On June 7, 2018, Enterprise initiated remediation activities to address petroleum hydrocarbon impact resulting from the release.

- 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.

- Prior to backfilling, 10 composite soil samples were collected from the final primary excavation for laboratory analyses. In addition, 20 composite soil samples were collected from the overspray area for laboratory analyses. Based on soil laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.

- A total of approximately 112 cubic yards of petroleum hydrocarbon affected soils and four (4) bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and resurfaced with gravel to provide a suitable driving surface.

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 Additional Limitations

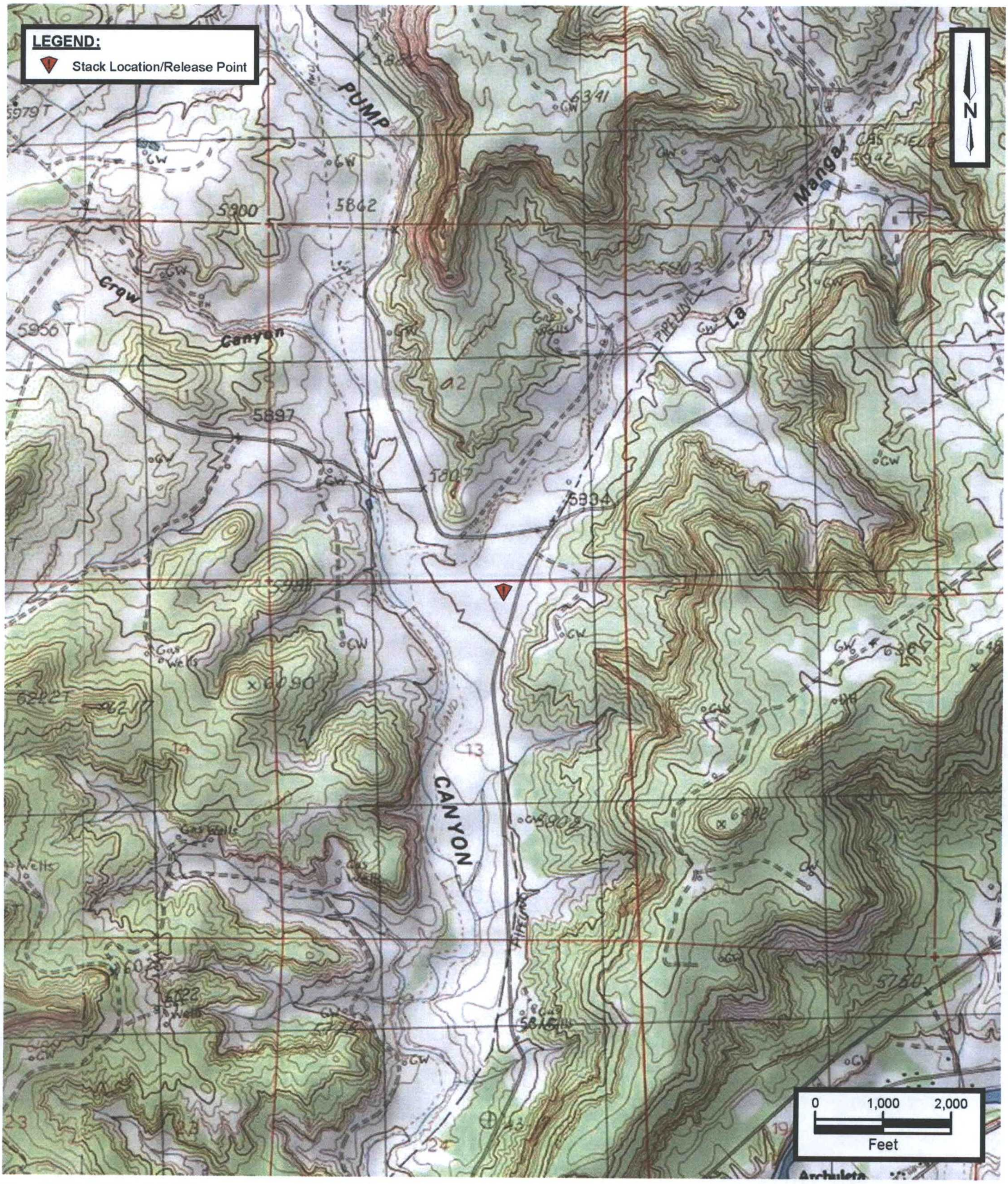
Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

9.3 Reliance

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

APPENDIX A

Figures



ENSOLUM
Environmental & Hydrogeologic Consultants

Topographic Map

ENTERPRISE FIELD SERVICES LLC
BUENA VISTA COMPRESSOR STATION STACK RELEASE
NW ¼, S13 T30N R9W, San Juan County, New Mexico
36.817905° N, 107.729466° W

PROJECT NUMBER: 05A1226030

FIGURE

1

ENSOLUM
Environmental & Hydrogeologic Consultants

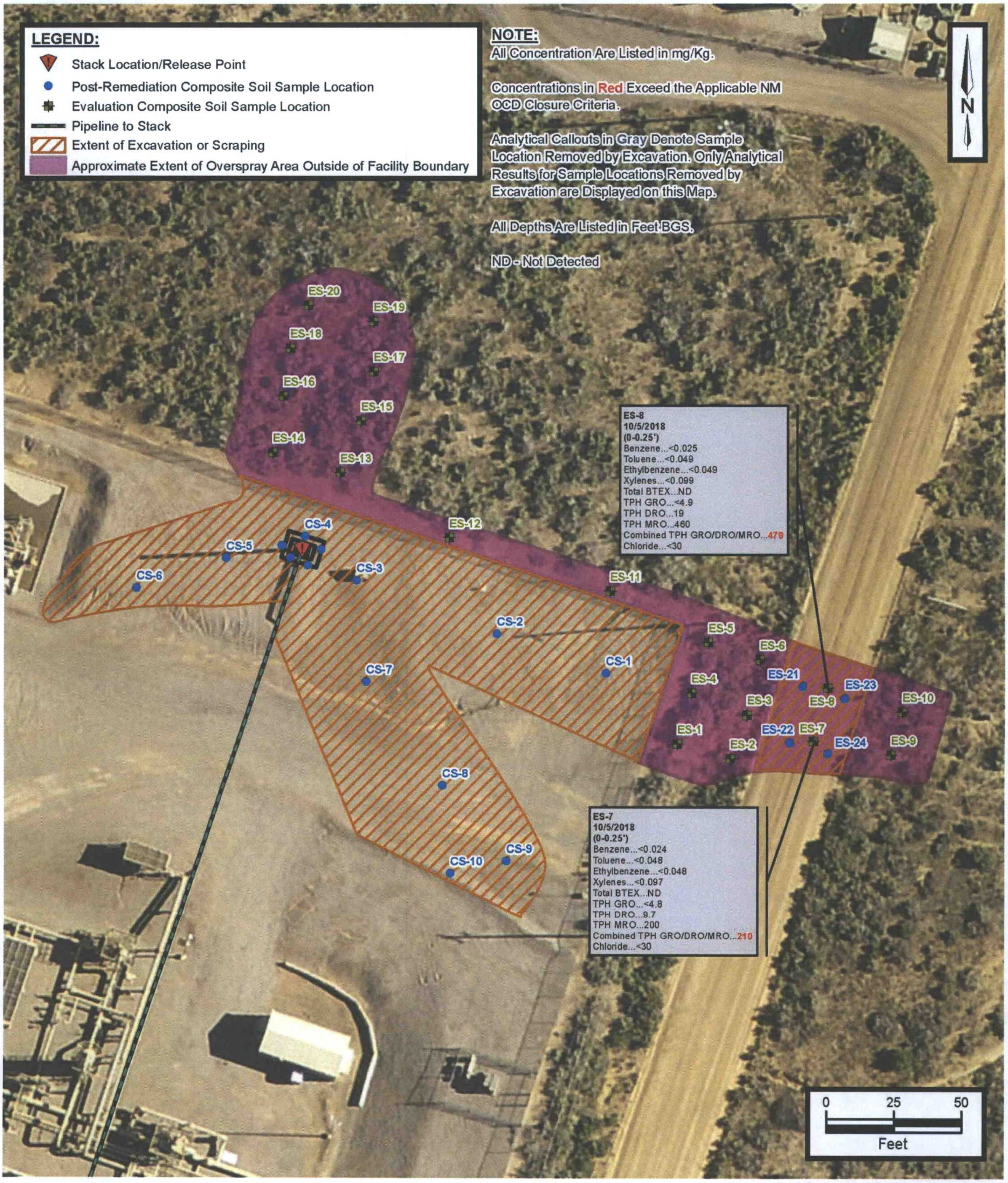
Site Vicinity Map

ENTERPRISE FIELD SERVICES LLC
BUENA VISTA COMPRESSOR STATION STACK RELEASE
NW ¼, S13 T30N R9W, San Juan County, New Mexico
36.817905° N, 107.729466° W

PROJECT NUMBER: 05A1226030

FIGURE

2



LEGEND:

- ▼ Stack Location/Release Point
- ● Post-Remediation Composite Soil Sample Location
- ✚ Evaluation Composite Soil Sample Location
- ━ Pipeline to Stack
- ▨ Extent of Excavation or Scraping
- 🟪 Approximate Extent of Overspray Area Outside of Facility Boundary

NOTE:

All Concentration Are Listed in mg/Kg.

Concentrations in Red Exceed the Applicable NM OCD Closure Criteria.

Analytical Callouts in Gray Denote Sample Location Removed by Excavation. Only Analytical Results for Sample Locations Removed by Excavation are Displayed on this Map.

All Depths Are Listed in Feet BGS.

ND - Not Detected

ES-8
10/5/2018
(0-0.25')
Benzene...<0.025
Toluene...<0.049
Ethylbenzene...<0.049
Xylenes...<0.099
Total BTEX...ND
TPH GRO...<4.9
TPH DRO...19
TPH MRO...460
Combined TPH GRO/DRO/MRO...479
Chloride...<30

ES-7
10/5/2018
(0-0.25')
Benzene...<0.024
Toluene...<0.048
Ethylbenzene...<0.048
Xylenes...<0.097
Total BTEX...ND
TPH GRO...<4.8
TPH DRO...9.7
TPH MRO...200
Combined TPH GRO/DRO/MRO...210
Chloride...<30

Site Map with Soil Analytical Results

ENSOLUM
Environmental & Hydrogeologic Consultants

ENTERPRISE FIELD SERVICES LLC
BUENA VISTA COMPRESSOR STATION STACK RELEASE
NW ¼, S13 T30N R9W, San Juan County, New Mexico
36.817905° N, 107.729466° W

PROJECT NUMBER: 05A1226030

FIGURE
3

APPENDIX B

Executed C-138 Solid Waste Acceptance Forms

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

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

97057-0925

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401

Invoice Information: PM:Matt Garrison
Non AFE: N36935
Pay Key: GG11580

2. Originating Site:
Buena Vista Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
Section 13 T30N R9W; 36.8173,-107.7298

June 2018

4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas compressor station.

Estimated Volume 50 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) 100 [✓ yd^3] / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME **COMPANY NAME**
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, Thomas Long 6-11-2018, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete the required
Generator Signature
testing/sign the Generator Waste Testing Certification.

I, ________, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Halo Services, DeHerrera

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Environmental Manager DATE: 6/12/18
SIGNATURE: ________ TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

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

97057-0960

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Non AFE: N36935
PM: Dwayne Dixon
PayKey: RB21200

2. Originating Site:
Buena Vista Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
Section 13 T30N R9W; 36.8173, -107.7298

Nov / Dec 2018

4. Source and Description of Waste:
Source: Leak transfer pump.
Description: Hydrocarbon/Condensate impacted soil/sludge from remediation activities associated with ESD Vent Release.
Estimated Volume 30 [✓ yd^3] / bbls Known Volume (to be entered by the operator at the end of the haul) 12/4 yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 11-27-18, representative for Enterprise Products Operating authorizes Envirotech, Inc to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Riley Industrial and West States Energy Contractors, HBL

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED (Must Be Maintained As Permanent Record)**

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 11/26/18
SIGNATURE:
Surface Waste Management Facility Authorized Agent
TELEPHONE NO.: 505-632-0615

APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Buena Vista Compressor Station Stack Release
Ensolum Project No. 05A1226030

ENSOLUM

Photograph 1 View of the release area, facing north-west.	
Photograph 2 View of the release area, facing southeast.	
Photograph 3 View of the release area, facing west.	

Photograph 4 View of the in-process excavation/scraping activities, facing northwest.	
Photograph 5 View of the in-process excavation/scraping activities, facing northeast.	
Photograph 6 View of the final excavated/scraped surface, facing southeast.	

Photograph 7

View of the final excavated/scraped surface, facing west.

Photograph 8

View of the final excavated/scraped surface, facing south.

Photograph 9

View of the final excavation, facing northwest.

Photograph 10 View of the final and backfilled excavated/scraped surface.	

APPENDIX D

Table 1 - Soil Analytical Summary

ENSOLUM

TABLE 1
Buena Vista Compressor Station Stack Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Combined TPH GRO/DRO/MRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Evaluation Composite Soil Samples Removed by Excavation													
ES-7	10.05.18	C	0 to 0.25	<0.024	<0.048	<0.048	<0.097	ND	<4.8	9.7	200	**210**	<30
ES-8	10.05.18	C	0 to 0.25	<0.025	<0.049	<0.049	<0.099	ND	<4.9	19	460	**479**	<30
Post-Remediation Composite Soil Samples													
CS-1	6.14.18	C	0.25	<0.017	<0.034	<0.034	<0.067	ND	<3.4	<9.7	<49	ND	<30
CS-2	6.14.18	C	0.25	<0.017	<0.034	<0.034	<0.069	ND	<3.4	<10	<50	ND	<30
CS-3	6.14.18	C	0.25	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<10	<50	ND	<30
CS-4	6.14.18	C	0.25 to 1.5	<0.017	<0.033	<0.033	<0.067	ND	<3.3	<9.8	<49	ND	<30
CS-5	6.14.18	C	0.25 to 0.5	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<9.5	<47	ND	<30
CS-6	6.14.18	C	0.25	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.4	<47	ND	<30
CS-7	6.14.18	C	0.25	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.6	<48	ND	<30
CS-8	6.14.18	C	0.25	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.3	<47	ND	<30
CS-9	6.14.18	C	0.25	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.3	<47	ND	42
CS-10	6.14.18	C	0.25	<0.017	<0.033	<0.033	<0.066	ND	<3.3	<9.6	<48	ND	<30
ES-21	11.28.18	C	0.50	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.9	<49	ND	85
ES-22	11.28.18	C	0.50	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.7	<49	ND	54
ES-23	11.28.18	C	0.50	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<9.9	<49	ND	170
ES-24	11.28.18	C	0.50	<0.024	<0.047	<0.047	<0.094	ND	<4.7	<9.7	<48	ND	120
Evaluation Composite Soil Samples													
ES-1	10.05.18	C	0 to 0.25	<0.023	<0.046	<0.046	<0.091	ND	<4.6	<9.9	<49	ND	<30
ES-2	10.05.18	C	0 to 0.25	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.9	<49	ND	<30
ES-3	10.05.18	C	0 to 0.25	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.8	<49	ND	37
ES-4	10.05.18	C	0 to 0.25	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<9.8	<49	ND	<30
ES-5	10.05.18	C	0 to 0.25	<0.023	<0.046	<0.046	<0.093	ND	<4.6	<9.8	<49	ND	41
ES-6	10.05.18	C	0 to 0.25	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.8	60	60	<30
ES-9	10.05.18	C	0 to 0.25	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<10	<50	ND	<30
ES-10	10.05.18	C	0 to 0.25	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<9.7	<48	ND	<30
ES-11	10.05.18	C	0 to 0.25	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.8	<49	ND	<30
ES-12	10.05.18	C	0 to 0.25	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.9	<50	ND	<30
ES-13	10.05.18	C	0 to 0.25	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.6	<48	ND	<30
ES-14	10.05.18	C	0 to 0.25	<0.023	<0.046	<0.046	<0.093	ND	<4.6	<9.6	<48	ND	<30
ES-15	10.05.18	C	0 to 0.25	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.8	<49	ND	36
ES-16	10.05.18	C	0 to 0.25	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.9	<49	ND	<30
ES-17	10.05.18	C	0 to 0.25	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.6	<48	ND	<30
ES-18	10.05.18	C	0 to 0.25	<0.023	<0.046	<0.046	<0.092	ND	<4.6	<9.5	<48	ND	<30
ES-19	10.05.18	C	0 to 0.25	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.7	<49	ND	<30
ES-20	10.05.18	C	0 to 0.25	<0.025	<0.049	<0.049	<0.099	ND	<4.9	<9.6	<48	ND	<30

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

Appendix E

Laboratory Data Sheets
& Chain of Custody Documentation

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

January 15, 2019

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Buena Vista Stack Release OrderNo.: 1806945

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/15/2018 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued June 19, 2018.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806945**
Date Reported: **1/15/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN		**Client Sample ID:**	CS-1
Project: Buena Vista Stack Release		**Collection Date:**	6/14/2018 9:00:00 AM
Lab ID: 1806945-001	**Matrix:** SOIL	**Received Date:**	6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 12:29:06 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	6/15/2018 10:16:34 AM	A52018
Surr: BFB	119	70-130		%Rec	1	6/15/2018 10:16:34 AM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/15/2018 10:30:59 AM	38699
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2018 10:30:59 AM	38699
Surr: DNOP	97.2	70-130		%Rec	1	6/15/2018 10:30:59 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.017		mg/Kg	1	6/15/2018 10:16:34 AM	B52018
Toluene	ND	0.034		mg/Kg	1	6/15/2018 10:16:34 AM	B52018
Ethylbenzene	ND	0.034		mg/Kg	1	6/15/2018 10:16:34 AM	B52018
Xylenes, Total	ND	0.067		mg/Kg	1	6/15/2018 10:16:34 AM	B52018
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	6/15/2018 10:16:34 AM	B52018
Surr: Toluene-d8	97.9	70-130		%Rec	1	6/15/2018 10:16:34 AM	B52018

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806945**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **1/15/2019**

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-002 **Matrix:** SOIL

Client Sample ID: CS-2
Collection Date: 6/14/2018 9:05:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	6/15/2018 12:41:30 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	6/15/2018 10:39:28 AM	A52018
Surr: BFB	116	70-130		%Rec	1	6/15/2018 10:39:28 AM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/15/2018 10:53:15 AM	38699
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2018 10:53:15 AM	38699
Surr: DNOP	103	70-130		%Rec	1	6/15/2018 10:53:15 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.017		mg/Kg	1	6/15/2018 10:39:28 AM	B52018
Toluene	ND	0.034		mg/Kg	1	6/15/2018 10:39:28 AM	B52018
Ethylbenzene	ND	0.034		mg/Kg	1	6/15/2018 10:39:28 AM	B52018
Xylenes, Total	ND	0.069		mg/Kg	1	6/15/2018 10:39:28 AM	B52018
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	6/15/2018 10:39:28 AM	B52018
Surr: Toluene-d8	99.8	70-130		%Rec	1	6/15/2018 10:39:28 AM	B52018

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-003 **Matrix:** SOIL

Client Sample ID: CS-3
Collection Date: 6/14/2018 9:10:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 12:53:54 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	6/15/2018 11:02:30 AM	A52018
Surr: BFB	117	70-130		%Rec	1	6/15/2018 11:02:30 AM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/15/2018 11:15:15 AM	38699
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2018 11:15:15 AM	38699
Surr: DNOP	99.0	70-130		%Rec	1	6/15/2018 11:15:15 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.017		mg/Kg	1	6/15/2018 11:02:30 AM	B52018
Toluene	ND	0.034		mg/Kg	1	6/15/2018 11:02:30 AM	B52018
Ethylbenzene	ND	0.034		mg/Kg	1	6/15/2018 11:02:30 AM	B52018
Xylenes, Total	ND	0.068		mg/Kg	1	6/15/2018 11:02:30 AM	B52018
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	6/15/2018 11:02:30 AM	B52018
Surr: Toluene-d8	96.9	70-130		%Rec	1	6/15/2018 11:02:30 AM	B52018

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **1/15/2019**

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-004
Matrix: SOIL

Client Sample ID: CS-4
Collection Date: 6/14/2018 9:15:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 1:31:09 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	6/15/2018 11:25:32 AM	A52018
Surr: BFB	115	70-130		%Rec	1	6/15/2018 11:25:32 AM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/15/2018 11:37:21 AM	38699
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2018 11:37:21 AM	38699
Surr: DNOP	99.5	70-130		%Rec	1	6/15/2018 11:37:21 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.017		mg/Kg	1	6/15/2018 11:25:32 AM	B52018
Toluene	ND	0.033		mg/Kg	1	6/15/2018 11:25:32 AM	B52018
Ethylbenzene	ND	0.033		mg/Kg	1	6/15/2018 11:25:32 AM	B52018
Xylenes, Total	ND	0.067		mg/Kg	1	6/15/2018 11:25:32 AM	B52018
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	6/15/2018 11:25:32 AM	B52018
Surr: Toluene-d8	98.0	70-130		%Rec	1	6/15/2018 11:25:32 AM	B52018

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

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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-005 **Matrix:** SOIL

Client Sample ID: CS-5
Collection Date: 6/14/2018 9:20:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 1:43:33 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	6/15/2018 11:48:36 AM	A52018
Surr: BFB	117	70-130		%Rec	1	6/15/2018 11:48:36 AM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/15/2018 11:59:22 AM	38699
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/15/2018 11:59:22 AM	38699
Surr: DNOP	90.2	70-130		%Rec	1	6/15/2018 11:59:22 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.017		mg/Kg	1	6/15/2018 11:48:36 AM	B52018
Toluene	ND	0.034		mg/Kg	1	6/15/2018 11:48:36 AM	B52018
Ethylbenzene	ND	0.034		mg/Kg	1	6/15/2018 11:48:36 AM	B52018
Xylenes, Total	ND	0.068		mg/Kg	1	6/15/2018 11:48:36 AM	B52018
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	6/15/2018 11:48:36 AM	B52018
Surr: Toluene-d8	99.7	70-130		%Rec	1	6/15/2018 11:48:36 AM	B52018

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT:	APEX TITAN	**Client Sample ID:**	CS-6
Project:	Buena Vista Stack Release	**Collection Date:**	6/14/2018 9:25:00 AM
Lab ID:	1806945-006 **Matrix:** SOIL	**Received Date:**	6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 1:55:58 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/15/2018 12:11:38 PM	A52018
Surr: BFB	120	70-130		%Rec	1	6/15/2018 12:11:38 PM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/15/2018 12:21:27 PM	38699
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/15/2018 12:21:27 PM	38699
Surr: DNOP	97.2	70-130		%Rec	1	6/15/2018 12:21:27 PM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.018		mg/Kg	1	6/15/2018 12:11:38 PM	B52018
Toluene	ND	0.036		mg/Kg	1	6/15/2018 12:11:38 PM	B52018
Ethylbenzene	ND	0.036		mg/Kg	1	6/15/2018 12:11:38 PM	B52018
Xylenes, Total	ND	0.071		mg/Kg	1	6/15/2018 12:11:38 PM	B52018
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	6/15/2018 12:11:38 PM	B52018
Surr: Toluene-d8	99.1	70-130		%Rec	1	6/15/2018 12:11:38 PM	B52018

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **1/15/2019**

CLIENT:	APEX TITAN	**Client Sample ID:**	CS-7
Project:	Buena Vista Stack Release	**Collection Date:**	6/14/2018 9:30:00 AM
Lab ID:	1806945-007 **Matrix:** SOIL	**Received Date:**	6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	6/15/2018 2:08:23 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/15/2018 12:34:40 PM	A52018
Surr: BFB	118	70-130		%Rec	1	6/15/2018 12:34:40 PM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/15/2018 12:13:33 PM	38699
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/15/2018 12:13:33 PM	38699
Surr: DNOP	104	70-130		%Rec	1	6/15/2018 12:13:33 PM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.018		mg/Kg	1	6/15/2018 12:34:40 PM	B52018
Toluene	ND	0.036		mg/Kg	1	6/15/2018 12:34:40 PM	B52018
Ethylbenzene	ND	0.036		mg/Kg	1	6/15/2018 12:34:40 PM	B52018
Xylenes, Total	ND	0.071		mg/Kg	1	6/15/2018 12:34:40 PM	B52018
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	6/15/2018 12:34:40 PM	B52018
Surr: Toluene-d8	99.5	70-130		%Rec	1	6/15/2018 12:34:40 PM	B52018

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-008 **Matrix:** SOIL

Client Sample ID: CS-8
Collection Date: 6/14/2018 9:40:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 2:20:47 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/15/2018 12:57:53 PM	A52018
Surr: BFB	115	70-130		%Rec	1	6/15/2018 12:57:53 PM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/15/2018 11:49:24 AM	38699
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/15/2018 11:49:24 AM	38699
Surr: DNOP	98.0	70-130		%Rec	1	6/15/2018 11:49:24 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.018		mg/Kg	1	6/15/2018 12:57:53 PM	B52018
Toluene	ND	0.036		mg/Kg	1	6/15/2018 12:57:53 PM	B52018
Ethylbenzene	ND	0.036		mg/Kg	1	6/15/2018 12:57:53 PM	B52018
Xylenes, Total	ND	0.071		mg/Kg	1	6/15/2018 12:57:53 PM	B52018
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	6/15/2018 12:57:53 PM	B52018
Surr: Toluene-d8	99.2	70-130		%Rec	1	6/15/2018 12:57:53 PM	B52018

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-009
Matrix: SOIL

Client Sample ID: CS-9
Collection Date: 6/14/2018 9:45:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	42	30		mg/Kg	20	6/15/2018 2:33:11 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/15/2018 1:21:04 PM	A52018
Surr: BFB	120	70-130		%Rec	1	6/15/2018 1:21:04 PM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/15/2018 11:25:09 AM	38699
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/15/2018 11:25:09 AM	38699
Surr: DNOP	104	70-130		%Rec	1	6/15/2018 11:25:09 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.018		mg/Kg	1	6/15/2018 1:21:04 PM	B52018
Toluene	ND	0.036		mg/Kg	1	6/15/2018 1:21:04 PM	B52018
Ethylbenzene	ND	0.036		mg/Kg	1	6/15/2018 1:21:04 PM	B52018
Xylenes, Total	ND	0.071		mg/Kg	1	6/15/2018 1:21:04 PM	B52018
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	6/15/2018 1:21:04 PM	B52018
Surr: Toluene-d8	98.8	70-130		%Rec	1	6/15/2018 1:21:04 PM	B52018

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1806945**
Date Reported: **1/15/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1806945-010 **Matrix:** SOIL

Client Sample ID: CS-10
Collection Date: 6/14/2018 9:50:00 AM
Received Date: 6/15/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	6/15/2018 2:45:36 PM	38707
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	6/15/2018 1:44:13 PM	A52018
Surr: BFB	117	70-130		%Rec	1	6/15/2018 1:44:13 PM	A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/15/2018 11:00:53 AM	38699
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/15/2018 11:00:53 AM	38699
Surr: DNOP	99.5	70-130		%Rec	1	6/15/2018 11:00:53 AM	38699
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.017		mg/Kg	1	6/15/2018 1:44:13 PM	B52018
Toluene	ND	0.033		mg/Kg	1	6/15/2018 1:44:13 PM	B52018
Ethylbenzene	ND	0.033		mg/Kg	1	6/15/2018 1:44:13 PM	B52018
Xylenes, Total	ND	0.066		mg/Kg	1	6/15/2018 1:44:13 PM	B52018
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	6/15/2018 1:44:13 PM	B52018
Surr: Toluene-d8	97.9	70-130		%Rec	1	6/15/2018 1:44:13 PM	B52018

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806945**

15-Jan-19

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **MB-38707** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **38707** RunNo: **52011**

Prep Date: **6/15/2018** Analysis Date: **6/15/2018** SeqNo: **1702038** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-38707** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **38707** RunNo: **52011**

Prep Date: **6/15/2018** Analysis Date: **6/15/2018** SeqNo: **1702039** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806945**

15-Jan-19

Client: APEX TITAN
Project: Buena Vista Stack Release

Sample ID **LCS-38699**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**	
Client ID: **LCSS**	Batch ID: **38699**	RunNo: **52005**	
Prep Date: **6/15/2018**	Analysis Date: **6/15/2018**	SeqNo: **1701133**	Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.7	70	130			
Surr: DNOP	4.7		5.000		94.2	70	130			

Sample ID **MB-38699**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**	
Client ID: **PBS**	Batch ID: **38699**	RunNo: **52005**	
Prep Date: **6/15/2018**	Analysis Date: **6/15/2018**	SeqNo: **1701134**	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	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806945**
15-Jan-19

Client: APEX TITAN
Project: Buena Vista Stack Release

Sample ID **100ng btex lcs** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **B52018** RunNo: **52018**
Prep Date: Analysis Date: **6/15/2018** SeqNo: **1701306** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.99	0.050	1.000	0	98.8	80	120			
Benzene	1.1	0.025	1.000	0	112	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.8	70	130			
Surr: Toluene-d8	0.52		0.5000		104	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **B52018** RunNo: **52018**
Prep Date: Analysis Date: **6/15/2018** SeqNo: **1701318** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.57		0.5000		114	70	130			
Surr: Toluene-d8	0.52		0.5000		104	70	130			

Sample ID **1806945-002ams** SampType: **MS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **CS-2** Batch ID: **B52018** RunNo: **52018**
Prep Date: Analysis Date: **6/15/2018** SeqNo: **1701833** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.65	0.034	0.6878	0	94.1	80	120			
Benzene	0.67	0.017	0.6878	0	98.0	80	120			
Toluene	0.64	0.034	0.6878	0.004450	92.5	80	120			
Ethylbenzene	0.67	0.034	0.6878	0	96.8	82	121			
Xylenes, Total	2.0	0.069	2.063	0.01777	94.6	80.2	120			
Surr: 4-Bromofluorobenzene	0.37		0.3439		107	70	130			
Surr: Toluene-d8	0.34		0.3439		97.9	70	130			

Sample ID **1806945-002amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **CS-2** Batch ID: **B52018** RunNo: **52018**
Prep Date: Analysis Date: **6/15/2018** SeqNo: **1701834** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.67	0.034	0.6878	0	97.5	80	120	3.60	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806945**

15-Jan-19

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID	**1806945-002amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260B: Volatiles Short List**		
Client ID:	**CS-2**	Batch ID:	**B52018**	RunNo:	**52018**		
Prep Date:		Analysis Date:	**6/15/2018**	SeqNo:	**1701834**	Units:	**mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.017	0.6878	0	97.0	80	120	0.985	20	
Toluene	0.64	0.034	0.6878	0.004450	91.8	80	120	0.740	20	
Ethylbenzene	0.67	0.034	0.6878	0	96.9	82	121	0.124	20	
Xylenes, Total	2.0	0.069	2.063	0.01777	95.0	80.2	120	0.343	20	
Surr: 4-Bromofluorobenzene	0.37		0.3439		107	70	130	0	0	
Surr: Toluene-d8	0.35		0.3439		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806945**

15-Jan-19

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A52018**	RunNo: **52018**
Prep Date:	Analysis Date: **6/15/2018**	SeqNo: **1701303** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	70	130			
Surr: BFB	500		500.0		99.1	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **A52018**	RunNo: **52018**
Prep Date:	Analysis Date: **6/15/2018**	SeqNo: **1701304** 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	550		500.0		109	70	130			

Sample ID **1806945-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **CS-1**	Batch ID: **A52018**	RunNo: **52018**
Prep Date:	Analysis Date: **6/15/2018**	SeqNo: **1701823** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.4	16.81	0.7465	90.2	64.7	142			
Surr: BFB	360		336.2		106	70	130			

Sample ID **1806945-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **CS-1**	Batch ID: **A52018**	RunNo: **52018**
Prep Date:	Analysis Date: **6/15/2018**	SeqNo: **1701824** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.4	16.81	0.7465	89.4	64.7	142	0.806	20	
Surr: BFB	360		336.2		107	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC   Work Order Number: 1806945   RcptNo: 1

Received By: Anne Thorne   6/15/2018 8:20:00 AM

Completed By: Anne Thorne   6/15/2018 9:11:10 AM

Reviewed By: MY   06/15/18

Labeled by: AT 06/15/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
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? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: ____________
(<2 or >12 unless noted)
Adjusted? ____________
Checked by: ____________

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:

CUSTODY SEALS INTACT ON SOIL JARS/at 6/15/18

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

APEX

CHAIN OF CUSTODY RECORD

Office Location
606 S Rio Grande Suite A
Aztec, NM 87410
Project Manager: K Summers

Laboratory: Hall Environmental Analysis Laboratory
Address: 4901 Hawkins NE
Albuquerque, NM 87109
Contact: A Freeman
Phone: 505-345-3975
PO/SO #: see notes

ANALYSIS REQUESTED

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.8

1	2	3	4	5

Page 1 of 1

Sampler's Name: Ranee Deechilly
Sampler's Signature:

Proj. No.: 725040112453
Project Name: Buena Vista Stack Release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chlorides							Lab Sample ID (Lab Use Only)
S	6/14/18	900	X		CS-1						1		X	X	X							1806945-001
S	6/14/18	905	X		CS-2						1		X	X	X							-002
S	6/14/18	910	X		CS-3						1		X	X	X							-003
S	6/14/18	915	X		CS-4						1		X	X	X							-004
S	6/14/18	920	X		CS-5						1		X	X	X							-005
S	6/14/18	925	X		CS-6						1		X	X	X							-006
S	6/14/18	930	X		CS-7						1		X	X	X							-007
S	6/14/18	940	X		CS-8						1		X	X	X							-008
S	6/14/18	945	X		CS-9						1		X	X	X							-009
S	6/14/18	950	X		CS-10						1		X	X	X							-010

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6/14/18	1426	Christa Waite	6/14/18	1426
Christa Waite	6/14/18	1815		6/15/18	0820

NOTES:
PM - Tom Long
Pay Key - GG711580
Non AFE - N36935

SAME DAY

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

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

October 18, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Buena Vista Stack Release

OrderNo.: 1810422

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 20 sample(s) on 10/6/2018 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,

Andy

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1810422**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **10/18/2018**

CLIENT:	APEX TITAN			**Client Sample ID:**	ES-1
Project:	Buena Vista Stack Release			**Collection Date:**	10/5/2018 11:45:00 AM
Lab ID:	1810422-001	**Matrix:**	SOIL	**Received Date:**	10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/16/2018 1:09:16 AM	40987
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/11/2018 11:07:36 PM	40934
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/11/2018 11:07:36 PM	40934
Surr: DNOP	138	50.6-138		%Rec	1	10/11/2018 11:07:36 PM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/10/2018 8:45:52 PM	40866
Surr: BFB	90.0	15-316		%Rec	1	10/10/2018 8:45:52 PM	40866
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.023		mg/Kg	1	10/10/2018 8:45:52 PM	40866
Toluene	ND	0.046		mg/Kg	1	10/10/2018 8:45:52 PM	40866
Ethylbenzene	ND	0.046		mg/Kg	1	10/10/2018 8:45:52 PM	40866
Xylenes, Total	ND	0.091		mg/Kg	1	10/10/2018 8:45:52 PM	40866
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	10/10/2018 8:45:52 PM	40866

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-002
Matrix: SOIL

Client Sample ID: ES-2
Collection Date: 10/5/2018 11:50:00 AM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/16/2018 1:21:40 AM	40987
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/11/2018 11:31:54 PM	40934
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/11/2018 11:31:54 PM	40934
Surr: DNOP	129	50.6-138		%Rec	1	10/11/2018 11:31:54 PM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/10/2018 9:09:12 PM	40866
Surr: BFB	86.3	15-316		%Rec	1	10/10/2018 9:09:12 PM	40866
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.024		mg/Kg	1	10/10/2018 9:09:12 PM	40866
Toluene	ND	0.048		mg/Kg	1	10/10/2018 9:09:12 PM	40866
Ethylbenzene	ND	0.048		mg/Kg	1	10/10/2018 9:09:12 PM	40866
Xylenes, Total	ND	0.096		mg/Kg	1	10/10/2018 9:09:12 PM	40866
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	10/10/2018 9:09:12 PM	40866

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-003 **Matrix:** SOIL

Client Sample ID: ES-3
Collection Date: 10/5/2018 11:55:00 AM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	37	30		mg/Kg	20	10/15/2018 2:23:49 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/11/2018 11:56:13 PM	40934
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/11/2018 11:56:13 PM	40934
Surr: DNOP	121	50.6-138		%Rec	1	10/11/2018 11:56:13 PM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/10/2018 9:32:31 PM	40866
Surr: BFB	90.4	15-316		%Rec	1	10/10/2018 9:32:31 PM	40866
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.024		mg/Kg	1	10/10/2018 9:32:31 PM	40866
Toluene	ND	0.049		mg/Kg	1	10/10/2018 9:32:31 PM	40866
Ethylbenzene	ND	0.049		mg/Kg	1	10/10/2018 9:32:31 PM	40866
Xylenes, Total	ND	0.097		mg/Kg	1	10/10/2018 9:32:31 PM	40866
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	10/10/2018 9:32:31 PM	40866

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT:	APEX TITAN	**Client Sample ID:**	ES-4
Project:	Buena Vista Stack Release	**Collection Date:**	10/5/2018 12:00:00 PM
Lab ID:	1810422-004 **Matrix:** SOIL	**Received Date:**	10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	10/15/2018 3:01:02 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/12/2018 12:20:42 AM	40934
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 12:20:42 AM	40934
Surr: DNOP	123	50.6-138		%Rec	1	10/12/2018 12:20:42 AM	40934
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/10/2018 9:55:53 PM	40866
Surr: BFB	89.3	15-316		%Rec	1	10/10/2018 9:55:53 PM	40866
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/10/2018 9:55:53 PM	40866
Toluene	ND	0.047		mg/Kg	1	10/10/2018 9:55:53 PM	40866
Ethylbenzene	ND	0.047		mg/Kg	1	10/10/2018 9:55:53 PM	40866
Xylenes, Total	ND	0.095		mg/Kg	1	10/10/2018 9:55:53 PM	40866
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	10/10/2018 9:55:53 PM	40866

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN		**Client Sample ID:**	ES-5
Project: Buena Vista Stack Release		**Collection Date:**	10/5/2018 12:05:00 PM
Lab ID: 1810422-005	**Matrix:** SOIL	**Received Date:**	10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	41	30		mg/Kg	20	10/15/2018 3:13:26 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/12/2018 1:09:20 AM	40934
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 1:09:20 AM	40934
Surr: DNOP	106	50.6-138		%Rec	1	10/12/2018 1:09:20 AM	40934
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/10/2018 10:19:13 PM	40866
Surr: BFB	91.0	15-316		%Rec	1	10/10/2018 10:19:13 PM	40866
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	10/10/2018 10:19:13 PM	40866
Toluene	ND	0.046		mg/Kg	1	10/10/2018 10:19:13 PM	40866
Ethylbenzene	ND	0.046		mg/Kg	1	10/10/2018 10:19:13 PM	40866
Xylenes, Total	ND	0.093		mg/Kg	1	10/10/2018 10:19:13 PM	40866
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	10/10/2018 10:19:13 PM	40866

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1810422**
Date Reported: **10/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-006
Matrix: SOIL
Client Sample ID: ES-6
Collection Date: 10/5/2018 12:10:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	10/15/2018 3:25:51 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/12/2018 1:33:35 AM	40934
Motor Oil Range Organics (MRO)	60	49		mg/Kg	1	10/12/2018 1:33:35 AM	40934
Surr: DNOP	121	50.6-138		%Rec	1	10/12/2018 1:33:35 AM	40934
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/10/2018 10:42:31 PM	40909
Surr: BFB	91.8	15-316		%Rec	1	10/10/2018 10:42:31 PM	40909
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/10/2018 10:42:31 PM	40909
Toluene	ND	0.048		mg/Kg	1	10/10/2018 10:42:31 PM	40909
Ethylbenzene	ND	0.048		mg/Kg	1	10/10/2018 10:42:31 PM	40909
Xylenes, Total	ND	0.096		mg/Kg	1	10/10/2018 10:42:31 PM	40909
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	10/10/2018 10:42:31 PM	40909

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1810422**
Date Reported: **10/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-007
Matrix: SOIL

Client Sample ID: ES-7
Collection Date: 10/5/2018 12:15:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	10/15/2018 3:38:16 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	9.7	9.6		mg/Kg	1	10/12/2018 1:58:00 AM	40934
Motor Oil Range Organics (MRO)	200	48		mg/Kg	1	10/12/2018 1:58:00 AM	40934
Surr: DNOP	112	50.6-138		%Rec	1	10/12/2018 1:58:00 AM	40934
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/10/2018 11:05:47 PM	40909
Surr: BFB	90.2	15-316		%Rec	1	10/10/2018 11:05:47 PM	40909
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/10/2018 11:05:47 PM	40909
Toluene	ND	0.048		mg/Kg	1	10/10/2018 11:05:47 PM	40909
Ethylbenzene	ND	0.048		mg/Kg	1	10/10/2018 11:05:47 PM	40909
Xylenes, Total	ND	0.097		mg/Kg	1	10/10/2018 11:05:47 PM	40909
Surr: 4-Bromofluorobenzene	97.7	80-120		%Rec	1	10/10/2018 11:05:47 PM	40909

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-008
Matrix: SOIL
Client Sample ID: ES-8
Collection Date: 10/5/2018 12:20:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/15/2018 3:50:40 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	19	9.8		mg/Kg	1	10/12/2018 1:41:29 PM	40934
Motor Oil Range Organics (MRO)	460	49		mg/Kg	1	10/12/2018 1:41:29 PM	40934
Surr: DNOP	109	50.6-138		%Rec	1	10/12/2018 1:41:29 PM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/10/2018 11:29:08 PM	40909
Surr: BFB	91.2	15-316		%Rec	1	10/10/2018 11:29:08 PM	40909
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	10/10/2018 11:29:08 PM	40909
Toluene	ND	0.049		mg/Kg	1	10/10/2018 11:29:08 PM	40909
Ethylbenzene	ND	0.049		mg/Kg	1	10/10/2018 11:29:08 PM	40909
Xylenes, Total	ND	0.099		mg/Kg	1	10/10/2018 11:29:08 PM	40909
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	10/10/2018 11:29:08 PM	40909

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-009
Matrix: SOIL
Client Sample ID: ES-9
Collection Date: 10/5/2018 12:25:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/15/2018 4:03:05 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/12/2018 2:46:43 AM	40934
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/12/2018 2:46:43 AM	40934
Surr: DNOP	117	50.6-138		%Rec	1	10/12/2018 2:46:43 AM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/10/2018 11:52:26 PM	40909
Surr: BFB	89.3	15-316		%Rec	1	10/10/2018 11:52:26 PM	40909
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	10/10/2018 11:52:26 PM	40909
Toluene	ND	0.048		mg/Kg	1	10/10/2018 11:52:26 PM	40909
Ethylbenzene	ND	0.048		mg/Kg	1	10/10/2018 11:52:26 PM	40909
Xylenes, Total	ND	0.096		mg/Kg	1	10/10/2018 11:52:26 PM	40909
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	10/10/2018 11:52:26 PM	40909

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1810422**
Date Reported: **10/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	**Client Sample ID:**	ES-10
Project:	Buena Vista Stack Release	**Collection Date:**	10/5/2018 12:30:00 PM
Lab ID:	1810422-010 **Matrix:** SOIL	**Received Date:**	10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	10/15/2018 4:15:30 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/12/2018 3:10:56 AM	40934
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 3:10:56 AM	40934
Surr: DNOP	133	50.6-138		%Rec	1	10/12/2018 3:10:56 AM	40934
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2018 12:15:48 AM	40909
Surr: BFB	88.8	15-316		%Rec	1	10/11/2018 12:15:48 AM	40909
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/11/2018 12:15:48 AM	40909
Toluene	ND	0.047		mg/Kg	1	10/11/2018 12:15:48 AM	40909
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2018 12:15:48 AM	40909
Xylenes, Total	ND	0.095		mg/Kg	1	10/11/2018 12:15:48 AM	40909
Surr: 4-Bromofluorobenzene	97.4	80-120		%Rec	1	10/11/2018 12:15:48 AM	40909

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-011 **Matrix:** SOIL

Client Sample ID: ES-11
Collection Date: 10/5/2018 12:35:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/15/2018 4:52:43 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/12/2018 3:35:23 AM	40934
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 3:35:23 AM	40934
Surr: DNOP	140	50.6-138	S	%Rec	1	10/12/2018 3:35:23 AM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2018 1:26:30 AM	40909
Surr: BFB	89.4	15-316		%Rec	1	10/11/2018 1:26:30 AM	40909
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.023		mg/Kg	1	10/11/2018 1:26:30 AM	40909
Toluene	ND	0.047		mg/Kg	1	10/11/2018 1:26:30 AM	40909
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2018 1:26:30 AM	40909
Xylenes, Total	ND	0.093		mg/Kg	1	10/11/2018 1:26:30 AM	40909
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	10/11/2018 1:26:30 AM	40909

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-012
Matrix: SOIL

Client Sample ID: ES-12
Collection Date: 10/5/2018 12:40:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/15/2018 5:05:07 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/12/2018 3:59:35 AM	40934
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/12/2018 3:59:35 AM	40934
Surr: DNOP	115	50.6-138		%Rec	1	10/12/2018 3:59:35 AM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2018 1:50:06 AM	40909
Surr: BFB	89.6	15-316		%Rec	1	10/11/2018 1:50:06 AM	40909
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	10/11/2018 1:50:06 AM	40909
Toluene	ND	0.049		mg/Kg	1	10/11/2018 1:50:06 AM	40909
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2018 1:50:06 AM	40909
Xylenes, Total	ND	0.098		mg/Kg	1	10/11/2018 1:50:06 AM	40909
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	10/11/2018 1:50:06 AM	40909

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-013
Matrix: SOIL
Client Sample ID: ES-13
Collection Date: 10/5/2018 12:45:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/15/2018 5:17:32 PM	41001
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/12/2018 4:23:56 AM	40934
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 4:23:56 AM	40934
Surr: DNOP	115	50.6-138		%Rec	1	10/12/2018 4:23:56 AM	40934
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/11/2018 2:13:41 AM	40909
Surr: BFB	88.6	15-316		%Rec	1	10/11/2018 2:13:41 AM	40909
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.025		mg/Kg	1	10/11/2018 2:13:41 AM	40909
Toluene	ND	0.050		mg/Kg	1	10/11/2018 2:13:41 AM	40909
Ethylbenzene	ND	0.050		mg/Kg	1	10/11/2018 2:13:41 AM	40909
Xylenes, Total	ND	0.099		mg/Kg	1	10/11/2018 2:13:41 AM	40909
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	10/11/2018 2:13:41 AM	40909

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-014
Matrix: SOIL

Client Sample ID: ES-14
Collection Date: 10/5/2018 12:50:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	10/17/2018 2:36:36 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/15/2018 1:34:21 PM	40958
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/15/2018 1:34:21 PM	40958
Surr: DNOP	97.5	50.6-138		%Rec	1	10/15/2018 1:34:21 PM	40958
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/11/2018 4:44:26 PM	40915
Surr: BFB	89.0	15-316		%Rec	1	10/11/2018 4:44:26 PM	40915
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	10/11/2018 4:44:26 PM	40915
Toluene	ND	0.046		mg/Kg	1	10/11/2018 4:44:26 PM	40915
Ethylbenzene	ND	0.046		mg/Kg	1	10/11/2018 4:44:26 PM	40915
Xylenes, Total	ND	0.093		mg/Kg	1	10/11/2018 4:44:26 PM	40915
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	10/11/2018 4:44:26 PM	40915

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1810422**
Date Reported: **10/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	**Client Sample ID:**	ES-15
Project:	Buena Vista Stack Release	**Collection Date:**	10/5/2018 12:55:00 PM
Lab ID:	1810422-015 **Matrix:** SOIL	**Received Date:**	10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	36	30		mg/Kg	20	10/17/2018 3:38:38 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/12/2018 4:50:57 PM	40958
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 4:50:57 PM	40958
Surr: DNOP	110	50.6-138		%Rec	1	10/12/2018 4:50:57 PM	40958
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2018 3:42:06 PM	40915
Surr: BFB	89.2	15-316		%Rec	1	10/12/2018 3:42:06 PM	40915
EPA METHOD 8021B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	10/12/2018 3:42:06 PM	40915
Toluene	ND	0.049		mg/Kg	1	10/12/2018 3:42:06 PM	40915
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2018 3:42:06 PM	40915
Xylenes, Total	ND	0.098		mg/Kg	1	10/12/2018 3:42:06 PM	40915
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	10/12/2018 3:42:06 PM	40915

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1810422**
Date Reported: **10/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-016
Matrix: SOIL

Client Sample ID: ES-16
Collection Date: 10/5/2018 1:00:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/17/2018 3:51:03 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/12/2018 5:15:17 PM	40958
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 5:15:17 PM	40958
Surr: DNOP	122	50.6-138		%Rec	1	10/12/2018 5:15:17 PM	40958
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2018 7:05:03 PM	40915
Surr: BFB	88.0	15-316		%Rec	1	10/11/2018 7:05:03 PM	40915
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.023		mg/Kg	1	10/11/2018 7:05:03 PM	40915
Toluene	ND	0.047		mg/Kg	1	10/11/2018 7:05:03 PM	40915
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2018 7:05:03 PM	40915
Xylenes, Total	ND	0.093		mg/Kg	1	10/11/2018 7:05:03 PM	40915
Surr: 4-Bromofluorobenzene	93.5	80-120		%Rec	1	10/11/2018 7:05:03 PM	40915

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-017
Matrix: SOIL
Client Sample ID: ES-17
Collection Date: 10/5/2018 1:05:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/17/2018 4:03:27 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/12/2018 5:39:46 PM	40958
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 5:39:46 PM	40958
Surr: DNOP	111	50.6-138		%Rec	1	10/12/2018 5:39:46 PM	40958
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/11/2018 7:28:30 PM	40915
Surr: BFB	86.6	15-316		%Rec	1	10/11/2018 7:28:30 PM	40915
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.024		mg/Kg	1	10/11/2018 7:28:30 PM	40915
Toluene	ND	0.048		mg/Kg	1	10/11/2018 7:28:30 PM	40915
Ethylbenzene	ND	0.048		mg/Kg	1	10/11/2018 7:28:30 PM	40915
Xylenes, Total	ND	0.097		mg/Kg	1	10/11/2018 7:28:30 PM	40915
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	1	10/11/2018 7:28:30 PM	40915

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-018
Matrix: SOIL

Client Sample ID: ES-18
Collection Date: 10/5/2018 1:10:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/17/2018 4:15:52 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/12/2018 6:04:02 PM	40958
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 6:04:02 PM	40958
Surr: DNOP	149	50.6-138	S	%Rec	1	10/12/2018 6:04:02 PM	40958
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/11/2018 9:25:42 PM	40915
Surr: BFB	89.0	15-316		%Rec	1	10/11/2018 9:25:42 PM	40915
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.023		mg/Kg	1	10/11/2018 9:25:42 PM	40915
Toluene	ND	0.046		mg/Kg	1	10/11/2018 9:25:42 PM	40915
Ethylbenzene	ND	0.046		mg/Kg	1	10/11/2018 9:25:42 PM	40915
Xylenes, Total	ND	0.092		mg/Kg	1	10/11/2018 9:25:42 PM	40915
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	10/11/2018 9:25:42 PM	40915

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-019
Matrix: SOIL

Client Sample ID: ES-19
Collection Date: 10/5/2018 1:15:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/17/2018 4:28:17 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/12/2018 6:28:27 PM	40958
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 6:28:27 PM	40958
Surr: DNOP	138	50.6-138		%Rec	1	10/12/2018 6:28:27 PM	40958
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2018 9:49:00 PM	40915
Surr: BFB	89.8	15-316		%Rec	1	10/11/2018 9:49:00 PM	40915
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.024		mg/Kg	1	10/11/2018 9:49:00 PM	40915
Toluene	ND	0.049		mg/Kg	1	10/11/2018 9:49:00 PM	40915
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2018 9:49:00 PM	40915
Xylenes, Total	ND	0.097		mg/Kg	1	10/11/2018 9:49:00 PM	40915
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	10/11/2018 9:49:00 PM	40915

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1810422-020
Matrix: SOIL

Client Sample ID: ES-20
Collection Date: 10/5/2018 1:20:00 PM
Received Date: 10/6/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/17/2018 4:40:41 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/12/2018 6:52:43 PM	40958
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 6:52:43 PM	40958
Surr: DNOP	115	50.6-138		%Rec	1	10/12/2018 6:52:43 PM	40958
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2018 10:12:22 PM	40915
Surr: BFB	89.7	15-316		%Rec	1	10/11/2018 10:12:22 PM	40915
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.025		mg/Kg	1	10/11/2018 10:12:22 PM	40915
Toluene	ND	0.049		mg/Kg	1	10/11/2018 10:12:22 PM	40915
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2018 10:12:22 PM	40915
Xylenes, Total	ND	0.099		mg/Kg	1	10/11/2018 10:12:22 PM	40915
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	10/11/2018 10:12:22 PM	40915

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **MB-41001** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **41001** RunNo: **54867**

Prep Date: **10/15/2018** Analysis Date: **10/15/2018** SeqNo: **1824301** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-41001** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **41001** RunNo: **54867**

Prep Date: **10/15/2018** Analysis Date: **10/15/2018** SeqNo: **1824302** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Sample ID **MB-40987** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **40987** RunNo: **54867**

Prep Date: **10/12/2018** Analysis Date: **10/15/2018** SeqNo: **1824336** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-40987** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **40987** RunNo: **54867**

Prep Date: **10/12/2018** Analysis Date: **10/15/2018** SeqNo: **1824337** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID **MB-41047** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **41047** RunNo: **54923**

Prep Date: **10/17/2018** Analysis Date: **10/17/2018** SeqNo: **1826694** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-41047** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **41047** RunNo: **54923**

Prep Date: **10/17/2018** Analysis Date: **10/17/2018** SeqNo: **1826696** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: 1810422

Hall Environmental Analysis Laboratory, Inc.

18-Oct-18

Client: APEX TITAN
Project: Buena Vista Stack Release

Sample ID	**LCS-40934**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**LCSS**	Batch ID:	**40934**	RunNo:	**54803**
Prep Date:	**10/10/2018**	Analysis Date:	**10/11/2018**	SeqNo:	**1820408** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	70	130			
Surr: DNOP	5.2		5.000		105	50.6	138			

Sample ID	**MB-40934**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**PBS**	Batch ID:	**40934**	RunNo:	**54803**
Prep Date:	**10/10/2018**	Analysis Date:	**10/11/2018**	SeqNo:	**1820409** 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	10		10.00		101	50.6	138			

Sample ID	**LCS-40958**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**LCSS**	Batch ID:	**40958**	RunNo:	**54841**
Prep Date:	**10/11/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1823156** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.0	70	130			
Surr: DNOP	5.2		5.000		104	50.6	138			

Sample ID	**MB-40958**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**PBS**	Batch ID:	**40958**	RunNo:	**54841**
Prep Date:	**10/11/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1823157** 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	10		10.00		99.7	50.6	138			

Sample ID	**1810422-014AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**ES-14**	Batch ID:	**40958**	RunNo:	**54841**
Prep Date:	**10/11/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1823280** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.8	48.97	0	101	53.5	126			
Surr: DNOP	5.9		4.897		120	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **1810422-014AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **ES-14** Batch ID: **40958** RunNo: **54841**

Prep Date: **10/11/2018** Analysis Date: **10/12/2018** SeqNo: **1823281** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.8	48.88	0	104	53.5	126	2.22	21.7	
Surr: DNOP	6.1		4.888		126	50.6	138	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810422
18-Oct-18

Client: APEX TITAN
Project: Buena Vista Stack Release

Sample ID **LCS-40866** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **40866** RunNo: **54741**
Prep Date: **10/8/2018** Analysis Date: **10/9/2018** SeqNo: **1818187** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.2	75.9	131			
Surr: BFB	1000		1000		103	15	316			

Sample ID **MB-40866** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **40866** RunNo: **54741**
Prep Date: **10/8/2018** Analysis Date: **10/9/2018** SeqNo: **1818189** 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	920		1000		92.0	15	316			

Sample ID **LCS-40909** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **40909** RunNo: **54774**
Prep Date: **10/9/2018** Analysis Date: **10/10/2018** SeqNo: **1819349** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.5	75.9	131			
Surr: BFB	1100		1000		105	15	316			

Sample ID **MB-40909** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **40909** RunNo: **54774**
Prep Date: **10/9/2018** Analysis Date: **10/10/2018** SeqNo: **1819350** 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	900		1000		89.8	15	316			

Sample ID **LCS-40915** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **40915** RunNo: **54814**
Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1820394** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	75.9	131			
Surr: BFB	1100		1000		107	15	316			

Sample ID **1810422-014AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **ES-14** Batch ID: **40915** RunNo: **54814**
Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1821122** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810422**

18-Oct-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **1810422-014AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **ES-14** Batch ID: **40915** RunNo: **54814**

Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1821122** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.72	0	109	77.8	128			
Surr: BFB	990		948.8		104	15	316			

Sample ID **1810422-014AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **ES-14** Batch ID: **40915** RunNo: **54814**

Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1821123** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.8	24.25	0	122	77.8	128	13.5	20	
Surr: BFB	1000		969.9		106	15	316	0	0	

Sample ID **MB-40915** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **40915** RunNo: **54814**

Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1821138** 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	910		1000		90.6	15	316			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810422**

18-Oct-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **LCS-40866** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **40866** RunNo: **54741**

Prep Date: **10/8/2018** Analysis Date: **10/9/2018** SeqNo: **1818668** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.3	77.3	128			
Toluene	0.94	0.050	1.000	0	94.0	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	94.2	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	95.7	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID **MB-40866** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **40866** RunNo: **54741**

Prep Date: **10/8/2018** Analysis Date: **10/9/2018** SeqNo: **1818670** 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	0.99		1.000		99.0	80	120			

Sample ID **LCS-40909** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **40909** RunNo: **54774**

Prep Date: **10/9/2018** Analysis Date: **10/10/2018** SeqNo: **1819469** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.7	77.3	128			
Toluene	1.0	0.050	1.000	0	103	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	102	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	103	81.6	129			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID **MB-40909** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **40909** RunNo: **54774**

Prep Date: **10/9/2018** Analysis Date: **10/10/2018** SeqNo: **1819470** 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		96.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810422**

18-Oct-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **LCS-40915** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **40915** RunNo: **54814**
Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1820396** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	77.3	128			
Toluene	1.0	0.050	1.000	0	102	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	101	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	102	81.6	129			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			

Sample ID **MB-40915** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **40915** RunNo: **54814**
Prep Date: **10/10/2018** Analysis Date: **10/11/2018** SeqNo: **1821178** 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	0.98		1.000		97.7	80	120			

Sample ID **1810422-015AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **ES-15** Batch ID: **40915** RunNo: **54834**
Prep Date: **10/10/2018** Analysis Date: **10/12/2018** SeqNo: **1822857** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.048	0.9506	0.01153	82.4	68.5	133			
Toluene	0.85	0.095	0.9506	0.009677	88.4	75	130			
Ethylbenzene	0.85	0.095	0.9506	0	89.7	79.4	128			
Xylenes, Total	2.6	0.19	2.852	0.01681	90.9	77.3	131			
Surr: 4-Bromofluorobenzene	1.8		1.901		93.2	80	120			

Sample ID **1810422-015AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **ES-15** Batch ID: **40915** RunNo: **54834**
Prep Date: **10/10/2018** Analysis Date: **10/12/2018** SeqNo: **1822858** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.023	0.9208	0.01153	85.5	68.5	133	0.505	20	
Toluene	0.85	0.046	0.9208	0.009677	91.6	75	130	0.367	20	
Ethylbenzene	0.86	0.046	0.9208	0	93.6	79.4	128	1.06	20	
Xylenes, Total	2.6	0.092	2.762	0.01681	94.1	77.3	131	0.218	20	
Surr: 4-Bromofluorobenzene	0.90		0.9208		97.6	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC   Work Order Number. 1810422   RcptNo: 1

Received By: Jazzmine Burkhead   10/6/2018 10:00:00 AM

Completed By: Michelle Garcia   10/8/2018 12:37:46 PM   Michelle Garcia

Reviewed By: JAB 10/08/18

LB: JC 10-8-18

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° 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. VOA vials have zero headspace?   Yes ☐   No ☐   No VOA Vials ☑
10. Were any sample containers received broken?   Yes ☐   No ☑
11. Does paperwork match bottle labels?   Yes ☑   No ☐
    (Note discrepancies on chain of custody)
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?   Yes ☑   No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: JC 10'8'18

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5	Good	Not Present			

CHAIN OF CUSTODY RECORD

APEX

Office Location
606 S Rio Grande, Suite A
Aztec, NM 87410

Project Manager K.Summers

Laboratory: Hall Environmental Analysis Laboratory
Address: 4901 Hawkins NE
Albuquerque, NM 87109
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #: See notes

Sampler's Name: Ranee Deechilly
Sampler's Signature:

Proj. No. 725040112453
Project Name: Buena Vista Stack Release

Lab use only
Due Date:

Temp. of coolers when received (C°): 5.4-0.4 (CF)=5

1	2	3	4	5

Page 1 of 2

18I0422

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chlorides	Lab Sample ID (Lab Use Only)
S	10/5/18	1145	X		ES-1						1		X	X	X	001
S	10/5/18	1150	X		ES-2						1		X	X	X	002
S	10/5/18	1155	X		ES-3						1		X	X	X	003
S	10/5/18	1200	X		ES-4						1		X	X	X	004
S	10/5/18	1205	X		ES-5						1		X	X	X	005
S	10/5/18	1210	X		ES-6						1		X	X	X	006
S	10/5/18	1215	X		ES-7						1		X	X	X	007
S	10/5/18	1220	X		ES-8						1		X	X	X	008
S	10/5/18	1225	X		ES-9						1		X	X	X	009
S	10/5/18	1230	X		ES-10						1		X	X	X	010

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/5/18	1605		10/5/18	1605
	10/5/18	1811	Burkhead	10/06/18	10:00

NOTES:
Courier
PM - Tom Long
Pay Key - GG11580
NonAFE - N 36935

Matrix: WW - Wastewater, W - Water, S - Soil, SD - Solid, L - Liquid, A - Air Bag, C - Charcoal tubs, 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

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande, Suite A
Aztec, NM 87410
Project Manager K. Summers

Laboratory: Hall Environmental Analysis Laboratory
Address: 4901 Hawkins NE
Albuquerque, NM 87109
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #: See notes

ANALYSIS REQUESTED

Lab use only
Due Date:
Temp. of coolers when received (C°): 5.4-0.4 (CF)= 5.0
1 2 3 4 5
Page 2 of 2

Sampler's Name Ranee Deechilly
Sampler's Signature

Proj. No. 725040124S3
Project Name Buena Vista Stack Release

1810422

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chlorides							Lab Sample ID (Lab Use Only)
S	10/5/18	1235	X		ES-11						1		X	X	X							011
S	10/5/18	1240	X		ES-12						1		X	X	X							012
S	10/5/18	1245	X		ES-13						1		X	X	X							013
S	10/5/18	1250	X		ES-14						1		X	X	X							014
S	10/5/18	1255	X		ES-15						1		X	X	✓							015
S	10/5/18	1300	X		ES-16						1		X	X	X							016
S	10/5/18	1305	X		ES-17						1		X	X	X							017
S	10/5/18	1310	X		ES-18						1		X	X	X							018
S	10/5/18	1315	X		ES-19						1		X	X	X							019
S	10/5/18	1320	X		ES-20						1		X	X	X							020

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/5/18	1605	Mat Walls	10/5/18	1605
Christie Walls	10/5/18	1811	Jazzmine Burkhead	10/6/18	10:00

NOTES:
Courier
PM - Tom Long
Pay Key - GC0115E0
Non AFE - N36935

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

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

December 04, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Buena Vista Stack Release

OrderNo.: 1811D97

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 11/29/2018 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,

Andy

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811D97**
Date Reported: **12/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1811D97-001
Matrix: SOIL
Client Sample ID: ES-21
Collection Date: 11/28/2018 12:45:00 PM
Received Date: 11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	85	30		mg/Kg	20	12/3/2018 12:40:39 PM	41846
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/4/2018 6:08:29 AM	41790
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/4/2018 6:08:29 AM	41790
Surr: DNOP	89.9	50.6-138		%Rec	1	12/4/2018 6:08:29 AM	41790
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2018 9:43:48 PM	41797
Surr: BFB	93.7	73.8-119		%Rec	1	11/30/2018 9:43:48 PM	41797
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	11/30/2018 9:43:48 PM	41797
Toluene	ND	0.048		mg/Kg	1	11/30/2018 9:43:48 PM	41797
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2018 9:43:48 PM	41797
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2018 9:43:48 PM	41797
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	11/30/2018 9:43:48 PM	41797

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1811D97-002
Matrix: SOIL

Client Sample ID: ES-22
Collection Date: 11/28/2018 12:55:00 PM
Received Date: 11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	54	30		mg/Kg	20	12/3/2018 12:53:03 PM	41846
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/4/2018 6:30:31 AM	41790
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/4/2018 6:30:31 AM	41790
Surr: DNOP	98.8	50.6-138		%Rec	1	12/4/2018 6:30:31 AM	41790
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2018 10:06:37 PM	41797
Surr: BFB	92.5	73.8-119		%Rec	1	11/30/2018 10:06:37 PM	41797
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	11/30/2018 10:06:37 PM	41797
Toluene	ND	0.048		mg/Kg	1	11/30/2018 10:06:37 PM	41797
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2018 10:06:37 PM	41797
Xylenes, Total	ND	0.097		mg/Kg	1	11/30/2018 10:06:37 PM	41797
Surr: 4-Bromofluorobenzene	90.1	80-120		%Rec	1	11/30/2018 10:06:37 PM	41797

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1811D97**
Date Reported: **12/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	**Client Sample ID:**	ES-23
Project:	Buena Vista Stack Release	**Collection Date:**	11/28/2018 1:05:00 PM
Lab ID:	1811D97-003 **Matrix:** SOIL	**Received Date:**	11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	170	30		mg/Kg	20	12/3/2018 1:30:17 PM	41846
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/4/2018 6:52:23 AM	41790
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/4/2018 6:52:23 AM	41790
Surr: DNOP	98.0	50.6-138		%Rec	1	12/4/2018 6:52:23 AM	41790
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/30/2018 10:29:27 PM	41797
Surr: BFB	91.3	73.8-119		%Rec	1	11/30/2018 10:29:27 PM	41797
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	11/30/2018 10:29:27 PM	41797
Toluene	ND	0.047		mg/Kg	1	11/30/2018 10:29:27 PM	41797
Ethylbenzene	ND	0.047		mg/Kg	1	11/30/2018 10:29:27 PM	41797
Xylenes, Total	ND	0.094		mg/Kg	1	11/30/2018 10:29:27 PM	41797
Surr: 4-Bromofluorobenzene	88.1	80-120		%Rec	1	11/30/2018 10:29:27 PM	41797

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1811D97**
Date Reported: **12/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Buena Vista Stack Release
Lab ID: 1811D97-004 **Matrix:** SOIL

Client Sample ID: ES-24
Collection Date: 11/28/2018 1:15:00 PM
Received Date: 11/29/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	120	30		mg/Kg	20	12/3/2018 1:42:41 PM	41846
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/4/2018 7:14:34 AM	41790
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/4/2018 7:14:34 AM	41790
Surr: DNOP	93.1	50.6-138		%Rec	1	12/4/2018 7:14:34 AM	41790
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/30/2018 10:52:12 PM	41797
Surr: BFB	90.9	73.8-119		%Rec	1	11/30/2018 10:52:12 PM	41797
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	11/30/2018 10:52:12 PM	41797
Toluene	ND	0.047		mg/Kg	1	11/30/2018 10:52:12 PM	41797
Ethylbenzene	ND	0.047		mg/Kg	1	11/30/2018 10:52:12 PM	41797
Xylenes, Total	ND	0.094		mg/Kg	1	11/30/2018 10:52:12 PM	41797
Surr: 4-Bromofluorobenzene	87.4	80-120		%Rec	1	11/30/2018 10:52:12 PM	41797

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1811D97**

Hall Environmental Analysis Laboratory, Inc.

04-Dec-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **MB-41846**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**	
Client ID: **PBS**	Batch ID: **41846**	RunNo: **56033**	
Prep Date: **12/3/2018**	Analysis Date: **12/3/2018**	SeqNo: **1871389**	Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-41846**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**	
Client ID: **LCSS**	Batch ID: **41846**	RunNo: **56033**	
Prep Date: **12/3/2018**	Analysis Date: **12/3/2018**	SeqNo: **1871390**	Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D97**

04-Dec-18

Client: APEX TITAN
Project: Buena Vista Stack Release

Sample ID **LCS-41790**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**	
Client ID: **LCSS**	Batch ID: **41790**	RunNo: **56031**	
Prep Date: **11/29/2018**	Analysis Date: **12/4/2018**	SeqNo: **1871902**	Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.3	70	130			
Surr: DNOP	4.4		5.000		89.0	50.6	138			

Sample ID **MB-41790**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**	
Client ID: **PBS**	Batch ID: **41790**	RunNo: **56031**	
Prep Date: **11/29/2018**	Analysis Date: **12/4/2018**	SeqNo: **1871903**	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	9.7		10.00		97.4	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D97**

04-Dec-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID	**MB-41797**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBS**	Batch ID:	**41797**	RunNo:	**55985**
Prep Date:	**11/29/2018**	Analysis Date:	**11/30/2018**	SeqNo:	**1869593** 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	910		1000		91.2	73.8	119			

Sample ID	**LCS-41797**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSS**	Batch ID:	**41797**	RunNo:	**55985**
Prep Date:	**11/29/2018**	Analysis Date:	**11/30/2018**	SeqNo:	**1869594** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	80.1	123			
Surr: BFB	1000		1000		103	73.8	119			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D97**

04-Dec-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID **MB-41797** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **41797** RunNo: **55985**

Prep Date: **11/29/2018** Analysis Date: **11/30/2018** SeqNo: **1869607** 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	0.96		1.000		96.2	80	120			

Sample ID **LCS-41797** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **41797** RunNo: **55985**

Prep Date: **11/29/2018** Analysis Date: **11/30/2018** SeqNo: **1869608** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.8	80	120			
Toluene	0.98	0.050	1.000	0	98.1	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.0	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.6	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC Work Order Number: 1811D97 RcptNo: 1

Received By: Anne Thorne 11/29/2018 7:00:00 AM
Completed By: Isaiah Ortiz 11/29/2018 9:26:10 AM
Reviewed By: VVZ 11/29/18
LB: DAD 11/29/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
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? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: ______
(<2 or >12 unless noted)
Adjusted? ______
Checked by: DAD 11/29/18

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 ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			
2	1.3	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location
606 S. Rio Grande, Suite A
Aztec, NM 87410
Project Manager K. Summers

Laboratory: Hall Environmental Analysis Laboratory
Address: 4901 Hawkins NE
Albuquerque, NM 87109
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #: see notes

ANALYSIS REQUESTED

Lab use only
Due Date:

Temp. of coolers when received (C°): 2.4 1.3

1 [✓ 2] 3 4 5

Page 1 of 1

Sampler's Name: Ranee Deechilly
Sampler's Signature

Proj. No.: 725040112453
Project Name: Buena Vista Stack Release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chlorides	Lab Sample ID (Lab Use Only)
S	11/28/18	1245	X		ES-21						1		X	X	X	1811097 -001
S	11/28/18	1255	X		ES-22						1		X	X	X	-002
S	11/28/18	1305	X		ES-23						1		X	X	X	-003
S	11/28/18	1315	X		ES-24						1		X	X	X	-004

NKS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	11/28/18	1710	Misty Wall	11/28/18	1710
Misty Wall	11/28/18	1814		11/29/18	0700

NOTES:
PM - Tom Long (EPROD)
Pay Key - GG11580
Non AFE - N36935

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 TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

Appendix F

BLM Vegetation Monitoring-Photo Points

Photo Point 1
Coordinates: 36.81776N, 107.72885W
Photo ID: PP1_BV_Series 1_072518_E
Description: Facing east from center of eastern overspray area

Photo Point 1
Coordinates: 36.81776N, 107.72885W
Photo ID: PP1_BV_Series 1_072518_W
Description: Facing west from center of eastern overspray area

Photo Point 2
Coordinates: 36.81792N, 107.72922W
Photo ID: PP2_BV_Series 1_072518_SE
Description: Facing southeast from center of middle overspray area

Photo Point 2
Coordinates: 36.81792N, 107.72922W
Photo ID: PP2_BV_Series 1_072518_NW
Description: Facing northwest from center of middle overspray area

Photo Point 3
Coordinates: 36.81818N, 107.72941W
Photo ID: PP3_BV_Series 1_072518_S
Description: Facing south from northern end of western overspray area

Photo Point 4
Coordinates: 36.81812N, 107.72955W
Photo ID: PP4_BV_Series 1_072518_E
Description: Facing east from western end of western overspray area

Photo Point 5
Coordinates: 36.818092N, 107.72931W
Photo ID: PP5_BV_Series 1_072518_W
Description: Facing west from eastern end of western overspray area

Photo Point 6
Coordinates: 36.81797N, 107.72944W
Photo ID: PP6_BV_Series 1_072518_N
Description: Facing north from southern end of western overspray area

Photo Point 1
Coordinates: 36.81776N, 107.72885W
Photo ID: PP1_BV_Series 2_100518_E
Description: Facing east from center of eastern overspray area

Photo Point 1
Coordinates: 36.81776N, 107.72885W
Photo ID: PP1_BV_Series 2_100518_W
Description: Facing west from center of eastern overspray area

Photo Point 2
Coordinates: 36.81792N, 107.72922W
Photo ID: PP2_BV_Series 2_100518_SE
Description: Facing southeast from center of middle overspray area

Photo Point 2
Coordinates: 36.81792N, 107.72922W
Photo ID: PP2_BV_Series 2_100518_NW
Description: Facing northwest from center of middle overspray area

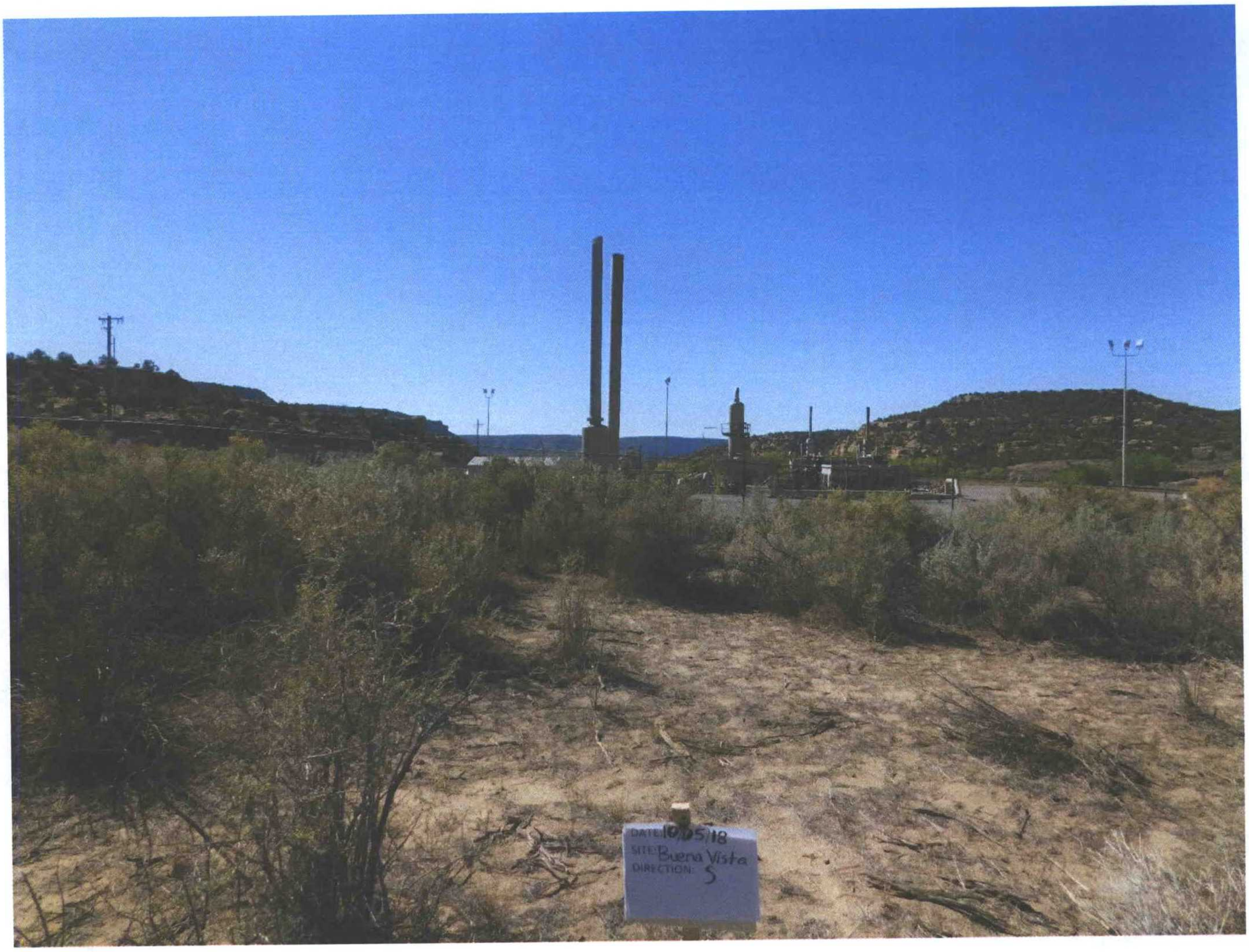


Photo Point 3
Coordinates: 36.81818N, 107.72941W
Photo ID: PP3_BV_Series 2_100518_S
Description: Facing south from northern end of western overspray area

Photo Point 4
Coordinates: 36.81812N, 107.72955W
Photo ID: PP4_BV_Series 2_100518_E
Description: Facing east from western end of western overspray area

Photo Point 5
Coordinates: 36.818092N, 107.72931W
Photo ID: PP5_BV_Series 2_100518_W
Description: Facing west from eastern end of western overspray area

Photo Point 6
Coordinates: 36.81797N, 107.72944W
Photo ID: PP6_BV_Series 2_100518_N
Description: Facing north from southern end of western overspray area

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	

NMOCD
MAR 18 2019
DISTRICT III

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NVF1836228602**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.879542** Longitude **-107.696093** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Quinn 340S**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/11/2018**	Serial Number *(if applicable)*:

Unit Letter	Section	Township	Range	County
O	20	31N	8W	San Juan

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 5-7 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **10.69 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On December 11, 2018, a contractor performing pipeline patrols discovered a possible release on the Quinn 340S pipeline. An Enterprise technician was dispatched and confirmed the release. The pipeline was isolated, depressurized, locked out and tagged out. The release is located in a wash (blue line on a USGS topographic map). There were no fluids observed on the ground surface. Enterprise determined this release was required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX, 100 ppm TPH and 600 ppm Chloride). Repairs are remediation were completed by on January 7, 2019. The final excavation dimensions measured approximately 49 feet long by 12 feet wide by 11 feet deep. Approximately 60 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

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: Jon E. Fields
Title: Director, Field Environmental

Signature: Jon E. Fields
Date: 3-11-19

email: jefields@eprod.com
Telephone: 713-381-6595

OCD Only

Received by:
Date: 3/18/2019

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: 3/18/2019

Printed Name: Vanessa Fields
Title: Environmental Specialist

ENSOLUM

CLOSURE REPORT

Property:

Quinn 340S (2018) Pipeline Release
SE ¼, S20 T31N R8W
San Juan County, New Mexico

February 28, 2019
Ensolum Project No. 05A1226037

Prepared for:

Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Chad D'Aponti
Field Environmental Scientist

Ranee Deechilly

Ranee Deechilly
Staff Scientist

Kyle Summers, CPG
Sr. Project Manager

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LIST OF APPENDICES

Appendix A: **Figures**
  Figure 1 Topographic Map
  Figure 2 Site Vicinity Map
  Figure 3 Site Map with Soil Analytical Results

Appendix B: **Executed C-138 Solid Waste Acceptance Form**

Appendix C: **Photographic Documentation**

Appendix D: **Table 1 - Soil Analytical Summary**

Appendix E: **Laboratory Data Sheets & Chain of Custody Documentation**

CLOSURE REPORT

Quinn 340S (2018) Pipeline Release
SE ¼, S20 T31N R8W
San Juan County, New Mexico

Ensolum Project No. 05A1226037

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Quinn 340S (2018) Pipeline Release (Site)
Location:	36.879577° North, 107.696134° West Southeast (SE) ¼ of Section 20, Township 31 North, Range 8 West San Juan County, New Mexico
Property:	Private Land (Faulkenburg Brandon)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On December 11, 2018, a release of natural gas was identified on the Quinn 340S pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On December 22, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service.

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.

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.

- No water wells were identified within a one-half mile radius of the Site on the OSE Water Rights Reporting System (WRRS) database.

- Five (5) cathodic-protection well records were found in the New Mexico EMNRD imaging database within the approximate one (1) mile search radius. The closest (located approximately 0.18 miles from the Site) recorded cathodic-protection well (Quinn #6A, #9 (Unit P, Sec 21 T30N R8W)) indicates a depth to water of 160 feet below grade surface (bgs). Cathodic-protection wells Quinn #1, #339 (Unit L, Sec 20 T31N R8W), Quinn #4A (Unit I, Sec 19 T31N R8W), SJ 32-8 Unit #12 (Unit M, Sec 21 T31N R8W), and Quinn #340 (Unit A, Sec 20 T31N R8W) indicate depths to water ranging from 140 feet bgs to 400 feet bgs.

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse. The Site is located within an ephemeral wash that is identified as a "blue line" on the United States Geological Survey topographic map. A stock pond is located approximately 35 feet south of the Site.
- 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.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were 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.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

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

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

3.0 SOIL REMEDIATION ACTIVITIES

On December 22, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service. During the pipeline repair and corrective action activities West States Energy Contactors, Inc, provided heavy equipment and labor support, while Apex Companies, LLC (Apex) provided environmental consulting support.

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

The final excavation measured approximately 49 feet long and 12 feet wide. The maximum depth of the final excavation measured approximately 11 feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of semi-consolidated silty clay underlain by sandstone.

A total of approximately 60 cubic yards (cy) of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to surrounding grade.

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**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Based on information supplied by Enterprise, Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of seven (7) composite soil samples (S-1 through S-7) from the sidewalls and the base of the final excavation for laboratory analysis. In addition, four (4) composite stockpile soil samples (SP-1 through SP-4) were collected from the segregated soils that were designated for reuse, to confirm the material was suitable to remain on-Site. A New Mexico EMNRD OCD representative was on Site during the final confirmation sampling events. Soil associated with composite soil sample S-2 was removed from the Site and transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation.

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 the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/#8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, 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 BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with composite soil samples (S-1, S-3 through S-7, and SP-1 through SP-4) to the New Mexico EMNRD OCD closure criteria. Soil associated with composite soil sample S-2 was removed from the Site and transported to Envirotech landfarm for disposal/remediation and is not included in the following discussion.

- Laboratory analytical results indicate benzene concentrations for soils remaining in place and the reused stockpiled soils do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate that total BTEX concentrations for soils remaining in place and the reused stockpiled soils do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- Laboratory analytical results indicate that combined TPH GRO/DRO/MRO concentrations for soils remaining in place and the reused stockpiled soils do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical results of composite soil samples S-3 through S-6 and SP-1 through SP-3 collected from soils remaining in place and the reused portion of the stockpiled soils indicate chloride concentrations ranging from 30 mg/kg (SP-3) to 110 mg/kg (S-5); these concentrations are below the New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

7.0 RECLAMATION AND RE-VEGETATION

The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to the surrounding grade. Enterprise will re-seed the Site with an approved seeding mixture at the beginning of the next favorable growing season.

8.0 FINDINGS AND RECOMMENDATION

On December 11, 2018, a release of natural gas was identified on the Quinn 340S pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On December 22, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service.

- 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.
- A total of seven (7) composite soil samples were collected from the final excavation for laboratory analysis. In addition, four (4) composite stockpile soil samples were collected from the segregated

stockpiled soils. Based on soil laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.

- A total of approximately 60 cubic yards of petroleum hydrocarbon affected were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to surrounding grade.

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 Additional Limitations

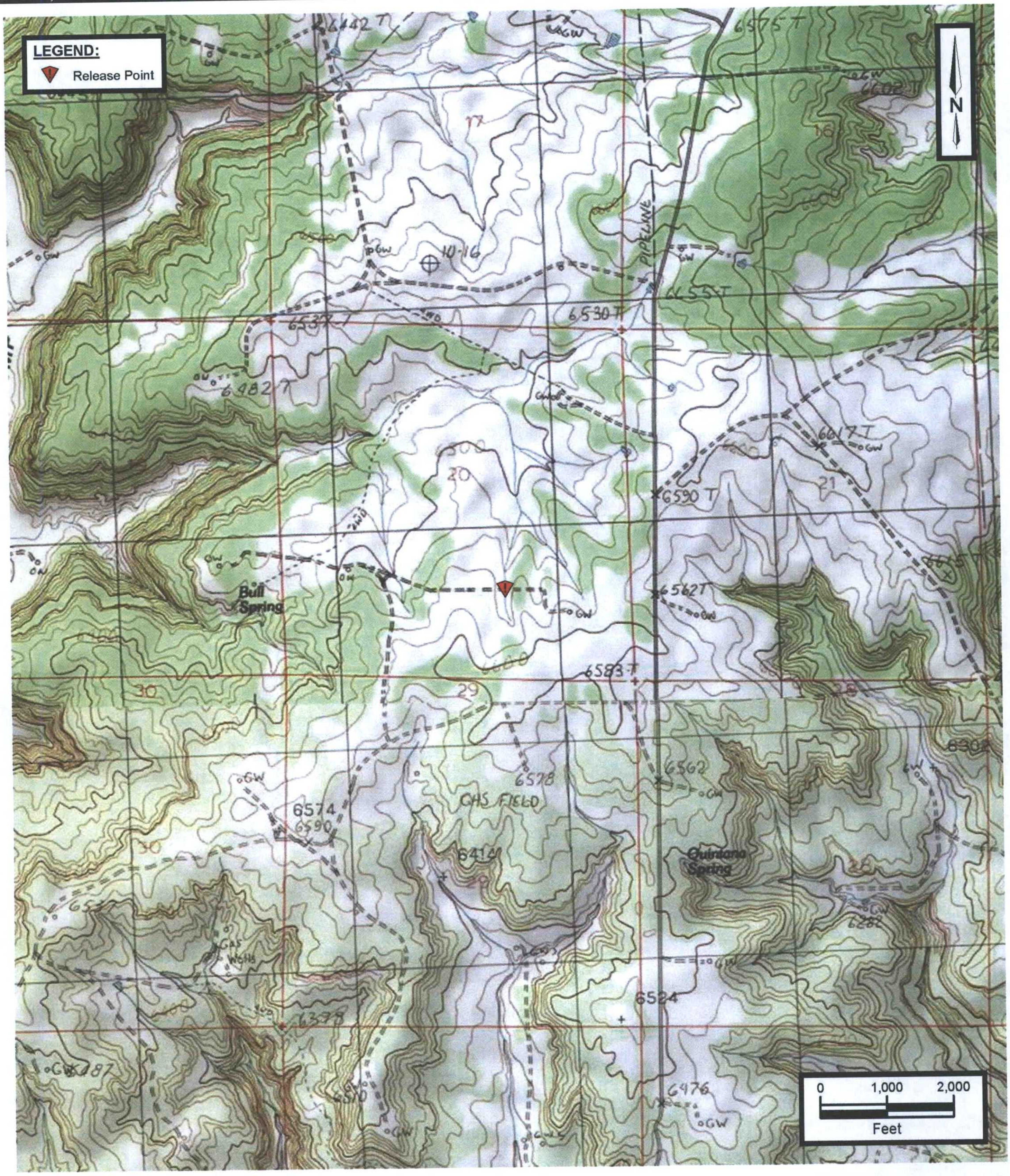
Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

9.3 Reliance

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

APPENDIX A

Figures



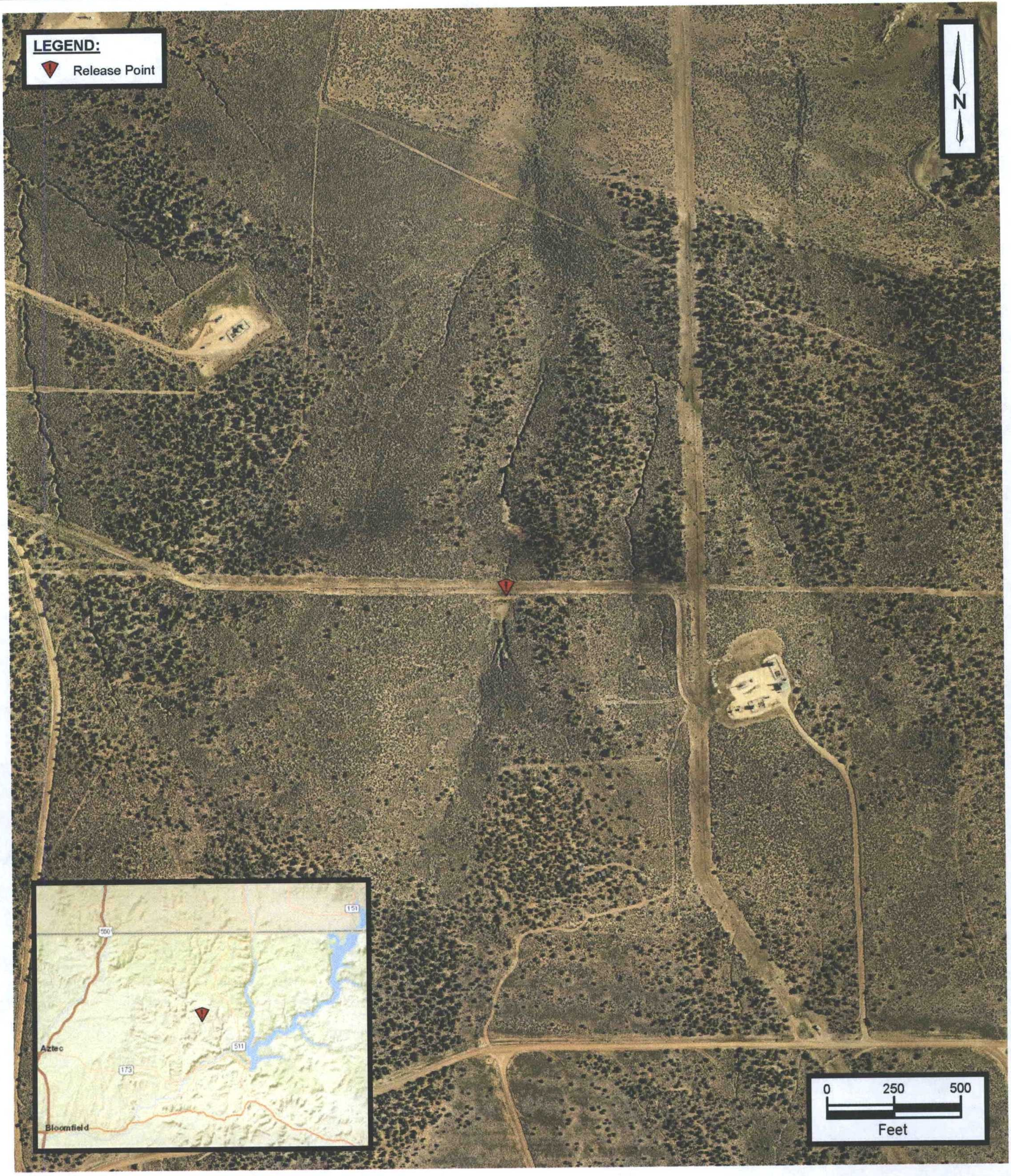
Topographic Map

ENTERPRISE FIELD SERVICES LLC
QUINN 340S PIPELINE RELEASE (2018)
SE ¼, S20 T31N R8W, San Juan County, New Mexico
36.879577° N, 107.696134° W

PROJECT NUMBER: 05A1226037

ENSOLUM
Environmental & Hydrogeologic Consultants

FIGURE
1



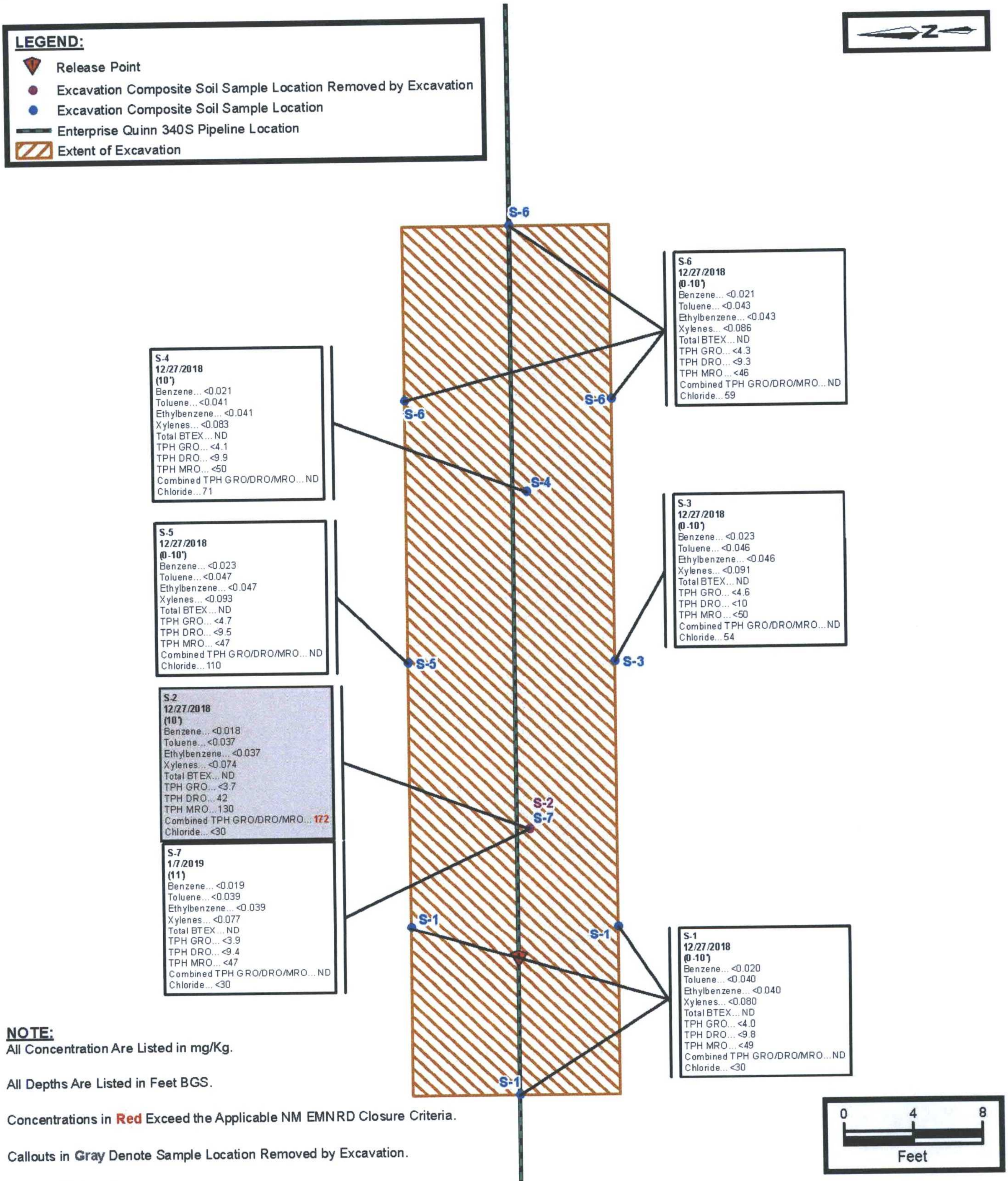
ENSOLUM
Environmental & Hydrogeologic Consultants

Site Vicinity Map

ENTERPRISE FIELD SERVICES LLC
QUINN 340S PIPELINE RELEASE (2018)
SE ¼, S20 T31N R8W, San Juan County, New Mexico
36.879577° N, 107.696134° W

PROJECT NUMBER: 05A1226037

FIGURE
2



S-6
12/27/2018
(0-10')
Benzene... <0.021
Toluene... <0.043
Ethylbenzene... <0.043
Xylenes... <0.086
Total BTEX... ND
TPH GRO... <4.3
TPH DRO... <9.3
TPH MRO... <46
Combined TPH GRO/DRO/MRO... ND
Chloride... 59

S-4
12/27/2018
(10')
Benzene... <0.021
Toluene... <0.041
Ethylbenzene... <0.041
Xylenes... <0.083
Total BTEX... ND
TPH GRO... <4.1
TPH DRO... <9.9
TPH MRO... <50
Combined TPH GRO/DRO/MRO... ND
Chloride... 71

S-3
12/27/2018
(0-10')
Benzene... <0.023
Toluene... <0.046
Ethylbenzene... <0.046
Xylenes... <0.091
Total BTEX... ND
TPH GRO... <4.6
TPH DRO... <10
TPH MRO... <50
Combined TPH GRO/DRO/MRO... ND
Chloride... 54

S-5
12/27/2018
(0-10')
Benzene... <0.023
Toluene... <0.047
Ethylbenzene... <0.047
Xylenes... <0.093
Total BTEX... ND
TPH GRO... <4.7
TPH DRO... <9.5
TPH MRO... <47
Combined TPH GRO/DRO/MRO... ND
Chloride... 110

S-2
12/27/2018
(10')
Benzene... <0.018
Toluene... <0.037
Ethylbenzene... <0.037
Xylenes... <0.074
Total BTEX... ND
TPH GRO... <3.7
TPH DRO... 42
TPH MRO... 130
Combined TPH GRO/DRO/MRO... **172**
Chloride... <30

S-7
1/7/2019
(11')
Benzene... <0.019
Toluene... <0.039
Ethylbenzene... <0.039
Xylenes... <0.077
Total BTEX... ND
TPH GRO... <3.9
TPH DRO... <9.4
TPH MRO... <47
Combined TPH GRO/DRO/MRO... ND
Chloride... <30

S-1
12/27/2018
(0-10')
Benzene... <0.020
Toluene... <0.040
Ethylbenzene... <0.040
Xylenes... <0.080
Total BTEX... ND
TPH GRO... <4.0
TPH DRO... <9.8
TPH MRO... <49
Combined TPH GRO/DRO/MRO... ND
Chloride... <30

NOTE:
All Concentration Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

Concentrations in **Red** Exceed the Applicable NM EMNRD Closure Criteria.

Callouts in **Gray** Denote Sample Location Removed by Excavation.

ND - Not Detected

ENSOLUM
Environmental & Hydrogeologic Consultants

Site Map with Soil Analytical Results

ENTERPRISE FIELD SERVICES LLC
QUINN 340S PIPELINE RELEASE (2018)
SE ¼, S20 T31N R8W, San Juan County, New Mexico
36.879577° N, 107.696134° W

PROJECT NUMBER: 05A1226037

FIGURE
3

APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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

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

97057-0977

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
2. Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401

Invoice Information:
N38913
PM: Howard Roddy
Pay Key: RB21200

3. Originating Site:
Quinn 340S

4. Location of Material (Street Address, City, State or ULSTR):
UL O Section 20 T31 R8W; 36.879542, -107.696093

January 2019

4. Source and Description of Waste: Hydrocarbon impacted soil from remediation activities associated with a natural gas pipeline release.

5. Estimated Volume 80 [✓ yd³] / bbls Known Volume (to be entered by the operator at the end of the haul) 60 [✓ yd³] / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME — COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, 1-10-19, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to
Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6 **Transporter:** ~~**Riley Industrial**~~. Prado Farms, HBL, West States

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status: ☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 1/7/19

SIGNATURE: TELEPHONE NO.: 505-632-0615

APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Photograph 1

View of release area.

Photograph 2

View of the excavation, facing west.

Photograph 3

View of the final excavation.

Photograph 4

View of stockpile soils.

Photograph 5

View of the final excavation after initial restoration.

APPENDIX D

Table – Soil Analytical Summary

ENSOLUM

TABLE 1
Quinn 340S (2018) Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Combined TPH GRO/DRO/MRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				10	NE	NE	NE	50				100	600
Excavation Soil Sample Removed by Excavation													
S-2	12.27.18	C	10	<0.018	<0.037	<0.037	<0.074	ND	<3.7	42	130	**172**	<30
Stockpile Composite Soil Samples													
SP-1	12.27.18	C	Stockpile	<0.021	<0.042	<0.042	<0.083	ND	<4.2	<9.9	<50	ND	40
SP-2	12.27.18	C	Stockpile	<0.023	<0.045	<0.045	<0.090	ND	<4.5	<10	<50	ND	63
SP-3	12.27.18	C	Stockpile	<0.018	<0.036	<0.036	<0.073	ND	<3.6	<9.4	<47	ND	30
SP-4	12.27.18	C	Stockpile	<0.022	<0.045	<0.045	<0.089	ND	<4.5	<9.9	<49	ND	<30
Excavation Composite Soil Samples													
S-1	12.27.18	C	0 to 10	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.8	<49	ND	<30
S-3	12.27.18	C	0 to 10	<0.023	<0.046	<0.046	<0.091	ND	<4.6	<10	<50	ND	54
S-4	12.27.18	C	10	<0.021	<0.041	<0.041	<0.083	ND	<4.1	<9.9	<50	ND	71
S-5	12.27.18	C	0 to 10	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.5	<47	ND	110
S-6	12.27.18	C	0 to 10	<0.021	<0.043	<0.043	<0.086	ND	<4.3	<9.3	<46	ND	59
S-7	1.07.19	C	11	<0.019	<0.039	<0.039	<0.077	ND	<3.9	<9.4	<47	ND	<30

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

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 Data Sheets
& Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 31, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Quinn 340S

OrderNo.: 1812E55

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/28/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812E55**
Date Reported: **12/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E55-001
Matrix: MEOH (SOIL)
Client Sample ID: SP-1
Collection Date: 12/27/2018 10:30:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	40	30		mg/Kg	20	12/28/2018 11:40:07 AM	42356
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/28/2018 11:24:13 AM	42355
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/28/2018 11:24:13 AM	42355
Surr: DNOP	90.1	50.6-138		%Rec	1	12/28/2018 11:24:13 AM	42355
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	12/28/2018 9:48:00 AM	G56652
Surr: BFB	134	73.8-119	S	%Rec	1	12/28/2018 9:48:00 AM	G56652
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.021		mg/Kg	1	12/28/2018 9:48:00 AM	B56652
Toluene	ND	0.042		mg/Kg	1	12/28/2018 9:48:00 AM	B56652
Ethylbenzene	ND	0.042		mg/Kg	1	12/28/2018 9:48:00 AM	B56652
Xylenes, Total	ND	0.083		mg/Kg	1	12/28/2018 9:48:00 AM	B56652
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	12/28/2018 9:48:00 AM	B56652

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E55-002
Matrix: MEOH (SOIL)

Client Sample ID: SP-2
Collection Date: 12/27/2018 10:35:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	63	30		mg/Kg	20	12/28/2018 11:52:32 AM	42356
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/28/2018 11:47:59 AM	42355
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/28/2018 11:47:59 AM	42355
Surr: DNOP	90.5	50.6-138		%Rec	1	12/28/2018 11:47:59 AM	42355
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	12/28/2018 10:11:51 AM	G56652
Surr: BFB	93.0	73.8-119		%Rec	1	12/28/2018 10:11:51 AM	G56652
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.023		mg/Kg	1	12/28/2018 10:11:51 AM	B56652
Toluene	ND	0.045		mg/Kg	1	12/28/2018 10:11:51 AM	B56652
Ethylbenzene	ND	0.045		mg/Kg	1	12/28/2018 10:11:51 AM	B56652
Xylenes, Total	ND	0.090		mg/Kg	1	12/28/2018 10:11:51 AM	B56652
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	12/28/2018 10:11:51 AM	B56652

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812E55**
Date Reported: **12/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E55-003
Matrix: MEOH (SOIL)
Client Sample ID: SP-3
Collection Date: 12/27/2018 10:40:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	30	30		mg/Kg	20	12/28/2018 12:04:57 PM	42356
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/28/2018 12:11:43 PM	42355
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/28/2018 12:11:43 PM	42355
Surr: DNOP	84.5	50.6-138		%Rec	1	12/28/2018 12:11:43 PM	42355
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/28/2018 11:21:05 AM	G56652
Surr: BFB	90.5	73.8-119		%Rec	1	12/28/2018 11:21:05 AM	G56652
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/28/2018 11:21:05 AM	B56652
Toluene	ND	0.036		mg/Kg	1	12/28/2018 11:21:05 AM	B56652
Ethylbenzene	ND	0.036		mg/Kg	1	12/28/2018 11:21:05 AM	B56652
Xylenes, Total	ND	0.073		mg/Kg	1	12/28/2018 11:21:05 AM	B56652
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	12/28/2018 11:21:05 AM	B56652

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E55-004
Matrix: MEOH (SOIL)
Client Sample ID: SP-4
Collection Date: 12/27/2018 10:45:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	12/28/2018 12:17:21 PM	42356
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/28/2018 12:35:29 PM	42355
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/28/2018 12:35:29 PM	42355
Surr: DNOP	89.5	50.6-138		%Rec	1	12/28/2018 12:35:29 PM	42355
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	12/28/2018 11:44:47 AM	G56652
Surr: BFB	88.6	73.8-119		%Rec	1	12/28/2018 11:44:47 AM	G56652
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.022		mg/Kg	1	12/28/2018 11:44:47 AM	B56652
Toluene	ND	0.045		mg/Kg	1	12/28/2018 11:44:47 AM	B56652
Ethylbenzene	ND	0.045		mg/Kg	1	12/28/2018 11:44:47 AM	B56652
Xylenes, Total	ND	0.089		mg/Kg	1	12/28/2018 11:44:47 AM	B56652
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	12/28/2018 11:44:47 AM	B56652

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E55**

31-Dec-18

Client: APEX TITAN
Project: Quinn 340S

Sample ID **MB-42356**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**						
Client ID: **PBS**	Batch ID: **42356**			RunNo: **56645**						
Prep Date: **12/28/2018**	Analysis Date: **12/28/2018**			SeqNo: **1896539**		Units: **mg/Kg**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42356**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**						
Client ID: **LCSS**	Batch ID: **42356**			RunNo: **56645**						
Prep Date: **12/28/2018**	Analysis Date: **12/28/2018**			SeqNo: **1896540**		Units: **mg/Kg**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Quinn 340S

Sample ID **MB-42355**		SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**				
Client ID: **PBS**		Batch ID: **42355**			RunNo: **56641**				
Prep Date: **12/28/2018**		Analysis Date: **12/28/2018**			SeqNo: **1895558**		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	9.0		10.00		90.4	50.6	138			

Sample ID **LCS-42355**		SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**				
Client ID: **LCSS**		Batch ID: **42355**			RunNo: **56641**				
Prep Date: **12/28/2018**		Analysis Date: **12/28/2018**			SeqNo: **1895559**		Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.2	70	130			
Surr: DNOP	4.4		5.000		87.5	50.6	138			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E55**

31-Dec-18

Client: APEX TITAN

Project: Quinn 340S

Sample ID **RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **G56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896127** 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	920		1000		92.2	73.8	119			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **G56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896128** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.7	80.1	123			
Surr: BFB	1000		1000		101	73.8	119			

Sample ID **1812E55-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-1** Batch ID: **G56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896129** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.2	20.80	0	99.4	77.8	128			
Surr: BFB	1200		832.0		146	73.8	119			S

Sample ID **1812E55-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-1** Batch ID: **G56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896130** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.2	20.80	0	99.2	77.8	128	0.282	20	
Surr: BFB	1200		832.0		142	73.8	119	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Quinn 340S

Sample ID **RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **B56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896133** 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	0.94		1.000		93.8	80	120			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **B56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896134** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.1	80	120			
Toluene	0.93	0.050	1.000	0	92.9	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.7	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.5	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			

Sample ID **1812E55-002AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SP-2** Batch ID: **B56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896135** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.023	0.9033	0	93.5	63.9	127			
Toluene	0.89	0.045	0.9033	0	98.0	69.9	131			
Ethylbenzene	0.89	0.045	0.9033	0	98.6	71	132			
Xylenes, Total	2.7	0.090	2.710	0	99.7	71.8	131			
Surr: 4-Bromofluorobenzene	0.92		0.9033		102	80	120			

Sample ID **1812E55-002AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SP-2** Batch ID: **B56652** RunNo: **56652**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896136** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.023	0.9033	0	89.2	63.9	127	4.73	20	
Toluene	0.84	0.045	0.9033	0	93.5	69.9	131	4.66	20	
Ethylbenzene	0.84	0.045	0.9033	0	93.4	71	132	5.34	20	
Xylenes, Total	2.6	0.090	2.710	0	94.6	71.8	131	5.26	20	
Surr: 4-Bromofluorobenzene	0.87		0.9033		96.2	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

*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: **APEX AZTEC** Work Order Number: **1812E55** RcptNo: **1**

Received By: **Jazzmine Burkhead** **12/28/2018 8:20:00 AM**

Completed By: **Erin Melendrez** **12/28/2018 8:31:51 AM**

Reviewed By: DAD 12/28/18

LB: ENM 12/28/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
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? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by:

ENM 12/28/18

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A
Aztec Nm 87410

Project Manager R Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87107
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #:

ANALYSIS REQUESTED

Lab use only
Due Date:

Temp. of coolers when received (C°): 5.4° C

1	2	3	4	5

Page 1 of 1

Sampler's Name: C D Aponti

Sampler's Signature

Proj. No.: 725040112547

Project Name: Quinn 340S

No/Type of Containers

1812E55

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	12/27/18	1030	X		SP-1	–	–				1		X	X	X	-001
S	12/27/18	1035	X		SP-2	–	–				1		X	X	X	-002
S	12/27/18	1040	X		SP-3	–	–				1		X	X	X	-003
S	12/27/18	1045	X		SP-4	–	–				1		X	X	X	-004

NES

Turn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% Rush 12-28-18

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/27/18	1603		12/27/18	1603
	12/27/18	1811		12/28/18	08:20

NOTES: Paykey # RB21200
Pm - Tom Long
Courier
AFE# N38913
*(Same Day 12-28-18)

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 31, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Quinn 340S OrderNo.: 1812E56

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/28/2018 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,

Andy

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812E56**
Date Reported: **12/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E56-001
Matrix: MEOH (SOIL)

Client Sample ID: S-1
Collection Date: 12/27/2018 10:00:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	12/28/2018 12:29:45 PM	42356
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/28/2018 11:25:43 AM	B56651
Surr: BFB	96.8	70-130		%Rec	1	12/28/2018 11:25:43 AM	B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/28/2018 10:34:26 AM	42355
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/28/2018 10:34:26 AM	42355
Surr: DNOP	97.2	50.6-138		%Rec	1	12/28/2018 10:34:26 AM	42355
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.020		mg/Kg	1	12/28/2018 11:25:43 AM	A56651
Toluene	ND	0.040		mg/Kg	1	12/28/2018 11:25:43 AM	A56651
Ethylbenzene	ND	0.040		mg/Kg	1	12/28/2018 11:25:43 AM	A56651
Xylenes, Total	ND	0.080		mg/Kg	1	12/28/2018 11:25:43 AM	A56651
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	12/28/2018 11:25:43 AM	A56651
Surr: Toluene-d8	99.8	70-130		%Rec	1	12/28/2018 11:25:43 AM	A56651

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812E56**
Date Reported: **12/31/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E56-002
Matrix: MEOH (SOIL)

Client Sample ID: S-2
Collection Date: 12/27/2018 10:05:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	12/28/2018 12:42:10 PM	42356
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/28/2018 11:54:17 AM	B56651
Surr: BFB	97.2	70-130		%Rec	1	12/28/2018 11:54:17 AM	B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	42	9.6		mg/Kg	1	12/28/2018 10:56:30 AM	42355
Motor Oil Range Organics (MRO)	130	48		mg/Kg	1	12/28/2018 10:56:30 AM	42355
Surr: DNOP	90.1	50.6-138		%Rec	1	12/28/2018 10:56:30 AM	42355
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.018		mg/Kg	1	12/28/2018 11:54:17 AM	A56651
Toluene	ND	0.037		mg/Kg	1	12/28/2018 11:54:17 AM	A56651
Ethylbenzene	ND	0.037		mg/Kg	1	12/28/2018 11:54:17 AM	A56651
Xylenes, Total	ND	0.074		mg/Kg	1	12/28/2018 11:54:17 AM	A56651
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/28/2018 11:54:17 AM	A56651
Surr: Toluene-d8	96.9	70-130		%Rec	1	12/28/2018 11:54:17 AM	A56651

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **12/31/2018**

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E56-003
Matrix: MEOH (SOIL)
Client Sample ID: S-3
Collection Date: 12/27/2018 10:10:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	54	30		mg/Kg	20	12/28/2018 1:19:23 PM	42356
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/28/2018 12:22:50 PM	B56651
Surr: BFB	98.6	70-130		%Rec	1	12/28/2018 12:22:50 PM	B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/28/2018 11:18:29 AM	42355
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/28/2018 11:18:29 AM	42355
Surr: DNOP	86.8	50.6-138		%Rec	1	12/28/2018 11:18:29 AM	42355
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	12/28/2018 12:22:50 PM	A56651
Toluene	ND	0.046		mg/Kg	1	12/28/2018 12:22:50 PM	A56651
Ethylbenzene	ND	0.046		mg/Kg	1	12/28/2018 12:22:50 PM	A56651
Xylenes, Total	ND	0.091		mg/Kg	1	12/28/2018 12:22:50 PM	A56651
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	12/28/2018 12:22:50 PM	A56651
Surr: Toluene-d8	98.1	70-130		%Rec	1	12/28/2018 12:22:50 PM	A56651

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E56-004

Matrix: MEOH (SOIL)

Client Sample ID: S-4
Collection Date: 12/27/2018 10:15:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	71	30		mg/Kg	20	12/28/2018 1:31:48 PM	42356
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	12/28/2018 12:51:21 PM	B56651
Surr: BFB	98.3	70-130		%Rec	1	12/28/2018 12:51:21 PM	B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/28/2018 11:40:37 AM	42355
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/28/2018 11:40:37 AM	42355
Surr: DNOP	77.9	50.6-138		%Rec	1	12/28/2018 11:40:37 AM	42355
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.021		mg/Kg	1	12/28/2018 12:51:21 PM	A56651
Toluene	ND	0.041		mg/Kg	1	12/28/2018 12:51:21 PM	A56651
Ethylbenzene	ND	0.041		mg/Kg	1	12/28/2018 12:51:21 PM	A56651
Xylenes, Total	ND	0.083		mg/Kg	1	12/28/2018 12:51:21 PM	A56651
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	12/28/2018 12:51:21 PM	A56651
Surr: Toluene-d8	95.9	70-130		%Rec	1	12/28/2018 12:51:21 PM	A56651

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	Value above quantitation range
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 Quanitative Limit		RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **12/31/2018**

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E56-005
Matrix: MEOH (SOIL)

Client Sample ID: S-5
Collection Date: 12/27/2018 10:20:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	110	30		mg/Kg	20	12/28/2018 1:44:13 PM	42356
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/28/2018 1:20:01 PM	B56651
Surr: BFB	96.5	70-130		%Rec	1	12/28/2018 1:20:01 PM	B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/28/2018 12:02:37 PM	42355
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/28/2018 12:02:37 PM	42355
Surr: DNOP	76.5	50.6-138		%Rec	1	12/28/2018 12:02:37 PM	42355
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.023		mg/Kg	1	12/28/2018 1:20:01 PM	A56651
Toluene	ND	0.047		mg/Kg	1	12/28/2018 1:20:01 PM	A56651
Ethylbenzene	ND	0.047		mg/Kg	1	12/28/2018 1:20:01 PM	A56651
Xylenes, Total	ND	0.093		mg/Kg	1	12/28/2018 1:20:01 PM	A56651
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	12/28/2018 1:20:01 PM	A56651
Surr: Toluene-d8	96.7	70-130		%Rec	1	12/28/2018 1:20:01 PM	A56651

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: Quinn 340S
Lab ID: 1812E56-006

Matrix: MEOH (SOIL)

Client Sample ID: S-6
Collection Date: 12/27/2018 10:25:00 AM
Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	59	30		mg/Kg	20	12/28/2018 1:56:38 PM	42356
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	12/28/2018 1:48:45 PM	B56651
Surr: BFB	100	70-130		%Rec	1	12/28/2018 1:48:45 PM	B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/28/2018 1:08:42 PM	42355
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/28/2018 1:08:42 PM	42355
Surr: DNOP	73.8	50.6-138		%Rec	1	12/28/2018 1:08:42 PM	42355
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.021		mg/Kg	1	12/28/2018 1:48:45 PM	A56651
Toluene	ND	0.043		mg/Kg	1	12/28/2018 1:48:45 PM	A56651
Ethylbenzene	ND	0.043		mg/Kg	1	12/28/2018 1:48:45 PM	A56651
Xylenes, Total	ND	0.086		mg/Kg	1	12/28/2018 1:48:45 PM	A56651
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/28/2018 1:48:45 PM	A56651
Surr: Toluene-d8	95.7	70-130		%Rec	1	12/28/2018 1:48:45 PM	A56651

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Quinn 340S

Sample ID **MB-42356** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **42356** RunNo: **56645**

Prep Date: **12/28/2018** Analysis Date: **12/28/2018** SeqNo: **1896539** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42356** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **42356** RunNo: **56645**

Prep Date: **12/28/2018** Analysis Date: **12/28/2018** SeqNo: **1896540** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E56**
31-Dec-18

Client: APEX TITAN
Project: Quinn 340S

Sample ID **MB-42355** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42355** RunNo: **56641**
Prep Date: **12/28/2018** Analysis Date: **12/28/2018** SeqNo: **1895558** 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	9.0		10.00		90.4	50.6	138			

Sample ID **LCS-42355** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42355** RunNo: **56641**
Prep Date: **12/28/2018** Analysis Date: **12/28/2018** SeqNo: **1895559** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.2	70	130			
Surr: DNOP	4.4		5.000		87.5	50.6	138			

Sample ID **1812E56-006AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-6** Batch ID: **42355** RunNo: **56647**
Prep Date: **12/28/2018** Analysis Date: **12/28/2018** SeqNo: **1895651** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.3	46.60	0	99.8	53.5	126	5.86	21.7	
Surr: DNOP	3.1		4.660		67.1	50.6	138	0	0	

Sample ID **1812E56-006AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-6** Batch ID: **42355** RunNo: **56647**
Prep Date: **12/28/2018** Analysis Date: **12/28/2018** SeqNo: **1895652** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	49.90	0	98.8	53.5	126			
Surr: DNOP	3.3		4.990		66.6	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E56**

31-Dec-18

Client: APEX TITAN
Project: Quinn 340S

Sample ID **100ng lcs**		SampType: **LCS**			TestCode: **EPA Method 8260B: Volatiles Short List**					
Client ID: **LCSS**		Batch ID: **A56651**			RunNo: **56651**					
Prep Date:		Analysis Date: **12/28/2018**			SeqNo: **1895685**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.9	70	130			
Toluene	0.89	0.050	1.000	0	88.6	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.4	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.49		0.5000		97.9	70	130			
Surr: Toluene-d8	0.48		0.5000		96.1	70	130			

Sample ID **rb**		SampType: **MBLK**			TestCode: **EPA Method 8260B: Volatiles Short List**					
Client ID: **PBS**		Batch ID: **A56651**			RunNo: **56651**					
Prep Date:		Analysis Date: **12/28/2018**			SeqNo: **1895693**		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: 1,2-Dichloroethane-d4	0.47		0.5000		94.7	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.4	70	130			
Surr: Dibromofluoromethane	0.49		0.5000		98.7	70	130			
Surr: Toluene-d8	0.49		0.5000		97.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E56**

31-Dec-18

Client: APEX TITAN
Project: Quinn 340S

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **B56651** RunNo: **56651**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1895702** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	70	130			
Surr: BFB	490		500.0		98.8	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **B56651** RunNo: **56651**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1895703** 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	490		500.0		98.8	70	130			

Sample ID **1812e56-001ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-1** Batch ID: **B56651** RunNo: **56651**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896232** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.0	20.02	0	94.5	68.2	135			
Surr: BFB	380		400.3		95.8	70	130			

Sample ID **1812e56-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-1** Batch ID: **B56651** RunNo: **56651**
Prep Date: Analysis Date: **12/28/2018** SeqNo: **1896233** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.0	20.02	0	88.4	68.2	135	6.60	20	
Surr: BFB	380		400.3		95.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **APEX AZTEC** Work Order Number: **1812E56** RcptNo: **1**

Received By: **Jazzmine Burkhead** **12/28/2018 8:20:00 AM**

Completed By: **Erin Melendrez** **12/28/2018 8:37:09 AM**

Reviewed By: DAD 12/28/18

LB: ENM 12/28/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
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? Yes ☑ No ☐
    (If no, notify customer for authorization.)

\# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by:

ENM 12/28/18

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87107
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 5.4°C

1	2	3	4	5

Page 1 of 1

Sampler's Name: C DAponti

Sampler's Signature:

Proj. No. 725040112547

Project Name: Quinn 340S

No/Type of Containers

1812E56

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH/GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	12/27/18	1000	X		S-1	0	10				1		X	X	X	-001
S	12/27/18	1005	X		S-2	0	10				1		X	X	X	-002
S	12/27/18	1010	X		S-3	0	10				1		X	X	X	-003
S	12/27/18	1015	X		S-4	0	10				1		X	X	X	-004
S	12/27/18	1020	X		S-5	0	10				1		X	X	X	-005
S	12/27/18	1025	X		S-6	0	10				1		X	X	X	-006

ZRS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12-27-18	1603		12/27/18	1603
	12/27/18	1811	Jazzmine Burkhead	12/28/18	08:20

NOTES: Pay key # RB21200
Courier PM Tom Long
AFE # N38913
*(Same day 12-28-18)

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 ______

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

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

January 09, 2019

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Quinn 340 S OrderNo.: 1901185

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/8/2019 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Quinn 340 S
Lab ID: 1901185-001
Matrix: SOIL
Client Sample ID: S-7
Collection Date: 1/7/2019 12:00:00 PM
Received Date: 1/8/2019 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	1/8/2019 11:57:09 AM	42483
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	1/8/2019 10:37:00 AM	A56828
Surr: BFB	96.6	70-130		%Rec	1	1/8/2019 10:37:00 AM	A56828
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/8/2019 10:08:09 AM	42481
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/8/2019 10:08:09 AM	42481
Surr: DNOP	100	50.6-138		%Rec	1	1/8/2019 10:08:09 AM	42481
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.019		mg/Kg	1	1/8/2019 10:37:00 AM	R56828
Toluene	ND	0.039		mg/Kg	1	1/8/2019 10:37:00 AM	R56828
Ethylbenzene	ND	0.039		mg/Kg	1	1/8/2019 10:37:00 AM	R56828
Xylenes, Total	ND	0.077		mg/Kg	1	1/8/2019 10:37:00 AM	R56828
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	1/8/2019 10:37:00 AM	R56828
Surr: Toluene-d8	106	70-130		%Rec	1	1/8/2019 10:37:00 AM	R56828

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901185**

09-Jan-19

Client: APEX TITAN

Project: Quinn 340 S

Sample ID **MB-42483**		SampType: **mblk**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **PBS**		Batch ID: **42483**			RunNo: **56829**					
Prep Date: **1/8/2019**		Analysis Date: **1/8/2019**			SeqNo: **1902729**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42483**		SampType: **lcs**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **LCSS**		Batch ID: **42483**			RunNo: **56829**					
Prep Date: **1/8/2019**		Analysis Date: **1/8/2019**			SeqNo: **1902730**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1901185**

Hall Environmental Analysis Laboratory, Inc.

09-Jan-19

Client: APEX TITAN
Project: Quinn 340 S

Sample ID **MB-42481** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42481** RunNo: **56822**
Prep Date: **1/8/2019** Analysis Date: **1/8/2019** SeqNo: **1902031** 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	10		10.00		101	50.6	138			

Sample ID **LCS-42481** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42481** RunNo: **56822**
Prep Date: **1/8/2019** Analysis Date: **1/8/2019** SeqNo: **1902039** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.6	70	130			
Surr: DNOP	4.7		5.000		93.6	50.6	138			

Sample ID **1901185-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-7** Batch ID: **42481** RunNo: **56822**
Prep Date: **1/8/2019** Analysis Date: **1/8/2019** SeqNo: **1902178** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33	9.5	47.71	0	69.1	53.5	126			
Surr: DNOP	3.2		4.771		66.1	50.6	138			

Sample ID **1901185-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-7** Batch ID: **42481** RunNo: **56822**
Prep Date: **1/8/2019** Analysis Date: **1/8/2019** SeqNo: **1902179** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.6	48.17	0	104	53.5	126	41.3	21.7	R
Surr: DNOP	4.7		4.817		96.9	50.6	138	0	0	

Sample ID **LCS-42474** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42474** RunNo: **56822**
Prep Date: **1/7/2019** Analysis Date: **1/8/2019** SeqNo: **1902180** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.4	50.6	138			

Sample ID **MB-42474** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42474** RunNo: **56822**
Prep Date: **1/7/2019** Analysis Date: **1/8/2019** SeqNo: **1902181** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1901185**

Hall Environmental Analysis Laboratory, Inc.

09-Jan-19

Client: APEX TITAN
Project: Quinn 340 S

Sample ID	**MB-42474**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**PBS**	Batch ID:	**42474**	RunNo:	**56822**
Prep Date:	**1/7/2019**	Analysis Date:	**1/8/2019**	SeqNo:	**1902181** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		99.7	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901185**
09-Jan-19

Client: APEX TITAN
Project: Quinn 340 S

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **R56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902115** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.7	70	130			
Toluene	0.91	0.050	1.000	0	90.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.55		0.5000		109	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		109	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **R56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902117** 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: 1,2-Dichloroethane-d4	0.53		0.5000		107	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		107	70	130			
Surr: Toluene-d8	0.54		0.5000		107	70	130			

Sample ID **1901185-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-7** Batch ID: **R56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902481** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.64	0.019	0.7716	0	83.3	68.9	131			
Toluene	0.59	0.039	0.7716	0	76.4	64.3	137			
Surr: 1,2-Dichloroethane-d4	0.41		0.3858		107	70	130			
Surr: 4-Bromofluorobenzene	0.40		0.3858		104	70	130			
Surr: Dibromofluoromethane	0.42		0.3858		109	70	130			
Surr: Toluene-d8	0.39		0.3858		100	70	130			

Sample ID **1901185-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-7** Batch ID: **R56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902482** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.62	0.019	0.7716	0	79.9	68.9	131	4.15	20	
Toluene	0.59	0.039	0.7716	0	76.1	64.3	137	0.341	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: Quinn 340 S

Sample ID **1901185-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **S-7** Batch ID: **R56828** RunNo: **56828**

Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902482** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.42		0.3858		110	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.39		0.3858		100	70	130	0	0	
Surr: Dibromofluoromethane	0.42		0.3858		109	70	130	0	0	
Surr: Toluene-d8	0.39		0.3858		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901185**
09-Jan-19

Client: APEX TITAN
Project: Quinn 340 S

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **A56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902121** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	70	130			
Surr: BFB	490		500.0		98.4	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **A56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902122** 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	490		500.0		97.0	70	130			

Sample ID **1901185-001ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-7** Batch ID: **A56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902479** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.9	19.29	0	104	68.2	135			
Surr: BFB	370		385.8		95.6	70	130			

Sample ID **1901185-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-7** Batch ID: **A56828** RunNo: **56828**
Prep Date: Analysis Date: **1/8/2019** SeqNo: **1902480** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.9	19.29	0	104	68.2	135	0.193	20	
Surr: BFB	380		385.8		98.6	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC Work Order Number: 1901185 RcptNo: 1

Received By: Anne Thorne 1/8/2019 8:25:00 AM
Completed By: Anne Thorne 1/8/2019 8:31:37 AM
Reviewed By: ENM 1/8/19
Labeled by: AT 01/08/19

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° 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.	VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
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: ________

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S. Rio Grande Suit A
Aztec Nm 87410
Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque Nm 87109
Contact: A Freeman
Phone: 505 345 3975
PO/SO #:

ANALYSIS REQUESTED

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.4C
[✓ 1] 2 3 4 5
Page 1 of 1

Sampler's Name: C D Aponti
Sampler's Signature:

Proj. No.: 7050402547
Project Name: Quinn 340S

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	1-7-19	1200	✓		S-7	~	11				1		X	X	X	1901185-001

NKS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	1-7-19	1520		1/7/19	1520
Matt Walt	1/7/19	1754		01/08/19	0825

NOTES: Pay Key RB 21200
Pm - Tom Long
AFE # N38913
(Same Day 1-8-19)

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 ____

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	

NMOCD
MAR 18 2019
DISTRICT III

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NVF1900853403**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude 36.987093 Longitude -107.875699 *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **MD 7 Loop**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/4/2018**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
E	15	32N	10W	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 10-12 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **36.90 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On December 4, 2018, Enterprise dispatched a technician to investigate a possible leak on the MD-7 Loop pipeline. The leak was confirmed and the pipeline was isolated, depressurized, locked out and tagged out. No fluids were observed on the ground surface. Enterprise determined this release reportable per NMOCD regulation on December 17, 2018 by the volume of impacted subsurface soil. This release is required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX and 100 ppm TPH). Repairs and remediation were completed on December 17, 2018. The final excavation dimensions measured approximately 21 feet long by 9 feet wide by 13 feet deep. Approximately 212 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

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Form C-141
Page 2

State of New Mexico
Oil Conservation Division

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: Jon E. Fields Title: Director, Field Environmental

Signature: Date: 3-8-19

email: jefields@eprod.com Telephone: 713-381-6595

OCD Only

Received by: Date: 3/18/2019

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: 3/18/2019

Printed Name: Vanessa Fields Title: Environmental Specialist

ENSOLUM

CLOSURE REPORT

Property:

MD-7 Loop Pipeline Release (2018)
NW ¼, S15 T32N R10W
San Juan County, New Mexico

February 28, 2019
Ensolum Project No. 05A1226035

Prepared for:

Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Chad D'Aponti
Staff Scientist

Kyle Summers, CPG
Sr. Project Manager

Ensolum, LLC | Environmental & Hydrogeologic Consultants
606 South Rio Grande, Suite A | Aztec, NM 87410 | ensolum.com

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CLOSURE REPORT

MD-7 Loop Pipeline Release (2018)
NW ¼, S15 T32N R10W
San Juan County, New Mexico

Ensolum Project No. 05A1226035

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	MD-7 Loop Pipeline Release (2018) (Site)
Location:	36.9871° North, 107.8758° West Northwest (NW) ¼ of Section 15, Township 32 North, Range 10 West San Juan County, New Mexico
Property:	Private Property
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On December 4, 2018, a release of natural gas occurred from the MD-7 Loop pipeline. On December 17, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service.

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.

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.

- Numerous Points of Diversion were identified within a half mile of the Site on the OSE Water Rights Reporting System (WRSS) database. The closest POD (SJ01153), appears to be located approximately 500 feet from the Site, and indicates depth to water at 47 feet below grade surface (bgs). The location of this well was not ground verified.

- One (1) cathodic-protection well (Bonds #1A (Unit D, Sec 15 T32N R10W)) was identified on the New Mexico EMNRD OCD imaging databased is located approximately 982 feet north of the Site at an elevation approximately 33 feet higher than the site and indicates a depth to water of 200 feet bgs.
- 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 located within 300 feet from a permanent residence, school, hospital, institution or church. The Site is located approximately 100 feet southwest of a permanent residence.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were 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.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

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

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

3.0 SOIL REMEDIATION ACTIVITIES

On December 17, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service. During the pipeline repair and corrective action activities West States Energy Contactors, Inc, provided heavy equipment and labor support, while Apex Companies, LLC (Apex) provided environmental consulting support.

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

The final excavation measured approximately 21 feet long by nine (9) feet wide at the maximum extents. The maximum depth of the final excavation measured approximately 13 feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated sandy silty clay and cobbles.

A total of approximately 212 cubic yards (cy) of petroleum hydrocarbon affected soils and 120 barrels (bbls) of hydro-excavation cuttings and water were transported to the Industrial Ecosystems, Inc. (IEI) landfarm on Crouch Mesa near Aztec, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation was backfilled with imported fill and then contoured to surrounding grade.

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**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Based on information supplied by Enterprise, Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of four (4) composite soil samples (S-1 through S-4) from the sidewalls and the base of the final excavation for laboratory analysis. Soils associated with composite soil sample S-1 exhibited COC concentrations above the applicable New Mexico EMNRD OCD standard. These soils were removed by excavation and transported to the IEI landfarm for disposal/remediation. A New Mexico EMNRD OCD representative was on Site during the final confirmation sampling event.

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 the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/#8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, 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 BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with composite soil samples (S-2 through S-4) to the New Mexico EMNRD OCD closure criteria. Soils associated with composite soil sample S-1 were removed from the Site and transported to IEI landfarm for disposal/remediation. As a result, composite soil sample S-1 is not included in the following discussion.

- Laboratory analytical results indicate benzene concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate that total BTEX concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- Laboratory analytical results indicate combined TPH GRO/DRO/MRO concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical results of composite soil samples S-2 through S-4, collected from soil remaining in place, indicate chloride concentrations ranging from 32 mg/kg (S-2) to 160 mg/kg (S-3); these concentrations are below the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

7.0 RECLAMATION AND RE-VEGETATION

The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to the surrounding grade. Enterprise will re-seed the Site with a BLM Farmington Field Office approved seeding mixture at the beginning of the next favorable growing season.

8.0 FINDINGS AND RECOMMENDATION

On December 4, 2018, a release of natural gas occurred from the MD-7 Loop pipeline. On December 17, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service.

- 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.
- Prior to backfilling, four (4) composite soil samples were collected from the final excavation for laboratory analysis. Based on soil laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.
- A total of approximately 212 cubic yards of petroleum hydrocarbon affected soils and 120 bbls of hydro-excavation cuttings and water were transported to the IEI landfarm on Crouch Mesa near

Aztec, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and then contoured to surrounding grade.

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 Additional Limitations

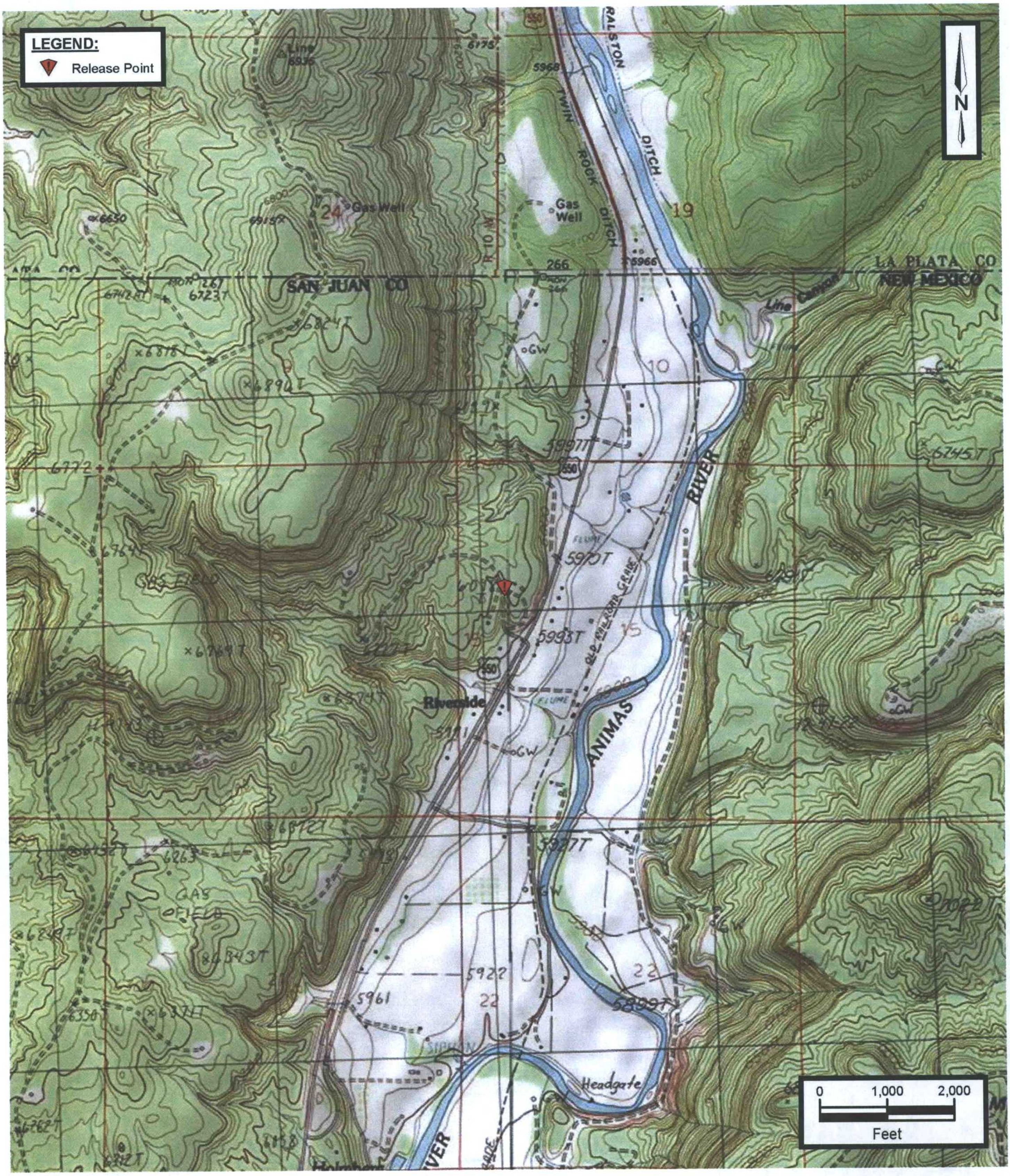
Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

9.3 Reliance

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

APPENDIX A

Figures



ENSOLUM
Environmental & Hydrogeologic Consultants

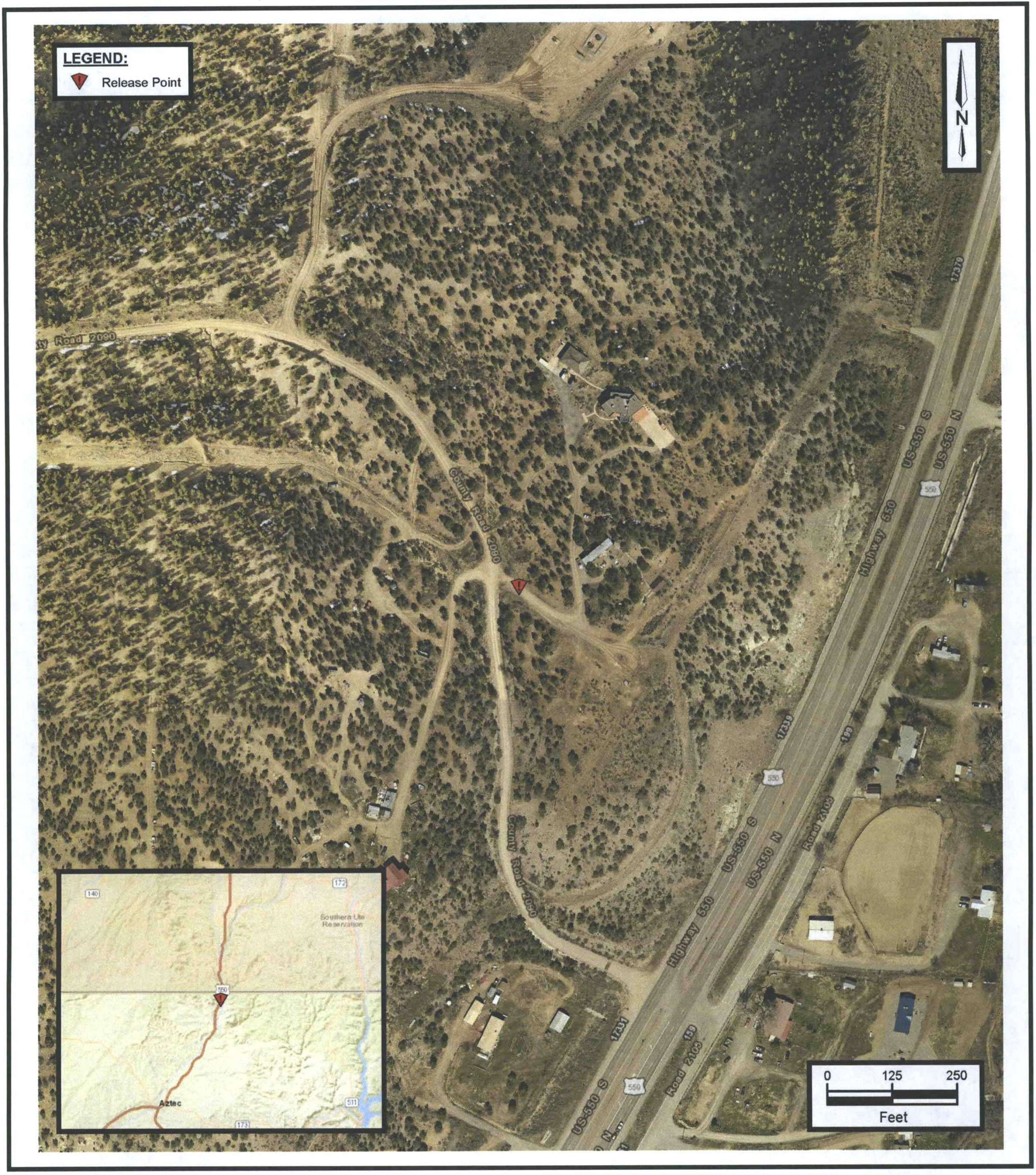
Topographic Map

ENTERPRISE FIELD SERVICES LLC
MD-7 LOOP (2018)
NW ¼, S15 T32N R10W, San Juan County, New Mexico
36.9871° N, 107.8758° W

PROJECT NUMBER: 05A1226035

FIGURE

1



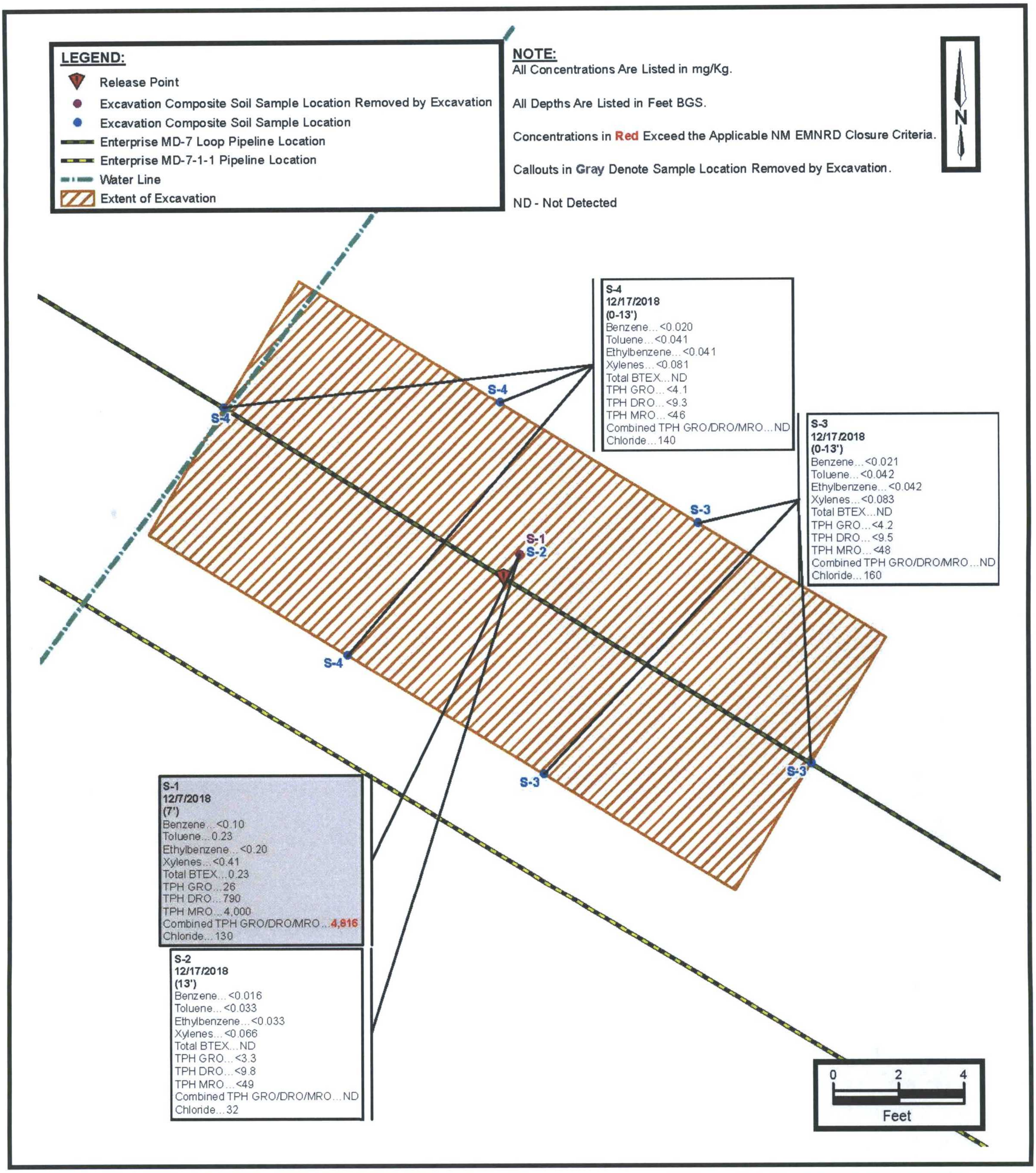
ENSOLUM
Environmental & Hydrogeologic Consultants

Site Vicinity Map

ENTERPRISE FIELD SERVICES LLC
MD-7 LOOP (2018)
NW ¼, S15 T32N R10W, San Juan County, New Mexico
36.9871° N, 107.8758° W

PROJECT NUMBER: 05A1226035

FIGURE
2



LEGEND:

- 🔻 Release Point
- ● Excavation Composite Soil Sample Location Removed by Excavation
- ● Excavation Composite Soil Sample Location
- Enterprise MD-7 Loop Pipeline Location
- Enterprise MD-7-1-1 Pipeline Location
- Water Line
- ▨ Extent of Excavation

NOTE:

All Concentrations Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

Concentrations in Red Exceed the Applicable NM EMNRD Closure Criteria.

Callouts in Gray Denote Sample Location Removed by Excavation.

ND - Not Detected

S-4
12/17/2018
(0-13')
Benzene...<0.020
Toluene...<0.041
Ethylbenzene...<0.041
Xylenes...<0.081
Total BTEX...ND
TPH GRO...<4.1
TPH DRO...<9.3
TPH MRO...<46
Combined TPH GRO/DRO/MRO...ND
Chloride...140

S-3
12/17/2018
(0-13')
Benzene...<0.021
Toluene...<0.042
Ethylbenzene...<0.042
Xylenes...<0.083
Total BTEX...ND
TPH GRO...<4.2
TPH DRO...<9.5
TPH MRO...<48
Combined TPH GRO/DRO/MRO...ND
Chloride...160

S-1
12/7/2018
(7')
Benzene...<0.10
Toluene...0.23
Ethylbenzene...<0.20
Xylenes...<0.41
Total BTEX...0.23
TPH GRO...26
TPH DRO...790
TPH MRO...4,000
Combined TPH GRO/DRO/MRO...4,816
Chloride...130

S-2
12/17/2018
(13')
Benzene...<0.016
Toluene...<0.033
Ethylbenzene...<0.033
Xylenes...<0.066
Total BTEX...ND
TPH GRO...<3.3
TPH DRO...<9.8
TPH MRO...<49
Combined TPH GRO/DRO/MRO...ND
Chloride...32

ENSOLUM
Environmental & Hydrogeologic Consultants

Site Map with Soil Analytical Results

ENTERPRISE FIELD SERVICES LLC
MD-7 LOOP (2018)
NW ¼, S15 T32N R10W, San Juan County, New Mexico
36.9871° N, 107.8758° W

PROJECT NUMBER: 05A1226035

FIGURE
3

APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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
220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Res
Oil Conservation Divisior
1220 South St. Francis Dr.
Santa Fe, NM 87505

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MD-7 Loop

12/18/18-92 yd
12/17/18- 120 yd
~~12/7/18-25 bbl~~
12/6/18- 50 bbl

3. Location of Material (Street Address, City, State or ULSTR):
Unit E Section 15 T 32 N R 10 W, San Juan County, NM; 36.987093, -107.875699

4. Source and Description of Waste:
Source: Hydro excavation Spoils from a Leak from a Natural Gas Gathering Line
Description: Soil impacted with Natural Gas Liquids (Condensate and Water)
Estimated Volume 100 yd³ / [✓ bbls] Known Volume (to be entered by the operator at the end of the haul) 45 yd³ / [✓ bbls]

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☒ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long 12-5-18, representative for Enterprise Products Operating authorizes IEI, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, Barbara N., representative for IEI, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Riley Industrial

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * **Permit #: NM 01-0010B**
Address of Facility: **#49 CR 2150 Aztec, New Mexico**

CL-792
pn-7

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Barbara Walkers TITLE: Clerk DATE: 12/5/18
SIGNATURE: BWalkers TELEPHONE NO.: 505-632-1782
Surface Waste Management Facility Authorized Agent

12/5/18

APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Photograph 1

Photograph Description: View of the in-process excavation activities.

Photograph 2

Photograph Description: View of the excavation.

Photograph 3

Photograph Description: View of the excavation.

Photograph 4

Photograph Description: View of the excavation.

Photograph 5

Photograph Description: View of the final excavation being backfilled.

APPENDIX D

Table 1 – Soil Analytical Summary

TABLE 1
MD-7 Loop Pipeline Release (2018)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Combined TPH GRO/DRO/MRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Excavation Soil Sample Removed by Excavation													
S-1	12.07.18	C	7	<0.10	0.23	<0.20	<0.41	0.23	26	790	4,000	**4,816**	130
Excavation Composite Soil Samples													
S-2	12.17.18	C	13	<0.016	<0.033	<0.033	<0.066	ND	<3.3	<9.8	<49	ND	32
S-3	12.17.18	C	0 to 13	<0.021	<0.042	<0.042	<0.083	ND	<4.2	<9.5	<48	ND	160
S-4	12.17.18	C	0 to 13	<0.020	<0.041	<0.041	<0.081	ND	<4.1	<9.3	<46	ND	140

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

Appendix E

Laboratory Data Sheets & Chain of Custody Documentation

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

December 12, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: MD 7 Loop

OrderNo.: 1812437

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/8/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812437**
Date Reported: **12/12/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: MD 7 Loop
Lab ID: 1812437-001

Matrix: MEOH (SOIL)

Client Sample ID: S-1
Collection Date: 12/7/2018 2:00:00 PM
Received Date: 12/8/2018 1:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	130	30		mg/Kg	20	12/10/2018 12:13:31 PM	42000
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	26	20		mg/Kg	5	12/10/2018 11:15:20 AM	A56208
Surr: BFB	97.8	70-130		%Rec	5	12/10/2018 11:15:20 AM	A56208
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	790	98		mg/Kg	10	12/10/2018 10:32:29 AM	41992
Motor Oil Range Organics (MRO)	4000	490		mg/Kg	10	12/10/2018 10:32:29 AM	41992
Surr: DNOP	0	50.6-138	S	%Rec	10	12/10/2018 10:32:29 AM	41992
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.10		mg/Kg	5	12/10/2018 11:15:20 AM	C56208
Toluene	0.23	0.20		mg/Kg	5	12/10/2018 11:15:20 AM	C56208
Ethylbenzene	ND	0.20		mg/Kg	5	12/10/2018 11:15:20 AM	C56208
Xylenes, Total	ND	0.41		mg/Kg	5	12/10/2018 11:15:20 AM	C56208
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	5	12/10/2018 11:15:20 AM	C56208
Surr: Toluene-d8	106	70-130		%Rec	5	12/10/2018 11:15:20 AM	C56208

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1812437**

Hall Environmental Analysis Laboratory, Inc.

12-Dec-18

Client: APEX TITAN
Project: MD 7 Loop

Sample ID **MB-42000** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **42000** RunNo: **56209**
Prep Date: **12/10/2018** Analysis Date: **12/10/2018** SeqNo: **1878477** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42000** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **42000** RunNo: **56209**
Prep Date: **12/10/2018** Analysis Date: **12/10/2018** SeqNo: **1878479** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812437**

12-Dec-18

Client: APEX TITAN

Project: MD 7 Loop

Sample ID **LCS-41992**		SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**				
Client ID: **LCSS**		Batch ID: **41992**			RunNo: **56213**				
Prep Date: **12/10/2018**		Analysis Date: **12/10/2018**			SeqNo: **1877826**		Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.7	70	130			
Surr: DNOP	4.4		5.000		87.1	50.6	138			

Sample ID **MB-41992**		SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**				
Client ID: **PBS**		Batch ID: **41992**			RunNo: **56213**				
Prep Date: **12/10/2018**		Analysis Date: **12/10/2018**			SeqNo: **1877827**		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	9.0		10.00		90.3	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812437**

12-Dec-18

Client: APEX TITAN

Project: MD 7 Loop

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **C56208** RunNo: **56208**
Prep Date: Analysis Date: **12/10/2018** SeqNo: **1877678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.3	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		106	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.2	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.52		0.5000		105	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **C56208** RunNo: **56208**
Prep Date: Analysis Date: **12/10/2018** SeqNo: **1877680** 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: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.9	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		103	70	130			
Surr: Toluene-d8	0.54		0.5000		108	70	130			

Sample ID **LCS-41968** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **41968** RunNo: **56208**
Prep Date: **12/7/2018** Analysis Date: **12/10/2018** SeqNo: **1878755** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		109	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.9	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		109	70	130			
Surr: Toluene-d8	0.52		0.5000		105	70	130			

Sample ID **MB-41968** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **41968** RunNo: **56208**
Prep Date: **12/7/2018** Analysis Date: **12/10/2018** SeqNo: **1878756** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.9	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.53		0.5000		106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812437**

12-Dec-18

Client: APEX TITAN

Project: MD 7 Loop

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **LCSS** Batch ID: **A56208** RunNo: **56208**

Prep Date: Analysis Date: **12/10/2018** SeqNo: **1877675** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	70	130			
Surr: BFB	480		500.0		95.7	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **PBS** Batch ID: **A56208** RunNo: **56208**

Prep Date: Analysis Date: **12/10/2018** SeqNo: **1877676** 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	480		500.0		96.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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: **APEX AZTEC**   Work Order Number: **1612437**   RcptNo: **1**

Received By: **Andy Freeman**   **12/8/2016 1:30:00 PM**

Completed By: **Isaiah Ortiz**   **12/10/2016 8:21:47 AM**

Reviewed By: JAB 12/10/18

LB: ENM 12/10/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)
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? Yes ☑ No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: ______ (<2 or >12 unless noted)
Adjusted? ______
Checked by: ______

ENM 12/10/18

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 ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A
Aztec NM 87410
Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87107
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #:

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.7 C

1	2	3	4	5

Page 1 of 1

Sampler's Name: C DAponti
Sampler's Signature:

Proj. No.:
Project Name: MD-7 Loop

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300							Lab Sample ID (Lab Use Only)
S	12-7-18	1400	X		S-1	—	7				1		X	X	X							1812437-001

Turn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% Rush 12-10-18

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12-7-18	1545		12/7/18	1545
	12/7/18	1620		12/7/18	1620
	12/7/18	1747		12/8/18	1330

NOTES:
Pay Key # RB 21200
PM - Tom Long
(Same Day 12-10-18)

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

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

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

December 19, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: MD-7 LOOP 2018 OrderNo.: 1812982

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/18/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812982**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **12/19/2018**

CLIENT:	APEX TITAN	**Client Sample ID:**	S-4
Project:	MD-7 LOOP 2018	**Collection Date:**	12/17/2018 2:00:00 PM
Lab ID:	1812982-001 **Matrix:** SOIL	**Received Date:**	12/18/2018 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	140	30		mg/Kg	20	12/18/2018 10:48:59 AM	42165
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	12/18/2018 10:49:31 AM	B56420
Surr: BFB	91.4	70-130		%Rec	1	12/18/2018 10:49:31 AM	B56420
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/18/2018 10:30:16 AM	42163
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/18/2018 10:30:16 AM	42163
Surr: DNOP	78.9	50.6-138		%Rec	1	12/18/2018 10:30:16 AM	42163
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	12/18/2018 10:49:31 AM	A56420
Toluene	ND	0.041		mg/Kg	1	12/18/2018 10:49:31 AM	A56420
Ethylbenzene	ND	0.041		mg/Kg	1	12/18/2018 10:49:31 AM	A56420
Xylenes, Total	ND	0.081		mg/Kg	1	12/18/2018 10:49:31 AM	A56420
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	12/18/2018 10:49:31 AM	A56420
Surr: Toluene-d8	99.0	70-130		%Rec	1	12/18/2018 10:49:31 AM	A56420

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **12/19/2018**

CLIENT: APEX TITAN
Project: MD-7 LOOP 2018
Lab ID: 1812982-002
Matrix: SOIL
Client Sample ID: S-2
Collection Date: 12/17/2018 2:05:00 PM
Received Date: 12/18/2018 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	32	30		mg/Kg	20	12/18/2018 11:01:23 AM	42165
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/18/2018 11:18:10 AM	B56420
Surr: BFB	91.9	70-130		%Rec	1	12/18/2018 11:18:10 AM	B56420
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/18/2018 10:52:13 AM	42163
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2018 10:52:13 AM	42163
Surr: DNOP	95.5	50.6-138		%Rec	1	12/18/2018 10:52:13 AM	42163
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.016		mg/Kg	1	12/18/2018 11:18:10 AM	A56420
Toluene	ND	0.033		mg/Kg	1	12/18/2018 11:18:10 AM	A56420
Ethylbenzene	ND	0.033		mg/Kg	1	12/18/2018 11:18:10 AM	A56420
Xylenes, Total	ND	0.066		mg/Kg	1	12/18/2018 11:18:10 AM	A56420
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	12/18/2018 11:18:10 AM	A56420
Surr: Toluene-d8	98.7	70-130		%Rec	1	12/18/2018 11:18:10 AM	A56420

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812982**
Date Reported: **12/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: MD-7 LOOP 2018
Lab ID: 1812982-003
Matrix: SOIL

Client Sample ID: S-3
Collection Date: 12/17/2018 2:10:00 PM
Received Date: 12/18/2018 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	160	30		mg/Kg	20	12/18/2018 11:13:47 AM	42165
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	12/18/2018 11:46:46 AM	B56420
Surr: BFB	91.8	70-130		%Rec	1	12/18/2018 11:46:46 AM	B56420
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/18/2018 11:14:20 AM	42163
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2018 11:14:20 AM	42163
Surr: DNOP	91.4	50.6-138		%Rec	1	12/18/2018 11:14:20 AM	42163
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: **AG**
Benzene	ND	0.021		mg/Kg	1	12/18/2018 11:46:46 AM	A56420
Toluene	ND	0.042		mg/Kg	1	12/18/2018 11:46:46 AM	A56420
Ethylbenzene	ND	0.042		mg/Kg	1	12/18/2018 11:46:46 AM	A56420
Xylenes, Total	ND	0.083		mg/Kg	1	12/18/2018 11:46:46 AM	A56420
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	12/18/2018 11:46:46 AM	A56420
Surr: Toluene-d8	97.1	70-130		%Rec	1	12/18/2018 11:46:46 AM	A56420

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812982**

19-Dec-18

Client: APEX TITAN

Project: MD-7 LOOP 2018

Sample ID **MB-42165**		SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **PBS**		Batch ID: **42165**			RunNo: **56417**					
Prep Date: **12/18/2018**		Analysis Date: **12/18/2018**			SeqNo: **1887503**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42165**		SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **LCSS**		Batch ID: **42165**			RunNo: **56417**					
Prep Date: **12/18/2018**		Analysis Date: **12/18/2018**			SeqNo: **1887504**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812982**
19-Dec-18

Client: APEX TITAN
Project: MD-7 LOOP 2018

Sample ID **MB-42163** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42163** RunNo: **56397**
Prep Date: **12/18/2018** Analysis Date: **12/18/2018** SeqNo: **1885920** 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	9.6		10.00		95.6	50.6	138			

Sample ID **LCS-42163** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42163** RunNo: **56397**
Prep Date: **12/18/2018** Analysis Date: **12/18/2018** SeqNo: **1885921** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	70	130			
Surr: DNOP	4.4		5.000		88.9	50.6	138			

Sample ID **1812982-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-4** Batch ID: **42163** RunNo: **56397**
Prep Date: **12/18/2018** Analysis Date: **12/18/2018** SeqNo: **1886315** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	49.75	7.766	79.4	53.5	126			
Surr: DNOP	4.3		4.975		87.0	50.6	138			

Sample ID **1812982-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-4** Batch ID: **42163** RunNo: **56397**
Prep Date: **12/18/2018** Analysis Date: **12/18/2018** SeqNo: **1886316** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.4	47.13	7.766	83.2	53.5	126	0.616	21.7	
Surr: DNOP	4.4		4.713		92.7	50.6	138	0	0	

Sample ID **MB-42144** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42144** RunNo: **56397**
Prep Date: **12/17/2018** Analysis Date: **12/18/2018** SeqNo: **1886799** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.4		10.00		94.1	50.6	138			

Sample ID **LCS-42144** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42144** RunNo: **56397**
Prep Date: **12/17/2018** Analysis Date: **12/18/2018** SeqNo: **1886800** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN
Project: MD-7 LOOP 2018

Sample ID **LCS-42144** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42144** RunNo: **56397**
Prep Date: **12/17/2018** Analysis Date: **12/18/2018** SeqNo: **1886800** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		97.7	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Client: APEX TITAN

Project: MD-7 LOOP 2018

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **LCSS** Batch ID: **A56420** RunNo: **56420**

Prep Date: Analysis Date: **12/18/2018** SeqNo: **1886354** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.1	70	130			
Toluene	0.96	0.050	1.000	0	95.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.7	70	130			
Surr: Dibromofluoromethane	0.49		0.5000		98.6	70	130			
Surr: Toluene-d8	0.48		0.5000		96.3	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBS** Batch ID: **A56420** RunNo: **56420**

Prep Date: Analysis Date: **12/18/2018** SeqNo: **1886362** 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: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		99.7	70	130			
Surr: Toluene-d8	0.50		0.5000		99.6	70	130			

Sample ID **1812982-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **S-4** Batch ID: **A56420** RunNo: **56420**

Prep Date: Analysis Date: **12/18/2018** SeqNo: **1886790** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.020	0.8150	0	94.8	68.9	131			
Toluene	0.74	0.041	0.8150	0	91.3	64.3	137			
Surr: 1,2-Dichloroethane-d4	0.41		0.4075		100	70	130			
Surr: 4-Bromofluorobenzene	0.40		0.4075		97.8	70	130			
Surr: Dibromofluoromethane	0.41		0.4075		102	70	130			
Surr: Toluene-d8	0.39		0.4075		95.5	70	130			

Sample ID **1812982-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **S-4** Batch ID: **A56420** RunNo: **56420**

Prep Date: Analysis Date: **12/19/2018** SeqNo: **1886791** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.020	0.8150	0	94.4	68.9	131	0.419	20	
Toluene	0.74	0.041	0.8150	0	91.1	64.3	137	0.257	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: **1812982**

Hall Environmental Analysis Laboratory, Inc.

19-Dec-18

Client: APEX TITAN
Project: MD-7 LOOP 2018

Sample ID **1812982-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-4** Batch ID: **A56420** RunNo: **56420**
Prep Date: Analysis Date: **12/19/2018** SeqNo: **1886791** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.42		0.4075		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.40		0.4075		99.3	70	130	0	0	
Surr: Dibromofluoromethane	0.41		0.4075		102	70	130	0	0	
Surr: Toluene-d8	0.40		0.4075		97.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812982**

19-Dec-18

Client: APEX TITAN
Project: MD-7 LOOP 2018

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **B56420** RunNo: **56420**
Prep Date: Analysis Date: **12/18/2018** SeqNo: **1886341** 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	92.0	70	130			
Surr: BFB	460		500.0		92.7	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **B56420** RunNo: **56420**
Prep Date: Analysis Date: **12/18/2018** SeqNo: **1886342** 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	470		500.0		94.0	70	130			

Sample ID **1812982-002ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-2** Batch ID: **B56420** RunNo: **56420**
Prep Date: Analysis Date: **12/19/2018** SeqNo: **1886868** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.3	16.42	0	90.3	68.2	135			
Surr: BFB	300		328.3		92.3	70	130			

Sample ID **1812982-002amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-2** Batch ID: **B56420** RunNo: **56420**
Prep Date: Analysis Date: **12/19/2018** SeqNo: **1886869** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.3	16.42	0	90.6	68.2	135	0.310	20	
Surr: BFB	310		328.3		95.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC   Work Order Number: 1812982   RcptNo: 1

Received By: Isaiah Ortiz   12/18/2018 8:05:00 AM   I. Ort

Completed By: Anne Thorne   12/18/2018 8:11:18 AM   Anne Th

Reviewed By: DAD 12/18/18

Labeled by: ~~AT 12/15/18~~ IO 12/18/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑

10. Were any sample containers received broken? Yes ☐ No ☑

11. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)

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? Yes ☑ No ☐
(If no, notify customer for authorization.)

IO 12/18/18

# of preserved bottles checked for pH: ____
(<2 or >12 unless noted)
Adjusted? ____
Checked by: ____

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:

CUSTODY SEALS INTACT ON SOIL JARS/at 12/18/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			
2	2.4	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio
Grande Suit A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87109
Contact: A Freeman
Phone: 505-345-3975
PO/SO #:

ANALYSIS REQUESTED
BTEX 8021
TPH GRO/DRO/MRO 8015
Chloride 300

Lab use only
Due Date:
Temp. of coolers when received (C°): 2.4°C 2.1°C

1	2 ☒	3	4	5

Page 1 of 1

Sampler's Name: CDAponti
Sampler's Signature

Proj. No.: 725040112545
Project Name: MD-7 200A (2018)
No/Type of Containers

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	12/17/18	1400	X		~~S1~~ S-4 cd	0	13				1		X	X	X	1812982-001
S	12/17/18	1405	X		S-2	—	13				1		X	X	X	002
S	12/17/18	1410	X		S-3	0	13				1		X	X	X	003
~~S~~	~~12/17/18~~	~~1415~~	~~X~~		~~S-4~~											
~~S~~	~~12/17/18~~	~~1420~~	~~X~~		~~S-5~~											

RES

CD

Turn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% Rush 12-18-18

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/17/18	1532	Christ Wall	12/17/18	1532
Christ Wall	12/17/18	1904	Courier	12/18/18	0805

NOTES:
Pay Key # RB21200
PM Tom Long
AFE# N38915
*(Same Day 12-18-18)

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

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

NMOCD
MAR 2 1 2019
DISTRICT III

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **N/A**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.731516** Longitude **-107.965945** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Blanco Storage S Tanks**	Site Type **Natural Gas Condensate Storage Tanks**
Date Release Discovered: **3/8/2019**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
D	**14**	**29N**	**11W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* Enterprise Field Services, LLC)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Unknown**	Volume Recovered (bbls):
☒ Natural Gas	Volume Released (Mcf): **Unknown**	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On March 8, 2019, after removal of the existing condensate storage tanks, Enterprise encountered a historical release within the Blanco Storage S Tanks secondary containment structure. No fluids were present within the secondary containment. Remediation of the historical release has been initiated. Enterprise has determined this release is required to be remediated to the first tier NMOCD remediation standard of 10 ppm Benzene, 50 ppm BTEX, 100 ppm TPH and 600 ppm Chloride. A third party closure report will be submitted with the "Final C-141."

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name: Jon E. Fields
Title: Director, Field Environmental

Signature: Jon E. Field
Date: 3-18-19

email: jefields@eprod.com
Telephone: 713-381-6684

OCD Only

Received by:
Date: 3/21/2019

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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NVF1836228041**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.884325** Longitude **-107.702855** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **MB-18 6 Inch**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/11/2018**	Serial Number *(if applicable)*:

Unit Letter	Section	Township	Range	County
F	20	31N	8W	San Juan

NMOCD
MAR 2 1 2019
DISTRICT III

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* **James R. Erbes**)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 5-7 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **10.69 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On December 11, 2018, a contractor performing pipeline patrols discovered a possible release on the MB-18 6 Inch pipeline. An Enterprise technician was dispatched and confirmed the release. The pipeline was isolated, depressurized, locked out and tagged out. The release is located in a wash (blue line on a USGS topographic map). There were no fluids observed on the ground surface. Enterprise determined this release was required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX, 100 ppm TPH and 600 ppm Chloride). Repairs are remediation were completed on December 20, 2018. The final excavation dimensions measured approximately 26.5 feet long by 8 feet wide by 5 feet deep. Approximately 24 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

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Form C-141
Page 2

State of New Mexico
Oil Conservation Division

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: Jon E. Fields
Title: Director, Field Environmental

Signature:
Date: 3-11-19

email: jefields@eprod.com
Telephone: 713-381-6595

OCD Only

Received by:
Date: 3/21/2019

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: 3/25/2019

Printed Name: Vanessa Fields
Title: Environmental Specialist

ENSOLUM

CLOSURE REPORT

Property:

MB-18 (2018) Pipeline Release
NW ¼, S20 T31N R8W
San Juan County, New Mexico

February 28, 2019
Ensolum Project No. 05A1226034

Prepared for:

Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Chad D'Aponti
Field Environmental Scientist

Ranee Deechilly
Staff Scientist

Kyle Summers, CPG
Sr. Project Manager

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Chain of Custody Documentation

CLOSURE REPORT

MB-18 (2018) Pipeline Release
NW ¼, S20 T31N R8W
San Juan County, New Mexico

Ensolum Project No. 05A1226034

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	MB-18 (2018) Pipeline Release (Site)
Location:	36.88449° North, 107.70273° West Northwest (NW) ¼ of Section 20, Township 31 North, Range 8 West San Juan County, New Mexico
Property:	Private Land (Erbes James R)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On December 11, 2018, a release of natural gas was identified by a third party. Enterprise verified the release and subsequently isolated and locked the pipeline out of service. On December 19, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service.

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.

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.

- No water wells were identified within a one-half mile radius of the Site on the OSE Water Rights Reporting System (WRRS) database.

- Five (5) cathodic-protection well records were found in the New Mexico EMNRD imaging database within the approximate one (1) mile search radius. The closest (located approximately 0.25 miles from the Site) recorded cathodic-protection well (Quinn #1, #339 (Unit L, Sec 20 T31N R8W) indicates a depth to water of 270 feet below grade surface (bgs). Cathodic-protection wells Quinn #4A (Unit I, Sec 19 T31N R8W), Quinn #6A, #9 (Unit P, Sec 21 T30N R8W), SJ 32-8 Unit #12 (Unit M, Sec 21 T21N R8W), and Quinn #340 (Unite A, Sec 20 T31N R8W) indicate depths to water ranging from 140 feet bgs to 400 feet bgs.

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse. The closest "blue line" ephemeral wash is located approximately 20 feet south of the Site.

- 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.

- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.

- No fresh water wells or springs were 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.

- The Site is not located within an unstable area.

- The Site is not located within a 100-year floodplain.

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

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

3.0 SOIL REMEDIATION ACTIVITIES

On December 11, 2018, a release of natural gas was identified by a third party. Enterprise verified the release and subsequently isolated and locked the pipeline out of service. On December 19, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service. During the pipeline repair and corrective action activities West States Energy Contactors, Inc. provided heavy equipment and labor support, while Apex Companies, LLC (Apex) provided environmental consulting support.

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

The final excavation measured approximately 26.5 feet long and eight (8) feet wide. The maximum depth of the excavation measured approximately five (5) feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated silty sand underlain by sandstone.

A total of approximately 24 cubic yards (cy) of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to surrounding grade.

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**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Based on information supplied by Enterprise, Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of five (5) composite soil samples (S-1 through S-5) from the sidewalls and the base of the final excavation for laboratory analysis. In addition, one (1) composite stockpile soil sample (SP-1) was collected from the segregated soils that were designated for potential reuse, to confirm the material was suitable to remain on-Site. A New Mexico EMNRD OCD representative was on Site during the final confirmation sampling event.

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 the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/#8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, 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 BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with composite soil samples and the composite stockpiled soil sample (S-1 through S-5 and SP-1) to the New Mexico EMNRD OCD closure criteria.

- Laboratory analytical results indicate benzene concentrations for soils remaining in place and the reused stockpiled soils do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).

- Laboratory analytical results indicate that total BTEX concentrations for soils remaining in place and the reused stockpiled soils do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil sample S-4 collected from soil remaining in place indicates a combined TPH GRO/DRO/MRO concentration of 13 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- Laboratory analytical results indicate chloride concentrations for soils remaining in place and the reused stockpiled soils do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

7.0 RECLAMATION AND RE-VEGETATION

The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to the surrounding grade. Enterprise will re-seed the Site with an approved seeding mixture at the beginning of the next favorable growing season.

8.0 FINDINGS AND RECOMMENDATION

On December 11, 2018, a release of natural gas was identified by a third party. Enterprise verified the release and subsequently isolated and locked the pipeline out of service. On December 19, 2018, Enterprise initiated activities to facilitate the repair of the pipeline, and to remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline was subsequently repaired and placed back into service.

- 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.

- A total of five (5) composite soil samples were collected from the final excavation for laboratory analysis. In addition, one (1) composite stockpile soil sample was collected from segregated, unaffected stockpiled soils. Based on soil laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.

- A total of approximately 24 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to surrounding grade.

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 Additional Limitations

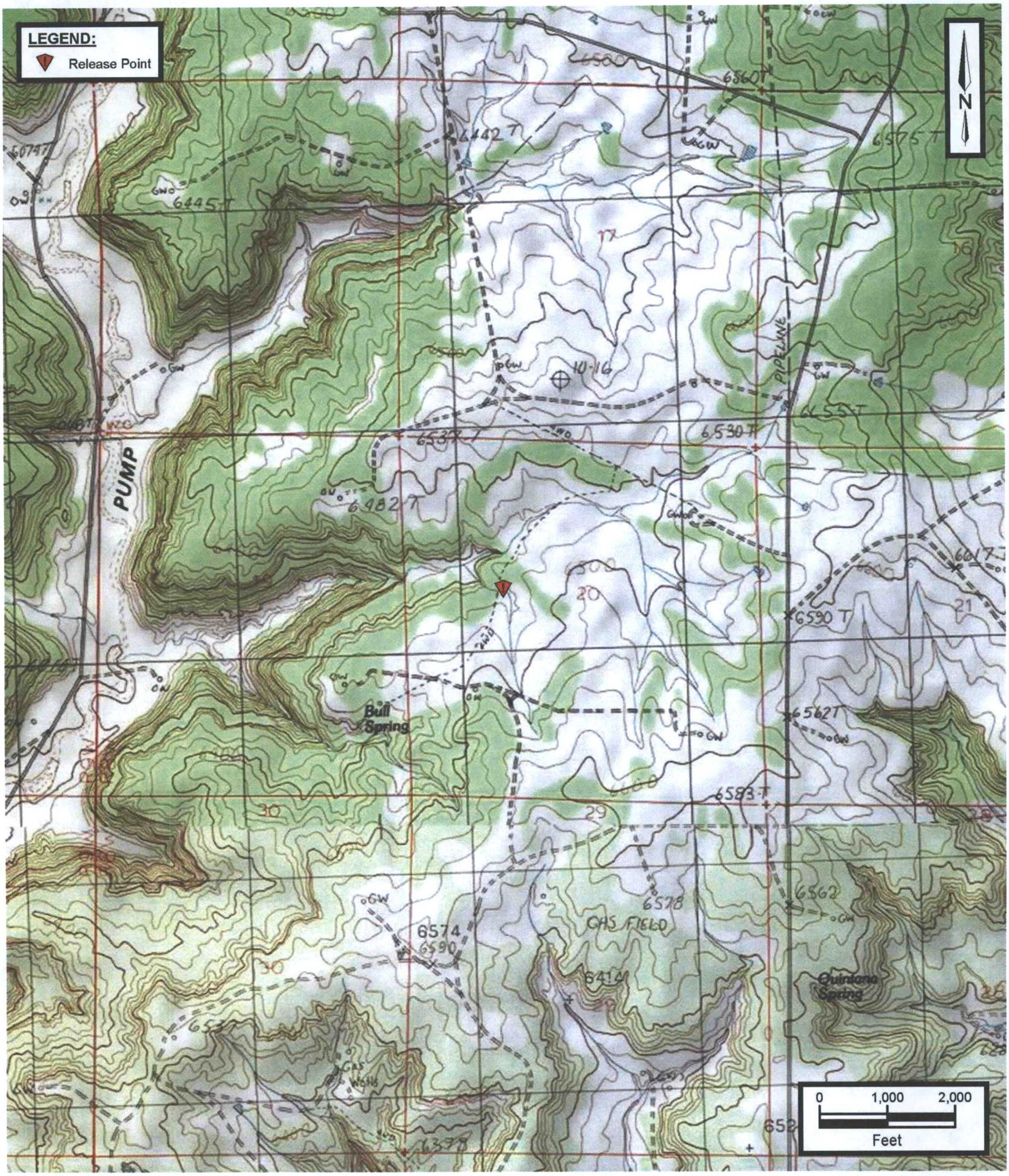
Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

9.3 Reliance

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

APPENDIX A

Figures



ENSOLUM
Environmental & Hydrogeologic Consultants

Topographic Map

ENTERPRISE FIELD SERVICES LLC
MB-18 PIPELINE RELEASE (2018)
NW ¼, S20 T31N R8W, San Juan County, New Mexico
36.88449° N, 107.70273° W

PROJECT NUMBER: 05A1226034

FIGURE

1

ENSOLUM

Environmental & Hydrogeologic Consultants

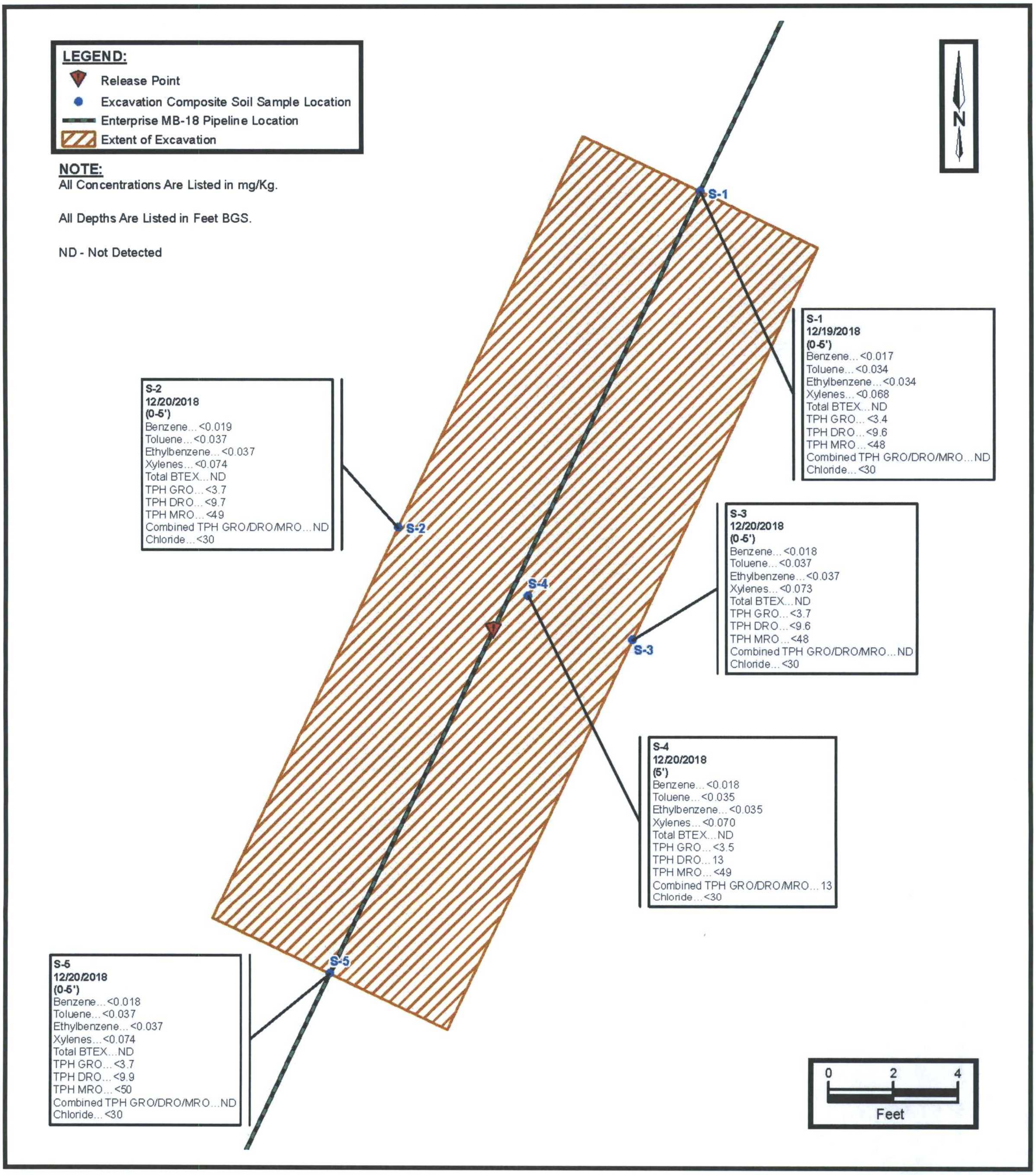
Site Vicinity Map

ENTERPRISE FIELD SERVICES LLC
MB-18 PIPELINE RELEASE (2018)
NW ¼, S20 T31N R8W, San Juan County, New Mexico
36.88449° N, 107.70273° W

PROJECT NUMBER: 05A1226034

FIGURE

2



LEGEND:

▼ Release Point

● Excavation Composite Soil Sample Location

▬ Enterprise MB-18 Pipeline Location

▨ Extent of Excavation

NOTE:

All Concentrations Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

ND - Not Detected

S-1
12/19/2018
(0-5')
Benzene...<0.017
Toluene...<0.034
Ethylbenzene...<0.034
Xylenes...<0.068
Total BTEX...ND
TPH GRO...<3.4
TPH DRO...<9.6
TPH MRO...<48
Combined TPH GRO/DRO/MRO...ND
Chloride...<30

S-2
12/20/2018
(0-5')
Benzene...<0.019
Toluene...<0.037
Ethylbenzene...<0.037
Xylenes...<0.074
Total BTEX...ND
TPH GRO...<3.7
TPH DRO...<9.7
TPH MRO...<49
Combined TPH GRO/DRO/MRO...ND
Chloride...<30

S-3
12/20/2018
(0-5')
Benzene...<0.018
Toluene...<0.037
Ethylbenzene...<0.037
Xylenes...<0.073
Total BTEX...ND
TPH GRO...<3.7
TPH DRO...<9.6
TPH MRO...<48
Combined TPH GRO/DRO/MRO...ND
Chloride...<30

S-4
12/20/2018
(5')
Benzene...<0.018
Toluene...<0.035
Ethylbenzene...<0.035
Xylenes...<0.070
Total BTEX...ND
TPH GRO...<3.5
TPH DRO...13
TPH MRO...<49
Combined TPH GRO/DRO/MRO...13
Chloride...<30

S-5
12/20/2018
(0-5')
Benzene...<0.018
Toluene...<0.037
Ethylbenzene...<0.037
Xylenes...<0.074
Total BTEX...ND
TPH GRO...<3.7
TPH DRO...<9.9
TPH MRO...<50
Combined TPH GRO/DRO/MRO...ND
Chloride...<30

ENSOLUM
Environmental & Hydrogeologic Consultants

Site Map with Soil Analytical Results

ENTERPRISE FIELD SERVICES LLC
MB-18 PIPELINE RELEASE (2018)
NW ¼, S20 T31N R8W, San Juan County, New Mexico
36.88449° N, 107.70273° W

PROJECT NUMBER: 05A1226034

FIGURE

3

APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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

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

97057-0966

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
2. Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401

Invoice Information:
AFE: N38912
PM: Howard Roddy
Pay Key: RB21200

3. **Originating Site:**
MB-18 6 Inch

4. **Location of Material (Street Address, City, State or ULSTR):**
UL F Section 20 T31N R8W; 36.884325, -107.702855

December 2018

4. **Source and Description of Waste:** Hydrocarbon impacted soil/sludge from remediation activities associated with a natural gas pipeline release.
5. Estimated Volume 80 [✓ yd³] / bbls Known Volume (to be entered by the operator at the end of the haul) 24 [✓ yd³] bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 12-20-18, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to
Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6 **Transporter: TBD** HBL, Prado Farms

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 12/21/18
SIGNATURE:
Surface Waste Management Facility Authorized Agent
TELEPHONE NO.: 505-632-0615

APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Photograph 1

View of the in-process excavation activities, facing west.

Photograph 2

View of the excavation, facing southwest.

Photograph 3

View of the excavation, facing northeast.

Photograph 4 View of the final excavation after initial restoration.	

APPENDIX D

Table 1 – Soil Analytical Summary

TABLE 1
MB-18 (2018) Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Combined TPH GRO/DRO/MRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Stockpile Composite Soil Sample													
SP-1	12.20.18	C	Stockpile	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.6	<48	ND	<30
Excavation Composite Soil Samples													
S-1	12.19.18	C	0 to 5	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<9.6	<48	ND	<30
S-2	12.20.18	C	0 to 5	<0.019	<0.037	<0.037	<0.074	ND	<3.7	<9.7	<49	ND	<30
S-3	12.20.18	C	0 to 5	<0.018	<0.037	<0.037	<0.073	ND	<3.7	<9.6	<48	ND	<30
S-4	12.20.18	C	5	<0.018	<0.035	<0.035	<0.070	ND	<3.5	13	<49	13	<30
S-5	12.20.18	C	0 to 5	<0.018	<0.037	<0.037	<0.074	ND	<3.7	<9.9	<50	ND	<30

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

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 Data Sheets & Chain of Custody Documentation

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

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

December 26, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: MB 18 6 inch

OrderNo.: 1812B37

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/20/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812B37**
Date Reported: **12/26/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: MB 18 6 inch
Lab ID: 1812B37-001
Matrix: SOIL

Client Sample ID: S-1
Collection Date: 12/19/2018 1:00:00 PM
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/20/2018 11:43:41 AM	42231
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/20/2018 10:16:10 AM	42227
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2018 10:16:10 AM	42227
Surr: DNOP	88.5	50.6-138		%Rec	1	12/20/2018 10:16:10 AM	42227
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	12/20/2018 9:41:45 AM	R56489
Surr: BFB	91.7	73.8-119		%Rec	1	12/20/2018 9:41:45 AM	R56489
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	12/20/2018 9:41:45 AM	R56489
Toluene	ND	0.034		mg/Kg	1	12/20/2018 9:41:45 AM	R56489
Ethylbenzene	ND	0.034		mg/Kg	1	12/20/2018 9:41:45 AM	R56489
Xylenes, Total	ND	0.068		mg/Kg	1	12/20/2018 9:41:45 AM	R56489
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	12/20/2018 9:41:45 AM	R56489

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812B37**

26-Dec-18

Client: APEX TITAN
Project: MB 18 6 inch

Sample ID **MB-42231**		SampType: **mblk**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **PBS**		Batch ID: **42231**			RunNo: **56495**					
Prep Date: **12/20/2018**		Analysis Date: **12/20/2018**			SeqNo: **1890343**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42231**		SampType: **lcs**			TestCode: **EPA Method 300.0: Anions**					
Client ID: **LCSS**		Batch ID: **42231**			RunNo: **56495**					
Prep Date: **12/20/2018**		Analysis Date: **12/20/2018**			SeqNo: **1890344**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812B37**

26-Dec-18

Client: APEX TITAN

Project: MB 18 6 inch

Sample ID **LCS-42227** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **42227** RunNo: **56487**

Prep Date: **12/20/2018** Analysis Date: **12/20/2018** SeqNo: **1889406** 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	89.3	70	130			
Surr: DNOP	4.4		5.000		87.1	50.6	138			

Sample ID **MB-42227** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **42227** RunNo: **56487**

Prep Date: **12/20/2018** Analysis Date: **12/20/2018** SeqNo: **1889407** 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	9.7		10.00		97.2	50.6	138			

Sample ID **1812B37-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-1** Batch ID: **42227** RunNo: **56487**

Prep Date: **12/20/2018** Analysis Date: **12/20/2018** SeqNo: **1891023** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	10	49.95	1.946	126	53.5	126			S
Surr: DNOP	6.1		4.995		123	50.6	138			

Sample ID **1812B37-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-1** Batch ID: **42227** RunNo: **56487**

Prep Date: **12/20/2018** Analysis Date: **12/20/2018** SeqNo: **1891024** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.9	49.41	1.946	84.6	53.5	126	39.3	21.7	R
Surr: DNOP	4.2		4.941		85.5	50.6	138	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812B37**

26-Dec-18

Client: APEX TITAN

Project: MB 18 6 inch

Sample ID **MB-42210**		SampType: **MBLK**		TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **PBS**		Batch ID: **42210**		RunNo: **56489**					
Prep Date: **12/19/2018**		Analysis Date: **12/20/2018**		SeqNo: **1889749**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.8	73.8	119			

Sample ID **LCS-42210**		SampType: **LCS**		TestCode: **EPA Method 8015D: Gasoline Range**						
Client ID: **LCSS**		Batch ID: **42210**		RunNo: **56489**						
Prep Date: **12/19/2018**		Analysis Date: **12/20/2018**		SeqNo: **1889750**		Units: **%Rec**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		104	73.8	119			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812B37**

26-Dec-18

Client: APEX TITAN

Project: MB 18 6 inch

Sample ID **MB-42210**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID: **PBS**	Batch ID: **42210**			RunNo: **56489**					
Prep Date: **12/19/2018**	Analysis Date: **12/20/2018**			SeqNo: **1889786**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	80	120			

Sample ID **LCS-42210**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID: **LCSS**	Batch ID: **42210**			RunNo: **56489**					
Prep Date: **12/19/2018**	Analysis Date: **12/20/2018**			SeqNo: **1889787**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: APEX AZTEC Work Order Number: 1812B37 RcptNo: 1

Received By: Anne Thorne 12/20/2018 8:00:00 AM

Completed By: Anne Thorne 12/20/2018 8:18:00 AM

Reviewed By: DAD 12/20/18

Labeled by: AT 12/20/18

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
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? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: ________
(<2 or >12 unless noted)
Adjusted? ________
Checked by: ________

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: Custody seal intact on soil jar / AT 12/20/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			
5	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio
Grande Suit A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87109
Contact: A Freeman
Phone: 505 345 3975
PO/SO #:

Sampler's Name C DAponti

Sampler's Signature

Proj. No. 725040112549

Project Name MB-18 6inch

ANALYSIS REQUESTED

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.0°C

1	2	3	4	5
1.4	1.0	1.0	1.0	1.0

Page 1 of 1

#6 1.0

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH DRO/GRO/MRO 8015	Chloride 300							Lab Sample ID (Lab Use Only)
S	12/19/18	1300	X		S-1	0	5				1		X	X	X							1812B37-001

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12-19-18	1603		12/19/18	1603
	12/19/18	1700		12/19/18	1700
	12/19/18	1907		12/20/18	0800

NOTES:
Pay Key # RB21200
PM- Tom Long
~~AFE~~ AFE # N38912
Same day 12-20-18

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 26, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: MB 18 6 inch

OrderNo.: 1812C52

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/21/2018 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812C52**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **12/26/2018**

CLIENT: APEX TITAN
Project: MB 18 6 inch
Lab ID: 1812C52-001
Matrix: SOIL

Client Sample ID: S-2
Collection Date: 12/20/2018 1:00:00 PM
Received Date: 12/21/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	12/21/2018 11:39:40 AM	42261
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/21/2018 10:29:44 AM	42255
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2018 10:29:44 AM	42255
Surr: DNOP	91.7	50.6-138		%Rec	1	12/21/2018 10:29:44 AM	42255
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/21/2018 9:54:27 AM	A56527
Surr: BFB	94.0	73.8-119		%Rec	1	12/21/2018 9:54:27 AM	A56527
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.019		mg/Kg	1	12/21/2018 9:54:27 AM	C56527
Toluene	ND	0.037		mg/Kg	1	12/21/2018 9:54:27 AM	C56527
Ethylbenzene	ND	0.037		mg/Kg	1	12/21/2018 9:54:27 AM	C56527
Xylenes, Total	ND	0.074		mg/Kg	1	12/21/2018 9:54:27 AM	C56527
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	12/21/2018 9:54:27 AM	C56527

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: MB 18 6 inch
Lab ID: 1812C52-002
Matrix: SOIL
Client Sample ID: S-3
Collection Date: 12/20/2018 1:05:00 PM
Received Date: 12/21/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	12/21/2018 11:52:05 AM	42261
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/21/2018 10:53:54 AM	42255
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/21/2018 10:53:54 AM	42255
Surr: DNOP	90.7	50.6-138		%Rec	1	12/21/2018 10:53:54 AM	42255
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/21/2018 10:17:10 AM	A56527
Surr: BFB	91.3	73.8-119		%Rec	1	12/21/2018 10:17:10 AM	A56527
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.018		mg/Kg	1	12/21/2018 10:17:10 AM	C56527
Toluene	ND	0.037		mg/Kg	1	12/21/2018 10:17:10 AM	C56527
Ethylbenzene	ND	0.037		mg/Kg	1	12/21/2018 10:17:10 AM	C56527
Xylenes, Total	ND	0.073		mg/Kg	1	12/21/2018 10:17:10 AM	C56527
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	12/21/2018 10:17:10 AM	C56527

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: MB 18 6 inch
Lab ID: 1812C52-003
Matrix: SOIL
Client Sample ID: S-4
Collection Date: 12/20/2018 1:10:00 PM
Received Date: 12/21/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/21/2018 12:04:29 PM	42261
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	13	9.8		mg/Kg	1	12/21/2018 11:18:15 AM	42255
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2018 11:18:15 AM	42255
Surr: DNOP	91.3	50.6-138		%Rec	1	12/21/2018 11:18:15 AM	42255
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/21/2018 10:40:01 AM	A56527
Surr: BFB	88.1	73.8-119		%Rec	1	12/21/2018 10:40:01 AM	A56527
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/21/2018 10:40:01 AM	C56527
Toluene	ND	0.035		mg/Kg	1	12/21/2018 10:40:01 AM	C56527
Ethylbenzene	ND	0.035		mg/Kg	1	12/21/2018 10:40:01 AM	C56527
Xylenes, Total	ND	0.070		mg/Kg	1	12/21/2018 10:40:01 AM	C56527
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	12/21/2018 10:40:01 AM	C56527

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

CLIENT: APEX TITAN
Project: MB 18 6 inch
Lab ID: 1812C52-004 **Matrix:** SOIL

Client Sample ID: S-5
Collection Date: 12/20/2018 1:15:00 PM
Received Date: 12/21/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/21/2018 12:16:53 PM	42261
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **Irm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/21/2018 11:42:33 AM	42255
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/21/2018 11:42:33 AM	42255
Surr: DNOP	92.3	50.6-138		%Rec	1	12/21/2018 11:42:33 AM	42255
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/21/2018 11:02:47 AM	A56527
Surr: BFB	88.9	73.8-119		%Rec	1	12/21/2018 11:02:47 AM	A56527
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/21/2018 11:02:47 AM	C56527
Toluene	ND	0.037		mg/Kg	1	12/21/2018 11:02:47 AM	C56527
Ethylbenzene	ND	0.037		mg/Kg	1	12/21/2018 11:02:47 AM	C56527
Xylenes, Total	ND	0.074		mg/Kg	1	12/21/2018 11:02:47 AM	C56527
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	12/21/2018 11:02:47 AM	C56527

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1812C52**
Date Reported: **12/26/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	**Client Sample ID:**	SP-1
Project:	MB 18 6 inch	**Collection Date:**	12/20/2018 1:20:00 PM
Lab ID:	1812C52-005 **Matrix:** SOIL	**Received Date:**	12/21/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	12/21/2018 12:29:17 PM	42261
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **Irm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/21/2018 12:06:55 PM	42255
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/21/2018 12:06:55 PM	42255
Surr: DNOP	93.6	50.6-138		%Rec	1	12/21/2018 12:06:55 PM	42255
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/21/2018 11:25:34 AM	A56527
Surr: BFB	83.6	73.8-119		%Rec	1	12/21/2018 11:25:34 AM	A56527
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.020		mg/Kg	1	12/21/2018 11:25:34 AM	C56527
Toluene	ND	0.040		mg/Kg	1	12/21/2018 11:25:34 AM	C56527
Ethylbenzene	ND	0.040		mg/Kg	1	12/21/2018 11:25:34 AM	C56527
Xylenes, Total	ND	0.080		mg/Kg	1	12/21/2018 11:25:34 AM	C56527
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	12/21/2018 11:25:34 AM	C56527

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	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812C52**

26-Dec-18

Client: APEX TITAN

Project: MB 18 6 inch

Sample ID **MB-42261** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **42261** RunNo: **56535**

Prep Date: **12/21/2018** Analysis Date: **12/21/2018** SeqNo: **1892359** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-42261** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **42261** RunNo: **56535**

Prep Date: **12/21/2018** Analysis Date: **12/21/2018** SeqNo: **1892360** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812C52**

26-Dec-18

Client: APEX TITAN
Project: MB 18 6 inch

Sample ID **LCS-42255** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42255** RunNo: **56487**
Prep Date: **12/21/2018** Analysis Date: **12/21/2018** SeqNo: **1891052** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.8	70	130			
Surr: DNOP	4.3		5.000		86.1	50.6	138			

Sample ID **MB-42255** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42255** RunNo: **56487**
Prep Date: **12/21/2018** Analysis Date: **12/21/2018** SeqNo: **1891053** 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	8.7		10.00		87.3	50.6	138			

Sample ID **1812C52-005AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-1** Batch ID: **42255** RunNo: **56487**
Prep Date: **12/21/2018** Analysis Date: **12/21/2018** SeqNo: **1891064** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.8	49.07	2.929	85.7	53.5	126			
Surr: DNOP	4.1		4.907		84.2	50.6	138			

Sample ID **1812C52-005AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SP-1** Batch ID: **42255** RunNo: **56487**
Prep Date: **12/21/2018** Analysis Date: **12/21/2018** SeqNo: **1891065** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.8	49.02	2.929	88.8	53.5	126	3.29	21.7	
Surr: DNOP	4.2		4.902		86.5	50.6	138	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812C52**

26-Dec-18

Client: APEX TITAN

Project: MB 18 6 inch

Sample ID **RB**	SampType: **MBLK**			TestCode: **EPA Method 8015D: Gasoline Range**						
Client ID: **PBS**	Batch ID: **A56527**			RunNo: **56527**						
Prep Date:	Analysis Date: **12/21/2018**			SeqNo: **1892671**		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	940		1000		94.3	73.8	119			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**			TestCode: **EPA Method 8015D: Gasoline Range**						
Client ID: **LCSS**	Batch ID: **A56527**			RunNo: **56527**						
Prep Date:	Analysis Date: **12/21/2018**			SeqNo: **1892672**		Units: **mg/Kg**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	82.8	80.1	123			
Surr: BFB	1100		1000		112	73.8	119			

Sample ID **1812C52-001AMS**	SampType: **MS**			TestCode: **EPA Method 8015D: Gasoline Range**						
Client ID: **S-2**	Batch ID: **A56527**			RunNo: **56527**						
Prep Date:	Analysis Date: **12/21/2018**			SeqNo: **1892673**		Units: **mg/Kg**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.7	18.57	0	87.6	77.8	128			
Surr: BFB	800		742.9		108	73.8	119			

Sample ID **1812C52-001AMSD**	SampType: **MSD**			TestCode: **EPA Method 8015D: Gasoline Range**						
Client ID: **S-2**	Batch ID: **A56527**			RunNo: **56527**						
Prep Date:	Analysis Date: **12/21/2018**			SeqNo: **1892674**		Units: **mg/Kg**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.7	18.57	0	90.2	77.8	128	2.88	20	
Surr: BFB	800		742.9		107	73.8	119	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812C52**

26-Dec-18

Client: APEX TITAN

Project: MB 18 6 inch

Sample ID **RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **C56527** RunNo: **56527**
Prep Date: Analysis Date: **12/21/2018** SeqNo: **1892685** 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	80	120			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **C56527** RunNo: **56527**
Prep Date: Analysis Date: **12/21/2018** SeqNo: **1892686** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	85.7	80	120			
Toluene	0.87	0.050	1.000	0	87.5	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.7	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID **1812C52-002AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-3** Batch ID: **C56527** RunNo: **56527**
Prep Date: Analysis Date: **12/21/2018** SeqNo: **1892687** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.57	0.018	0.7326	0.007319	76.5	63.9	127			
Toluene	0.62	0.037	0.7326	0.006381	83.3	69.9	131			
Ethylbenzene	0.66	0.037	0.7326	0.006374	89.1	71	132			
Xylenes, Total	2.0	0.073	2.198	0	91.6	71.8	131			
Surr: 4-Bromofluorobenzene	0.77		0.7326		106	80	120			

Sample ID **1812C52-002AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-3** Batch ID: **C56527** RunNo: **56527**
Prep Date: Analysis Date: **12/21/2018** SeqNo: **1892688** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.56	0.018	0.7326	0.007319	74.9	63.9	127	2.00	20	
Toluene	0.60	0.037	0.7326	0.006381	81.1	69.9	131	2.69	20	
Ethylbenzene	0.64	0.037	0.7326	0.006374	86.1	71	132	3.33	20	
Xylenes, Total	2.0	0.073	2.198	0	89.8	71.8	131	1.95	20	
Surr: 4-Bromofluorobenzene	0.78		0.7326		107	80	120	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **APEX AZTEC**   Work Order Number: **1812C52**   RcptNo: **1**

Received By: **Anne Thorne**   **12/21/2018 8:00:00 AM**

Completed By: **Anne Thorne**   **12/21/2018 8:21:49 AM**

Reviewed By: DAD 12/21/18

Labeled by: AT 12/21/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)
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? Yes ☑ No ☐
(If no, notify customer for authorization.)

\# of preserved bottles checked for pH: ______
(<2 or >12 unless noted)
Adjusted? ______
Checked by: ______

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: custody seals intact on soil jars / AT 12/21/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

APEX

CHAIN OF CUSTODY RECORD

Office Location 606 S Rio Grande Suit A Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental lab

Address: 4901 Hawkins NE Albuquerque NM 87109

Contact: A. Freeman

Phone: 505-345-3975

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.0 C

Cooler: [✓ 1] 2 3 4 5

Page 1 of 1

Sampler's Name: CDAponti

Sampler's Signature:

Proj. No.: 725040112 549

Project Name: MB-18 6inch

No/Type of Containers

ANALYSIS REQUESTED

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	12/20/18	1300	x		S-2	0	5				1		x	x	x	1812C52-001
S	12/20/18	1305	x		S-3	0	5				1		x	x	x	002
S	12/20/18	1310	x		S-4	-	5				1		x	x	x	003
S	12/20/18	1315	x		S-5	0	5				1		x	x	x	004
S	12/20/18	1320	x		SP-1	-	—				1		x	x	x	005
																~~A~~ ~~006~~
																12/21/18

Turn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% Rush 12-21-18

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12-20-18	1530		12/20/18	1530
	12/20/18	1811		12/21/18	0800

NOTES: Pay Key # R1321200
Pm - Tom Long
AFE # N38912

#/ Same Day 12-21-18)

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

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	

NMOCD
MAR 18 2019
DISTRICT III

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD):* **NCS1833149167**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.59318** Longitude **-107.86056** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Angel Peak 11A#4**	Site Type **Natural Gas Gathering Meter Tube**
Date Release Discovered: **11/15/2018**	Serial Number *(if applicable)*:

Unit Letter	Section	Township	Range	County
G	11	27N	10W	San Juan

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* **Coffman Shatasha T Skees**)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 3-5 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **3 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On November 15, 2018, an Enterprise technician discovered a release of natural gas and condensate on Angle Peak 11A #4 meter tube. The meter tube was isolated, depressurized, locked out and tagged out. An area of approximately 25 feet long ranging from 4 to 10 feet wide was affected by the release fluids. The release is the result of a frozen meter tube. Enterprise determined this release was required to be remediated to the most stringent NMOCD remediation standard (10 ppm Benzene, 50 ppm BTEX and 100 ppm TPH). Remediation was completed on November 29, 2018. The final excavation dimensions measured approximately 24 feet long by 6 feet wide by 1.5 feet deep. Approximately 12 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

29

State of New Mexico
Oil Conservation Division

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: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 3-11-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Vanossa Fields Date: 3/18/2019

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: 3/26/2019

Printed Name: Vanossa Fields Title: Environmental Specialist

ENSOLUM

CLOSURE REPORT

Property:

Angel Peak 11A #4 Meter Tube Release (2018)
NE ¼, S11 T27N R10W
San Juan County, New Mexico

February 28, 2019
Ensolum Project No. 05A1226029

Prepared for:

Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Chad D'Aponti
Staff Scientist

Kyle Summers, CPG
Sr. Project Manager

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LIST OF APPENDICES

Appendix A: **Figures**
- Figure 1 Topographic Map
- Figure 2 Site Vicinity Map
- Figure 3 Site Map with Soil Analytical Results

Appendix B: **Executed C-138 Solid Waste Acceptance Form**

Appendix C: **Photographic Documentation**

Appendix D: **Table 1 - Soil Analytical Summary**

Appendix E: **Laboratory Data Sheets &**
Chain of Custody Documentation

CLOSURE REPORT

Angel Peak 11A #4 Meter Tube Release (2018)
NE ¼, S11 T27N R10W
San Juan County, New Mexico

Ensolum Project No. 05A1226029

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Angel Peak 11A #4 Meter Tube Release (2018) (Site)
Location:	36.59318° North, 107.86056° West Northeast (NE) ¼ of Section 11, Township 27 North, Range 10 West San Juan County, New Mexico
Property:	Private Property (Coffman Shatasha T Skees)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On November 15, 2018, a release of natural gas occurred from the Angle Peak Meter 11A #4 meter tube. On November 29, 2018, Enterprise initiated activities to facilitate the repair of the meter tube, and to remediate potential petroleum hydrocarbon impact resulting from 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.

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, 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.

- One (1) point-of-diversion (POD) (SJ 04045) identified on the OSE Water Rights Reporting System (WRRS) database is located approximately 330 feet from the Site with a recorded depth to water of 50 feet below grade surface (bgs).

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse. The Site is also located approximately 23 feet from an ephemeral wash (considered a first-order tributary).
- 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.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were 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.
- The Site is not located within an unstable area.
- The Site is located within a 100-year floodplain.

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

Closure Criteria for Soils Impacted by a Release

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

3.0 SOIL REMEDIATION ACTIVITIES

On November 29, 2018, Enterprise initiated activities to facilitate the repair of the meter tube, and to remediate potential petroleum hydrocarbon impact resulting from the release. During the pipeline repair and corrective action activities West States Energy Contactors, Inc, provided heavy equipment and labor support, while Apex Companies, LLC (Apex) provided environmental consulting support.

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

The final excavation measured approximately 24 feet long and six (6) feet wide. The maximum depth of the excavation measured approximately 1.5 feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated silty sand.

A total of approximately 12 cubic yards (cy) of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation was backfilled with imported fill and contoured to surrounding grade.

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**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Based on information supplied by Enterprise, Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of one (1) composite soil sample (FP-1) from the remediated flow path for laboratory analysis. The New Mexico EMNRD OCD instructed Enterprise to proceed with sampling, although a New EMNRD OCD representative was not on Site to witness the sampling event.

The soil sample was collected and placed in laboratory prepared glassware, labeled/sealed using laboratory supplied labels and custody seals, and stored on ice in a cooler. The sample was relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/#8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, 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 BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with composite soil sample FP-1 to the New Mexico EMNRD OCD closure criteria.

- Laboratory analytical results indicate benzene concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate that total BTEX concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- Laboratory analytical results indicate combined TPH GRO/DRO/MRO concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- Laboratory analytical results indicate chloride concentrations for soils remaining in place do not exceed the laboratory PQLs or the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

7.0 RECLAMATION AND RE-VEGETATION

The excavation was backfilled with imported fill and then contoured to the surrounding grade.

8.0 FINDINGS AND RECOMMENDATION

On November 15, 2018, a release of natural gas occurred from the Angle Peak Meter 11A #4 meter tube. On November 29, 2018, Enterprise initiated activities to facilitate the repair of the meter tube, and to remediate potential petroleum hydrocarbon impact resulting from the release.

- 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.
- Prior to backfilling, one (1) composite soil sample was collected from the final excavation for laboratory analysis. Based on soil laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.
- A total of approximately 12 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and then contoured to surrounding grade.

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 Additional Limitations

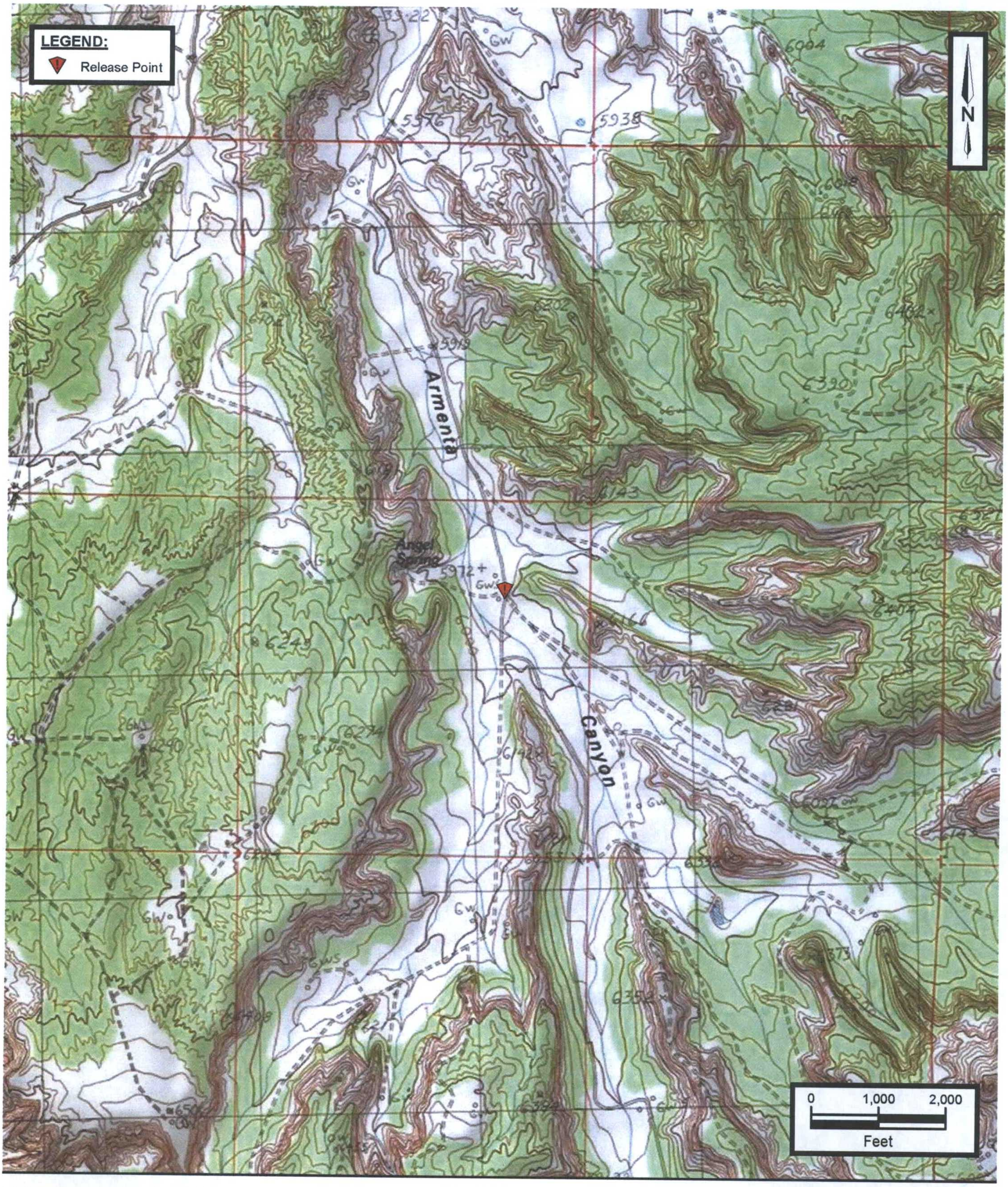
Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

9.3 Reliance

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

APPENDIX A

Figures



ENSOLUM

Environmental & Hydrogeologic Consultants

Topographic Map

ENTERPRISE FIELD SERVICES LLC
ANGEL PEAK 11A #4 METER TUBE RELEASE (2018)
NE ¼, S11 T27N R10W, San Juan County, New Mexico
36.59318° N, 107.86056° W

PROJECT NUMBER: 05A1226029

FIGURE

1

ENSOLUM

Environmental & Hydrogeologic Consultants

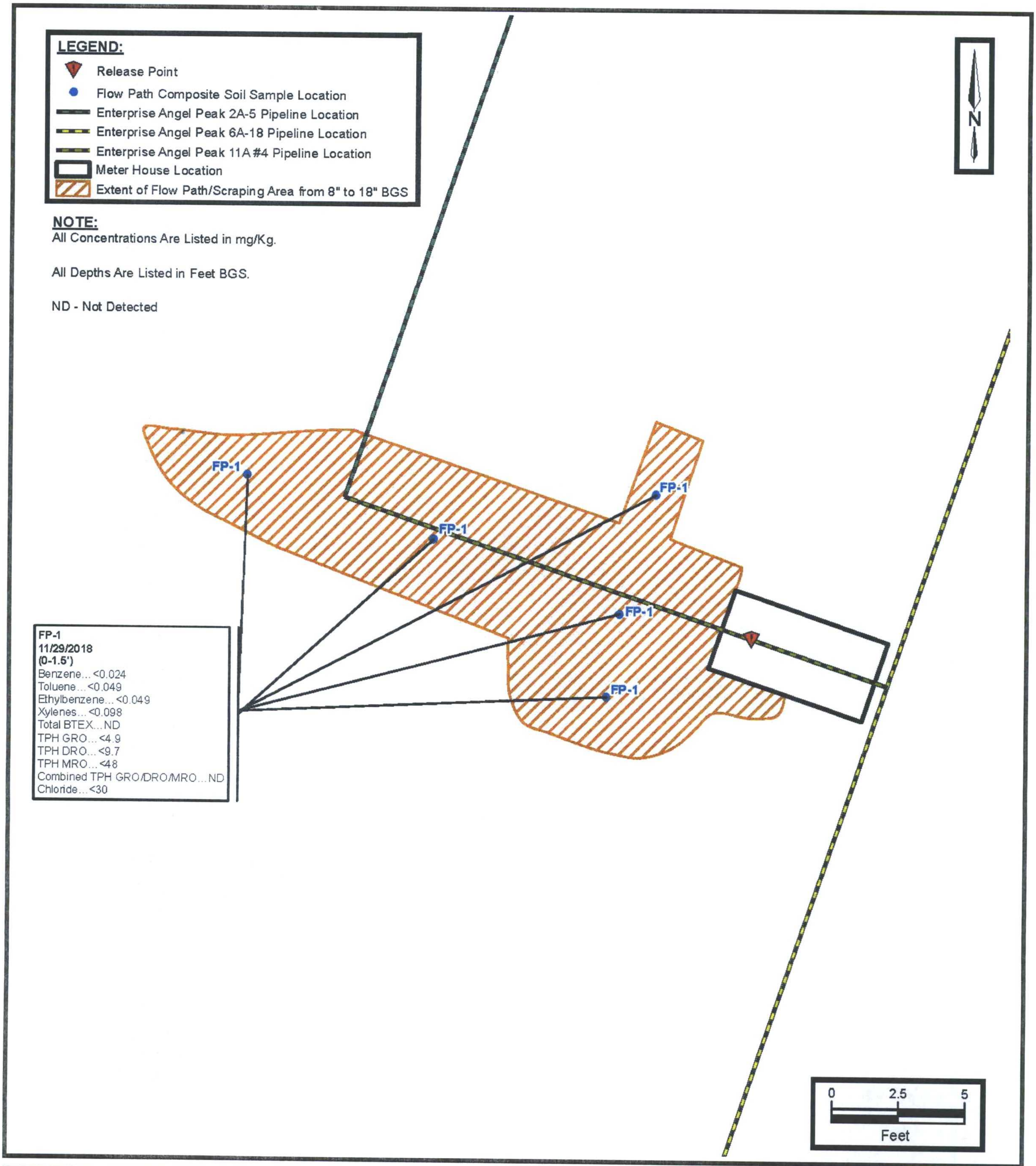
Site Vicinity Map

ENTERPRISE FIELD SERVICES LLC
ANGEL PEAK 11A #4 METER TUBE RELEASE (2018)
NE ¼, S11 T27N R10W, San Juan County, New Mexico
36.59318° N, 107.86056° W

PROJECT NUMBER: 05A1226029

FIGURE

2



LEGEND:

▼	Release Point
●	Flow Path Composite Soil Sample Location
—	Enterprise Angel Peak 2A-5 Pipeline Location
—	Enterprise Angel Peak 6A-18 Pipeline Location
—	Enterprise Angel Peak 11A #4 Pipeline Location
☐	Meter House Location
▨	Extent of Flow Path/Scraping Area from 8" to 18" BGS

NOTE:

All Concentrations Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

ND - Not Detected

FP-1
11/29/2018
(0-1.5')
Benzene... <0.024
Toluene... <0.049
Ethylbenzene... <0.049
Xylenes... <0.098
Total BTEX... ND
TPH GRO... <4.9
TPH DRO... <9.7
TPH MRO... <48
Combined TPH GRO/DRO/MRO... ND
Chloride... <30

ENSOLUM
Environmental & Hydrogeologic Consultants

Site Map with Soil Analytical Results

ENTERPRISE FIELD SERVICES LLC
ANGEL PEAK 11A #4 METER TUBE RELEASE (2018)
NE ¼, S11 T27N R10W, San Juan County, New Mexico
36.59318° N, 107.86056° W

PROJECT NUMBER: 05A1226029

FIGURE
3

APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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

97057-0961

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Non AFE: N38649
PM: Jim Marquis
PayKey: AJ14058

2. Originating Site:
Angel Peak 11A#4 Meter Tube Release

3. Location of Material (Street Address, City, State or ULSTR):
UL G Section 11 T27N R10W; 36.59318, -107.86056

Nov. 2018

4. Source and Description of Waste:
Source: Leak transfer pump.
Description: Hydrocarbon/Condensate impacted soil/sludge from remediation activities associated natural gas meter tube release.
Estimated Volume 50 [✓ yd³] bbls Known Volume (to be entered by the operator at the end of the haul) 12 [✓ yd³] / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 11-28-18, representative for Enterprise Products Operating authorizes Envirotech, Inc to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Riley Industrial and West States Energy Contractors

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 11/29/18
SIGNATURE:
Surface Waste Management Facility Authorized Agent
TELEPHONE NO.: 505-632-0615

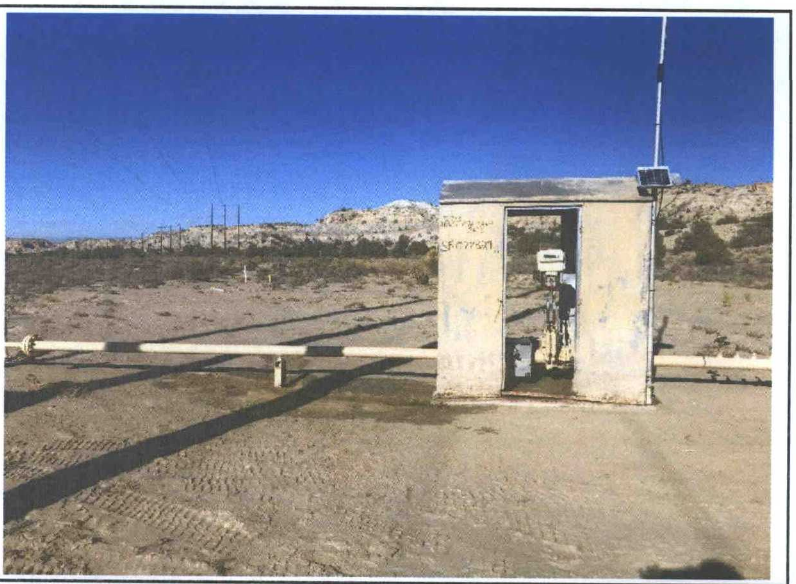
APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Angel Peak 11A #4 Meter Tube Release
Ensolum Project No. 05A1226029

ENSOLUM

Photograph 1 Photograph Description: View of the release area.	
Photograph 2 Photograph Description: View of the excavated flow path, facing northwest.	
Photograph 3 Photograph Description: View of the excavated flow path, facing southeast.	

Photograph 4 Photograph Description: View of the excavated flow path, facing south.	
Photograph 5 Photograph Description: View of the final excavation after initial restoration.	

APPENDIX D

Table - 1 Soil Analytical Summary

TABLE 1
Angle Peak 11A #4 Meter Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	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 MRO (mg/kg)	Combined TPH GRO/DRO/MRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Flow Path Composite Soil Sample													
FP-1	11.29.18	C	0 to 1.5	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.7	<48	ND	<30

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits
NA = Not Analyzed
NE = Not established
mg/kg = milligram per kilogram
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
TPH = Total Petroleum Hydrocarbon
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
MRO = Motor Oil/Lube Oil Range Organics

Appendix E

Laboratory Data Sheets
& Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 07, 2018

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Angel Peak 11A 4

OrderNo.: 1811E78

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/30/2018 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,

Andy

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811E78**
Date Reported: **12/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Angel Peak 11A 4
Lab ID: 1811E78-001
Matrix: SOIL

Client Sample ID: FP-1
Collection Date: 11/29/2018 10:00:00 AM
Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	12/5/2018 2:52:50 AM	41883
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**Irm**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/5/2018 3:33:23 AM	41858
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/5/2018 3:33:23 AM	41858
Surr: DNOP	107	50.6-138		%Rec	1	12/5/2018 3:33:23 AM	41858
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/3/2018 9:33:21 PM	41830
Surr: BFB	89.1	73.8-119		%Rec	1	12/3/2018 9:33:21 PM	41830
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	12/3/2018 9:33:21 PM	41830
Toluene	ND	0.049		mg/Kg	1	12/3/2018 9:33:21 PM	41830
Ethylbenzene	ND	0.049		mg/Kg	1	12/3/2018 9:33:21 PM	41830
Xylenes, Total	ND	0.098		mg/Kg	1	12/3/2018 9:33:21 PM	41830
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	12/3/2018 9:33:21 PM	41830

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	Value above quantitation range
	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 Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E78**

07-Dec-18

Client: APEX TITAN

Project: Angel Peak 11A 4

Sample ID	**MB-41883**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**PBS**	Batch ID:	**41883**	RunNo:	**56076**
Prep Date:	**12/4/2018**	Analysis Date:	**12/4/2018**	SeqNo:	**1872787** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-41883**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**LCSS**	Batch ID:	**41883**	RunNo:	**56076**
Prep Date:	**12/4/2018**	Analysis Date:	**12/4/2018**	SeqNo:	**1872788** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E78**
07-Dec-18

Client: APEX TITAN
Project: Angel Peak 11A 4

Sample ID **LCS-41858** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **41858** RunNo: **56060**
Prep Date: **12/3/2018** Analysis Date: **12/4/2018** SeqNo: **1872032** 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	91.8	70	130			
Surr: DNOP	4.9		5.000		97.4	50.6	138			

Sample ID **MB-41858** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **41858** RunNo: **56060**
Prep Date: **12/3/2018** Analysis Date: **12/4/2018** SeqNo: **1872034** 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	10		10.00		105	50.6	138			

Sample ID **LCS-41902** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **41902** RunNo: **56089**
Prep Date: **12/5/2018** Analysis Date: **12/5/2018** SeqNo: **1873284** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.7	50.6	138			

Sample ID **MB-41902** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **41902** RunNo: **56089**
Prep Date: **12/5/2018** Analysis Date: **12/5/2018** SeqNo: **1873285** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	50.6	138			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E78**

07-Dec-18

Client: APEX TITAN

Project: Angel Peak 11A 4

Sample ID **MB-41830** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **41830** RunNo: **56032**

Prep Date: **11/30/2018** Analysis Date: **12/3/2018** SeqNo: **1870919** 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	910		1000		91.2	73.8	119			

Sample ID **LCS-41830** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **41830** RunNo: **56032**

Prep Date: **11/30/2018** Analysis Date: **12/3/2018** SeqNo: **1870920** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.8	80.1	123			
Surr: BFB	1100		1000		106	73.8	119			

Sample ID **MB-41865** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **41865** RunNo: **56073**

Prep Date: **12/3/2018** Analysis Date: **12/4/2018** SeqNo: **1872520** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		93.6	73.8	119			

Sample ID **LCS-41865** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **41865** RunNo: **56073**

Prep Date: **12/3/2018** Analysis Date: **12/4/2018** SeqNo: **1872521** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	73.8	119			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E78**

07-Dec-18

Client: APEX TITAN

Project: Angel Peak 11A 4

Sample ID **MB-41830** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **41830** RunNo: **56032**
Prep Date: **11/30/2018** Analysis Date: **12/3/2018** SeqNo: **1870962** 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	0.96		1.000		96.1	80	120			

Sample ID **LCS-41830** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **41830** RunNo: **56032**
Prep Date: **11/30/2018** Analysis Date: **12/3/2018** SeqNo: **1870963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID **MB-41865** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **41865** RunNo: **56073**
Prep Date: **12/3/2018** Analysis Date: **12/4/2018** SeqNo: **1872563** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID **LCS-41865** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **41865** RunNo: **56073**
Prep Date: **12/3/2018** Analysis Date: **12/4/2018** SeqNo: **1872564** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

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: APEX AZTEC
Work Order Number: 1811E78
RcptNo: 1

Received By: Erin Melendrez 11/30/2018 8:25:00 AM
Completed By: Isaiah Ortiz 11/30/2018 9:18:59 AM
Reviewed By: ENM 11/30/18
LB: DAD 11/30/18

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° 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)
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? Yes ☑ No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: DAD 11/30/18

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			
2	2.7	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio
Grande Suite A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87107
Contact: A Freeman
Phone: 505-345-3975
PO/SO #:

Sampler's Name: CDAponti

Sampler's Signature:

Proj. No. 725040112538

Project Name: Angle Peak 11A #4

No/Type of Containers

ANALYSIS REQUESTED

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.7, 2.7 (CF=-1.0)

1	2	3	4	5

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	TPH GRO/DRO/MRO 8015	Chloride 300	Lab Sample ID (Lab Use Only)
S	11/29/18	1000	X		FP-1	–	1'				1		X	X	X	1811E78 -001

zRS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	11-29-18	1330	Christ Wa	11/29/18	1330
Christa Walters	11/29/18	1556		11/30/18	0825

NOTES: Pay Key # ~~RB 21200~~ AM14058
PM Tom Long
AFE # N38649

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