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	Y.
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)

DISTRICT

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	NMACD
K	24	30N	9W	San Juan	
					DEC 07 2018

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.

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: Kuls	Date: 12-3-18
email: jefields@eprod.com	Telephone: (713) 381-6684
OCD Only Received by: Danessa Fields	Date: 12/201201
Closure approval by the OCD does not relieve the responsible paremediate contamination that poses a threat to groundwater, surfa party of compliance with any other federal, state, or local laws at	rty of liability should their operations have failed to adequately investigate and ce water, human health, or the environment nor does not relieve the responsible nd/or regulations.
Closure Approved by:	Date: 12/2/0/2018
Printed Name: Vorossa Frelds	Title: Environmental Spacelist

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

DEC 06 2018

Responsible Party: Enterprise Field Services, LLC	OGRID: 151618 DISTRICT
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

Site Name Utton #100

Longitude <u>-108.036399</u> (NAD 83 in decimal degrees to 5 decimal places)

Site Type Natural Gas Gathering Pipeline

Serial # (if applicable): N/A

Date Release	Discovered:	11/16/2018

Unit LetterSectionTownshipRangeCountyM730N11WSan 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."

**			
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider	this a major release?	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by	what means (phone, e	mail, etc)?

Initial Response

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

 \square 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: JANE. Fuels	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 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

DEC 2 4 2018

NMOCD

Responsible Party

OGRID: 151618	
Contact Telephone: 505-599-2286	
Incident # (assigned by OCD) N/A	
NVF1836228041	
	OGRID: 151618 Contact Telephone: 505-599-2286 Incident # (assigned by OCD) N/A

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 Released (bbls)

	volume released (0013)	Volume Recovered (0013)
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?	If YES, for what reason(s) does the responsible party consider this a	1 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

 \square 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: / N. P. Full	Date: 12-18-18	
email: jefields@eprod.com	Telephone: 713-381-6684	
OCD Only Received by: Varesse Fields	Date: 12118 118	

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	

MOCD

DEC 24

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	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
0	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."

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 no NMOCD Vanessa Fields a	otice given to the OCD? By whom? To whom? When and by and Jim Griswold December 11, 2018 by phone call and email.	what means (phone, e	email, etc)? Notification to

Initial Response

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

 \square 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: JWE Full	Date: 12 - 18 - 18
email: jefields@eprod.com	_ Telephone: 713-381-6684
OCD Only Received by: Vanossa Fields	Date: 12124118

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	



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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DISTRICT

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.

Title: Director, Field Environmental
Date: 10/79/18

email: jefields@eprod.com

Telephone: (713) 381-6684

OCD Only

Received by:

anossz Fields

Date: 1112018

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: 111912018
Printed Name: Varosse Fields	Title: Environmental Specalist



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

Prepared for:

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

Prepared by:

el m Ranee Deechilly

Project Scientist

umm

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

NOV 012018 District III

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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 CI 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-ofcustody 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









APPENDIX B

Executed C-138 Solid Waste Acceptance Form

District I 1625 N French Dr., Hobbs, NM 88240 State of New Mexico District II Energy Minerals and Natural Resources Form C-138 97057-8939 1301 W. Grand Avenue, Artesia, NM 88210 Revised 08/01/11 District III Oil Conservation Division *Surface Waste Management Facility Operator and Generator shall maintain and make this 1000 Rio Brazos Road, Aztec. NM 87410 1220 South St. Francis Dr. District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 documentation available for Division inspection. Santa Fe, NM 87505 **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: Invoice Information: PM: Aaron Lucero **Trunk 2C Pipeline** Non AFE: N37753 Pay Key: CM22355 Location of Material (Street Address, City, State or ULSTR): 3. UL G Section 8 T26N R10W; 36.50456, -107.91551 August 2018 Source and Description of Waste: 4. Source: Overtopping of a storage tan Description: Hydrocarbon/Condensate impacted soil associated with the remediation of a natural gas pipeline least Estimated Volume 50 (yd3) bbls Known Volume (to be entered by the operator at the end of the haul) 160 yd3/bbls GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS 5. 1, Thomas Long the Ly, 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 nonexempt 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 8-14-18, representative for Enterprise Products Operating authorizes Envirotech, Inc to complete I, Thomas Long **Generator Signature** the required testing/sign the Generator Waste Testing Certification. , representative for Envirotech, Inc. 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: 61 TITLE: ENVIRONMENTA Manager DATE: 8/14/18 TELEPHONE NO .: SIGNATURE: ste Management Facility Authorized Agent 505-632-0615



APPENDIX C

Photographic Documentation



SITE PHOTOGRAPHS

Trunk 2C (2018) Pipeline Release





SITE PHOTOGRAPHS

Trunk 2C (2018) Pipeline Release

Photograph 4	The state of the state of the set
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.	

Page 2 of 3



SITE PHOTOGRAPHS

Trunk 2C (2018) Pipeline Release





E C

1

Appendix D

Table



			TA	BLE 1					than best is	1.1.2
친구가 있는 것이 가지 않는 것 이 것 같아.			Trunk 2C P	ipeline Rel	ease					
			SOIL ANALY	TICAL SUM	IARY					
Sample I.D. Date Sample Type Sample D C- Composite (feet) G - Grab	epth 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 Departmen Conservation Division, Closure Criteria	, 011 10	NE	NE	NE	50				100	600
			Flowpath Con	nposite Soil Sam	ple		Andrew Martin State	And Alline and	ALL RANGE MARKING	
FP-1 8.17.18 C 0 to 3	< 0.095	<0.19	<0.19	<0.38	ND	<19	77	<50	77	<30
	and the second	-Martin Barrisk	Excavation Con	nposite Soll San	nples	and the second sec		State of the second	La Stranger	
S-1 8.17.18 C 0 to 1	<0.10	<0.21	<0.21	<0.41	ND	<21	<9.9	<50	ND	<30
S-2 8.17.18 C 0 to 1	< 0.093	<0.19	<0.19	< 0.37	ND	<19	<10	<50	ND	48
S-3 8.17.18 C 0 to 1	<0.022	< 0.043	<0.043	<0.086	ND	<4.3	<9.7	<49	ND	250
S-4 8.17.18 C 0 to 1	<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 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

August 22, 2018

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

OrderNo.: 1808B59

Dear Kyle Summers:

RE: Trunk 2C

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 <u>www.hallenvironmental.com</u> 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 1808B59	

Date Reported: 8/22/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	Client Sample ID: FP-01								
Project:	Trunk 2C		(Collection Dat	e: 8/	17/2018 9:00:00 AM				
Lab ID:	1808 B59-0 01	Matrix: SOIL	,	Received Dat	e: 8/	18/2018 11:15:00 AM				
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch			
EPA MET	HOD 300.0: ANIONS			0		Analyst	MRA			
Chloride		ND	30	mg/Kg	20	8/20/2018 10:31:03 AM	39874			
EPA MET	HOD 8015D MOD: GASOLI	NE RANGE				Analyst	AG			
Gasoline	Range Organics (GRO)	ND	19	mg/Kg	5	8/20/2018 10:29:59 AM	A53553			
Surr: E	BFB	110	70-130	%Rec	5	8/20/2018 10:29:59 AM	A53553			
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	: Irm			
Diesel R	ange Organics (DRO)	77	10	mg/Kg	1	8/20/2018 12:40:17 PM	39869			
Motor Oi	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 MET	HOD 8260B: VOLATILES S	HORT 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			
Ethylben	zene	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	4-Bromofluorobenzene	123	70-130	%Rec	5	8/20/2018 10:29:59 AM	R53553			
Surr: 1	Foluene-d8	95.9	70-130	%Rec	5	8/20/2018 10:29:59 AM	R53553			

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 11
	ND	Not Detected at the Reporting Limit	Р	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			CI	ient Sa	nple II	D: S-	1	lt.		
Project:	Trunk 2C		Collection Date: 8/17/2018 9:05:00 AM								
Lab ID:	1808B59-002	Matrix:	SOIL	2	Receiv	ed Dat	e: 8/1	8/2018 11:15:00 AM	Л		
Analyses	l	R	esult	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	THOD 300.0: ANIONS							Analy	vst: MRA		
Chloride			ND	30		mg/Kg	20	8/20/2018 10:43:28 A	M 39874		
EPA MET	THOD 8015D MOD: GAS	OLINE RANGE						Analy	st: AG		
Gasoline	e Range Organics (GRO)		ND	21		mg/Kg	5	8/20/2018 10:53:05 A	AM A53553		
Surr:	BFB		107	70-130		%Rec	5	8/20/2018 10:53:05 A	AM A53553		
EPA ME	THOD 8015M/D: DIESEL	RANGE ORGANIC	;s					Analy	vst: Irm		
Diesel R	ange Organics (DRO)		ND	9.9		mg/Kg	1	8/20/2018 1:04:51 PM	M 39869		
Motor O	il Range Organics (MRO)		ND	50		mg/Kg	1	8/20/2018 1:04:51 PM	M 39869		
Surr:	DNOP		110	50.6-138		%Rec	1	8/20/2018 1:04:51 PI	M 39869		
EPA ME	THOD 8260B: VOLATILE	S SHORT LIST						Analy	vst: AG		
Benzene	e		ND	0.10		mg/Kg	5	8/20/2018 10:53:05 A	M R53553		
Toluene			ND	0.21		mg/Kg	5	8/20/2018 10:53:05 A	AM R53553		
Ethylber	nzene		ND	0.21		mg/Kg	5	8/20/2018 10:53:05 A	AM R53553		
Xylenes	, Total		ND	0.41		mg/Kg	5	8/20/2018 10:53:05 A	AM R53553		
Surr:	4-Bromofluorobenzene		120	70-130		%Rec	5	8/20/2018 10:53:05 A	AM R53553		
Surr:	Toluene-d8		95.3	70-130		%Rec	5	8/20/2018 10:53:05 A	AM R53553		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 11
	ND	Not Detected at the Reporting Limit	Р	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

							Lab Order 1808B59			
Hall Er	Hall Environmental Analysis Laboratory, Inc.							Date Reported: 8/22/2018		
CLIENT:	APEX TITAN		Cl	ient Sar	nple II): S-2	2			
Project:	Trunk 2C		C	Collectio	on Dat	e: 8/1	7/2018 9:10:00 AM			
Lab ID:	1808B59-003	Matrix: SOIL		Receive	ed Dat	e: 8/1	8/2018 11:15:00 AM			
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 300.0: ANIONS						Analys	: MRA		
Chloride		48	30		mg/Kg	20	8/20/2018 10:55:52 AM	39874		
EPA MET	HOD 8015D MOD: GASOLIN	IE RANGE					Analys	: AG		
Gasoline Range Organics (GRO)		ND	19		mg/Kg	5	8/20/2018 11:16:05 AM	A53553		
Surr: E	BFB	106	70-130		%Rec	5	8/20/2018 11:16:05 AM	A53553		
EPA MET	HOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	: Irm		
Diesel Ra	ange 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: E	DNOP	106	50.6-138		%Rec	1	8/20/2018 1:29:25 PM	39869		
EPA MET	HOD 8260B: VOLATILES SH	IORT LIST					Analys	: AG		
Benzene		ND	0.093		mg/Kg	5	8/20/2018 11:16:05 AN	R53553		
Toluene		ND	0.19		mg/Kg	5	8/20/2018 11:16:05 AM	R53553		
Ethylben	zene	ND	0.19		mg/Kg	5	8/20/2018 11:16:05 AN	R53553		
Xylenes,	Total	ND	0.37		mg/Kg	5	8/20/2018 11:16:05 AM	R53553		
Surr: 4	l-Bromofluorobenzene	119	70-130		%Rec	5	8/20/2018 11:16:05 AM	R53553		
Surr: T	oluene-d8	97.5	70-130		%Rec	5	8/20/2018 11:16:05 AN	R53553		

Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 11
	ND	Not Detected at the Reporting Limit	Р	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		Cl	ient Sample I	D: S-	3	
Project:	Trunk 2C		(Collection Dat	e: 8/	17/2018 9:15:00 AM	
Lab ID:	1808B59-004	Matrix: SOI	L	Received Dat	e: 8/	18/2018 11:15:00 AM	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analyst	MRA
Chloride		250	30	mg/Kg	20	8/20/2018 11:08:16 AM	39874
EPA MET	HOD 8015D MOD: GASO	LINE RANGE				Analyst	AG
Gasoline	Range Organics (GRO)	ND	4.3	mg/Kg	1	8/20/2018 11:39:11 AM	A53553
Surr: E	BFB	107	70-130	%Rec	1	8/20/2018 11:39:11 AM	A53553
EPA MET	HOD 8015M/D: DIESEL R	ANGE ORGANICS				Analyst	Irm
Diesel Ra	ange 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: D	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
Ethylben	zene	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: T	oluene-d8	96.7	70-130	%Rec	1	8/20/2018 11:39:11 AM	R53553

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 11
	ND	Not Detected at the Reporting Limit	Р	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: 8/22/2018						
CLIENT: APEX TITAN Project: Trunk 2C Lab ID: 1808B59-005	Matrix: SOIL	CI (ient Sample II Collection Dat Received Dat	D: S-4 e: 8/1 e: 8/1	4 17/2018 9:20:00 AM 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: GASOLIN	IE 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 RAN	IGE 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 SH	IORT 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.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Dame 5 - 6 11
	ND	Not Detected at the Reporting Limit		Sample pH Not In Range Page 5 of 11
	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
Hall E	Hall Environmental Analysis Laboratory, Inc.Lab Order 1808B59Date Reported: 8/22/2018											
CLIENT:	APEX TITAN		C	lient Sample I	D: S-	5						
Project:	Trunk 2C		Collection Date: 8/17/2018 9:25:00 AM									
Lab ID:	1808B59-006	Matrix: SOIL		Received Dat	e: 8/1	18/2018 11:15:00 AM						
Analyses	5	Result	PQL	Qual Units	DF	Date Analyzed Batch						
EPA MET	THOD 300.0: ANIONS					Analyst: MRA						
Chloride		350	30	mg/Kg	20	8/20/2018 11:33:06 AM 39874						
EPA MET	THOD 8015D MOD: GASOLI	NE RANGE				Analyst: AG						
Gasoline	e Range Organics (GRO)	ND	18	mg/Kg	5	8/20/2018 12:25:24 PM A53553						
Surr: I	BFB	109	70-130	%Rec	5	8/20/2018 12:25:24 PM A53553						
EPA MET	THOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analyst: Irm						
Diesel R	ange Organics (DRO)	ND	9.6	mg/Kg	1	8/20/2018 2:43:18 PM 39869						
Motor Oi	I Range Organics (MRO)	ND	48	mg/Kg	1	8/20/2018 2:43:18 PM 39869						
Surr: I	DNOP	108	50.6-138	%Rec	1	8/20/2018 2:43:18 PM 39869						
EPA MET	THOD 8260B: VOLATILES S	HORT LIST				Analyst: AG						
Benzene	3	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						
Ethylben	zene	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	4-Bromofluorobenzene	123	70-130	%Rec	5	8/20/2018 12:25:24 PM R53553						
Surr: 1	l oluene-d8	100	70-130	%Rec	5	8/20/2018 12:25:24 PM R53553						

Analytical Report

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Desce (a f 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range Page 6 01 11
	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

WO#: 1808B59

22-Aug-18

Hall Environmental Analysis Laboratory, Inc.

Client: Project:

APEX TITAN Trunk 2C

Sample ID LCS-39874	SampTy	pe: Ics	5	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch	ID: 39	874	F	RunNo: 5							
Prep Date: 8/20/2018	Analysis Da	ate: 8/	20/2018	S	eqNo: 1	76 <mark>6</mark> 307	Units: mg/k					
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	SampTy	/pe: mt	olk	Tes	tCode: El	PA Method	300.0: Anion	s				
Sample ID MB-39874 Client ID: PBS	SampTy Batch	/pe: mt	olk 874	Tes	tCode: Ef	PA Method 3555	300.0: Anion	s				
Sample ID MB-39874 Client ID: PBS Prep Date: 8/20/2018	SampTy Batch Analysis Da	/pe: mt ID: 39 ate: 8/	olk 874 20/2018	Tes F S	tCode: El RunNo: 5: SeqNo: 1	PA Method 3555 766308	300.0: Anion Units: mg/k	s				
Sample ID MB-39874 Client ID: PBS Prep Date: 8/20/2018 Analyte	SampTy Batch Analysis Da Result	/pe: mt ID: 39 ate: 8/ PQL	51k 874 20/2018 SPK value	Tes F S SPK Ref Val	tCode: EF RunNo: 53 SeqNo: 1 %REC	PA Method 3555 766308 LowLimit	300.0: Anion Units: mg/K HighLimit	s íg %RPD	RPDLimit	Qual		

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Page 7 of 11

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: APEX

Project: Trunk 2C

APEX TITAN

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	0
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.

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

Page 8 of 11

WO#: 1808B59

Hall Environmental Analysis Laboratory, Inc.

Client: Project: APEX TITAN Trunk 2C

Sample ID 100ng Ics	Samp	ampType: LCS4 TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Bato	h ID: R	53553		RunNo: 5	3553				
Prep Date:	Analysis I	Date: 8	/20/2018	;	SeqNo: 1	765339	Units: mg /l	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	Samp	Гуре: М	BLK	Tes	stCode: E	PA Method	8260B: Vola	tiles Short	List	
Client ID: PBS	Batc	h ID: R	53553	F	RunNo: 5	3553				
Prep Date:	Analysis [Date: 8	/20/2018	5	SeqNo: 1	7653 <mark>4</mark> 6	Units: mg/ł	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	SampT	ype: M	S4	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: S-1	Batch	h ID: R5	3553	F	RunNo: 5	3553				
Prep Date:	Analysis D)ate: 8/	20/2018	5	SeqNo: 1	766082	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HiahLimit	%RPD	RPDI imit	Qual
Benzene	4.1	0.10	4.115	0	100	80	120	/0141 2	TH DEIM	Guai
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 1808b59-002amsc	l SampT	ype: MS	SD4	Test	tCode: EF	A Method	8260B: Volat	tiles Short	List	
Client ID: S-1	Batch	ID: R5	3553	R	unNo: 53	3553				
Prep Date:	Analysis D	ate: 8/	20/2018	S	eqNo: 17	766083	Units: mg/K	g		
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	GUU
Toluene	4.2	0.21	4.115	0	102	80	120	5.41	20	
Ethylbenzene								0.11	20	
	4.2	0.21	4.115	0	103	82	121	4 55	20	
Xylenes, Total	4.2 12	0.21 0.41	4.115 12.34	0 0.08131	103 99.5	82 80.2	121 120	4.55	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank

Е Value above quantitation range

- Analyte detected below quantitation limits J Р
 - Sample pH Not In Range
- RL **Reporting Detection Limit**

Sample container temperature is out of limit as specified W

Page 9 of 11

WO#: 1808B59

Hall Environmental Analysis Laboratory, Inc.

Client:APEX TITANProject:Trunk 2C

Sample ID 1808b59-002ams	d SampT	SampType: MSD4			TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: S-1	Batch	Batch ID: R53553			RunNo: 53553							
Prep Date:	Analysis D	ate: 8/	20/2018	S	eqNo: 1	766083	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.
- 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

Page 10 of 11

WO#: 1808B59

nall Environmental Analysis Laboratory,	Inc
---	-----

Client: Project:

APEX TITAN Trunk 2C

Sample ID 2.5ug gro Ics	SampType:	LCS	Tes	stCode: E	PA Method	8015D Mod:	Gasoline	Range			
Client ID: LCSS	Batch ID:	A53553	F	RunNo: 53553							
Prep Date:	Analysis Date:	8/20/2018	:	SeqNo: 1	765336	Units: mg/l	Kg				
Analyte	Result PC	QL 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	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range			
Client ID: PBS	Batch ID:	A53553	F	RunNo: 5	3553						
Prep Date:	Analysis Date:	8/20/2018	5	SeqNo: 1	765337	Units: mg/l	٨g				
Analyte	Result PC	QL 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	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range			
Client ID: FP-01	Batch ID:	A53553	F	RunNo: 5	3553						
Prep Date:	Analysis Date:	8/20/2018	5	SeqNo: 1	766080	Units: mg/k	٢g				
Analyte	Result PC	L 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 1808b59-001ams	d SampType:	MSD	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range			
Client ID: FP-01	Batch ID:	A53553	F	RunNo: 5	3553						
Prep Date:	Analysis Date:	8/20/2018	S	eqNo: 1	766081	Units: mg/k	٢g				
Analyte	Result PC	L 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	120	0	0			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits J
- Page 11 of 11
- Sample pH Not In Range RL **Reporting Detection Limit**

Р

W Sample container temperature is out of limit as specified 1808B59

WO#:

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Anal 49 Albuquer TEL: 505-345-3975 FAX Website: www.hallenv	ysis Laboratory 101 Hawkins NE 1940, NM 87109 1: 505-345-4107 1:ronmental.com	Sam	ple Log-In Check List
Client Name: APEX AZTEC	Work Order Number: 180)8B59		RcptNo: 1
Received By: Anne Thome 8/	18/2018 11:15:00 AM	0	M.	
Completed By: Anne Thome 8/2	20/2018 7:39:14 AM		N	
Reviewed By: ID Stabiled by: AT 08/20/17	al 18	Cl.	ne Som	-
Chain of Custody				7.3
1. Is Chain of Custody complete?	Yes		•	Not Present
2. How was the sample delivered?	Col	rier		
Log In 3. Was an attempt made to cool the samples?	Yes	⊻ N	•	
4. Were all samples received at a temperature of >	0° C to 6.0°C Yes		•	NA 🗆
5. Sample(s) in proper container(s)?	Yes	2 N		
5. Sufficient sample volume for indicated test(s)?	Yes	No No		
7. Are samples (except VOA and ONG) property pre-	served? Yes	No No		
3. Was preservative added to bottles?	Yes	No.		NA 🗆
. VOA vials have zero headspace?	Yes	No No		No VOA Vials 🔽
0. Were any sample containers received broken?	Yes	D No		
1. Does paperwork match bottle labels?	Yes	No No		# of preserved bottles checked for pH:
(Note discrepancies on chain of custody)				(<2 or >12 unless noted)
Is it clear what analyses were requested?	dy? Yes	No No		Adjusted?
4. Were all holding times able to be met?	Yes	No No		Chasked by
(If no, notify customer for authorization.)	Tes	NO NO		
pecial Handling (if applicable)				
5. Was client notified of all discrepancies with this or	der? Yes	□ No		
Person Notified:	Date		and the second	
By Whom:	Via: O eMa		Eav	In Person
Regarding:				
Client Instructions:				
3. Additional remarks:				ne se
Cooler Information Cooler No. Temp C. Condition See Int	als intact c	m Sul,	Jans	1 08/20/13
	Seal Da	e - Sgnet	By	

Page 1 of 1

A								No. C	-		1						1000		CHAIN OF CUSTODY RECORD
			Laboratory	H.	all Lab	Enu	1:10:	n_m_	ent	٢	AN Re		SIS ESTI	ED /	5	//	//	7	Lab use only Due Date:
APEX		1	Address:	490	1 H	anik	ins	NI	Ē		8			1	\$/	/	/	/	2.1-(F-14
Office Location	65	Rio	Alberg	vere	jur	N	m	87	10	7				100	1	/	/	/ /	when received (C°): /.
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roject Manager <u>K</u>	Sum	mais	> PO/SO #:							-	0 / 1	2/	P/	/	/	1.			
ampler's Name			Sampler's Sigr	Sampler's Signature							1	1/1	9	/	/	/ _	1	re / /	
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atrix Date Time	C om p	G r identifying b	Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 LF	350 250	Glass Jar	D/O		20	10		1.		1	//	Lab Sample ID (Lab Use Only)
5 8/17/18 900	x	FI	2-1	0	3				1		X	Y	¥		·				1808859-00
5 8/17/18 405	r	S	-)	0	10				1		¥	x	×			. "			702
> 8/1/18 910	×	S	-2	0	10				l	-	X	x	¥						203
5 8/12/18 915	Y	2	-3	0	10				1		x	K	K	12			3		204
5 8/2/18 920	x	S	-4	0	10				1		Y	K	×	1					705
5 8/0/18 925	K	9	5-5		10				1		x	x	¥						7010
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linquished by (Signature)		Date:	Time: Receip	yed by:	(Signa	ture))	Î	Date:	18	T	ime:			D	ay	7	reg	f + Chief 335
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linquished by (Signature)	1	Date:	Time: Receiv	ved by:	(Signa	ture)	13-2	1	Date:	-	Т	ime:				Se	me	0	211 -21-18
trix WW - Wastewa	iter	W - Water	S - Soil SD - So	olid L	- Liquid	A	- Air Ba	Ig	C-	Chan	coal t	ube	SL	- slu	tiqe epit	0) - Oil	- side	0.00.0

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

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

DEC: 1 0 2018

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 <u>36.7762</u>	Longitude -10	(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
Linit Letter Cestien T	1: D	~

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

Surface Owner: State Federal Tribal Private (Name: BLM

Nature and Volume of Release

BISTRICT 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 Yes No produced water >10,000 mg/l? 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.

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. Field Signature

Title: Director, Field Environmental

 Chil	1.11	
 fin (.	Jana	

email: jefields@eprod.com

Telephone: (713) 381-6684

Date: 12-3-18

OCD Only Fields Date: 12/10/2018 Received by:

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: 122019
Printed Name: Novosse, Fields	Title: Environmental Specalist



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

um

Kyle Summers, CPG Branch Manager / Senior Geologist

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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.

1



- 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/I TDS	Constituent	Method	Limit			
	Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg			
≤ 50 feet	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-ofcustody 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.

4



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



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



Project No. 725040112481

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





	TABLE 1 Lateral H-46 Pipeline Release												
						SOIL ANALY	TICAL SUMM	ARY					
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 Ene Coi	rgy, Mineral & I nservation Divis	Natural Resources sion, Closure Crite	s Department, Oil eria	10	NE	NE	NE	50				100	600
COLOR DE LA CAL	and the second				TRANSPORT DE LA	Soil Samples re	moved by excav	ation	Way a strange the second			The Barris Andrews	Contraction (Contraction
S-6	8.23.18	С	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
Bar Ashara	大学に、シャップ					Excavation Con	nposite Soil Sam	ples		67. 6.	Stand Statement		A State of
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	С	2 to 18	<0.11	<0.22	<0.22	<0.43	ND	<22	<10	<50	ND	<30
S-3	8.23.18	С	0 to 21	< 0.022	<0.044	<0.044	<0.088	ND	<4.4	<10	<50	ND	<30
S-4	8.23.18	С	0 to 12	< 0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.7	<49	ND	<30
S-5	8.23.18	С	12	<0.12	<0.24	<0.24	<0.48	ND	<24	<9.7	<49	ND	<30
S-8	8.29.18	С	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	С	17	<0.019	<0.038	< 0.038	< 0.077	ND	<3.8	<9.9	<50	ND	<30
S-11	8.29.18	С	0 to 17	< 0.020	<0.040	<0.040	< 0.080	ND	<4.0	<9.7	<49	ND	<30
S-12	8.29.18	С	0 to 17	< 0.019	< 0.037	< 0.037	< 0.075	ND	<3.7	<9.9	<50	ND	<30
S-13	8.29.18	С	0 to 18	< 0.021	<0.041	<0.041	< 0.082	ND	<4.1	<9.9	<50	ND	<30
S-14	8.29.18	С	0 to 18	< 0.023	< 0.046	< 0.046	< 0.092	ND	<4.6	<10	<50	ND	<30
S-15	8.29.18	С	0 to 18	< 0.021	< 0.043	< 0.043	<0.085	ND	<4.3	<9.7	<49	ND	<30
S-16	8.29.18	С	0 to 18	< 0.021	< 0.041	<0.041	< 0.083	ND	<4.1	<9.7	<48	ND	280
S-17	8.29.18	С	0 to 18	<0.020	< 0.040	< 0.040	<0.080	ND	<4.0	<9.8	<49	ND	310
S-18	8.29.18	С	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

Distric	t] French Dr. Hobbs NM 88240	State of New Mexico	Form C-138
Distric	till V Grand Avenue Artesia NM 88210	Energy Minerals and Natural Resources	Revised 08/01/11
Distric	LIII Dio Brazos Road Aztec, NM 87410	011 Conservation Division	*Surface Waste Management Facility Operator
stric	t IV St. Francis Dr. Santa Eq. NM 87505	Santa Fe, NM 87505	documentation available for Division inspection.
10 1	REOUEST	FOR APPROVAL TO ACCEPT	SOLID WASTE
1. G	enerator Name and Address:	FOR ALL ROVAL TO ACCELL	Invoicing Information
Ente	rprise Field Services, LLC, 614 Reilly	y Ave, Farmington NM 87401	AFE: N37491 PM: Chad Timmerman PayKey:CM22355
2.	Driginating Site: Lateral H-46 Pipeline	auism Line.	
3. 1	ocation of Material (Street Åddress, Section 25 T30N R11W; 36.77623, -10	City, State or ULSTR): 07.94424	8/28/18-17940
4. 5	ource and Description of Waste:		8 23 18 - 30490
Desc	ce: Hydro excavation Spoils from a Le ription: Soil impacted with Natural Ga	ak from a Natural Gas Gathering Line s Liquids (Condensate and Water)	8122118-253190
Estin	ated Volume 50 yd ³ bbls Known	Volume (to be entered by the operator at the end	of the haul) 17.2 (yd ³) bbls
5.	GENERATO	DR CERTIFICATION STATEMENT OF WA	STE STATUS
	Thomas Long-		a
I, The	omas Long , representative or	authorized agent for Enterprise Products Operation	ng do hereby
certif	y that according to the Resource Conse	rvation and Recovery Act (RCRA) and the US En	nvironmental Protection Agen 1988
regul	atory determination, the above describe	ed waste is: (Check the appropriate classification)	
	RCRA Exempt: Oil field wastes ge exempt waste. <i>Operator Use Only:</i>	nerated from oil and gas exploration and product Waste Acceptance Frequency Monthly	on operations and are not mix
	RCRA Non-Exempt: Oil field wast haracteristics established in RCRA reg ubpart D, as amended. The following o he appropriate items)	e which is non-hazardous that does not exceed th ulations, 40 CFR 261.21-261.24, or listed hazardo documentation is attached to demonstrate the abo	e minimum standards for waste ous waste as defined in 40 CFR ve-described waste is non-hazar
	SDS Information RCRA Hazard	ous Waste Analysis 🛛 Process Knowledge [Other (Provide description in
	GENERATOR 19.15.36.15 WA	ASTE TESTING CERTIFICATION STATEM	ENT FOR LANDFARMS
	74 1		
I, Th	omas Long 8-20-17, represent	tative for Enterprise Products Operating authorize	es IEI, Inc. to complete
the re	Senerator Signature	e Testing Certification	
une re	duned testing/sign the Senerator wash	e resung certification.	
I, repre have of the	sentative samples of the oil field waste been found to conform to the specific re- representative samples are attached to	have been subjected to the paint filter test and test equirements applicable to landfarms pursuant to s demonstrate the above-described waste conform	do hereby certify that ted for chloride content and that the samples Section 15 of 19.15.36 NMAC. The results to the requirements of Section 15 of
19.15	.36 NMAC. Transporter: West States Energy Con	tractors and Subcontractors	
OC Nan Add	D Permitted Surface Waste Managen he and Facility Permit #: JFJ Landfarm ress of Facility: #49 CR3150 Aztec, N	nent Facility n/Industrial Ecosystems, Inc. * Permit #: NM 01 New Mexico	-0010B
Met	hod of Treatment and/or Disposal:	tion 🗌 Treating Plant 🛛 Landfarm 🗌	Landfill D Other PH - 7
Wa	ste Acceptance Status:		
'RI	NT NAME ALG	APPROVED DENIEL	(Must Be Maintained As Permanent Record) K DATE: 82118
SIG	NATURE: Surface Waste Management Fac	TELEPHONE NO.:	505-632-1782
			1 /
			8/20/18



APPENDIX C

Photographic Documentation



SITE PHOTOGRAPHS

Lateral H-46 (2018) Pipeline Release

Photograph 1

View of excavation activities, facing northwest.



Photograph 2

View of excavation activities, facing northwest.



Photograph 3

View of excavation activities.





SITE PHOTOGRAPHS

Lateral H-46 (2018) Pipeline Release





SITE PHOTOGRAPHS

Lateral H-46 (2018) Pipeline Release

Photograph 7 View of excavation activities, facing southeast.	
Photograph 8 View of the main excavation.	
Photograph 9 View of the main excavation.	<image/>



Appendix D

Table



Appendix E

Laboratory Data Sheets & Chain of Custody Documentation



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

August 27, 2018

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

OrderNo.: 1808F05

Dear Kyle Summers:

RE: Lateral H-46

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 <u>www.hallenvironmental.com</u> 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 1808F05

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/27/2018

CLIENT:	APEX TITAN	Client Sample ID: S-1
Project:	Lateral H-46	Collection Date: 8/23/2018 8:30:00 AM
Lab ID:	1808F05-001	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 11:24:28 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	Irm
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. D
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit PQL
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 12 J
- Ρ Sample pH Not In Range
- **Reporting Detection Limit** RL
- Sample container temperature is out of limit as specified W

Analytical Report
Lab Order 1808F05

Date Reported: 8/27/2018

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: APEX TITAN
 Client Sample ID: S-2

 Project:
 Lateral H-46
 Collection Date: 8/23/2018 8:35:00 AM

 Lab ID:
 1808F05-002
 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 11:36:53 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 ORGA	NICS				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	г				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.
- 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 Page 2 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

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

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.

- 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 Page 3 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1808F05 Date Reported: 8/27/2018

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:

*

- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
 - Analyte detected below quantitation limits Page 4 of 12 J
 - Sample pH Not In Range Р
- **Reporting Detection Limit** RL
- W Sample container temperature is out of limit as specified
Hall Environmental Analysis Laboratory, Inc.

Lab Order 1808F05 Date Reported: 8/27/2018

CLIENT:	APEX TITAN		Client Sample ID: S-5	
Project:	Lateral H-46		Collection Date: 8/23/2018 8:50:00 AM	M
Lab ID:	1808F05-005	Matrix: MEOH (SO	DIL) Received Date: 8/24/2018 7:45:00 AM	M

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 ORGA	NICS				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.

- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 12 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1808F05

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/27/2018

CLIENT:	APEX TITAN	Client Sample ID: S-6
Project:	Lateral H-46	Collection Date: 8/23/2018 8:55:00 AM
Lab ID:	1808F05-006	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 12:26:32 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 ORGAN	NICS					Analyst	Irm
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. D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
 - Analyte detected below quantitation limits Page 6 of 12 J
 - Ρ Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1808F05

Date Reported: 8/27/2018

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 APEX TITAN
 Client Sample ID: S-7

 Project:
 Lateral H-46
 Collection Date: 8/23/2018 9:00:00 AM

 Lab ID:
 1808F05-007
 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/K	g 20	8/24/2018 12:38:57 PM	39976
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	: AG
Gasoline Range Organics (GRO)	180	34	mg/K	g 10	8/24/2018 12:47:21 PM	A53694
Surr: BFB	96.6	70-130	%Re	c 10	8/24/2018 12:47:21 PM	A53694
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	: Irm
Diesel Range Organics (DRO)	11	9.7	mg/K	g 1	8/24/2018 10:03:06 AM	39973
Motor Oil Range Organics (MRO)	ND	48	mg/K	g 1	8/24/2018 10:03:06 AM	39973
Surr: DNOP	105	50.6-138	%Re	c 1	8/24/2018 10:03:06 AM	39973
EPA METHOD 8260B: VOLATILES SHORT LIST	г				Analyst	: AG
Benzene	0.18	0.17	mg/K	g 10	8/24/2018 12:47:21 PM	B53694
Toluene	4.7	0.34	mg/K	g 10	8/24/2018 12:47:21 PM	B53694
Ethylbenzene	1.7	0.34	mg/K	g 10	8/24/2018 12:47:21 PN	B53694
Xylenes, Total	19	0.68	mg/K	g 10	8/24/2018 12:47:21 PN	B53694
Surr: 4-Bromofluorobenzene	108	70-130	%Re	c 10	8/24/2018 12:47:21 PN	B53694
Surr: Toluene-d8	103	70-130	%Re	c 10) 8/24/2018 12:47:21 PN	B53694

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 Page 7 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1808F05

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27-Aug-18

Client:	APEX T	ITAN							
Project:	Lateral H	I-46							
Sample ID	MB-39976	SampType:	mblk	Test	Code: EPA Method	300.0: Anions			
Client ID:	PBS	S Batch ID: 39976			unNo: 53692				
Prep Date:	8/24/2018	Analysis Date:	8/24/2018	S	eqNo: 1771696	Units: mg/Kg			
Analyte		Result PQI	_ SPK value	SPK Ref Val	%REC LowLimit	HighLimit %	RPD F	RPDLimit	Qual
Chloride		ND 1.	.5						
Sample ID	LCS-39976	SampType:	lcs	Test	tCode: EPA Method	300.0: Anions			
Client ID:	LCSS	Batch ID: 3	39976	R	RunNo: 53692				
Prep Date:	8/24/2018	Analysis Date:	8/24/2018	S	GeqNo: 1771697	Units: mg/Kg			
Analyte		Result PQI	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit %	RPD F	RPDLimit	Qual
Chloride		14 1	.5 15.00	0	94.3 90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

	QC SUM Hall Envir	MARY onmenta	REPO l Analys	RT sis L	aborat	ory, Inc.					WO#:	1808F05 27-Aug-18
	Client: Project:	APEX TI Lateral H-	ΓΑΝ -46									
1	Sample ID MB-	39973	SampTyp	e: ME	3LK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
1	Client ID: PBS	i	Batch I	D: 399	973	R	RunNo: 5	3686				
	Prep Date: 8/2	4/2018	Analysis Dat	e: 8/	24/2018	S	SeqNo: 1	770890	Units: mg/K	g		
	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	Diesel Range Organi	ics (DRO)	ND	10								
1	Motor Oil Range Org	anics (MRO)	ND	50								
	Surr: DNOP		11		10.00		106	50.6	138			
	Sample ID LCS	-39973	SampTyp	e: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
	Client ID: LCS	S	Batch I	D: 39	973	F	RunNo: 5	3686				
1	Prep Date: 8/2	24/2018	Analysis Dat	ie: 8/	24/2018	5	SeqNo: 1	770891	Units: mg/k	(g		
	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	Diesel Range Organi	ics (DRO)	45	10	50.00	0	90.9	70	130			
	Surr: DNOP		4.9		5.000		98.7	50.6	138			
	Sample ID 180	8F05-007AMS	SampTy	be: MS	3	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
ľ	Client ID: S-7		Batch I	D: 39	973	F	RunNo: 5	3685				

SPK value SPK Ref Val %REC

SPK value SPK Ref Val

10.84

10.84

49.95

4.995

49.65

4.965

SeqNo: 1771119

79.6

113

RunNo: 53685

%REC

88.7

122

SeqNo: 1771120

LowLimit

LowLimit

53.5

50.6

53.5

50.6

Units: mg/Kg

126

138

Units: mg/Kg

126

138

HighLimit

HighLimit

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

%RPD

8.08

0

RPDLimit

RPDLimit

21.7

0

Qual

Qual

Analysis Date: 8/24/2018

SampType: MSD

Batch ID: 39973

Analysis Date: 8/24/2018

PQL

9.9

PQL

10

Result

Result

55

6.1

51

5.6

Qualifiers:

Value exceeds Maximum Contaminant Level. *

Sample Diluted Due to Matrix D

Prep Date: 8/24/2018

Diesel Range Organics (DRO)

Prep Date: 8/24/2018

Diesel Range Organics (DRO)

Sample ID 1808F05-007AMSD

Analyte

Analyte

Surr: DNOP

Surr: DNOP

Client ID: S-7

Η Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

PQL Practical Quanitative Limit

- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range E

Analyte detected below quantitation limits J

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Sample pH Not In Range RL **Reporting Detection Limit**

Р

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN **Project:**

Lateral H-46

							the second s				
Sample ID	100ng lcs	SampTy	ype: LC:	S4	Test	Code: EP	A Method	8260B: Volat	iles Short	List	
Client ID:	BatchQC	Batch	ID: 85	3694	R	unNo: 53	694				
Prep Date:		Analysis Da	ate: 8/2	24/2018	S	eqNo: 17	71142	Units: mg/K	g		
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, Tota	I	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bro	mofluorobenzene	0.51		0.5000		102	70	130			
Surr: Tolue	ne-d8	0.50		0.5000		100	70	130			
Sample ID	rb	SampT	ype: ME	BLK	Test	Code: EF	A Method	8260B: Volat	iles Short	List	
Client ID:	PBS	Batch	ID: B5	3694	R	unNo: 53	3694				
Prep Date	:	Analysis D	ate: 8/	24/2018	S	eqNo: 17	71150	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene	1	ND	0.050								
Xylenes, Tota	l.	ND	0.10								
Surr: 4-Bro	mofluorobenzene	0.54		0.5000		108	70	130			
Surr: Tolue	ene-d8	0.49		0.5000		98.8	70	130			
Sample IF	1808f05-002ams	SampT	vpe: MS	54	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID:	S-2	Batch	1D: B5	3694	R	RunNo: 5	3694				
Prep Date	:	Analysis D	ate: 8/	24/2018	S	eqNo: 1	771421	Units: mg/k	٢g		
Analyte											
- T areary to		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		Result 4.2	PQL 0.11	SPK value 4.314	SPK Ref Val	%REC 98.2	LowLimit 80	HighLimit 120	%RPD	RPDLimit	Qual
Benzene Toluene		Result 4.2 4.6	PQL 0.11 0.22	SPK value 4.314 4.314	SPK Ref Val 0 0.02563	%REC 98.2 105	LowLimit 80 80	HighLimit 120 120	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene	9	Result 4.2 4.6 4.6	PQL 0.11 0.22 0.22	SPK value 4.314 4.314 4.314	SPK Ref Val 0 0.02563 0	%REC 98.2 105 107	LowLimit 80 80 82	HighLimit 120 120 121	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota	e al	Result 4.2 4.6 4.6 14	PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 4.314 12.94	SPK Ref Val 0 0.02563 0 0.1116	%REC 98.2 105 107 106	LowLimit 80 80 82 80.2	HighLimit 120 120 121 120	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro	e al pmofluorobenzene	Result 4.2 4.6 4.6 14 2.2	PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 4.314 12.94 2.157	SPK Ref Val 0 0.02563 0 0.1116	%REC 98.2 105 107 106 104	LowLimit 80 80 82 80.2 70	HighLimit 120 120 121 120 120 130	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro Surr: Tolue	e al omofluorobenzene ene-d8	Result 4.2 4.6 4.6 14 2.2 2.1	PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 4.314 12.94 2.157 2.157	SPK Ref Val 0 0.02563 0 0.1116	%REC 98.2 105 107 106 104 99.4	LowLimit 80 80 82 80.2 70 70	HighLimit 120 121 121 120 130 130	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Totz Surr: 4-Bro Surr: Tolue Sample IE	e al mofluorobenzene ene-d8 1808f05-002amsd	Result 4.2 4.6 4.6 14 2.2 2.1 SampT	PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 4.314 12.94 2.157 2.157 SD4	SPK Ref Val 0 0.02563 0 0.1116 Tes	%REC 98.2 105 107 106 104 99.4	LowLimit 80 82 80.2 70 70 PA Method	HighLimit 120 121 120 130 130 8260B: Vola	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro Surr: Tolue Sample IE Client ID:	e al pmofluorobenzene ene-d8 0 1808f05-002amsd S-2	Result 4.2 4.6 4.6 14 2.2 2.1 SampT Batcl	PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 4.314 12.94 2.157 2.157 SD4 53694	SPK Ref Val 0 0.02563 0 0.1116 Tes	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5	LowLimit 80 80 82 80.2 70 70 70 70 70 8694	HighLimit 120 121 120 130 130 8260B: Vola	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tot Surr: 4-Bro Surr: Tolue Sample IE Client ID: Prep Date	e al mofluorobenzene ene-d8 0 1808f05-002amsd S-2 2:	Result 4.2 4.6 14 2.2 2.1 SampT Batch Analysis D	PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 12.94 2.157 2.157 SD4 53694 /24/2018	SPK Ref Val 0 0.02563 0 0.1116 Tes F	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5 SeqNo: 1	LowLimit 80 80 82 80.2 70 70 PA Method 3694 771422	HighLimit 120 121 120 130 130 130 18260B: Vola	%RPD tiles Short	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro Surr: Tolue Surr: Tolue Sample ID Client ID: Prep Date Analyte	e al omofluorobenzene ene-d8 1808f05-002amsd S-2 S:	Result 4.2 4.6 14 2.2 2.1 SampT Batch Analysis D Result	PQL 0.11 0.22 0.22 0.43 Fype: M3 h ID: B5 Date: 8, PQL	SPK value 4.314 4.314 12.94 2.157 2.157 504 53694 /24/2018 SPK value	SPK Ref Val 0 0.02563 0 0.1116 Tes F SPK Ref Val	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5 SeqNo: 1 %REC	LowLimit 80 80 82 80.2 70 70 70 PA Method 3694 771422 LowLimit	HighLimit 120 120 121 120 130 130 130 8260B: Vola Units: mg/k HighLimit	%RPD tiles Short (g %RPD	RPDLimit : List RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro Surr: Tolue Surr: Tolue Client ID: Prep Date Analyte Benzene	e al omofluorobenzene ene-d8 1808f05-002amsd S-2 e:	Result 4.2 4.6 4.6 14 2.2 2.1 SampT Batch Analysis D Result 4.1	PQL 0.11 0.22 0.22 0.43 Fype: M3 h ID: B5 Date: 8/ PQL 0.11	SPK value 4.314 4.314 12.94 2.157 2.157 504 53694 /24/2018 SPK value 4.314	SPK Ref Val 0 0.02563 0 0.1116 Tes F SPK Ref Val 0	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5 SeqNo: 1 %REC 95.7	LowLimit 80 80 82 80.2 70 70 70 70 70 70 70 3694 771422 LowLimit 80	HighLimit 120 120 121 120 130 130 130 18260B: Vola Units: mg/ł HighLimit 120	%RPD tiles Short (g %RPD 2.60	RPDLimit : List RPDLimit 20	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro Surr: Tolue Sample IE Client ID: Prep Date Analyte Benzene Toluene	e al mofluorobenzene ene-d8 0 1808f05-002amsd S-2 ::	Result 4.2 4.6 14 2.2 2.1 SampT Batch Analysis D Result 4.1 4.5	PQL 0.11 0.22 0.22 0.43 Type: M3 h ID: B5 Date: 8 PQL 0.11 0.22	SPK value 4.314 4.314 12.94 2.157 2.157 SD4 53694 /24/2018 SPK value 4.314 4.314	SPK Ref Val 0 0.02563 0 0.1116 Tes 5 SPK Ref Val 0 0.02563	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5 SeqNo: 1 %REC 95.7 103	LowLimit 80 80 82 80.2 70 70 70 PA Method 3694 771422 LowLimit 80 80	HighLimit 120 121 120 130 130 130 18260B: Vola Units: mg/k HighLimit 120 120	%RPD tiles Short (g %RPD 2.60 2.12	RPDLimit : List RPDLimit 20 20	Qual
Benzene Toluene Ethylbenzene Xylenes, Tot Surr: 4-Bro Surr: Tolue Sample IE Client ID: Prep Date Analyte Benzene Toluene Ethylbenzene	e al mofluorobenzene ene-d8 0 1808f05-002amsd S-2 S:	Result 4.2 4.6 14 2.2 2.1 SampT Batch Analysis D Result 4.1 4.5 4.6	PQL 0.11 0.22 0.22 0.43 Fype: MS h ID: B5 Date: 8 PQL 0.11 0.22 0.22	SPK value 4.314 4.314 12.94 2.157 2.157 504 53694 /24/2018 SPK value 4.314 4.314	SPK Ref Val 0 0.02563 0 0.1116 Tes F SPK Ref Val 0 0.02563 0	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5 SeqNo: 1 %REC 95.7 103 106	LowLimit 80 80 82 80.2 70 70 PA Method 3694 771422 LowLimit 80 80 82	HighLimit 120 121 120 130 130 130 130 130 130 130 130 HighLimit 120 120 121	%RPD tiles Short (g 2.60 2.12 0.951	RPDLimit : List RPDLimit 20 20 20 20	Qual
Benzene Toluene Ethylbenzene Xylenes, Tota Surr: 4-Bro Surr: Tolue Sample IE Client ID: Prep Date Analyte Benzene Toluene Ethylbenzene Xylenes, Tot	e al profluorobenzene ene-d8 1808f05-002amsd S-2 e:	Result 4.2 4.6 14 2.2 2.1 SampT Batch Analysis D Result 4.1 4.5 4.6 13	PQL 0.11 0.22 0.22 0.43 Type: M3 h ID: B5 Date: 8 PQL 0.11 0.22 0.22 0.43	SPK value 4.314 4.314 12.94 2.157 2.157 504 53694 /24/2018 SPK value 4.314 4.314 4.314 4.314 4.314	SPK Ref Val 0 0.02563 0 0.1116 Tes SPK Ref Val 0 0.02563 0 0.1116	%REC 98.2 105 107 106 104 99.4 tCode: El RunNo: 5 SeqNo: 1 %REC 95.7 103 106 103	LowLimit 80 80 82 80.2 70 70 70 PA Method 3694 771422 LowLimit 80 80 82 80.2	HighLimit 120 120 121 120 130 130 130 18260B: Vola Units: mg/k HighLimit 120 120 121 120	%RPD tiles Short (g 2.60 2.12 0.951 2.64	RPDLimit List RPDLimit 20 20 20 20 20 20 20 20	Qual

Qualifiers:

Value exceeds Maximum Contaminant Level. *

D Sample Diluted Due to Matrix

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Practical Quanitative Limit PQL

- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В

Value above quantitation range E

Analyte detected below quantitation limits J

Sample pH Not In Range P

Reporting Detection Limit RL

Sample container temperature is out of limit as specified W

Page 10 of 12

WO#: 1808F05 27-Aug-18

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1808F05 27-Aug-18

Client: APEX TITAN

F	
Proj	ect:

Lateral H-46

Ī	Sample ID 1808f05-002amsd	SampType: MSD4			Test	TestCode: EPA Method 8260B: Volatiles Short List					
ľ	Client ID: S-2	Batch	ID: B5	3694	R	unNo: 5	3694				
I	Prep Date:	Analysis Da	ate: 8/	24/2018	S	eqNo: 1	771422	Units: mg/k	(g		
	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1	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. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits J

Page 11 of 12

Sample pH Not In Range **Reporting Detection Limit** RL

Р

Sample container temperature is out of limit as specified W

Hall Environmenta	l Analysis	Laboratory,	Inc.
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WO#: 1808F05

27-Aug-18

Client:	APEX TI	TAN									
Project:	Lateral H-	-46									
		T		-	Teel	Order Fr	A Mathad	PO4ED Made	Casalina	Danga	
Sample ID	2.5ug gro Ics	Sampl	ype: LC	5	Test	Code: El	A Method	6015D WOG:	Gasonne i	tange	
Client ID:	LCSS	Batch	ID: A5	3694	R	unNo: 5	3694				
Prep Date:	:	Analysis D	ate: 8/	24/2018	S	eqNo: 1	771139	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Ran	ge Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB		470		500.0		93.9	70	130			
Sample ID) rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	PBS	Batch	n ID: A5	3694	R	anNo: 5	3694				
Prep Date	:	Analvsis D	ate: 8	24/2018	S	eqNo: 1	771140	Units: mg/k	(g		
		Decult	DOI			2/ DEC	Loud imit	Highl imit	%PPD	PPDI imit	Qual
Analyte		Result	PQL	SPK value	SPK Rei vai	70REC	LOWLINI	HighLinnt	70INF D	IXP DEIIIII	Quai
Casalina Dan	an Ormanian (CDO)	ND	50								
Gasoline Ran	nge Organics (GRO)	ND	5.0	500.0		05.0	70	130			
Gasoline Ran Surr: BFB	nge Organics (GRO)	ND 480	5.0	500.0		95.9	70	130			
Gasoline Ran Surr: BFB Sample ID	nge Organics (GRO) 1808f05-001ams	ND 480 SampT	5.0 ype: M	500.0 S	Tes	95.9 tCode: El	70 PA Method	130 8015D Mod:	Gasoline	Range	
Gasoline Ran Surr: BFB Sample ID Client ID:	nge Organics (GRO) 0 1808f05-001ams S-1	ND 480 SampT Batch	5.0 Type: MS n ID: A5	500.0 S 53694	Tes	95.9 tCode: El RunNo: 5	70 PA Method 3694	130 8015D Mod:	Gasoline	Range	
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date	nge Organics (GRO) 0 1808f05-001ams S-1 5:	ND 480 SampT Batch Analysis D	5.0 Type: Ms n ID: A5 Date: 8	500.0 S 53694 /24/2018	Tes F S	95.9 tCode: El RunNo: 5 SeqNo: 1	70 PA Method 3694 771419	130 8015D Mod: Units: mg/k	Gasoline	Range	
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte	nge Organics (GRO) 0 1808f05-001ams S-1 2:	ND 480 SampT Batch Analysis D Result	5.0 Type: Ms n ID: A5 Date: 8 PQL	500.0 S 53694 /24/2018 SPK value	Tes F SPK Ref Val	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC	70 PA Method 3694 771419 LowLimit	130 8015D Mod: Units: mg/H HighLimit	Gasoline (g %RPD	Range RPDLimit	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar	nge Organics (GRO) 1808f05-001ams S-1 : nge Organics (GRO)	ND 480 SampT Batch Analysis D Result 18	5.0 Type: Ms n ID: A5 Date: 8 PQL 3.8	500.0 S 53694 /24/2018 SPK value 18.81	Tes F S SPK Ref Val 0.7900	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6	70 PA Method 3694 771419 LowLimit 64.7	130 8015D Mod: Units: mg/F HighLimit 142	Gasoline (g %RPD	Range RPDLimit	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar Surr: BFB	nge Organics (GRO) 0 1808f05-001ams S-1 e: nge Organics (GRO)	ND 480 SampT Batch Analysis D Result 18 400	5.0 Type: M n ID: A5 Date: 8, PQL 3.8	500.0 5 3694 /24/2018 SPK value 18.81 376.2	Tes F SPK Ref Val 0.7900	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107	70 PA Method 3694 771419 LowLimit 64.7 70	130 8015D Mod: Units: mg/P HighLimit 142 130	Gasoline Kg %RPD	Range RPDLimit	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Ran Surr: BFB	nge Organics (GRO) 1808f05-001ams S-1 :: nge Organics (GRO)	ND 480 SampT Batch Analysis D Result 18 400	5.0 Type: M: Date: 8, PQL 3.8	500.0 53694 /24/2018 SPK value 18.81 376.2	Tes F SPK Ref Val 0.7900	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107	70 PA Method 3694 771419 LowLimit 64.7 70	130 8015D Mod: Units: mg/k HighLimit 142 130 8015D Mod:	Gasoline %g %RPD	Range RPDLimit	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar Surr: BFB Sample ID	nge Organics (GRO) 1808f05-001ams S-1 :: nge Organics (GRO) 1808f05-001amsd	ND 480 SampT Batch Analysis D Result 18 400 SampT	5.0 Type: MS Date: 8, PQL 3.8 Type: MS	500.0 S 33694 /24/2018 SPK value 18.81 376.2 SD	Tes F SPK Ref Val 0.7900 Tes	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107 tCode: E	70 PA Method 3694 771419 LowLimit 64.7 70 PA Method	130 8015D Mod: Units: mg/F HighLimit 142 130 8015D Mod:	Gasoline (g %RPD Gasoline	Range RPDLimit Range	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar Surr: BFB Sample ID Client ID:	nge Organics (GRO) 0 1808f05-001ams S-1 :: nge Organics (GRO) 0 1808f05-001amsd S-1	ND 480 SampT Batch Analysis D Result 18 400 SampT Batch	5.0 Type: M: Date: 8, PQL 3.8 Type: M: h ID: A5	500.0 5 53694 /24/2018 SPK value 18.81 376.2 SD 53694	Tes F SPK Ref Val 0.7900 Tes F	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107 tCode: E RunNo: 5	70 PA Method 3694 771419 LowLimit 64.7 70 PA Method 3694	130 8015D Mod: Units: mg/F HighLimit 142 130 8015D Mod:	Gasoline (g %RPD Gasoline	Range RPDLimit Range	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar Surr: BFB Sample ID Client ID: Prep Date	nge Organics (GRO) 1808f05-001ams S-1 e: nge Organics (GRO) 1808f05-001amsd S-1 e:	ND 480 SampT Batch Analysis D Result 18 400 SampT Batch Analysis D	5.0 Type: M: Date: 8, PQL 3.8 Type: M: h ID: A5 Date: 8	500.0 53694 /24/2018 SPK value 18.81 376.2 SD 53694 /24/2018	Tes F SPK Ref Val 0.7900 Tes F S	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107 tCode: El RunNo: 5 SeqNo: 1	70 PA Method 3694 771419 LowLimit 64.7 70 PA Method 3694 771420	130 8015D Mod: Units: mg/k HighLimit 142 130 8015D Mod: Units: mg/k	Gasoline %g %RPD Gasoline	RPDLimit RPDLimit	Qual
Gasoline Ran Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar Surr: BFB Sample ID Client ID: Prep Date Analyte	nge Organics (GRO) 1808f05-001ams S-1 :: nge Organics (GRO) 1808f05-001amsd S-1 ::	ND 480 SampT Batch Analysis D Result 18 400 SampT Batch Analysis D Result	5.0 Type: MS Date: 8, PQL 3.8 Type: MS Date: 8 Date: 8 PQL	500.0 53694 /24/2018 SPK value 18.81 376.2 SD 53694 /24/2018 SPK value	Tes F SPK Ref Val 0.7900 Tes F SPK Ref Val	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107 tCode: El RunNo: 5 SeqNo: 1 %REC	70 PA Method 3694 771419 LowLimit 64.7 70 PA Method 3694 771420 LowLimit	130 8015D Mod: Units: mg/k HighLimit 142 130 8015D Mod: Units: mg/k HighLimit	Gasoline %RPD Gasoline %RPD	RPDLimit RPDLimit Range	Qual
Gasoline Ran Surr: BFB Client ID: Prep Date Analyte Gasoline Rar Surr: BFB Sample ID Client ID: Prep Date Analyte Gasoline Rar	nge Organics (GRO) 1808f05-001ams S-1 e: nge Organics (GRO) 1808f05-001amsd S-1 e: nge Organics (GRO)	ND 480 SampT Batch Analysis D Result 400 SampT Batch Analysis D Result 17	5.0 Type: MS Date: 8, PQL 3.8 Type: MS h ID: AS Date: 8 PQL 3.8	500.0 5 53694 /24/2018 SPK value 18.81 376.2 53694 /24/2018 SPK value 18.81	Tes F SPK Ref Val 0.7900 Tes F SPK Ref Val 0.7900	95.9 tCode: El RunNo: 5 SeqNo: 1 %REC 90.6 107 tCode: E RunNo: 5 SeqNo: 1 %REC 86.2	70 PA Method 3694 771419 LowLimit 64.7 70 PA Method 3694 771420 LowLimit 64.7	130 8015D Mod: Units: mg/H HighLimit 142 130 8015D Mod: Units: mg/H HighLimit 142	Gasoline (g %RPD Gasoline (g %RPD 4.80	RPDLimit Range RPDLimit 20	Qual

Qualifiers:

Value exceeds Maximum Contaminant Level. *

Sample Diluted Due to Matrix D

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Practical Quanitative Limit PQL

- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- Analyte detected below quantitation limits J

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Sample pH Not In Range RL **Reporting Detection Limit**

P

W Sample container temperature is out of limit as specified

HALL Hall Environment ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345-35 Website: www	tal Analysis Labora 4901 Hawkins Albuquerque, NM 87 975 FAX: 505-345-4 v.hallenvironmental.	tory NE 109 San 107 com	Sample Log-In Check List					
Client Name: APEX AZTEC Work Order Numb	per: 1808F05		RcptNo: 1					
Received By: Jazzmine Burkhead 8/24/2018 7:45:00 /	M	him Backhal						
Completed By: Ashley Gallegos 8/24/2018 8:30:33 /	AM	A						
Reviewed By: A7 08 24118	Labeled	dby:	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								
Was an attempt made to cool the samples?	Yes 🗹	No 🛄	NAL					
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🖌	No 🗌						
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					
0. Were any sample containers received broken?	Yes	No 🗹	that annound in (1					
1. Does paperwork match bottle labels?	Yes 🖌	No 🗆	# or preserved bottles checked for pH:					
(Note discrepancies on chain of custody)	No.		Adjusted?					
2. Are matrices correctly identified on Chain of Custody?	Ves V		NY					
4. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗌	Checked by:					
Special Handling (if applicable)		/						
15. Was client notified of all discrepancies with this order?	Yes	No 🗌	NA 🗹					
Person Notified	International states of the second states of the second states of the second states of the second states of the	a na						
By Whom: Via:		hone 🗌 Fax	In Person					
Regarding:			TRACTOR OF THE TRACTOR OF TO TATION OF THE TRACTOR OF TO TATION OF THE TRACTOR OF TO TATION OF THE TRACTOR OF THE TRACTOR OF TO TATION OF TO TATI					
Client Instructions:			NAMARI MARTUNA M					
16 Additional remarks:								
IV. PNMUUICI IGIIICING.								
17. Cooler Information		an in the state of the	4					
Cooler No. Temp °C Condition Seal Intact Seal No	Seal Date	Signed By						

Page 1 of 1

and the second										C	HAIN OF	CUSTODY RECORD
X	Laboratory A	lall E	nu: 10	nmante	A		SIS STED	15	11	//		Lab use only Due Date:
ADEX	Laboratory:	1 14	1		_			1.0/			///	/
AFEN	Address: <u>M90</u>	PIPI	awk;	ns IVE	2		1	8//	/ /	/	///	Temp. of coolers
Office Location 606 5 K.O	HIBUQUE	que	NM	8710	1		/.	1 / 90	/ /			
Cerente Suit H	Contact: <u>A</u>	FILL	man		-		15		/ /	/ /		
HZtec NM 77410	Phone: 505	- 395	- 39	75	-			PP/		/ /	11	Page / of /
Project Manager <u>X</u> Summers	PO/SO #:				_	h	18	2/ /	/ /	/	/ /	
Sampler's Name	Sampler's Signature	11				5	N	1 /			/ /	
Ched DAponti	Cla	a				1	09/1	M/	/ /	/ /	/	
Proj. No. Project Name	21-111	No	o/Type of Co	ontainers		wi/	5. 0	γ / γ		/ /	/	
125040112481 [Ateral	H-76				- 1	0 3	10	//	/ /	/	/	
Matrix Date Time O r Identifying Mari	cs of Sample(s)	Dept	AG AG	Glass Jar	5	18	0		/ /	/ /	Lab	Sample ID (Lab Use Only)
5 \$123/14 830 8 5-1	-	21		1	1	XX	x				1808	F05-001
S \$13/18 835 0 5-2	2	18		1		AX	×					-002
S 8/23/14 840 P 5-3	0	21		5	X	X	<					-003
S \$ 272/14 845 8 5-4	0	12		1	X	6	X					-004
S 1/2/14 850 0 5-5	-	12		1	X	X	¥				1.	-005
S 8/22/18 855 x S-6	0	21		1	¥	x	x					-000
S 8/22/14 900 x S-7	0	18		1	x	×	x					-007
									-			
										S		
Turn around time 🖸 Normal 🛄 25% Rush 🛄	50% Rush 100%	Rush									~	
Relinquished by (Signature) Date: T	ime: Received by	: (Signature	t.	Date:	1	Time:	NO	TES: Pa	y her	2 #	Cm 20	3355
Relinquished by (\$ignature) Date; T	ime: Received by	: (Signature	11	Date:	Area	Time:	B	1) to	Tom	Lor	g (E	PRODJ
Matri WILL- 823/18/19	01 Janin	Dull	the	VXIZH	NR C	57341		EE #	× NZ	740	21	
Helinquished by (Signature) Date: T	me: received by	: (Signature	9) ·	Date:		nme:	1	10	. /		- (
Relinquished by (Signature) Date: T	me: Received by	: (Signature)	Date:		Time:		5	ane	Do	ay	8-24-18
Matrix WW - Wastewater W - Water S Container VOA - 40 ml viai A/G - Amber / Or	- Soil SD - Solid Glass 1 Liter	L - Liquid 250 ml - Glas	A - Air Bag ss wide mou	th P/O	harcoa Plasti	al tube ic or othe	. SL - :	sludge	O - Oil			

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204



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

OrderNo.: 1808H72

Dear Kyle Summers:

RE: Lateral H 46

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 <u>www.hallenvironmental.com</u> 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 1808H72

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/31/2018

CLIENT:	APEX TITAN			Clie	ent Sample I	D: S-	8	
Project:	Lateral H 46			C	ollection Dat	te: 8/2	29/2018 10:00:00 AM	
Lab ID:	1808H72-001	Matrix: S	OIL	F	Received Dat	te: 8/3	30/2018 7:00:00 AM	
Analyses		Res	ult PQ	L	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS						Analyst	MRA
Chloride			ND	30	mg/Kg	20	8/30/2018 10:47:04 AM	40066
EPA MET	HOD 8015D MOD: GAS	OLINE RANGE					Analyst	AG
Gasoline	e Range Organics (GRO)		6.6 3	8.7	mg/Kg	1	8/30/2018 10:15:59 AM	A53826
Surr: I	BFB		108 70-1	30	%Rec	1	8/30/2018 10:15:59 AM	A53826
EPA MET	THOD 8015M/D: DIESEL	RANGE ORGANICS					Analyst	: Irm
Diesel R	ange Organics (DRO)		ND §	9.9	mg/Kg	1	8/30/2018 9:54:38 AM	40064
Motor Oi	I Range Organics (MRO)		ND	49	mg/Kg	1	8/30/2018 9:54:38 AM	40064
Surr: I	DNOP		116 50.6-1	38	%Rec	1	8/30/2018 9:54:38 AM	40064

Suff: DNOP	110	50.0-150	70Rec	1	0/30/2010 9.34.30 AM	40004
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. D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
 - Analyte detected below quantitation limits Page 1 of 16 J
 - Sample pH Not In Range Р
- **Reporting Detection Limit** RL
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1808H72

Hall Environmental Analysis Laboratory, Inc.

Gasoline Range Organics (GRO)

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

EPA METHOD 8260B: VOLATILES SHORT LIST

Surr: BFB

Surr: DNOP

Benzene

Toluene

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Date Reported: 8/31/2018

8/30/2018 10:39:07 AM A53826

8/30/2018 10:39:07 AM A53826

8/30/2018 10:17:03 AM 40064

8/30/2018 10:17:03 AM 40064

8/30/2018 10:17:03 AM 40064

8/30/2018 10:39:07 AM R53826 8/30/2018 10:39:07 AM R53826

8/30/2018 10:39:07 AM R53826

8/30/2018 10:39:07 AM R53826

8/30/2018 10:39:07 AM R53826

8/30/2018 10:39:07 AM R53826

Analyst: Irm

Analyst: AG

CLIENT:	APEX TITAN		Clien	t Sample II	D: S-9)	
Project:	Lateral H 46		Coll	ection Dat	e: 8/2	9/2018 10:05:00 AM	
Lab ID:	1808H72-002	Matrix: SOIL	Re	ceived Dat	e: 8/3	30/2018 7:00:00 AM	
Analyses	3	Result	PQL Q	al Units	DF	Date Analyzed	Batch
EPA ME	THOD 300.0: ANIONS					Analys	: MRA
Chloride)	ND	30	mg/Kg	20	8/30/2018 10:59:29 AM	40066
FPA MF	THOD 8015D MOD: GASOLIN	IE RANGE				Analys	: AG

ND

109

ND

ND

120

ND

ND

ND

ND

123

96.4

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

*	Value	exceeds	Maximum	Contaminant	Level.
---	-------	---------	---------	-------------	--------

- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range

mg/Kg

%Rec

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

1

1

1

1

1

1

1

1

1

1

1

3.8

10

50

50.6-138

0.019

0.038

0.038

0.077

70-130

70-130

70-130

- Analyte detected below quantitation limits Page 2 of 16 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Toluene

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Surr: 4-Bromofluorobenzene

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

8/30/2018 11:02:14 AM R53826

8/30/2018 11:02:14 AM R53826

8/30/2018 11:02:14 AM R53826

8/30/2018 11:02:14 AM R53826 8/30/2018 11:02:14 AM R53826

CLIENT:	APEX TITAN			Cl	ient Sa	mple II): S-1	10	
Project:	Lateral H 46			(Collecti	on Dat	e: 8/2	29/2018 10:10:00 AM	
Lab ID:	1808H72-003	Matrix:	SOIL		Receiv	ed Dat	e: 8/3	80/2018 7:00:00 AM	
Analyses		R	esult	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS							Analyst	MRA
Chloride			ND	30		mg/Kg	20	8/30/2018 11:11:53 AM	40066
EPA MET	HOD 8015D MOD: GASOLI	NE RANGE						Analyst	AG
Gasoline	Range Organics (GRO)		ND	3.8		mg/Kg	1	8/30/2018 11:02:14 AM	A53826
Surr: I	BFB		107	70-130		%Rec	1	8/30/2018 11:02:14 AM	A53826
EPA MET	THOD 8015M/D: DIESEL RA	NGE ORGANIC	s					Analyst	Irm
Diesel R	ange Organics (DRO)		ND	9.9		mg/Kg	1	8/30/2018 10:38:58 AM	40064
Motor Oi	I Range Organics (MRO)		ND	50		mg/Kg	1	8/30/2018 10:38:58 AM	40064
Surr: I	DNOP		113	50.6-138		%Rec	1	8/30/2018 10:38:58 AM	40064
	THOD 8260B: VOLATILES S	HORT LIST						Analyst	AG
Benzene	9		ND	0.019		mg/Kg	1	8/30/2018 11:02:14 AM	R53826

ND

ND

ND

120

98.1

0.038

0.038

0.077

70-130

70-130

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

1

1

1

1

1

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

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* Value exceeds Maximum Contaminant Level. B Analyte detect	eds Maximum Contaminant Level. B Analyte det	ected in

- 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
 - J Analyte detected below quantitation limits Page 3 of 16
 - P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1808H72

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1808H/2 Date Reported: 8/31/2018

CLIENT: APEX TITAN		Cli	ient Sample II): S-	11	
Project: Lateral H 46		0	Collection Date	e: 8/2	29/2018 10:15:00 AM	
Lab ID: 1808H72-004	Matrix: SOIL		Received Date	e: 8/3	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 RA	NGE				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 O	RGANICS				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

PA METHOD 8260B: VOLATILES SHORT LIST					Analyst:	AG
					, maryer	
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	9 <mark>5</mark> .1	70-130	%Rec	1	8/30/2018 11:25:16 AM	R53826

Qualifiers	*	Value exceeds Maximum Contaminant Level	
Quanners:		value exceeds Maximum Containmant 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 Page 4 of 16
- 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.

Lab Order 1808H72 Date Reported: 8/31/2018

CLIENT:	APEX TITAN		Client S	ample II): S-1	12	
Project:	Lateral H 46		Collec	tion Dat	e: 8/2	29/2018 10:20:00 AM	
Lab ID:	1808H72-005	Matrix: SOIL	Rece	ived Dat	e: 8/3	0/2018 7:00:00 AM	
Analyses		Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA MET	HOD 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 ORGAN	lics				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 to	ogin checklist for	naggeu QC uata	and preservation mon

Qualifiers:	ĸ	Value exceeds Maximum Contaminant Level.	
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- 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 Page 5 of 16
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1808H72

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/31/2018

		and the second se	and the second se					
CLIENT: APEX TITAN		Clien	t Sample II): S-1	13			
Project: Lateral H 46 Collection Date: 8/29/2018 10:25:								
Lab ID: 1808H72-006	Matrix: SOIL	Matrix: SOIL Received Date: 8/30/2018 7:00:00 AM						
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analys	t: MRA		
Chloride	ND	30	mg/Kg	20	8/30/2018 11:49:05 AM	40066		
EPA METHOD 8015D MOD: GASO	LINE RANGE				Analys	t: AG		
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	8/30/2018 12:11:33 PM	A53826		
0 050								

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 ORGA	NICS				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	Г				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 16
	ND	Not Detected at the Reporting Limit	Р	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.

Matrix:

CLIENT: APEX TITAN Project: Lateral H 46

1808H72-007

Lab ID:

Lab Order 1808H72 Date Reported: 8/31/2018

	Client Sample ID: S-14
	Collection Date: 8/29/2018 10:30:00 AM
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 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 ORGA	NICS				Analyst	Irm
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the
	D	Sample Diluted Due to Matrix	E	Value above quantitat
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Ran
	PQL	Practical Quanitative Limit	RL	Reporting Detection L
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temp

- e associated Method Blank
- tion range
 - w quantitation limits Page 7 of 16
 - nge
 - imit
 - perature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1808H72 Date Reported: 8/31/2018

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

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 ORGA	NICS				Analyst	Irm
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.

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 16 J
- 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.

Lab Order 1808H72 Date Reported: 8/31/2018

8/30/2018 1:20:50 PM

R53826

CLIENT: APEX TITAN		Cl	ient Sample II): S-	16	
Project: Lateral H 46		(Collection Date	e: 8/2	29/2018 10:40:00 AM	
Lab ID: 1808H72-009	Matrix: SOIL		Received Date	e: 8/3	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 RA	NGE				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 O	RGANICS				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

98.5

70-130

%Rec

1

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

*		Value e	exceeds	Maximum	Contaminant	Level.	
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D Sample Diluted Due to Matrix

Surr: Toluene-d8

Qualifiers

- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
 - Analyte detected below quantitation limits Page 9 of 16 J
 - Р Sample pH Not In Range
 - RL **Reporting Detection Limit**
 - W Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1808H72

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

EPA METHOD 8260B: VOLATILES SHORT LIST

Diesel Range Organics (DRO)

Surr: DNOP

Benzene

Toluene

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Motor Oil Range Organics (MRO)

Surr: 4-Bromofluorobenzene

Lab Order 1808H72 Date Reported: 8/31/2018

Analyst: Irm

Analyst: AG

R53826

R53826

R53826

R53826

R53826

R53826

8/30/2018 11:22:21 AM 40064

8/30/2018 11:22:21 AM 40064

8/30/2018 11:22:21 AM 40064

8/30/2018 1:43:59 PM

			,							
CLIENT:	APEX TITAN			Cl	ient Samj	ole ID	: S-1	7		
Project:	Lateral H 46			(Collection	Date	e: 8/2	9/2018 10:45:00 AM		
Lab ID:	1808H72-010	Matrix:	Matrix: SOIL Received Date: 8/30/2018 7:00:00 AM							
Analyses	1	R	esult	PQL	Qual U	nits	DF	Date Analyzed	Batch	
EPA MET	THOD 300.0: ANIONS							Analyst	MRA	
Chloride			310	30	m	g/Kg	20	8/30/2018 1:03:31 PM	40066	
EPA ME	THOD 8015D MOD: GAS	SOLINE RANGE						Analyst	AG	
Gasoline	e Range Organics (GRO)		ND	4.0	m	g/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	

ND

ND

87.3

ND

ND

ND

ND

124

99.3

9.8

49

50.6-138

0.020

0.040

0.040

0.080

70-130

70-130

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

1

1

1

1

1

1

1

1

1

*	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 Page 10 of 16
 - 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.

EPA METHOD 8015D MOD: GASOLINE RANGE

EPA METHOD 8260B: VOLATILES SHORT LIST

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

Gasoline Range Organics (GRO)

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

Surr: 4-Bromofluorobenzene

Surr: BFB

Surr: DNOP

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Lab Order 1808H72

Date Reported: 8/31/2018

8/30/2018 2:07:01 PM

8/30/2018 10:57:54 AM 40064

8/30/2018 10:57:54 AM 40064

8/30/2018 10:57:54 AM 40064

mg/Kg

%Rec

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

3.9

10

50

50.6-138

0.020

0.039

0.039

0.079

70-130

70-130

70-130

1

1

1

1

1

1

1

1

1

1

1

Analyst: AG

Analyst: Irm

Analyst: AG

A53826

A53826

R53826

R53826

R53826

R53826

R53826

R53826

CLIENT:	APEX TITAN		Clier	nt Sample II): S-1	8		
Project:	Lateral H 46	Collection Date: 8/29/2018 10:50:00 AM						
Lab ID:	1808H72-011	Matrix: SOIL Received Date: 8/30/2018 7:00:00 AM						
Analyses		Result	PQL Q	Qual Units	DF	Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS					Analyst	MRA	
Chloride		ND	30	mg/Kg	20	8/30/2018 1:15:56 PM	40066	

ND

105

ND

ND

88.8

ND

ND

ND

ND

118

95.6

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte
	D	Sample Diluted Due to Matrix	E	Value a
	Н	Holding times for preparation or analysis exceeded	J	Analyte
	ND	Not Detected at the Reporting Limit	Р	Sample
	PQL	Practical Quanitative Limit	RL	Reporti
	S	% Recovery outside of range due to dilution or matrix	W	Sample

- detected in the associated Method Blank
- bove quantitation range
- e detected below quantitation limits Page 11 of 16
- pH Not In Range
- ng Detection Limit
- container temperature is out of limit as specified

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: APEX Project: Latera

APEX TITAN Lateral H 46

3											
Sample ID	MB-40066	SampTyp	be: mb	lk	Test						
Client ID:	PBS	Batch I	D: 400)66	R	unNo: 53	3830				
Prep Date:	8/30/2018	Analysis Dat	te: 8/ 3	30/2018	S	eqNo: 17	776658	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	15								
onionae		ND	1.0								
Sample ID	LCS-40066	SampTy	pe: Ics		Tes	tCode: El	PA Method	300.0: Anion	s		
Sample ID Client ID:	LCS-40066 LCSS	SampTyp Batch I	D: 40	066	Tes	tCode: Ef	PA Method 3830	300.0: Anion	S		
Sample ID Client ID: Prep Date:	LCS-40066 LCSS 8/30/2018	SampTy Batch I Analysis Da	D: 40	066 30/2018	Tes F	tCode: EF RunNo: 53 SeqNo: 1	PA Method 3830 776659	300.0: Anion Units: mg/K	s		
Sample ID Client ID: Prep Date: Analyte	LCS-40066 LCSS 8/30/2018	SampTy Batch I Analysis Da Result	D: 400 te: 8/	066 30/2018 SPK value	Tes F S SPK Ref Val	tCode: EF RunNo: 5: SeqNo: 1 %REC	PA Method 3830 776659 LowLimit	300.0: Anion Units: mg/K HighLimit	s (g %RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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
 - Sample pH Not In Range
- RL Reporting Detection Limit

Р

W Sample container temperature is out of limit as specified

Page 12 of 16

WO#: 1808H72

31-Aug-18

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

1808H72 WO#:

31-Aug-18

Client: APEX T	ITAN			
Project: Lateral H	I 46			
Sample ID LCS-40064	SampType: LCS	TestCode: EPA M	lethod 8015M/D: Diesel Range	e Organics
Client ID: LCSS	Batch ID: 40064	RunNo: 53813	1	
Bron Date: 8/30/2018	Analysis Date: 8/30/2018	SeaNo: 17757	783 Units: ma/Ka	
Fiep Date. 0/30/2010	Analysis Date. Ground to			DDDI imite Qual
Analyte	Result PQL SPK val	ue SPK Ref Val %REC Low	WLIMIT HighLimit %RPD	RPDLIMIt Quai
Diesel Range Organics (DRO)	48 10 50.	0 96.4	70 130	
Surr: DNOP	5.1 5.0	00 102	50.6 138	
Sample ID MB-40064	SampType: MBLK	TestCode: EPA M	lethod 8015M/D: Diesel Range	e Organics
Client ID: PBS	Batch ID: 40064	RunNo: 53813	3	
Prep Date: 8/30/2018	Analysis Date: 8/30/2018	SeqNo: 17757	784 Units: mg/Kg	
Analyte	Result PQL SPK val	ue SPK Ref Val %REC Lov	wLimit 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 N	Method 8015M/D: Diesel Rang	e Organics
Client ID: LCSS	Batch ID: 40046	RunNo: 53809	9	
Prep Date: 8/29/2018	Analysis Date: 8/30/2018	SeqNo: 17767	771 Units: %Rec	
Analyte	Result PQL SPK va	ue SPK Ref Val %REC Lo	wLimit HighLimit %RPD	RPDLimit Qual
Surr: DNOP	3.8 5.0	00 75.6	50.6 138	
Sample ID MB-40046	SampType: MBLK	TestCode: EPA N	Method 8015M/D: Diesel Rang	e Organics
Client ID: PBS	Batch ID: 40046	RunNo: 53809	9	
Prep Date: 8/29/2018	Analysis Date: 8/30/2018	SeqNo: 17767	772 Units: %Rec	
Analyte	Result PQL SPK va	ue SPK Ref Val %REC Lo	wLimit HighLimit %RPD	RPDLimit Qual
Surr: DNOP	9.6 10	.00 96.5	50.6 138	

Qualifiers:

Value exceeds Maximum Contaminant Level. *

Sample Diluted Due to Matrix D

- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits J
- Page 13 of 16
- Sample pH Not In Range **Reporting Detection Limit** RL

Р

Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN

Hojeet.	Luterui II										
Sample ID 100	Ong Ics	SampTy	/pe: LC	54	Test	Code: EP	A Method	8260B: Volat	iles Short	List	
Client ID: Bat	tchQC	Batch	ID: R5 3	3826	R	unNo: 5 3	826				
Prep Date:	,	Analysis Da	ate: 8/3	30/2018	S	eqNo: 17	76191	Units: mg/K	g		
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-Bromofluo	orobenzene	0.49		0.5000		98.9	70	130			
Surr: Toluene-d8	3	0.51		0.5000		102	70	130			
Sample ID rb		SampT	ype: MB	LK	Test	Code: EF	A Method	8260B: Volat	iles Short	List	
Client ID: PB	35	Batch	ID: R5	3826	R	unNo: 53	3826				
Prep Date:		Analysis D	ate: 8/3	30/2018	S	eqNo: 17	76203	Units: mg/K	g		
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-Bromoflu	Jorobenzene	0.55		0.5000		109	70	130			
Surr: Toluene-d8	8	0.51		0.5000		102	70	130			
Surr: Toluene-d8	808b72-002ams	0.51	vne: MS	0.5000	Tes	102	70 PA Method	130 8260B: Volat	tiles Short	List	
Surr: Toluene-d8 Sample ID 18 Client ID: S-	8 308h72-002ams 9	0.51 SampT Batch	ype: MS	0.5000 64 3826	Tes	102 tCode: El	70 PA Method 3826	130 8260B: Volat	tiles Short	List	
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date:	8 308h72-002ams 9	0.51 SampT Batch Analysis D	ype: MS 1D: R5 ate: 8/	0.5000 64 3826 30/2018	Tes F	102 tCode: EF RunNo: 5: SeqNo: 1	70 PA Method 3826 776519	130 8260B: Volat Units: mg/K	tiles Short	List	
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte	8 308h72-002ams 9	0.51 SampT Batch Analysis D Result	ype: MS ID: R5 ate: 8 / PQL	0.5000 64 3826 30/2018 SPK value	Tes F S SPK Ref Val	102 tCode: Ef RunNo: 5: SeqNo: 1' %REC	70 PA Method 3826 776519 LowLimit	130 8260B: Volat Units: mg/M HighLimit	tiles Short (g %RPD	List	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene	8 308h72-002ams 9	0.51 SampT Batch Analysis D Result 0.73	ype: MS ID: R5 ate: 8/ PQL 0.019	0.5000 64 3826 30/2018 SPK value 0.7692	Tes F S SPK Ref Val 0	102 tCode: EF RunNo: 5 SeqNo: 1 %REC 94.5	70 PA Method 3826 776519 LowLimit 80	130 8260B: Volat Units: mg/M HighLimit 120	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene	8 308h72-002ams 9	0.51 SampT Batch Analysis D Result 0.73 0.80	ype: MS ID: R5 ate: 8/ PQL 0.019 0.038	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692	Tes F SPK Ref Val 0 0	102 tCode: EF RunNo: 5: SeqNo: 1 %REC 94.5 104	70 PA Method 3826 776519 LowLimit 80 80	130 8260B: Volat Units: mg/k HighLimit 120 120	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-4 Prep Date: Analyte Benzene Toluene Ethylbenzene	8 308h72-002ams 9	0.51 SampT Batch Analysis D Result 0.73 0.80 0.79	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692	Tes F SPK Ref Val 0 0 0 0	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103	70 PA Method 3826 776519 LowLimit 80 80 80 82	130 8260B: Volat Units: mg/k HighLimit 120 120 121	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	8 308h72-002ams 9	0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692 2.308	Tes F SPK Ref Val 0 0 0 0 0.01971	102 tCode: EF RunNo: 5 SeqNo: 1' %REC 94.5 104 103 105	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofiu	8 308h72-002ams 9 uorobenzene	0.51 SampT Batch Analysis D <u>Result</u> 0.73 0.80 0.79 2.4 0.44	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038 0.038	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692 2.308 0.3846	Tes F SPK Ref Val 0 0 0 0.01971	102 tCode: EF RunNo: 5 SeqNo: 1 %REC 94.5 104 103 105 114	70 PA Method 3826 776519 LowLimit 80 80 82 80.2 70	130 8260B: Volat Units: mg/k HighLimit 120 121 120 121 120 130	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-4 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8	8 308h72-002ams 9 uorobenzene 18	0.51 SampT Batch Analysis D <u>Result</u> 0.73 0.80 0.79 2.4 0.44 0.37	ype: MS a ID: R5 pate: 8/ PQL 0.019 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692 2.308 0.3846 0.3846	Tes F SPK Ref Val 0 0 0 0 0.01971	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103 105 114 96.3	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 130	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-4 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofilu Surr: Toluene-d8	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd	0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 2.308 0.3846 0.3846 0.3846	Tes F SPK Ref Val 0 0 0 0.01971 Tes	102 tCode: EF RunNo: 5 SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70 PA Method	130 8260B: Volat Units: mg/k HighLimit 120 121 120 130 130 8260B: Vola	tiles Short (g %RPD tiles Short	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8 Sample ID 18 Client ID: S-	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch	ype: MS nID: R5 eate: 8/ PQL 0.019 0.038 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 35D4 3826	Tes F SPK Ref Val 0 0 0 0 0 0 0 0 0 0 Tes F	102 tCode: EF RunNo: 5 SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70 70 PA Method 3826	130 8260B: Volat Units: mg/M HighLimit 120 120 121 120 130 130 8260B: Vola	tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8 Sample ID 18 Client ID: S- Prep Date:	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch Analysis D	ype: MS alte: 8/ PQL 0.019 0.038 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 3826 30/2018	Tes F SPK Ref Val 0 0 0.01971 Tes F S	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5 SeqNo: 1	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70 PA Method 3826 776520	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 130 8260B: Vola Units: mg/k	tiles Short (g %RPD tiles Short	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8 Sample ID 18 Client ID: S- Prep Date: Analyte	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch Analysis D Result	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 30/2018 SPK value	Tes F SPK Ref Val 0 0 0 0.01971 Tes F SPK Ref Val	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5 SeqNo: 1 %REC	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70 70 70 70 70 70 70 70 70	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 130 8260B: Vola Units: mg/k HighLimit	tiles Short (g %RPD tiles Short (g %RPD	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8 Sample ID 18 Client ID: S- Prep Date: Analyte Benzene	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch Analysis D Result 0.72	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 3826 30/2018 SPK value 0.7692	Tes F SPK Ref Val 0 0 0 0.01971 Tes F SPK Ref Val 0	102 tCode: EF RunNo: 5: GeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5 GeqNo: 1 %REC 93.4	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70 70 PA Method 3826 776520 LowLimit 80	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 130 8260B: Vola Units: mg/k HighLimit 120	tiles Short (g %RPD tiles Short (g %RPD 1.21	List RPDLimit	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8 Sample ID 18 Client ID: S- Prep Date: Analyte Benzene Toluene	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 0.51 Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch Analysis D Result 0.72 0.78	ype: MS alD: R5 ate: 8/ PQL 0.019 0.038 0.038 0.077 iD: R5 pate: 8/ PQL 0.019 0.038	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 3826 30/2018 SPK value 0.7692 0.7692 0.7692 0.7692	Tes 5 5 5 5 7 7 8 7 8 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 9 9 7 9 9 9 9	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5 SeqNo: 1 %REC 93.4 101	70 PA Method 3826 776519 LowLimit 80 80 80 82 80.2 70 70 PA Method 3826 776520 LowLimit 80 80 80 80 80 80 80 80 80 80	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 330 8260B: Vola Units: mg/k HighLimit 120 130 130	tiles Short (g %RPD tiles Short (g %RPD 1.21 2.45	List RPDLimit : List RPDLimit 20 20	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-9 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromoflu Surr: Toluene-d8 Client ID: S- Prep Date: Analyte Benzene Toluene Ethylbenzene	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 0.51 Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch Analysis D Result 0.72 0.78 0.80	ype: MS alte: 8/ PQL 0.019 0.038 0.038 0.077 ype: MS bate: 8/ PQL 0.019 0.038 0.038	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 3826 30/2018 SPK value 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692	Tes 5 5 5 5 7 5 7 6 0 0 0 0 0 0 0 0 0 5 7 6 5 5 7 7 8 5 7 8 5 7 8 5 7 8 5 7 8 9 7 8 9 7 9 9 9 9 9 9 9 9 9 9 9 9 9	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5 SeqNo: 1 %REC 93.4 101 105	70 PA Method 3826 776519 LowLimit 80 80 82 80.2 70 70 PA Method 3826 776520 LowLimit 80 80 82 80.2 80.2 80.2 80.2 80 80 80 80 80 80 80 80 80 80	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 8260B: Vola Units: mg/k HighLimit 120 121 120 130 130	tiles Short (g %RPD tiles Short (g %RPD 1.21 2.45 1.56	List RPDLimit List RPDLimit RPDLimit 20 20 20 20	Qual
Surr: Toluene-d8 Sample ID 18 Client ID: S-4 Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: Toluene-d8 Sample ID 18 Client ID: S- Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	8 308h72-002ams 9 uorobenzene 18 808h72-002amsd -9	0.51 0.51 SampT Batch Analysis D Result 0.73 0.80 0.79 2.4 0.44 0.37 SampT Batch Analysis D Result 0.72 0.78 0.80 2.4	ype: MS alte: 8/ PQL 0.019 0.038 0.038 0.077	0.5000 34 3826 30/2018 SPK value 0.7692 0.7692 0.7692 2.308 0.3846 0.3846 0.3846 0.3846 30/2018 SPK value 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.7692 0.3846 0.3692 0.769	Tes 5 5PK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	102 tCode: EF RunNo: 5: SeqNo: 1' %REC 94.5 104 103 105 114 96.3 tCode: EF RunNo: 5 SeqNo: 1 %REC 93.4 101 105 105	70 PA Method 3826 776519 LowLimit 80 80 82 80.2 70 70 70 70 70 70 70 70 70 70	130 8260B: Volat Units: mg/k HighLimit 120 120 121 120 130 130 8260B: Vola Units: mg/k HighLimit 120 121 120 121 120	tiles Short (g %RPD tiles Short (g %RPD 1.21 2.45 1.56 0.294	List RPDLimit List RPDLimit RPDLimit 20 20 20 20 20 20 20 20 20 20 20 20 20	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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 RangeRL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 14 of 16

Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN Lateral H 46 **Project:**

1.2				and the second								
	Sample ID 1808h72-002amsd	SampTy	SampType: MSD4			TestCode: EPA Method 8260B: Volatiles Short List						
	Client ID: S-9	Batch	Batch ID: R53826			RunNo: 53826						
	Prep Date:	Analysis Da	ate: 8/	30/2018	S	eqNo: 1	776520	Units: mg/K	g			
	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
ľ	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. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits J
- Page 15 of 16

Sample pH Not In Range RL **Reporting Detection Limit**

P

Sample container temperature is out of limit as specified W

WO#: 1808H72 31-Aug-18

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808H72 31-Aug-18

Client:	APEX TIT	TAN										
Project:	Lateral H	46										
Sample ID		SampTyp		9	Test	Code: EF	PA Method	8015D Mod: (Gasoline I	Range		
Sample ID	2.50g gro ics	Sampiyp	. LU			DupNo: 52926						
Client ID:	LCSS	Batch II	D: A5	3826	R	unno: 53	3826					
Prep Date:		Analysis Dat	e: 8/	30/2018	S	eqNo: 17	776187	Units: mg/K	g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Rang	e Organics (GRO)	25	5.0	25.00	0	101	70	130				
Surr: BFB		470		500.0		93.3	70	130				
Sample ID	rb	SampTyp	be: ME	BLK	Test	tCode: El	PA Method	8015D Mod:	Gasoline I	Range		
Client ID:	PBS	Batch I	D: A5	3826	R	RunNo: 5	3826					
Prep Date:		Analysis Dat	te: 8/	30/2018	S	SeqNo: 1	776188	Units: mg/K	g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Rang	ge Organics (GRO)	ND	5.0									
Surr: BFB		490		500.0		97.2	70	130				
Sample ID	1808h72-001ams	SampTy	pe: MS	S	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range		
Client ID:	S-8	Batch I	D: R5	53826	F	RunNo: 5	3826					
Prep Date:		Analysis Da	te: 8	/30/2018	S	SeqNo: 1	776521	Units: %Re	C			
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	SampTy	pe: M	SD	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range		
Client ID:	S-8	Batch	ID: R	53826	F	RunNo: 5	3826					
Prep Date		Analysis Da	te: 8	/30/2018	5	SeqNo: 1	776522	Units: %Re	C			
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. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits J
- Page 16 of 16

Sample pH Not In Range **Reporting Detection Limit** RL

Р

W Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental A Albu TEL: 505-345-3975 Website: www.hal	Analys 4901 querqu FAX: : lenvir	is Laboratory Hawkins NI 16, NM 87109 505-345-4107 mmental.com	9 7 n	Sam	ple Log-In Check List
Client Name: APEX AZTEC	Work Order Number:	1808	H72			RcptNo: 1
Received By: Anne Thome 8/	30/2018 7:00:00 AM			Anne	An	-
Completed By: Anne Thome 8/30/18 8/ Reviewed By: JAB 08/30/18 Labeled by 'A+ 08/30/18	30/20†8 7:14:11 AM			Anne	H	
Chain of Custody						
1. Is Chain of Custody complete?		Yes	\checkmark	No		Not Present
2. How was the sample delivered?		<u>Cour</u>	ier			
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		
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 pr	reserved?	Yes	\checkmark	No		
8. Was preservative added to bottles?		Yes		No	\checkmark	
9. VOA vials have zero headspace?		Yes		No		No VOA Vials 🗹
0. Were any sample containers received broken?		Yes		No		# of preserved
1. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No		for pH: (<2 or >12 unless noted
2. Are matrices correctly identified on Chain of Cus	stody?	Yes		No		Adjusted r
3. Is it clear what analyses were requested?4. Were all holding times able to be met?	1	Yes Yes	\checkmark	No No		Checked by:
(If no, notify customer for authorization.)					L	
Special Handling (if applicable)						
15. Was client notified of all discrepancies with this	order?	Yes		No		NA M
Person Notified: By Whom: Regarding: Client Instructions:	Date Via: [] eM	ail 🗌 Pho	one [] Fax	In Person
16. Additional remarks: Custody Seal. 17. <u>Cooler Information</u>	s intact or	1 5	al jo	1 1 1	1/5	08/30/18
Cooler No Temp *C Condition Seal 1 1.1 Good Yes)ear L		igned	PY	

Page 1 of 1

11

									CHAIN OF CUSTODY RECO	RD
	Laboratory: Lin	11 24	nuiren.	mental	AN/ Red	ALYSI: QUES	S J	///	Lab use only Due Date:	
APEX	Address: 490	1 MA	wKing	S NE			100/		Temp. of coolers (*(
Office Location 606 S Kid	HID-querqu	ve 1	um a	87109				///		5
Grande Suit A	Contact: H, F	6421	nan			-	M.V.	///		5
Artec NIM 87410	Phone: 505-	348.	- 397	5		3	NO A		/ / Pageors	۹ -
Project Manager K. Semmers	PO/SO #:				_	f.	27/			
Sampler's Name	Sampler's Signature	1.2				1	0/V/			
Chad DAponti	Clart	46	L			1. K	N N			
Proj. No. Project Name			No/Type of C	Containers	4	4	10/			
725040112481 Lateral	H-46				- ~	ial	Nº / /			
Matrix Date Time O r Identifying Ma	rks of Sample(s)	End Depth	VOA A/G 1 LL	250 ml Glass Jar P/O		N	4//		Lab Sample ID (Lab Use Only)	_
S \$139/18 1000 \$ 5-8	1 0	17		1	Y	K 9			1808+172-0	7
5 8/01/1005 × S-9	0	11		1	Y	XI	!		-0	12
(860/1 m/s X S-1	0 -	17		1	X	V	(T.	B
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C 8/21 1122 5 5-12) 0	17		1	X	XX			-4	15
5 8/20/11/22 - 4 S-13	3 0	18		1	X	KX			2	06
E \$/28/11/202 V S-14	0	18		1	V	¥ 7	۷ (7	07
5 5/118 1030 F	0	18		1	X	X	K		2	08
2 18/18 -33 1 -1-1 2 8/01 1040 4 5-11	6 0	18		1	Y	X	x		4	M
5 8/20/2 10615 ¥ 3-1	7 0	18		1	ĸ	×	x		0	10
Turn around time	50% Rush 100%	Rush		1			NOTEO			
Relinquished by (Signature) Date:	Time: Received by:	Signat	alt	Date: 8/29/18	13	ime:	NOTES:	ry Kiy	+ " Cm 223.55	
Relinquished by (Signature) - Date:	Time: Received by	: (Signat	ure) 7	Date:	+ -	Time:	Bill to	Tom	Long (EPROD)	
Relinguished by (Signature) Date:	Time: Received by	: (Signat	ture)	Date:		Time:	AFE	# 137	491	
Relinquished by (Signature) Date:	Time: Received by	: (Signat	ture)	Date:	1	lime:	*	Same	Day 8-30-18	
Matrix WW - Wastewater W - Water Container VOA - 40 ml vial A/G - Amber / 0	S - Soll SD - Solid Or Glass 1 Liter	L - Liquid 250 mi - 0	A - Air E Glass wide m	Bag C-C nouth P/O-	harcoal Plastic	tube or other	SL - sludge	O - Oil		

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

	1 Parts						-		14												(CHA	IN C	OF (CUSTO	DY RE	CORE
A	PEX					Laboratory: Address:	490	ell e Leb	Low; Man	ion	ne.	Ne		ANALY	SIS ESTE		Sie	/	/	//	//	//	//	//	Lab us Due Da	e only ate:	//
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A-7	fec	Nm	8	741	10	Phone:	505	3	48	- 3	97	5			/	31	0/	1		/ /	/ /	/ /	/		Page_	2 of	2
HZ+2C JUN 8 FIIO Ph				PO/SO #-							_		2/9	QY.	7/	/	/	/	/	/	/						
Project Manager <u>R</u> <u>Sampler's Name</u> Sampler's Signate					ature							à	0/5	\$/	1	/	/	/	/	/	/						
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Matrix	Date	Time	Co	G	Identifying M	arks of Sample(s)	pth	pth	OA	Q H	ml 50	ass ar	Q	6/8	104	5/	/	/		/	/	/					
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Relinq	uished by	(Signature)	,		Date:	Time: Receiv	ved by:	(Signa	ture)			Date	:	Time:					3	2.11	re	da	y	2	8-30	18	
Matrix	with with with with with with with with	V - Wastewa	ater		W - Water A/G - Amber / 0	S - Soil SD - So Or Glass 1 Liter	lid I	Liquio 250 ml -	d A Glass v	- Air Ba	ag	C · P/C	- Char D - Pl	rcoal tube astic or othe	SL	- sluc	lge		0-0	Dil		1	0				

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District 1 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
Contact mailing address: 614 Reilly Ave, Farmington, NM 87401	NVF 1900853403

Location of Release Source

Latitude 36.987093

Site Name MD 7 Loop

Longitude <u>-107.875699</u> (NAD 83 in decimal degrees to 5 decimal places)

Site Type Natural Gas Gathering Pipeline

Serial # (if applicable): N/A

Date Release	Discovered:	12/4/2018

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



Surface Owner: State Federal Tribal Private (Name: _

Nature and Volume of Release

DISTRICT III

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

Volume Released (bbls)	Volume Recovered (bbls)
Volume Released (bbls)	Volume Recovered (bbls)
Is the concentration of dissolved chloride in the produced water ≥ 10.000 mg/l?	Yes No
Volume Released (bbls): Unknown at this time.	Volume Recovered (bbls): None
Volume Released (Mcf): Unknown at this time	Volume Recovered (Mcf): None
Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
	Volume Released (bbls) Volume Released (bbls) Is the concentration of dissolved chloride in the produced water >10,000 mg/l? Volume Released (bbls): Unknown at this time . Volume Released (Mcf): Unknown at this time Volume/Weight Released (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."

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

-

•

Initial Response

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

\square 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 of 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.					
L bereby 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					
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					
Signature: Date: Date:					
email: jefields@eprod.com Telephone: 713-381-6684					
OCD Only					
Received by: Does tolds Date: 1812019					

District 2 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

JAN 0 8 2019

DISTRICT

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	NVF 1900853946

Location of Release Source

Latitude <u>36.911549</u>	ongitude <u>-107.713513</u> 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

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

· ·			
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider	this a major release?	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by w	vhat means (phone, e	mail, etc)?

Initial Response

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

 \boxtimes 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 Date: $l - 4 - 19$	
email: jefields@eprod.com	Telephone: 713-381-6684	
OCD Only Received by: CNOSSE Fields	Date: 118209	



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

JAN 17 2019

DISTRICT III

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	NYF1901749164

Location of Release Source

Latitude <u>36.7737</u> decimal places)	Longitude_ -107.6324	NAD 83 in decimal degrees to 5
Site Name EPNG D Com #5A	Site Type Natural Gas Me	tering Tube
Date Release Discovered: 1/2/2019	Serial # (if applicable) N/A	NMOCD

Unit Letter	Section	Township	Range	County	
D	36	30N	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): 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.				

	20 c		
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 release because it exceeds 500 MCF.	this a major release?	This release is a major
If YES, was immediate n notification was given to V	l otice given to the OCD? By whom? To whom? When and b /anessa Fields and Jim Griswold via phone call and email on Jar	y what means (phone nuary 2, 2019 at 3:35	e, email, etc)? Immediate 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 F. Fields	Title: Director, Field Environmental	
Signature: Int. tul	Date: 1-15-19	
email: jefields@eprod.com	_ Telephone:	
OCD Only Received by: Varesse Folds	Date: 11712019	
District 1 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	1012	
Facility ID		
Application ID		

Release Notification

111 T3197210

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 <u>36.323769</u> decimal places) Longitude -107.532816

_NAD 83 in decimal degrees to 5

NMOCD

JAN 3 1 2019

DISTRICT III

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
М	12	24N	7W	Rio Arriba

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?	If YES, for what reason(s) does the responsible party consider	this a major release?	- - -	
If YES, was immediate no	tice given to the OCD? By whom? To whom? When and by wh	at means (phone, em	ail, etc)?	1

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 Signature: Jon E. Turlad	Title: Director, Field Environmental
email: jefields@eprod.com	Telephone: 713-381-6684
OCD Only Received by:	Date: 1/3//19

District 1 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

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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

NMOCD FEB 0 1 2019

Responsible Party

Responsible Party: Enterprise Field Services, LLC	OGRID: 151618	DISTRICT	
Contact Name: Thomas Long	Contact Telephone: 505-599-2286	5	
Contact email:tjlong@eprod.com	Incident # (assigned by OCD) N/A		
Contact mailing address: 614 Reilly Ave, Farmington, NM 87401	NVF 1904250	450	

Location of Release Source

Latitude <u>36.820587</u> Longitude <u>-108.036771</u> 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	
М	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?	
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."

		-	
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider	this a major release?	
If YES, was immediate no	tice given to the OCD? By whom? To whom? When and by wh	at means (phone, em	ail, 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:
Signature:	Date: 1-79-19
email: jefields@eprod.com	_ Telephone:713-381-6684
\frown	
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	NCS 464355294
Location of Re	elease Source FEB 1 1 2019
Latitude 36.651985 Longitude Longitude	ude <u>-107.671788</u> DISTRICT IN NAD 83 in decimal degrees to 5

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
С	22	28N	8W	San Juan

Surface Owner: State Kederal 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?		
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)	
a (b)			

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."

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider	this a major release?	
🗌 Yes 🖾 No			
If YES, was immediate no	tice given to the OCD? By whom? To whom? When and by wh	nat means (phone, em	nail, 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: Jall. truly	Date: 2-4-19
email: jefeilds@eprod.com	_Telephone:
OCD Only Received by: OOD Cory	Date: 2/12/19

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	

(NAD 83 in decimal degrees to 5 decimal places)

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	NCS 1838938721

Location of Release Source

Longitude -107.966570

Latitude 36.731732

id Recovery Site Type Natural Gas Gathering Pipeline

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 2 n 2019

DISTRICT III

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: Kuly	Date: 2 - 8 - 19
email: jefields@eprod.com	Telephone: (713) 381-6684
Anossa Fields	Date: 212012019
Closure approval by the OCD does not relieve the responsible part remediate contamination that poses a threat to groundwater, surfa- party of compliance with any other federal, state, or local laws an	rty of liability should their operations have failed to adequately investigate and ce water, human health, or the environment nor does not relieve the responsible nd/or regulations.
Closure Approved by:	Date: 21212019
Printed Name: Vanosse Fields	Title: Enorronmental Decelost

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



NMOCD FEB 2 0 2019 District III

November 20, 2018 SMA #5126788 BG15

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Remediation Activities	2
Closure and Limitations	3
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Tables:

Table 2: NMOCD Closure Criteria JustificationTable 3: Summary of Sample Results

Appendices:

Appendix A: Form C-141 Appendix B: NMOSE Wells Report Appendix C: Field Notes Appendix D: Site Photography Appendix E: Laboratory Analytical Reports 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.

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 7 th and 24 th , 2018, October 15, 2018							

The table below summarizes information about the remediation activities.

Engineering • Environmental • Surveying

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 privatelyowned 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.

November 20, 2018 SMA #5126788 BG15

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

Reviewed by:

Shawna Chubbuck

Ashley Maxwell Project Scientist

Shawna Chubbuck Senior Scientist

Engineering • Environmental • Surveying

www.soudermiller.com

4

FIGURES







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)		7.5 minute quadrangle map		

Closure Criteria (19.15.2	9.12.B(4) an	d Table 1 NMAC)	avera da ca			
		Closu	re Criteria	a (units in n	ng/kg)	Constraints
Depth to Groundwater		Chloride *numerical limit or background, whichever is greater	трн	GRO + DRO	BTEX	Benzene
< 50' BGS	APPENDENCE (SPE	600	100	120	50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no		if ye	s, then		
<300' from continuously flowing watercourse or other significant watercourse?	No					
<200' from lakebed, sinkhole or playa lake?						
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?						
Human and Other Areas		600	100		50	10
<300' from an occupied permanent residence, school, hospital, institution or church?	No					
within incorporated municipal boundaries or within a defined municipal	2017					
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	BTEX	Benzene	GRO	DRO	MRO	Total TPH	CI-
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Closure Criteria		50	10			31634	100	600	
60.1	9/27/2018	1	<0.1	<0.1	<20.0	34.8	93.5	128.3	<20.0
50-1	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

______<u>SMA</u>

APPENDIX A FORM C-141



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

/mbp Enclosure

Rodney M. Sartor Senior Director, Environmental

P.O. BOX 4324 HOUSTON, TEXAS 77210-4324 713.381.6500 1100 LOUISIANA STREET HOUSTON, TEXAS 77002-5227 www.enterpriseproducts.com District 1 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 <u>-107.966570</u> (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.

		Incident ID	
e 7	Oil Conservation Division	District RP	
-		Facility ID	
		Application ID	
		rippilouiton ib	
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 pa amount ranged from 16-33 barrels of condensate.	rty consider this a major release? The calculated re	eleas
If YES, was immediate notification was performe 9/5/18 at 12:10 p.m.	notice given to the OCD? By whom? To whom? ed by Thomas Long. Notification was sent by phone	When and by what means (phone, email, etc)? In call and follow-up email to Cory Smith and Jim Gri	nme swol
	Initial Respon	se	
The responsible	e party must undertake the following actions immediately unless t	hey could create a safety hazard that would result in injury	
If all the actions describe	ed above have <u>not</u> been undertaken, explain why:		
Per 19.15.29.8 B. (4) NM has begun, please attach within a lined containmer I hereby certify that the info regulations all operators are public health or the enviror failed to adequately investi addition, OCD acceptance and/or regulations.	MAC the responsible party may commence remediat h a narrative of actions to date. If remedial efforts ent area (see 19.15.29.11(A)(5)(a) NMAC), please a formation given above is true and complete to the best of r e required to report and/or file certain release notifications mment. The acceptance of a C-141 report by the OCD doc igate and remediate contamination that pose a threat to gro of a C-141 report does not relieve the operator of respons	ion immediately after discovery of a release. If ren have been successfully completed or if the release tach all information needed for closure evaluation. hy knowledge and understand that pursuant to OCD rules and perform corrective actions for releases which may er s not relieve the operator of liability should their operatio undwater, surface water, human health or the environmer bility for compliance with any other federal, state, or loca	and and ndang ns ha att. In all law
Per 19.15.29.8 B. (4) NM has begun, please attach within a lined containmed I hereby certify that the infr regulations all operators are public health or the enviror failed to adequately investi addition, OCD acceptance and/or regulations.	MAC the responsible party may commence remediate in a narrative of actions to date. If remedial efforts ent area (see 19.15.29.11(A)(5)(a) NMAC), please a formation given above is true and complete to the best of r e required to report and/or file certain release notifications mement. The acceptance of a C-141 report by the OCD doe igate and remediate contamination that pose a threat to gro of a C-141 report does not relieve the operator of respons Fields Title: Di Mark	ion immediately after discovery of a release. If ren have been successfully completed or if the release tach all information needed for closure evaluation. hy knowledge and understand that pursuant to OCD rules and perform corrective actions for releases which may et s not relieve the operator of liability should their operatio undwater, surface water, human health or the environmer bility for compliance with any other federal, state, or loca rector, Field Environmental	and ndany ns ha at. In I law
Per 19.15.29.8 B. (4) NM has begun, please attach within a lined containmed I hereby certify that the infr regulations all operators are public health or the enviror failed to adequately investi addition, OCD acceptance and/or regulations. Printed Name: Signature: email: jefields@epre	MAC the responsible party may commence remediat a narrative of actions to date. If remedial efforts ent area (see 19.15.29.11(A)(5)(a) NMAC), please a formation given above is true and complete to the best of r e required to report and/or file certain release notifications mment. The acceptance of a C-141 report by the OCD doe igate and remediate contamination that pose a threat to gro of a C-141 report does not relieve the operator of respons Fields Title: Di Mathematical Date: rod.com Telephon	ion immediately after discovery of a release. If rem have been successfully completed or if the release tach all information needed for closure evaluation. hy knowledge and understand that pursuant to OCD rules and perform corrective actions for releases which may et is not relieve the operator of liability should their operatio undwater, surface water, human health or the environmer bility for compliance with any other federal, state, or local rector, Field Environmental all 3/3 713-381-6684	and and ndan; ns ha at. In il law
Per 19.15.29.8 B. (4) NM has begun, please attach within a lined containme I hereby certify that the inf regulations all operators an public health or the enviror failed to adequately investi addition, OCD acceptance and/or regulations. Printed Name: Jon F. Signature: email: jefields@epre	MAC the responsible party may commence remediate in a narrative of actions to date. If remedial efforts ent area (see 19.15.29.11(A)(5)(a) NMAC), please a formation given above is true and complete to the best of r e required to report and/or file certain release notifications imment. The acceptance of a C-141 report by the OCD doe igate and remediate contamination that pose a threat to gree of a C-141 report does not relieve the operator of respons Fields Title: Di Date: Tod.com Telephon	ion immediately after discovery of a release. If ren have been successfully completed or if the release tach all information needed for closure evaluation. The perform corrective actions for releases which may et and perform corrective actions for releases which may et is not relieve the operator of liability should their operatio undwater, surface water, human health or the environment bility for compliance with any other federal, state, or local rector, Field Environmental 91318 713-381-6684	and ndang ns ha at. In al law

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?	 (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 1/2-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

Engineering • Environmental • Surveying



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	(R=POD has been replaced, O=orphaned,									,				
& no longer serves a water right file.)	C=the file is closed)	(0	quart quart	ers ers	ar	e 1= e sr	=NW2 nalles	t to larg	est) (NA) AD83 UTM in me	ters)	(In feet)	
	POD Sub-		Q	9	Q			Date		v	Distance	Depth	Depth	Water
POD Number	Code basin C	ounty	64 1	16	4 5	14	20N	Rng	235366	4068747*	546	155	10	145
SJ 01426	5JIVI2	31		4		14	2311	1100	200000	1000111			10	
SJ 01851	SJM2	SJ		4	4	10	29N	11W	234586	4069572* 🌑	614	125	48	11
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	5 12	63
										Avera	age Depth to	o Water	25	feet
											Minimun	n Depth	: 6	i feet
											Maximun	n Depth	: 56	ifeet
Record Count: 14														
LITMNAD83 Radius	Search (in met	ers):												

Easting (X): 235087.88

Northing (Y): 4069216.93

Radius: 1608

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/1/18 3:07 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX C FIELD NOTES

Engineering • Environmental • Surveying

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onsite 11:40

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Field Screening Form									
2	Location Name			Date					
Blanco	Shrage Yar	d	1	9-24-2018					
Location Name	Description	Depth (Feet BGS)	Time Collected	PID Reading (ppm)	Time Screened	PetroFLAG Reading	Time Screened		
5C-1	South BL'X2' end of Sall path	3"	12:02	0.0	12:53	49	13:58		
SC-2	South end Moving north	٦ '	12:27	0.4	1:2:53	0	13:58		
SC-3	south end moving north	0.5-1	12:38	0.0	12:54	_	_		
SC-4	south end moving north	τ'	13:01	0.0	13:27				
66-5	South end Maving north	1'	13:11	0.1	1327	50	13:59		
SC-le	mid flaw path	۱′	13:22	0.6	13:32	-			
SC-7	mich flow path	1	14:36	389	15:03	38	1527		
56-83	path	۱′	14:42	316	15:04	26	1526		
sc-9	Parth Parth	\ '	1450	397	15:05	18	1526		
5C-10	mid Flow path	11	14:55	262	15:05	183	1525		
otes: Sam DI	ed in Zo' Sec	chons. 1	200rcN	16' wid	e				

ASMA

9:00 Am

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	Field Scrooping Form									
		Location Na	me	reen	ng For	m				
	Blance	Storage Ye	ard			Date 9-25: 2014				
	Location Name Description		Depth (Fee BGS)	t Time Collecte	PID Reading ed (ppm)	g Time Screened	PetroFLAG	Time		
	SC-11	mid flow path	11	8:22	2 363	8:53	168	9:28		
	SC-12	Path Path	1	8:26	6.3	8:53	_	-		
	SC-13	heading to	1'	8:30	399	8:54	129	9:28		
5	ĴC-14	heading to pumphouse	1'	8:32	27.5	8:55	-	-		
5	C-15	heading to punphonis	d l'	8:35	374	8:57	27	9:29		
5	C-16	horth heading to pumphouse		8:38	85,6	8:57	_	_		
50	2-17	South of pump house prorexcavaria	1'	907	376	9:22	60	9:29		
50	-18	south of pumphonse prior excavaling)/	11:59	365	12/18	141	12:18		
56-	19	Spill path at source of rabase	0-3	13:14	226	(3:33	44	13:41		
SW	-1	NW OF SC-19 Wall	0-2	3:14	367	13:53	59	13:41		
SW-	-2	NE of SC-19 WALL	0-3	3:15	128	13:34	71	3:41		
otes										
	is. SC-14 Smell at 2', continued to excavate around source of release									

Ð

____<u>SM</u>___

		Field Sc	reenin	g Form	1		
	Location Name	Date					
Blance	o Yard			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
50-10	l'exavated	1	12:44	0.0	13:02	25	13:03
sc-1	scraped 3"	۹"	13:15	0.0	13:31	138	13:40
SC-1	scraped 3"	12"	13:55	4.1	14:14	170	13:20
56-1	Collected	12"	14:26	-	-	-	_
SC-12	ElCavate resample	1-3'	15:09	2.2	15:26	84	1533
SC-11	Excavate resample	1-2	15:11	6.S	15'26	31	15:33
otes: Onsite II:	00	1					
10-16-18 01	nsite 8:30 c	FSite	9:15				
			SM	4			

APPENDIX D SITE PHOGRAPHY

Engineering • Environmental • Surveying

November 20, 2018 SMA #5126788 BG15

Blanco Storage/Liquid Recovery Final Remediation Report San Juan County, New Mexico



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

Engineering • Environmental • Surveying


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 Hinkin

Date: 10/4/18

Walter Hinchman, Laboratory Director

Tim Cain, Project Manager

Date: 10/4/18



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.

5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865 Ph (970) 259-0615 Fr (800) 362-1879 envirotech-inc.com laboratorv@envirotech-inc.com

Page 1 of 21



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.

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Souder Miller & Associates	Project	Name:	Blan	со					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashl	ey Maxwell				10/04/18 15:20	
			SC-1						
		P8090	62-01 (Se	olid)					
		Reporting							
Analyte	Result	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	0-150	1839025	09/28/18	10/02/18	EPA 8015D	
Surrogate: n-Nonane		95.5 %	50	0-200	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	

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Souder Miller & Associates	Project	Name:	Bland	co					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashle	ey Maxwell				10/04/18 15:2	20
			SC-2						
		P8090	62-02 (So	olid)					
		Reporting							
Analyte	Result	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	0-150	1839025	09/28/18	10/02/18	EPA 8015D	
Surrogate: n-Nonane		96.4 %	50	0-200	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	

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Souder Miller & Associates	Project	Name:	Blan	co					
401 W. Broadway	Project	Number:	9705	57-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashl	ey Maxwell				10/04/18 15:20	
			SC-3						
		P8090	62-03 (Se	olid)					
		Reporting							
Analyte	Result	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	0-150	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	0-150	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	

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Souder Miller & Associates	Project	Project Name: Blanco							
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Project Manager:			Ashley Maxwell				
			SC-4						
		P8090	62-04 (Se	olid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Project	Name:	Blanc	:0					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashle	ey Maxwell				10/04/18 15:2	20
			SC-5						
		P8090	62-05 (So	lid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Project Name: Blanco								
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Ashle	Ashley Maxwell					10/04/18 15:20	
			SC-6						
		P8090	62-06 (So	olid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Project	Name:	Blanco						
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Project Manager: Ashley Maxwell						10/04/18 15:20	
			SC-7						
		P8090	62-07 (So	olid)					
		Reporting							
Analyte	Result	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	

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Analytical Laboratory

Souder Miller & Associates	Project	Name:	Bland	co					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashle	ey Maxwell				10/04/18 15:20	
			SC-8						
		P8090	62-08 (Sc	olid)					
		Reporting							
Analyte	Result	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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Souder Miller & Associates	Project	Name:	Bland	0					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashley Maxwell					10/04/18 15:20	
			SC-9						
		P8090	62-09 (So	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021		α.							
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	

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Souder Miller & Associates	Project	Project Name: Blanco							
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashl	ey Maxwell				10/04/18 15:2	20
			SC-10						
		P8090	62-10 (Sc	olid)					
		Reporting							
Analyte	Result	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	0-200	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	

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Souder Miller & Associates	Project	Name:	Blanc	:0					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Project Manager: Ashley Maxwell						10/04/18 15:2	20
			SC-11						
		P8090	62-11 (So	lid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Project	Name:	Bland	со					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Project Manager: Ashley Maxwell						10/04/18 15:20	
			SC-12						
		P8090	62-12 (So	olid)					
		Reporting							
Analyte	Result	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	

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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

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source	0/850	%REC	DDD	RPD	Mater
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	INOTES
Batch 1839025 - Purge and Trap EPA 5030A				hanna						
Blank (1839025-BLK1)				Prepared: 0	9/28/18 0 A	nalyzed: 1	0/02/18 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: 0	09/28/18 0 A	nalyzed: 1	0/02/18 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)	So	urce: P809062-0	01	Prepared: 0	09/28/18 0 A	Analyzed: 1	0/02/18 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)	So	urce: P809062 -	01	Prepared: (09/28/18 0 A	Analyzed: 1	0/02/18 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			

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Souder Miller & Associates	Proje	ct Name:	В	lanco	-						
401 W. Broadway	Proje	ct Number:	9	97057-0352			Reported:				
Farmington NM, 87401	Projec	Project Manager:			-11				10/04/18 15:20		
	Nonhaloger	nated Org	anics by	y 8015 - Qu	ality Co	ntrol					
	Env	virotech A	Analyti	cal Labor	atory						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 1839025 - Purge and Trap EPA 50 Blank (1839025-BLK1))30A			Prepared: 0	09/28/18 0 /	Analyzed: 1	0/02/18 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)	Sourc	e: P809062-	01	Prepared: 0	09/28/18 0	Analyzed: 1	0/02/18 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)	Sourc	e: P809062-	01	Prepared: 0	09/28/18 0	Analyzed: 1	0/02/18 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				

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C	envi	ro	te	ch
E	Analy	I O ytical	Labo	ratory

Souder Miller & Associates	Projec	t Name:	B	lanco								
401 W. Broadway	Projec	t Number:	t Number: 97		97057-0352					Reported:		
Farmington NM, 87401	Projec	Project Manager: Ashley Maxwell				10/04/18 15:20						
	Nonhalogen	ated Org	anics by	8015 - Qu	ality Co	ntrol						
	Env	irotech A	Analyti	cal Labor	atory							
		Reporting		Spike	Source		%REC		RPD			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes		
Batch 1839027 - DRO Extraction EPA 3	570											
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: 1	0/02/18 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)	Sourc	e: P809062-	·01	Prepared: (09/28/18 1	Analyzed: 1	0/02/18 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)	Sourc	e: P809062-	·01	Prepared: (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					

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Souder Miller & Associates	Projec	ct Name:	В	lanco						
401 W. Broadway	Projec	et Number:	9	7057-0352					Report	ed:
Farmington NM, 87401	Projec	et Manager:	А	shley Maxwe	211				10/04/18	15:20
	Anior	is by 300.	0/9056A	- Quality	Control					
	Env	virotech A	Analyti	cal Labor	atory					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Blank (1840009-BLK1)	ND	20.0	mg/kg	Prepared:	10/02/18 0 /	Analyzed: 1	0/02/18 1			
LCS (1840009-BS1)	n.b	20.0	III KB	Prepared:	10/02/18 0	Analyzed: 1	0/02/18 1			
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1840009-MS1)	Sourc	e: P810001-	-02	Prepared:	10/02/18 0	Analyzed: 1	0/02/18 1			
Chloride	258	20.0	mg/kg	250	ND	103	80-120			
Matrix Spike Dup (1840009-MSD1)	Sourc	e: 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	

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

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.

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	Chain of C	ustody		1075	12	hlle	0.00	h			TAT		FDA D	()	
Inelit: STATA	Report due by: Standard		Lab	MO	Ld	D US	loh	Num	hor						SDW
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ity, State, Zip Farmington, NH 8740	City, State, Zip Farming Dr.	NM 87401	S	S									NM	CO	UTA
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117 SC-	2	2													
7:21 56-	3	3													
125 Sc-	Ч	4													
7:30 56-	5	5													
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T:37 SC		7													
7:43 50	- 8	8													
1:47 50.	- 9	9													
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dditional Instructions:	WICE OP TONOLO	20	Asc	1	0 .	A (1	mla	2-1	Ma						
(field sampler), attest to the validity and authenticity of this sample. I	m aware that tampering with or intentionally mislabelling the	e sample location.	date or	- 10	10 M		Samples	requirir	generm	al prese	ervation mus	t be received	on ice the da	y they are s	sampled
ime of collection is considered fraud and may be grounds for legal action	n. Sampled by: AShten Ma	axivell			_		received	packed	l in ice at	an avg	temp above	0 but less that	n 6 °C on sub	sequent da	ays.
elinquished/by: (Signature) Date Tir	Received by: (Signature)	Date 9-27-1	8	Time 10	:57		Rece	eiver	loni	ice.	Lab	Jse Only	'		
telinquished by: (Signature) Date Tir	Received by: (Signature)	Date		Time			T1 AVG	Ten	np °C	4	T2		<u></u> <u>T3</u>		
ample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O -	Other	Container	г Тур	e: g -	glass	s, p -	poly/	plast	ic, ag	- an	nber gla	ss, v - V(A	A ANTAL SUIT	
ote: Samples are discarded 30 days after results are reported	unless other arrangements are made. Hazardous sar	nples will be ret	urned	to clie	ent or	dispos	ed of a	at the	client e	expen	se. The r	eport for t	ne analysi	s of the	above
Jonviratach	pratory with this COC. The liability of the laboraotry	is limited to the	amou	nt pai	d for d	on the	report								

Project	Informati	on				Chain of (Custodv										P	age 2	ofr
Client:	SmA					Report Attention			18423	La	b Use	Only	12 March		TA	T	E	PA Progr	am
Project:	Biand	O			- Rei	port due by:		Lab	WO#	1	J	b Nu	mber	diese is	1D 3	3D	RCRA	CWA	SDW
Project	Manager	AShk	max	wen	Att	ention: Athen Maxw	en	P	509	062	2 6 3	970	57-0.	352					
Address	:401 W	Broach	Naz		Ad	dress: 401 W Breadwa	3				An	alysis	and M	letho	d			St	ate
City, Sta	te, Zip Fa	rmung	ton, Nr	1 8740	Cit	, State, Zip Faymington	NM	15	15									NM CO	UTA
Phone:	005-32	5-75	35		<u>Pho</u>	one: 505 - 325- 453		by 80	oy 80	21	00								'
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10.02		1	\		5(-12		12			1									
Additio	nal Instru	actions:	Vis. ic	ie in co	oler my														
l, (field sam	pler), attest to	the validity an	nd authenticit	y of this sample	e. I am aware that action. Sampled by	ampering with or intentionally mislabelling t	he sample location	, date o	r	_	Sa	mples rec ceived pa	quiring the cked in ice	rmal pres at an avg	ervation i g temp ab	must be ove 0 bi	received on i it less than 6	ce the day they °C on subsequer	are sampled or nt days.
Relinquits	thed by: (Sig	(nature)	Dat	27/18	Time 10:56	Received by: (Signature)	Date 09-27-	18	Time	:57	F	eceiv	ved or	ice:	Lal	b Us	e Only N	l de la	
Relinquis	hed by: (Sig	(nature)	Dat	9	Time	Received by: (Signature)	Date		Time		I	1 VG T	emp '	°C	T2	-		<u>T3</u>	
Sample M	atrix: S - Soil,	Sd - Solid, S	5g - Sludge,	A - Aqueous,	0 - Other		Containe	er Typ	e: g -	glass	5, p - p	oly/pl	astic, a	ag - ar	mber (glass,	v - VOA		
Note: Sam	ples are disc	arded 30 da	vs after res	ults are repor	ted unless other	arrangements are made. Hazardous sit	amples will be re	turned	to clie	ent or o	dispose	of at t	he clien	t expe	nse. Th	ne repo	ort for the	analysis of t	he above
	on	vir	ot	ack						2,510								The second	



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 Hinden

Date: 10/17/18

Walter Hinchman, Laboratory Director

Tim Cain, Project Manager

Date: 10/17/18



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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.

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Souder Miller & Associates	Project	Name:	Blan	co Storage Y	ard				
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashl	ey Maxwell				10/17/18 16:	19
			SC-1						
		P8100	46-01 (So	olid)					
		Reporting							
Analyte	Result	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	

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Analytical Laboratory

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

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1842006 - Purge and Trap EPA 5030	A									
Blank (1842006-BLK1)				Prepared: 1	0/15/18 1 A	nalyzed: 1	0/16/18 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: 1	0/15/18 1 A	nalyzed: 1	0/16/18 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)	Sou	rce: P810029-	01	Prepared: 1	0/15/18 1 A	nalyzed: 1	0/16/18 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	н	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)	Sou	rce: P810029-	01	Prepared: 1	0/15/18 1 A	analyzed: 1	0/17/18 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			

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envirotech Analytical Laboratory

Souder Miller & Associates	Projec	et Name:	В	lanco Storage	Yard					
401 W. Broadway	Projec	et Number:	9	7057-0352					Report	ed:
Farmington NM, 87401	Projec	et Manager:	А	shley Maxwe		10/17/18	16:19			
	Nonhalogen	ated Org	anics by	y 8015 - Qu	ality Co	ntrol				
	Env	virotech A	Analyti	cal Labor	atory					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1842006 - Purge and Trap EPA 50 Blank (1842006-BLK1)	30A			Prepared: 1	0/15/18 1 A	Analyzed: 1	0/16/18 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: 1	0/15/18 1 A	Analyzed: 1	0/16/18 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	e: P810029-	01	Prepared: 1	0/15/18 1 A	Analyzed: 1	0/16/18 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	e: P810029-	01	Prepared: 1	0/15/18 1 A	Analyzed: 1	0/16/18 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			

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Souder Miller & Associates 401 W. Broadway	Projec	et Name: et Number:	B1 97	anco Storage 057-0352	Yard				Report	ed:		
Farmington NM, 87401	mington NM, 87401 Project Manager: Ashley Maxwell									10/17/18 16:19		
	Nonhalogen	ated Orga	anics by	8015 - Qu	ality Co	ntrol						
	Env	rirotech A	nalytic	cal Labor	atory							
		Reporting		Spike	Source		%REC		RPD			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes		
Batch 1842010 - DRO Extraction EPA 3	570											
Blank (1842010-BLK1)				Prepared: 1	0/16/18 0 A	Analyzed: 1	0/16/18 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: 1	0/16/18 0 /	Analyzed: 1	0/16/18 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)	Sourc	e: P810046-	01	Prepared: 1	0/16/18 0 /	Analyzed: 1	0/16/18 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)	Sourc	e: P810046-	01	Prepared:	10/16/18 0	Analyzed: 1	0/16/18 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					

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Souder Miller & Associates Project Name:			Blanco Storage Yard								
401 W	401 W. Broadway Project Number:		97057-0352	Reported:							
Farmin	Farmington NM, 87401 Project		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 o	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.

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Project li	nformatio	on				Chai	n of Custody								9705	7-0352	Page 1	OT
Client:	MA					Report Atten	tion			Lat	Use C	Dnly		1	TAT	DOD	EPA Progra	am
Project:	Bianci	ostor	agey	arcl	Re	port due by: 10/16/2	018	Lab	WO#	·	JO	b Nun	nber	1	D 3D	RCRA	A CWA	SDW
Project I	Manager:	Ashk	mai	xived	Att	ention:		P8	100	40	0	211/	-04	T. WA	ANA -		St	ate
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City, Sta	te, ZipFo	rmunc	ahn, K	M 874		y, State, Zip		8015	8015			0						
Phone:	505 32	25.72	535	- 1		one:		þ	h	3021	260	300.					X	
Email: (Bhley	maxn	IEN ES	Scridern	<u>iller</u> Em	ail:	Lab	ORC	DRC	by 8	by 8 als 60	ride	418.	1			Dee	
Time Sampled	Date Sampled	Matrix	No Containers	Sample I	D		Number	DRO/	GRO/	втех	VOC	Chlo	H			\downarrow	Rer	narks
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							1244											
Additio	nal Instru	uctions:	CC-	tom L	ong	Bill Enteroris	e.	-										
L (field same	oler), attest to	the validity a	nd authentici	ty of this same	le. I am aware that	tampering with or intentionally misl	abelling the sample locati	on, date	or		Sar	nples requ	iring ther	mal prese	rvation mu	st be received	on ice the day the	y are sample ent days.
time of coll	ection is consi	dered fraud a	nd may be gr	ounds for lega	l action. Sampled b	y:				_	rec	eiveu paci	eu in ice	er en evg	and anon	- out has th		
Relinquis	had by Sig	gnature)	Dat	e	Time	Received by: (Signature)	Date	100	Time	m					Lab	Use On	У	
-1			10	115/18	15:57	nine prost	10-15	-18	IL IL	2.3	R	eceive	ed on	ice:	C	/ N	TO	
Relinquis	hed by: (Sig	gnature)	Dat	e	Time	Received by: (Signature)	Date		lime	2	Ţ		mp ⁰	CU	.0			
							Contain	or Tur	10.0	, glas	5 n - n	lv/nla	stic. a	g - an	ber gl	ass, v - V	OA	
Sample M	atrix: S - Soil	, Sd - Solid,	Sg - Sludge,	A - Aqueou	s, O - Other	r arrangements are made. Haza	rdous samples will be	returne	ed to c	lient o	r dispose	d of at t	he clier	nt expe	ise. The	report for	the analysis o	f the above
samples is	applicable of	only to those	samples re	eceived by th	e laboratory with	this COC. The liability of the la	boraotry is limited to	the amo	ount p	aid for	on the r	eport.						



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 Hinden

Date:

10/18/18

Walter Hinchman, Laboratory Director

Tim Cain, Project Manager

Date: 10/18/18



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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.

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Souder Miller & Associates	Project	Name:	Bland	co Storage Y					
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	10/18/18 11:56						
		S	C-10R						
		P8100	48-01 (So	olid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Projec	t Name:	Blan	co Storage Y					
401 W. Broadway	Projec	t Number:	9705	57-0352				Reported:	
Farmington NM, 87401	Projec	t Manager:	Ashl	ey Maxwell	10/18/18 11:56				
		5	SC-11R						
		P8100	48-02 (Se	olid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Project	Name:	Bland	co Storage Y	ard				
401 W. Broadway	Project	Number:	9705	7-0352				Reported:	
Farmington NM, 87401	Project	Manager:	Ashle	ey Maxwell			10/18/18 11:56		
		S	SC-12R						
		P8100	48-03 (So	olid)					
		Reporting							
Analyte	Result	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	

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Souder Miller & Associates	Pro	ject Name:	B	lanco Storage	Yard					
401 W. Broadway	Pro	ject Number:	97	7057-0352					Report	ed:
Farmington NM, 87401	Pro	Project Manager:			11			10/18/18 11:56		
	Volatile	Organics b	y EPA 8	021 - Qua	lity Cont	rol				
	E	nvirotech A	nalyti	cal Labor	atory					
		Reporting		Spike	Source		%REC		RPD	N
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1842006 - Purge and Trap EPA 5	030A									
Blank (1842006-BLK1)				Prepared: 1	0/15/18 1 A	Analyzed: 1	0/16/18 1			
Benzene	ND	100	ug/kg							
foluene	ND	100	"							
Ethylbenzene	ND	100								
o,m-Xylene	ND	200								
o-Xylene	ND	100	"							
Fotal Xylenes	ND	100								
fotal BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	8120		"	8000		101	50-150			
LCS (1842006-BS1)				Prepared:	10/15/18 1 4	Analyzed: 1	0/16/18 1			
Benzene	6120	100	ug/kg	5000		122	70-130			
Toluene	6160	100	"	5000		123	70-130			
Ethylbenzene	6200	100		5000		124	70-130			
o,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)	Sou	rce: P810029-	-01	Prepared:	10/15/18 1	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)	Sou	irce: 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	DI
Total Xylenes	15100	100	"	15000	ND	101	63.3-131	0.624	20	D1
Surragate: A-Bromochlorohenzene-PID	8180		"	8000		102	50-150			

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Souder Miller & Associates	Proje	Project Name: Project Number:		Blanco Storage Yard 97057-0352 Ashley Maxwell							
401 W. Broadway	Proje								Reported: 10/18/18 11:56		
Farmington NM, 87401	Project Manager:		А								
	Nonhaloger	nated Org	anics b	y 8015 - Qu	ality Co	ntrol					
	Env	virotech A	Analyti	cal Labor	atory						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 1842006 - Purge and Trap EPA 50	30A										
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)	Sourc	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	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				

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Souder Miller & Associates	D .	. 31								
All W. D. I	Proje	ect Name:	E	Blanco Storage	e Yard					
401 W. Broadway	Proje	ect Number:	9	7057-0352					Report	ed:
Farmington NM, 87401	Proje	ect Manager:	A	Ashley Maxwe	211				10/18/18	11:56
	Nonhaloge	nated Org	ganics b	y 8015 - Qu	uality Co	ntrol				
	En	virotech	Analyti	cal Labor	atory					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1842010 - DRO Extraction EPA 3	3570									
Blank (1842010-BLK1)				Prepared: 1	0/16/18 0 A	nalvzed: 1	0/16/18 1		~	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1						
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	58.9		"	50.0		118	50-200			
LCS (1842010-BS1)				Prepared: 1	0/16/18 0 A	nalyzed: 1	0/16/18 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)	Sourc	e: P810046-	01	Prepared: 1	0/16/18 0 A	nalyzed: 1	0/16/18 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)	Sourc	e: P810046-	01	Prepared: 1	0/16/18 0 A	nalyzed: 1	0/16/18 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			

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Souder M	liller & Associates	Project Name:	Blanco Storage Yard	
401 W. Br	roadway	Project Number:	97057-0352	Reported:
Farmingto	on NM, 87401	Project Manager:	Ashley Maxwell	10/18/18 11:56
		Notes and De	efinitions	
D1	Duplicates or Matrix Spike Duplicates or Lab	poratory Control Sample I	Duplicates Relative Percent Difference is outside of control limit	ts.
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the reporting	ng limit		
NR	Not Reported			
RPD	Relative Percent Difference			
**	Methods marked with ** are non-accredited metho	ds.		

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	tion	AN LEAST	10-31-24	10	hlle	e On	h	Indiana (-	TAT	F	PA Progra	am
int: S(1)F	Report due by: 10-17-18 Lab WOtt Lob Number				1		RCRA	CWA	SDW				
iset Managar: Aches maxia Pal	XMEN	D	10	049	1	97	05-	1-03t	2	X	Incrurt		0011
Address:		FC	110	V 1 6	Δ	nalvs	is an	d Me	thod			Sta	ate
State Zin Eachaulowhan AMBOUN City State Zin		5	5		ΓÍ							NM CO	
Phone:		801	801				0						
ail: a side in analiar Magander Miller Email:		Vd O	Vd C	8021	3260	010	300	-				X	
me Date Matrix No Sample ID	Lab	RO/OR	RO/DR	TEX by	OC by 8	letals 6	hloride	PH 418				Rem	narks
	Number		5	B	>	2	0	F		+			
03 10-16-18 5011 5C-10R	1000	X	X	1	L				_	_			
DAILISC-IIR	2	X	X	X									
11 SC-12R	3	X	X	X									
ditional Instructions: CC Tom Long											1		
Invoice Entenonse													
eld sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally misla	abelling the sample location	n, date	or			received	packed	in ice at	an avg te	emp above	be received on but less than 6	°C on subsequen	are sampled It days.
e of collection is considered fraud and may be grounds for legal action. Sampled by:	Data		Timo			5 () () () () () () () () () (Lohl	lee Only		
inquished by: (Signature)	Ib-Ha-	18	q	:47	1	Desi				Lab	ise Only		
In the (Signature) Date Time Received by Preserved	Date	10	Time	()		T1	eiveo	ioni	ce:		IN	та	
inquisned by: (Signature)	Date		line			AVG	Ten	np °C	2	0		15	N.N. O.L.
nale Matrix: S - Soil Sd - Solid Sg - Sludge A - Aqueous O - Other	Containe	r Tvn	e:g.	glas	s. p -	polv/	plast	tic. ag	- am	ber gla	ss. v - VOA	4	
e: Samples are discarded 30 days after results are reported unless other arrangements are made. Haza	rdous samples will be re	eturne	d to cl	ient o	r dispo	sed of	at the	client	expen	se. The	eport for the	e analysis of t	the abov
aples is applicable only to those samples received by the laboratory with this COC. The liability of the la	boraotry is limited to th	ie amo	unt pa	aid for	on the	e repor	t.						

APPENDIX F EXECUTED C-138 FORM

Engineering • Environmental • Surveying

www.soudermiller.com

District 1 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 REQUEST FO	State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 OR APPROVAL TO ACCEPT S	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. 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, C NW ¼ NW ¼ Section 14 T 29 N R 11V	City, State or ULSTR): V, San Juan County, NM; 36.731541, -107.96	6013 Sep. 2018
4. Source and Description of Waste: Source: Overtopping of a storage tank. Description: Hydrocarbon/Condensate impact Estimated Volume _60yd ³ (bbl) Known	ted soil/sludge/tank bottoms associated with cle Volume (to be entered by the operator at the end	eaning a storage tank, d of the haul) 10/2105 d ³ / bbls
5. GENERATO	R CERTIFICATION STATEMENT OF WA	STE STATUS
I, Thomas Long <i>Jurn Log</i> , representative or a Generator Signature certify that according to the Resource Conserver regulatory determination, the above described	uthorized agent for Enterprise Products Operativation and Recovery Act (RCRA) and the US E waste is: (Check the appropriate classification)	ng do hereby nvironmental Protection Agency's July 1988
RCRA Exempt: Oil field wastes gen exempt waste. <u>Operator Use Only: V</u>	erated from oil and gas exploration and product Waste Acceptance Frequency Monthly	ion operations and are not mixed with non- Weekly Per Load
RCRA Non-Exempt: Oil field waste characteristics established in RCRA regu subpart D, as amended. The following do the appropriate items)	which is non-hazardous that does not exceed the lations, 40 CFR 261.21-261.24, or listed hazard ocumentation is attached to demonstrate the abo	ne minimum standards for waste hazardous by lous waste as defined in 40 CFR, part 261, ove-described waste is non-hazardous. (Check
☐ MSDS Information ☐ RCRA Hazardo	us Waste Analysis 🛛 Process Knowledge	Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WA	STE TESTING CERTIFICATION STATEM	IENT FOR LANDFARMS
I, Thomas Long Generator Signature the required testing/sign the Generator Waste I, Give a Crabbee, representative	tive for Enterprise Products Operating authorize Testing Certification.	es Envirotech <u>, Inc</u> to complete
representative samples of the oil field waste h have been found to conform to the specific re of the representative samples are attached to o 19.15.36 NMAC.	ave been subjected to the paint filter test and test quirements applicable to landfarms pursuant to lemonstrate the above-described waste conform	sted for chloride content and that the samples Section 15 of 19.15.36 NMAC. The results to the requirements of Section 15 of
5. Transporter: Reilly Industrial, Sta	n Horn, OFT	
Name and Facility Permit #: Envirotech Address of Facility: Hilltop, NM Method of Treatment and/or Disposal:	n C Treating Plant I Landfarm	M 01-0011 Landfill 🔲 Other
Waste Acceptance Status:	APPROVED DENIED	(Must Be Maintained As Permanent Record)
PRINT NAME: Grag Crabter SIGNATURE: Surface Waste Management Facility	TITLE: Environment TELEPHONE NO.: Y Authorized Agent	32-0615

-

District 1 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 ½ NW ½ Section 14 T 29 N R 11W, San Juan County, NM; 36.731637, -107.966617 Oct. 2018
 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 <u>50</u> (yd³) bbls Known Volume (to be entered by the operator at the end of the haul) <u>33</u> (yd³) bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Thomas Long 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. <u>Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load</u>
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 Jone by I. Thomas Long Jone by Generator Signature the required testing/sign the Generator Waste Testing Certification. I. <u>Gree</u> <u>Grade Market</u> , representative for <u>Envirotech, Inc.</u> 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.
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:
PRINT NAME: SIGNATURE: Surface Waste Management Facility Authorized Agent Surface Waste Management Facility Authorized Agent Surface Waste Management Facility Authorized Agent Surface Waste Management Facility Authorized Agent

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

Responsible Party

Release Notification

NAR 04 2019

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	

Location of Release Source

Latitude 36.431197	Longitude107.442322	NAD 83 in decimal degrees to 5
decimal places)		
	Cite Ture Neturel Coo Linu	uide Collection Tank

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)

	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."

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider	this a major release?	
🗌 Yes 🖾 No			
If YES, was immediate no	btice given to the OCD? By whom? To whom? When and by wh	at means (phone, em	nail, 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: M. Full	Date: 2-27-19
email: jefields@eprod.com	_Telephone:
OCD Only Received by	Date: 311/2019

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 NCS 1907 433 625
Contact mailing address: 614 Reilly Ave, Farmington, NM 87401	NMOCD
	MAR 1 1 2019

Location of Release Source

Latitude <u>36.670267</u> decimal places) Longitude -108.158470

DISTRICT III NAD 83 in decimal degrees to 5

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?	
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."

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 no	btice given to the OCD? By whom? To whom? When and by wh	at means (phone, en	nail, 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.

It 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: Just full	_ Date:
email: jefields@eprod.com	Telephone: _713-381-6595
	2/11/10
Received by:	Date: <u>/// //9</u>

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

Release Notification

NMOCD MAR 1 1 2019

Responsible Party

Responsible Party: Enterprise Field Services, LLC	OGRID: 151618 DISTRICT
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	NVF 1907733404

Location of Release Source

Latitude <u>36.590988</u> Longitude <u>-107.747339</u> 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: <mark>Navajo Nation</mark>*

Nature and Volume of Release

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

	Volumo Polessed (bbls)	Volume Recovered (bbls)
	Volume Released (bbis)	
	Values Delessed (bbls)	Volume Recovered (bbls)
Produced vvater	Volume Released (bbis)	Volume (Coordina (Sole)
	Is the concentration of discolved chloride in the	Ves No
	is the concentration of dissolved chloride in the	
	produced water >10,000 mg/l?	
MCandanasta	Volume Released (bbls): Estimated 10-20	Volume Recovered (bbls):
	Volume Released (bbis). Estimated to It	
	BBLs	
Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
	Volume/Weight Released (provide anno)	5
		a release of condensate on the Lateral C-11 Drip Tank

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."

			1
	_		-
Was this a major If YES, for what reason(s) does the responsible party consider t	his a major release?		Г
release as defined by			
19.15.29.7(A)			
NMAC?			
If YES was immediate notice given to the OCD2 By whom? To whom? When and humb		11 ()0	
The rest was initiate notice given to the OCD? By whom? To whom? When and by wh	at means (phone, em	all, etc)?	
Initial Deenenaa			

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: JNC. tul	Date: <u>3-7-6</u>
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	
В	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.

lertied Sampling ES 23,24 tersomples E7/E8 Remaind

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: JNT. Jul	Date: 3-8-19
email:	Telephone: 713-381-6684
h h	
OCD Only	26-03
Received by: Vares & Fields	Date: 315297
Closure approval by the OCD does not relieve the responsible p remediate contamination that poses a threat to groundwater, surf party of compliance with any other federal, state, or local laws	arty of liability should their operations have failed to adequately investigate and face water, human health, or the environment nor does not relieve the responsible and/or regulations.
Closure Approved by:	Date: 318/2019
Printed Name: VONOSS& Fields	Title Covironmontal Operatist



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

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

BLM Farmington Field Office Lands Team Attention: Whitney Thomas 6251 College Blvd. Farmington, New Mexico 87401 7015 0640 0003 1834 8415 Return Receipt Requested

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.

NMOCO

MAR 1 5 2019

DISTRICT III

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

/mbp Attachments

Rodney M. Sartor Senior Director, Environmental



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 MAR 1 5 2019 District III

NMOCD

Prepared by:

lea

Ranee Deechilly Staff Scientist

umm

Kyle Summers, CPG Sr. Project Manager

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9.0	STANDARDS OF CARE, LIMITATIONS, AND RELIANCE 9.1 STANDARD OF CARE 9.2 ADDITIONAL LIMITATIONS 9.3 RELIANCE	5 5 5 5 5
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C ENSOLUM

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/I TDS	Constituent	Method	Limit		
	Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg		
≤ 50 feet	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 semiconsolidated 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









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 FIGURE

3

PROJECT NUMBER: 05A1226030



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, NM88210 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 97057-0925 Revised August 1, 2011 Form C-138

Oil Conservation Division 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: Invoice Information: PM Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401 Not Pay	A:Matt Garrison on AFE: N36935 ov 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 20	18
4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas station.	s compressor
Estimated Volume 50 yd ³ /bbls Known Volume (to be entered by the operator at the end of the haul) 102	yd ³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Thomas Long</u> , representative or authorized agent for <u>Enterprise Field Services</u> , LLC do hereby PRINT & SIGN NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection regulatory determination, the above described waste is: (Check the appropriate classification)	Agency's July 1988
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not exempt waste. Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load	ot mixed with non-
□ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 4 subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is not the appropriate items)	or waste hazardous by 40 CFR, part 261, on-hazardous.(Check
□ MSDS Information □ RCRA Hazardous Waste Analysis □ Process Knowledge □ Other (Provide descrip	ption in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARM	MS
I, Thomas Long, 6-11-2018, representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to required GeneratorSignature	o complete the
testing/sign the Generator Waste Testing Certification.	
I, <u>Envirotech. Inc.</u> do I representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content a have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NI of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Se 19.15.36 NMAC.	hereby certify that and that the samples MAC. The results ection 15 of
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:	
Waste Acceptance Status:	Permanent Record)
PRINT NAME: Greg Crabtree TITLE: Environmental Manager DATE:	6/12/18
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 REQUEST FO 1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly	State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 DR APPROVAL TO ACCEPT Ave, Farmington NM 87401	Form C-138 Revised 08/01/11 *Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection. SOLID WASTE Non AFE: N36935 PM: Dwayne Dixon PayKey: RB21200			
2. Originating Site: Buena Vista Compressor Station					
Section 13 T30N R9W; 36.8173, -107.72	298	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 <u>30</u> (yd ³) bbls Known Volume (to be entered by the operator at the end of the haul) <u>12/4</u> yd ³ / bbls					
5. GENERATO	R CERTIFICATION STATEMENT OF WA	ASTE 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. <u>Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load</u>					
RCRA Non-Exempt: Oil field waste characteristics established in RCRA regul subpart D, as amended. The following do the appropriate items)	which is non-hazardous that does not exceed the ations, 40 CFR 261.21-261.24, or listed hazard ocumentation is attached to demonstrate the abo	the minimum standards for waste hazardous by lous waste as defined in 40 CFR, part 261, ove-described waste is non-hazardous. (Check			
MSDS Information RCRA Hazardou	us Waste Analysis 🛛 Process Knowledge	Other (Provide description in Box 4)			
GENERATOR 19.15.36.15 WAS	STE TESTING CERTIFICATION STATEN	IENT FOR LANDFARMS			
I, Thomas Long II-27-18, representative for Enterprise Products Operating authorizes Envirotech. Inc to complete Generator Signature the required testing/sign the Generator Waste Testing Certification					
I, <u>Grag Crabbe</u> , representative for <u>Envirotech, Inc.</u> 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				
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 Address Landfarm Landfill Other					
Waste Acceptance Status: PRINT NAME: Greg Crabbae SIGNATURE: Surface Waste Management Facility	APPROVED DENIED TITLE: CAUCO Ma TELEPHONE NO.: 505-6:	(Must Be Maintained As Permanent Record)			



APPENDIX C

Photographic Documentation

Enterprise Field Services, LLC Closure Report Buena Vista Compressor Station Stack Release Ensolum Project No. 05A1226030





Enterprise Field Services, LLC Closure Report Buena Vista Compressor Station Stack Release Ensolum Project No. 05A1226030



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.



Enterprise Field Services, LLC Closure Report Buena Vista Compressor Station Stack Release Ensolum Project No. 05A1226030





Enterprise Field Services, LLC Closure Report Buena Vista Compressor Station Stack Release Ensolum Project No. 05A1226030



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													
						OOIE ANALI	TICAL COMIN						
Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	ТРН	ТРН	ТРН	Combined	Chloride
A State State State		C- Composite	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO	DRO	MRO	TPH	(mg/kg)
		G - Grab								A Martin State	and the second second	GRO/DRO/MRO	
									(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	和田田生
New Mexico Er	nergy, Mineral 8	& Natural Resource	es Department,	10	NE	NE	AIT	50				100	600
Oil C	onservation Div	vision, Closure Cri	iteria	IV	NE	NC	INE	50				100	000
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	С	0 to 0.25	<0.025	<0.049	<0.049	<0.099	ND	<4.9	19	460	479	<30
						Post-Remediation	Composite Soil S	Samples					
CS-1	6.14.18	С	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	С	0.25	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<10	<50	ND	<30
CS-4	6.14.18	С	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	С	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	С	0.25	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.4	<47	ND	<30
CS-7	6.14.18	С	0.25	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.6	<48	ND	<30
CS-8	6.14.18	С	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	С	0.25	<0.017	<0.033	<0.033	<0.066	ND	<3.3	<9.6	<48	ND	<30
ES-21	11.28.18	С	0.50	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.9	<49	ND	85
ES-22	11.28.18	С	0.50	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.7	<49	ND	54
ES-23	11.28.18	С	0.50	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<9.9	<49	ND	170
ES-24	11.28.18	С	0.50	<0.024	<0.047	<0.047	< 0.094	ND	<4.7	<9.7	<48	ND	120
						Evaluation Con	nposite Soil Sam	ples	·····································				
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	С	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
E0-14	10.05.18	C	0 to 0.25	<0.023	<0.046	<0.046	<0.093	ND	<4.6	< 9.6	<48	ND	<30
E0-10	10.05.18	0	0 to 0.25	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.8	<49	ND	30
E0-10	10.05.18	0	0 to 0.25	<0.023	<0.047	<0.047	<0.093	ND	<4./	<9.9	<49		<30
E0-1/	10.05.18	C C	0 to 0.25	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.6	<48	ND	<30
E0-10	10.05.18		0 to 0.25	<0.023	<0.046	<0.046	<0.092	ND	<4.0	< 9.5	<48	ND	<30
E0-19	10.05.18		0 to 0.25	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.7	<49	ND	<30
Note: Concentrati	ons in bold and	vellow exceed the	applicable NM FM	VRD Closure Crit	eria	~ 0.049	CU.099	ND	\$4.9	\$9.0	<u>\40</u>		N 30

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 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Surr: 4-Bromofluorobenzene

Lab Order 1806945 Date Reported: 1/15/2019

6/15/2018 10:16:34 AM B52018

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		R	esult	PQL	Qual L	Jnits	DF	Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS							Analyst	MRA	
Chloride			ND	30	n	ng/Kg	20	6/15/2018 12:29:06 PM	38707	
EPA MET	HOD 8015D MOD: GASOLINE	RANGE						Analyst	AG	
Gasoline	Range Organics (GRO)		ND	3.4	n	ng/Kg	1	6/15/2018 10:16:34 AM	A52018	
Surr: E	3FB		119	70-130	9	6Rec	1	6/15/2018 10:16:34 AM	A52018	
EPA MET	HOD 8015M/D: DIESEL RANG	E ORGANIC	S					Analyst	TOM	
Diesel Ra	ange Organics (DRO)		ND	9.7	n	ng/Kg	1	6/15/2018 10:30:59 AM	38699	
Motor Oil	Range Organics (MRO)		ND	49	n	ng/Kg	1	6/15/2018 10:30:59 AM	38699	
Surr: D	DNOP		97.2	70-130	9	6Rec	1	6/15/2018 10:30:59 AM	38699	
EPA MET	HOD 8260B: VOLATILES SHO	RT LIST						Analyst	AG	

ND

ND

ND

ND

123

97.9

0.017

0.034

0.034

0.067

70-130

70-130

mg/Kg

mg/Kg

%Rec

%Rec

mg/Kg 1

mg/Kg 1

1

1

1

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 15
	ND	Not Detected at the Reporting Limit	Р	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.

Surr: 4-Bromofluorobenzene

Surr: Toluene-d8

Lab Order 1806945 Date Reported: 1/15/2019

CLIENT: APEX TITAN Client Sample ID: CS-2								
Project:	Buena Vista Stack Release		Collection Date: 6/14/2018 9:05:00 AM					
Lab ID:	1806945-002	Matrix: SOIL	15/2018 8:20:00 AM					
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS					Analyst:	MRA	
Chloride		ND	30	mg/Kg	20	6/15/2018 12:41:30 PM	38707	
EPA MET	HOD 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: E	3FB	116	70-130	%Rec	1	6/15/2018 10:39:28 AM	A52018	
EPA MET	HOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst:	TOM	
Diesel R	ange Organics (DRO)	ND	10	mg/Kg	1	6/15/2018 10:53:15 AM	38699	
Motor Oi	I Range Organics (MRO)	ND	50	mg/Kg	1	6/15/2018 10:53:15 AM	38699	
Surr: [ONOP	103	70-130	%Rec	1	6/15/2018 10:53:15 AM	38699	
EPA MET	HOD 8260B: VOLATILES SHO	RT LIST				Analyst:	AG	
Benzene	ł.	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	
Ethylben	zene	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	

122

99.8

70-130

70-130

%Rec

%Rec

1

1

6/15/2018 10:39:28 AM B52018

6/15/2018 10:39:28 AM B52018

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 15
	ND	Not Detected at the Reporting Limit	Р	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

Lab Order 1806945

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/15/2019

6/15/2018 11:02:30 AM B52018

6/15/2018 11:02:30 AM B52018

	and the second sec							
CLIENT:	APEX TITAN	Client Sample ID: CS-3						
Project:	Buena Vista Stack Release	Collection Date: 6/14/2018 9:10:00 AM						
Lab ID:	1806945-003	Matrix: SOIL		Received Date	e: 6/	15/2018 8:20:00 AM		
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS					Analyst:	MRA	
Chloride		ND	30	mg/Kg	20	6/15/2018 12:53:54 PM	38707	
EPA MET	HOD 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: E	3FB	117	70-130	%Rec	1	6/15/2018 11:02:30 AM	A52018	
EPA MET	HOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst:	TOM	
Diesel R	ange Organics (DRO)	ND	10	mg/Kg	1	6/15/2018 11:15:15 AM	38699	
Motor Oi	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 MET	HOD 8260B: VOLATILES SHO	RT 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	
Ethylben	zene	ND	0.034	mg/Kg	1	6/15/2018 11:02:30 AM	B52018	
Xylenes,	Total	ND	0.068	ma/Ka	1	6/15/2018 11:02:30 AM	B52018	

122

96.9

70-130

70-130

%Rec

%Rec

1

1

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

Qu	alifi	ers:	
-			

Surr: 4-Bromofluorobenzene

Surr: Toluene-d8

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н 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
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 15 J
- Р Sample pH Not In Range RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015D MOD: GASOLINE RANGE

EPA METHOD 8260B: VOLATILES SHORT LIST

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

Gasoline Range Organics (GRO)

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

Surr: 4-Bromofluorobenzene

Surr: BFB

Surr: DNOP

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Lab Order 1806945 Date Reported: 1/15/2019

Analyst: AG

Analyst: TOM

Analyst: AG

6/15/2018 11:25:32 AM A52018

6/15/2018 11:25:32 AM A52018

6/15/2018 11:37:21 AM 38699

6/15/2018 11:37:21 AM 38699

6/15/2018 11:37:21 AM 38699

6/15/2018 11:25:32 AM B52018

CLIENT: APEX TITAN Client Sample ID: CS-4 Project: Buena Vista Stack Release Collection Date: 6/14/2 Lab ID: 1806945-004 Matrix: SOIL Received Date: 6/15/2 Analyses Result PQL Qual Units DF Date EPA METHOD 300.0: ANIONS Oblaside Oblaside													
Project: Buena Vista Stack Release Collection Date: 6/14/2 Lab ID: 1806945-004 Matrix: SOIL Received Date: 6/15/2 Analyses Result PQL Qual Units DF Date: 6/14/2 EPA METHOD 300.0: ANIONS Objection DF Date: 6/15/2 DF Date: 6/15/2	CLIENT: APEX TITAN				Client Sample ID: CS-4								
Lab ID: 1806945-004 Matrix: SOIL Received Date: 6/15/2 Analyses Result PQL Qual Units DF Date: EPA METHOD 300.0: ANIONS Objection Opposite Opposite	Project:	Collection Date: 6/14/2018 9:15:00 AM											
Analyses Result PQL Qual Units DF Da EPA METHOD 300.0: ANIONS	Lab ID:	Matrix: SOIL Received Date: 6/15/2018 8:20:00 AM											
EPA METHOD 300.0: ANIONS	Analyses	F Da	DF I	Date Analyzed	1	Batch							
Oblacida	EPA MET			A	Analyst:	MRA							
Chioriae ND 30 mg/Kg 20 6/	Chloride	20 6/1	20	6/15/2018 1:31:0	09 PM	38707							

3.3

9.8

49

70-130

0.017

0.033

0.033

0.067

70-130

70-130

70-130

mg/Kg

%Rec

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

1

1

1

1

1

1

1

1

1

1

1

ND

115

ND

ND

99.5

ND

ND

ND

ND

121

98.0

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Decent a f 15
	ND	Not Detected at the Reporting Limit	Р	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

Lab ID:

Project: Buena Vista Stack Release

1806945-005

Lab Order 1806945 Date Reported: 1/15/2019

	Client Sample ID: CS-5
	Collection Date: 6/14/2018 9:20:00 AM
Matrix: SOIL	Received Date: 6/15/2018 8:20:00 AM
Posult	POI Qual Units DE Data Analyzad

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 ORGA	NICS				Analyst	том
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 15
	ND	Not Detected at the Reporting Limit	Р	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.

Lab Order 1806945

Date Reported: 1/15/2019

Analyses		Result	PQL Qual Units DF Date Analyzed	Batch
Lab ID:	1806945-006	Matrix: SOIL	Received Date: 6/15/2018 8:20:00 AM	
Project:	Buena Vista Stack Release		Collection Date: 6/14/2018 9:25:00 AM	
CLIENT:	APEX TITAN		Client Sample ID: CS-6	

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:	том
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 15
	ND Not Detected at the Reporting Limit		Р	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.

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Lab Order 1806945 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 ORGA	NICS				Analyst	ТОМ
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	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 exceededND Not Detected at the Reporting Limit		J	Analyte detected below quantitation limits Page 7 of 15	
		Р	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

Lab Order 1806945

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/15/2019

Analyses		Result	POL Oual Units	DF Date Analyzed	Batch			
Lab ID:	1806945-008	Matrix: SOIL	Received Date: 6/15/2018 8:20:00 AM					
Project:	Buena Vista Stack Release		Collection Date	e: 6/14/2018 9:40:00 AM				
CLIENT:	APEX TITAN	Client Sample ID: CS-8						

EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	Analyst: 6/15/2018 2:20:47 PM	MRA 38707
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst:	AG
Gasoline Range Organics (GRO) Surr: BFB	ND 115	3.6 70-130	mg/Kg %Rec	1 1	6/15/2018 12:57:53 PM 6/15/2018 12:57:53 PM	A52018 A52018
EPA METHOD 8015M/D: DIESEL RANGE ORGAN	NICS				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 8 of 15
	ND	Not Detected at the Reporting Limit	Р	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.

EPA METHOD 300.0: ANIONS

Gasoline Range Organics (GRO)

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8015D MOD: GASOLINE RANGE

EPA METHOD 8260B: VOLATILES SHORT LIST

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

Chloride

Surr: BFB

Surr: DNOP

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Lab Order 1806945

Date Reported: 1/15/2019

6/15/2018 2:33:11 PM

6/15/2018 1:21:04 PM

6/15/2018 11:25:09 AM 38699

6/15/2018 11:25:09 AM 38699

6/15/2018 11:25:09 AM 38699

Analyst: MRA

Analyst: AG

Analyst: TOM

Analyst: AG

38707

A52018

A52018

B52018

B52018

B52018

B52018

B52018

B52018

Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch		
Lab ID:	1806945-009	Matrix: SOIL	Received Date: 6/15/2018 8:20:00 AM				
Project:	Buena Vista Stack Release	Collection Date: 6/14/2018 9:45:00 AM					
CLIENT:	APEX TITAN	Client Sample ID: CS-9					

42

ND

120

ND

ND

104

ND

ND

ND

ND

126

98.8

30

3.6

9.3

47

70-130

0.018

0.036

0.036

0.071

70-130

70-130

70-130

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

20

1

1

1

1

1

1

1

1

1

1

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	H Holding times for preparation or analysis exceeded		Analyte detected below quantitation limits Page 9 of 15
ND Not Detected at the Reporting Limit		Not Detected at the Reporting Limit	Р	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

A	na	ly	tical	Report	
	1000				

Hall Environmental Analysis Laboratory, Inc. Ţ

Lab Order 1806945 Date Reported: 1/15/2019

CLIENT:	APEX TITAN		C	ient Sa	mple II	D: CS	5-10						
Project:	Buena Vista Stack Release	Collection Date: 6/14/2018 9:50:00 AM											
Lab ID:	1806945-010	Matrix: SOIL		Receiv	ed Date	e: 6 /1	5/2018 8:20:00 AM						
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch					
EPA MET	HOD 300.0: ANIONS						Analyst:	MRA					
Chloride		ND	30		mg/Kg	20	6/15/2018 2:45:36 PM	38707					
EPA MET	HOD 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: B	BFB	117	70-130		%Rec	1	6/15/2018 1:44:13 PM	A52018					
EPA MET	HOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst:	том					
Diesel Ra	ange 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: D	NOP	99.5	70-130		%Rec	1	6/15/2018 11:00:53 AM	38699					

	00.0	10-100	70ILEC		0/15/2010 11.00.55 AW	20033
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	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

WO#: **1806945**

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID MB-38707	SampType:	MBLK	Test	tCode: EPA	A Method	300.0: Anion	S		
Client ID: PBS	Batch ID: 3	88707	R	RunNo: 520	011				
Prep Date: 6/15/2018	Analysis Date:	6/15/2018	S	SeqNo: 170	02038	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC I	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND 1.	5							
Sample ID LCS-38707	SampType: I	_CS	Tes	tCode: EPA	A Method	300.0: Anion	s		
Sample ID LCS-38707 Client ID: LCSS	SampType: I Batch ID: 3	_CS 38707	Tesi	tCode: EPA RunNo: 520	A Method 011	300.0: Anion	S		
Sample ID LCS-38707 Client ID: LCSS Prep Date: 6/15/2018	SampType: L Batch ID: 3 Analysis Date:	_CS 38707 6/15/2018	Tesi R S	tCode: EPA RunNo: 520 SeqNo: 170	A Method 011 02039	300.0: Anion: Units: mg/K	s g		
Sample ID LCS-38707 Client ID: LCSS Prep Date: 6/15/2018 Analyte	SampType: L Batch ID: 3 Analysis Date: Result PQL	_CS 38707 6/15/2018 SPK value	Tesi R S SPK Ref Val	tCode: EPA RunNo: 520 SeqNo: 170 %REC I	A Method 011 02039 LowLimit	300.0: Anion Units: mg/K HighLimit	s g %RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

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WO#: **1806945** *15-Jan-19*

Client: AF	EX TITAN										
Project: Bu	ena Vista Stack Rel	ease									
Sample ID LCS-38699	SampType	: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID	: 38	699	RunNo: 52005							
Prep Date: 6/15/2018	Analysis Date	: 6/	15/2018	5	SeqNo: 1	701133	Units: mg/k	٢g			
Analyte	Result P	QL	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	: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics		
Client ID: PBS	Batch ID	: 38	699	F	RunNo: 5	2005					
Prep Date: 6/15/2018	Analysis Date	: <mark>6/</mark>	15/2018	S	SeqNo: 1	701134	Units: mg/k	٢g			
Analyte	Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO	ND	10									
Motor Oil Range Organics (M	RO) ND	50									
Surr: DNOP	10		10.00		102	70	130				

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

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WO#: 1806945

15-Jan-19

Client:

APEX TITAN

Proj	ect:
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Buena Vista Stack Release

Sample ID 100ng btex lcs	Samp	Type: LC	S4	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: BatchQC	Batc	h ID: B5	2018	F	RunNo: 5	2018				
Prep Date:	Analysis [Date: 6/	15/2018	S	SeqNo: 1	701306	Units: mg/K	ζg		
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 Sh									List	
Client ID: PBS	Batc	h ID: B5	2018	F	RunNo: 5	2018				
Prep Date:	Analysis [Date: 6/	15/2018	5	SeqNo: 1	701318	Units: mg/K	(g		
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	Samp	Type: MS	64	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: CS-2	Batc	h ID: B5	2018	F	RunNo: 5	2018				
Prep Date:	Analysis [Date: 6/	15/2018	5	SeqNo: 1	701833	Units: mg/K	ζg		
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	I Samp ⁻	Type: MS	SD4	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: CS-2	Batc	h ID: B5	2018	F	RunNo: 5	2018				
Prep Date:	Analysis [Date: 6/	15/2018	S	SeqNo: 1	701834	Units: mg/K	(g		
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.

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

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Client: A

APEX TITAN

Project: Buena Vista Stack Release

Sample ID 1806945-002ams	d Samp	Type: MS	SD4	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	List	
Client ID: CS-2	Batc	h ID: B5	2018	F	RunNo: 5	2018				
Prep Date:	Analysis E	Date: 6/	15/2018	S	SeqNo: 1	701834	Units: mg/k	ζg		
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.
- 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

WO#: **1806945** *15-Jan-19*

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WO#: **1806945**

Qual

Qual

Qual

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15-Jan-19

Client: APEX TITAN **Project:** Buena Vista Stack Release Sample ID 2.5ug gro Ics 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 SPK value SPK Ref Val PQL %REC LowLimit HighLimit %RPD **RPDLimit** 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 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 SPK value SPK Ref Val PQL %REC LowLimit HighLimit %RPD **RPDLimit** Gasoline Range Organics (GRO) 16 3.4 16.81 0.7465 90.2 64.7 142 Surr: BFB 360 336.2 106 70 130 Comple ID 4906045 004

Sample ID 1806945-001a	msa Sampi	ype: MS	SD	Test	tCode: E	PA Method	8015D Mod:	Gasoline	Range	
Client ID: CS-1	Batch	Batch ID: A52018			RunNo: 52018					
Prep Date:	Analysis D	ate: 6/	15/2018	S	eqNo: 1	701824	Units: mg/k	g		
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.
- 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 ENVIRONMEN ANALYSIS LABORATORY	ITAL 1	Hall Environmental Albu TEL: 505-345-3975 Website: www.hau	Analy. 490 querq FAX: llenvii	sis Laborator 1 Hawkins N ue, NM 8710 505-345-410 onmental.co	ry IE 19 Sa 17 m	am	ple Log-In C	heck List
Client Name: APEX A	ZTEC	Work Order Number:	1806	3945			RcptNo:	1
Received By: Anne T	home	6/15/2018 8:20:00 AM			Anne 2	Hum	_	
Completed By: Anne T	home	6/15/2018 9:11:10 AM			ame 2	Am	-	
Reviewed By: Labeled by: Chain of Custody	Ar 06/15/18	UUISIIS						
1. Is Chain of Custody co	mplete?		Yes	\checkmark	No		Not Present	
2. How was the sample de	elivered?		Cour	ier				
Log In 3. Was an attempt made	to cool the samples?		Yes		No [NA 🗆	
4. Were all samples receiv	ved at a temperature of	of >0° C to 6.0°C	Yes		No		NA 🗆	
5. Sample(s) in proper col	ntainer(s)?		Yes		No 🗌			ж.
6. Sufficient sample volum	e for indicated test(s)	?	Yes		No 🗌			
7. Are samples (except VC	A and ONG) properly	preserved?	Yes	\checkmark	No			
8. Was preservative added	to bottles?		Yes		No 🔽		NA 🗌	
9. VOA vials have zero her	adspace?		Yes		No 🗌]	No VOA Vials 🗹	
10. Were any sample conta	iners received broker	1?	Yes		No 🖤		# of preserved	
11. Does paperwork match (Note discrepancies on	bottle labels? chain of custody)		Yes		No		for pH: (<2 or :	>12 uniess noted)
12. Are matrices correctly ic	entified on Chain of C	Sustody?	Yes		No 🗌		Adjusted?	
13. Is it clear what analyses	were requested?		Yes		No			
14. Were all holding times a (If no, notify customer for	ble to be met? r authorization.)		Yes	\checkmark	No		Checked by:	
Special Handling (if a	pplicable)							
15. Was client notified of al	discrepancies with th	nis order?	Yes		No		NA 🔽	
Person Notified: By Whom: Regarding:		Date Via:] eMa	iil 📋 Pho	ne 🗌 F	ax [In Person	
Client Instructions	:							
16. Additional remarks:								
CUSTODY SEAL	S INTACT ON SOIL J	ARS/at 6/15/18						
17. <u>Cooler Information</u> Cooler No Temp	C Condition Se	al Intact Seal No Se	eal Da	ite Si	gned By			
1.8	Good Yes				en renative rational en en es			
						×		

	1					, , , , , , , , , , , , , , , , , , , ,	CHAIN OF CUSTODY RECOR
	Hal	Envir	tonme or	lai	ANALYSIS		/ / Lab use only
	Laboratory: A	nalisis	s Labo	ratery	REQUESTED		/ / / Due Date:
IAPEX	Address: 4901	Hawie	cins N	E			
Office Location	Albuquer	gue, n	VM ST	109		#///	Temp. of coolers 1-2
606 S Pio Grande Suite A	Contact:	AFTNO	ama	n			
Aztec, NM 87410	Phone: 545-2	245-2	a=	l.)		4 / / / /	
Project Manager K. Summers	PO/SO #-	seen	otes	9	at a	. / / / /	/ / Page(of (
Sampler's Name	Sampler's Signature	10				4///	
Ranee Deechilly	Brad l'	1L			Ja.	31	
Proj. No. Project Name	10 mary	No	Type of Co	ntainere		7 / / / /	
725040112453 Buena Vista	Stuck Release	2		ritamers	ADA		
Matrix Date Time C G	(s of Sample(s) to to	DA oth	0+0	8 - 8 - 0	1 / 1 9		
	D or ounpic(s)	Д D П	A± 8	P G a A			Lab Sample ID (Lab Use Only)
5 61418 900 X CS-1				1	XXX		18010945-001
S 6/14/18 905 X CS-5	2			1	VVJ		70
5 6/14/18 910 X CS-3	3				JXX		7(13
S 10/14/18 915 × CS-4	1			1	V X X		
S WIYIK 920 X (S-S	-				X X /		
S YINK 925 X OSI				1	1 X X		
Q WINN QZA V	7			1	XXX		204
6 Jahulus 010 V	T			1	N X X		- 207
5 114118 940 CS-	8			1	XXX		268
C Ishuku Provid	7)	XXX		-209
$\frac{3}{100}$ $\frac{100}{100}$ $\frac{100}{100}$ $\frac{100}{100}$ $\frac{100}{100}$ $\frac{100}{100}$	10				XXX		-210
Relinquished by, (Signature)	me: Received by: (Signature)	SAMI	Date	Time: NOT		
Junz-hel (4)14/18/142	+ / Mist	Las	V	4/1/18	1424	5. PIVI-10	in long
NAL = 1 . COL-	ne: Received by: (Signature)	5	Date:	Time:	pay key-	- G(711580
Relinquished by (Signature) Date: Ti	ne: Received by: (Signature)		Date:	Time:	Non AFE	- N36935
Relinguished by (Signature)	ne: Reached has (Clanature			5	ME DAY	
Date. II	ne. neceived by: (signature)		Date:	Time:		
Matrix WW - Wastewater W - Water S - Container VOA - 40 ml vial A/G - Amber / Or (Soil SD - Solid L - Glass 1 Liter 25	Liquid A 0 ml - Glass	A - Air Bag wide mouth	C - Char P/O - Pla	coal tube SL - slu	dge Ö - Oil	

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204



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

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 <u>www.hallenvironmental.com</u> 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,

Ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

CLIENT:	APEX TITAN	Client Sample ID: ES-1									
Project:	Buena Vista Stack Release		(Collection Date	e: 10/	/5/2018 11:45:00 AM					
Lab ID:	1810422-001	Matrix: SOIL		Received Date	e: 10/	/6/2018 10:00:00 AM					
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch				
EPA MET	HOD 300.0: ANIONS					Analys	t: MRA				
Chloride		ND	30	mg/Kg	20	10/16/2018 1:09:16 AM	40987				
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: Irm				
Diesel Ra	ange Organics (DRO)	ND	9.9	mg/Kg	1	10/11/2018 11:07:36 P	M 40934				
Motor Oil	Range Organics (MRO)	ND	49	mg/Kg	1	10/11/2018 11:07:36 P	M 40934				
Surr: D	DNOP	138	50.6-138	%Rec	1	10/11/2018 11:07:36 P	M 40934				
EPA MET	HOD 8015D: GASOLINE RANG	E				Analys	t: RAA				
Gasoline	Range Organics (GRO)	ND	4.6	mg/Kg	1	10/10/2018 8:45:52 PM	40866				
Surr: E	3FB	90.0	15-316	%Rec	1	10/10/2018 8:45:52 PM	40866				
EPA MET	HOD 8021B: VOLATILES					Analys	t: 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				
Ethylben	zene	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	1-Bromofluorobenzene	97.8	80-120	%Rec	1	10/10/2018 8:45:52 PM	40866				

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 27
	ND	Not Detected at the Reporting Limit	Р	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.

Lab Order 1810422 Date Reported: 10/18/2018

10/10/2018 9:09:12 PM 40866

10/10/2018 9:09:12 PM 40866

CLIENT:	APEX TITAN	Client Sample ID: ES-2						
Project:	Buena Vista Stack Release	Collection Date: 10/5/2018 11:50:00 AM						
Lab ID:	1810422-002	Matrix: SOIL		Received Date	e: 10	/6/2018 10:00:00 AM		
Analyses	5	Result	PQL	Qual Units	DF	Date Analyzed	Batch	
EPA ME	THOD 300.0: ANIONS					Analyst	MRA	
Chloride		ND	30	mg/Kg	20	10/16/2018 1:21:40 AM	40987	
EPA MET	THOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	Irm	
Diesel R	ange Organics (DRO)	ND	9.9	mg/Kg	1	10/11/2018 11:31:54 PM	/ 40934	
Motor O	il Range Organics (MRO)	ND	49	mg/Kg	1	10/11/2018 11:31:54 PM	1 40934	
Surr:	DNOP	129	50.6-138	%Rec	1	10/11/2018 11:31:54 PM	/ 40934	
EPA MET	THOD 8015D: GASOLINE RANGE	=				Analyst	RAA	
Gasoline	e 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 MET	THOD 8021B: VOLATILES					Analyst	RAA	
Benzene	9	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	
Ethylber	zene	ND	0.048	mg/Kg	1	10/10/2018 9:09:12 PM	40866	

ND

92.8

0.096

80-120

mg/Kg

%Rec

1

1

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

0	1		
	10	 are	٠
		 UI 3	

*

Xylenes, Total

Surr: 4-Bromofluorobenzene

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 27 J
- 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.

Surr: 4-Bromofluorobenzene

Lab Order 1810422

Date Reported: 10/18/2018

10/10/2018 9:32:31 PM 40866

CLIENT:	APEX TITAN		CI	ient Sample II): ES	3-3		
Project:	Buena Vista Stack Release	Collection Date: 10/5/2018 11:55:00 AM						
Lab ID:	1810422-003	Matrix: SOIL		Received Date	e: 10	/6/2018 10:00:00 AM		
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch	
EPA MET	HOD 300.0: ANIONS					Analyst	MRA	
Chloride		37	30	mg/Kg	20	10/15/2018 2:23:49 PM	41001	
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	Irm	
Diesel Ra	ange Organics (DRO)	ND	9.8	mg/Kg	1	10/11/2018 11:56:13 PM	1 40934	
Motor Oi	I Range Organics (MRO)	ND	49	mg/Kg	1	10/11/2018 11:56:13 PM	1 40934	
Surr: E	ONOP	121	50.6-138	%Rec	1	10/11/2018 11:56:13 PM	1 40934	
EPA MET	HOD 8015D: GASOLINE RANGE					Analyst	RAA	
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	10/10/2018 9:32:31 PM	40866	
Surr: E	3FB	90.4	15-316	%Rec	1	10/10/2018 9:32:31 PM	40866	
EPA MET	HOD 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	
Ethylben	zene	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	

96.0

80-120

%Rec

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 27
	ND	Not Detected at the Reporting Limit	Р	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

10/10/2018 9:55:53 PM 40866

Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

CLIENT: APE Project: Buer Lab ID: 1810	X TITAN na Vista Stack Release 1422-004	Matrix: SOII	C	lient Sample I Collection Dat	D : ES	-4 /5/2018 12:00:00 PM	
Analyses		Result	PQL	Oual Units	DF	Date Analyzed	Ratch
EPA METHOD	300.0: ANIONS					Archit	Duten
Chloride		ND	30	malka	20	Analyst:	MRA
EPA METHOD	8015M/D. DIESEL RANGE	PCANICS	50	iiig/kg	20	10/15/2018 3:01:02 PM	41001
	OF TOWNER DESEE NAME	JRGANICS				Analyst:	Irm
Diesel Range C	Organics (DRO)	ND	9.8	mg/Kg	1	10/12/2018 12:20:42 AM	40934
Motor Oil Range	e 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	e Organics (GRO)	ND	4.7	ma/Ka	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	DAA
Benzene		ND	0.004			Analysi.	KAA
Toluene			0.024	mg/Kg	1	10/10/2018 9:55:53 PM	40866
Ethylbenzeno		ND	0.047	mg/Kg	1	10/10/2018 9:55:53 PM	40866
Zulanaa Tatal		ND	0.047	mg/Kg	1	10/10/2018 9:55:53 PM	40866
Ayleries, Total		ND	0.095	mg/Kg	1	10/10/2018 9:55:53 PM	40866

95.7

80-120

%Rec

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits p
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range Page 4 of 27
	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.

Surr: 4-Bromofluorobenzene

Lab Order 1810422 Date Reported: 10/18/2018

10/10/2018 10:19:13 PM 40866

10/10/2018 10:19:13 PM 40866

CLIENT:	APEX TITAN		C	lient Sample II	D: ES	5-5	
Project:	Buena Vista Stack Release			Collection Date	e: 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
	THOD 300.0: ANIONS					Analyst	MRA
Chloride		41	30	mg/Kg	20	10/15/2018 3:13:26 PM	41001
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: Irm
Diesel R	ange Organics (DRO)	ND	9.8	mg/Kg	1	10/12/2018 1:09:20 AM	40934
Motor Oi	I Range Organics (MRO)	ND	49	mg/Kg	1	10/12/2018 1:09:20 AM	40934
Surr: I	DNOP	106	50.6-138	%Rec	1	10/12/2018 1:09:20 AM	40934
EPA MET	HOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline	Range Organics (GRO)	ND	4.6	mg/Kg	1	10/10/2018 10:19:13 PM	A 40866
Surr: E	BFB	91.0	15-316	%Rec	1	10/10/2018 10:19:13 PM	A 40866
EPA MET	HOD 8021B: VOLATILES					Analyst	RAA
Benzene		ND	0.023	mg/Kg	1	10/10/2018 10:19:13 PM	1 40866
Toluene		ND	0.046	mg/Kg	1	10/10/2018 10:19:13 PM	/ 40866
Ethylben	zene	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	1 40866

98.8

80-120

mg/Kg

%Rec

1

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Deces 5 of 27
	ND	Not Detected at the Reporting Limit	Р	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.

Lab Order 1810422

Date Reported:	10/18/2018
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CLIENT:	APEX TITAN		Cl	ient Sample II	D: ES	5-6			
Project:	Buena Vista Stack Release	Collection Date: 10/5/2018 12:10:00 PM							
Lab ID:	1810422-006	Matrix: SOIL Received Date: 10/6/2018 10:00:00							
Analyses		Result	PQL	Qual Units	DF	Date Analyzed Batch			
EPA ME	THOD 300.0: ANIONS					Analyst: MRA			
Chloride		ND	30	mg/Kg	20	10/15/2018 3:25:51 PM 4100			
EPA MET	THOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: Irm			
Diesel R	ange Organics (DRO)	ND	9.8	mg/Kg	1	10/12/2018 1:33:35 AM 40934			
Motor O	il 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 MET	THOD 8015D: GASOLINE RANGE					Analyst: RAA			
Gasoline	e 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 MET	THOD 8021B: VOLATILES					Analyst: RAA			
Benzene	2	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			
Ethylber	izene	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.

- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range E
- Analyte detected below quantitation limits Page 6 of 27 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch		
Lab ID:	1810422-007	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM				
Project:	Buena Vista Stack Release		Collection Dat	e: 10/5/2018 12:15:00 PM	[
CLIENT:	APEX TITAN		Client Sample II	D: ES-7			

A REAL PROPERTY AND A REAL		A A A A A A A A A A A A A A A A A A A			
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 OR	GANICS				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:

*

- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 27 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

Matrix: SO	DIL Received Date: 10/6/2018 10:00:00 AM	
a Stack Release	Collection Date: 10/5/2018 12:20:00 PM	
AN	Client Sample ID: ES-8	
	AN a Stack Release	AN Client Sample ID: ES-8 Collection Date: 10/5/2018 12:20:00 PM Matrix: SOIL Received Date: 10/6/2018 10:00:00 AM

Anaryses	A COULT				J
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 OR	GANICS				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

Oualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits Page 8 of 27 J
- Sample pH Not In Range Р
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

Analyses	5	Result	PQL Qual Units	DF Date Analyzed	Batch
Lab ID:	1810422-009	Matrix: SOIL	Received Dat	e: 10/6/2018 10:00:00 AN	1
Project:	Buena Vista Stack Release		Collection Dat	e: 10/5/2018 12:25:00 PM	1
CLIENT:	APEX TITAN		Client Sample II	D: ES-9	

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EPA METHOD 300.0: ANIONS	ND	30	mg/Kg	20	Analyst: MRA 10/15/2018 4:03:05 PM 41001
Chionde					Applyot: Imm
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst. Inn
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. D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits Page 9 of 27 J
- Sample pH Not In Range Р
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Date Reported: 10/18/2018

Lab Order 1810422

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch		
Lab ID:	1810422-010	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM				
Project:	Buena Vista Stack Release		Collection Date	e: 10/5/2018 12:30:00 PM			
CLIENT:	APEX TITAN		Client Sample II): ES-10			

7 kildiy 505					
EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	Analyst: MRA 10/15/2018 4:15:30 PM 41001
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				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.

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- 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 Page 10 of 27
- 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.

Lab Order 1810422 Date Reported: 10/18/2018

Analyses		Result	POL Oual Units DF Date Analyzed Ba	atch
Lab ID:	1810422-011	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM	
Project:	Buena Vista Stack Release		Collection Date: 10/5/2018 12:35:00 PM	
CLIENT:	APEX TITAN		Client Sample ID: ES-11	

Analyses	Itesuit	- 2-				e e	
EPA METHOD 300.0: ANIONS	ND	30		ma/Ka	20	Analyst: 10/15/2018 4:52:43 PM	MRA 41001
Chloride		00				Analyst	Irm
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst.	
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.

rector to the QC Statistics P	1 0	00	

- * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix

Qualifiers:

- 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 limitspage 11 of 27
- 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.

Lab Order 1810422 Date Reported: 10/18/2018

Analyses		Result	POL Qual Units	DF Date Analyzed	Batch		
Lab ID:	1810422-012	Matrix: SOIL	Received Date	e: 10/6/2018 10:00:00 AM			
Project:	Buena Vista Stack Release		Collection Date	e: 10/5/2018 12:40:00 PM			
CLIENT:	APEX TITAN	Client Sample ID: ES-12					

Analyses						and the second diversity of th
EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	Analyst: 10/15/2018 5:05:07 PM	MRA 41001
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				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

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits Page 12 of 27 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

Analysas		Result	POL Oual Units	DF Date Analyzed	Batch		
Lab ID:	1810422-013	Matrix: SOIL	Received Dat	e: 10/6/2018 10:00:00 AM			
Project:	Buena Vista Stack Release		Collection Dat	e: 10/5/2018 12:45:00 PM			
CLIENT:	APEX TITAN	Client Sample ID: ES-13					

Analyses			•		v	
EPA METHOD 300.0: ANIONS	ND	30	ma/Ka	20	Analyst:	MRA 41001
Chioride	ND	50	ing/itg	20		
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				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.

Anal	lifiance
ОЛИЯ	IIIIers:

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- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limitsPage 13 of 27 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

	D	DOL Qual Units DE Date Analyzed	Ratch			
1810422-014	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM				
Buena Vista Stack Release		Collection Date: 10/5/2018 12:50:00 PM				
APEX TITAN	Client Sample ID: ES-14					
1	APEX TITAN Buena Vista Stack Release 1810422-014	APEX TITAN Buena Vista Stack Release 1810422-014 Matrix: SOIL	Client Sample ID: ES-14 Guena Vista Stack Release Collection Date: 10/5/2018 12:50:00 PM I810422-014 Matrix: SOIL Received Date: 10/6/2018 10:00:00 AM			

Analyses	Result	TYL	Quai emits	~	Dutt mining	
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 ORG	ANICS				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. * Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- Analyte detected below quantitation limits Page 14 of 27 J
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Lab Order 1810422

Date Reported: 10/18/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITANClient Sample ID: ES-15Project: Buena Vista Stack ReleaseCollection Date: 10/5/2018 12:55:00 PMLab ID: 1810422-015Matrix: SOILReceived Date: 10/6/2018 10:00:00 AMAnalysesResultPQL Qual Units DF Date AnalyzedBatch

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 ORG	ANICS				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

Qualifiers:	*	Value exceeds Maximum	Contaminant	Level.
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- 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 Page 15 of 27
- 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.

Lab Order 1810422 Date Reported: 10/18/2018

Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch				
Lab ID:	1810422-016	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM						
Project:	Buena Vista Stack Release		Collection Dat	e: 10/5/2018 1:00:00 PM					
CLIENT:	APEX TITAN	Client Sample ID: ES-16							

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EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	Analyst: 10/17/2018 3:51:03 PM	MRA 41047
FPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				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.

- * Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limit Page 16 of 27 J
- Sample pH Not In Range Р
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

		Desult	POL Qual Units DF Date Analyzed	Batch
Lab ID:	1810422-017	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM	
Project:	Buena Vista Stack Release		Collection Date: 10/5/2018 1:05:00 PM	
CLIENT:	APEX TITAN		Client Sample ID: ES-17	

Analyses	Result	- Yr	Anni onni		5	
EPA METHOD 300.0: ANIONS				00	Analyst:	MRA
Chloride	ND	30	mg/Kg	20	10/17/2018 4:03:27 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Ana
	D	Sample Diluted Due to Matrix	E	Val

- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- alyte detected in the associated Method Blank
- lue above quantitation range
- Analyte detected below quantitation limits Page 17 of 27 J
- Sample pH Not In Range Ρ
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422 Date Reported: 10/18/2018

CLIENI: AI	PEX TITAN		Client Sample ID: ES-18
Project: Bu	uena Vista Stack Release		Collection Date: 10/5/2018 1:10:00 PM
Lab ID: 18	810422-018	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	10/17/2018 4:15:52 PM	41047
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qua

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- in the associated Method Blank
- antitation range
- Analyte detected below quantitation limitsPage 18 of 27 J
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Analytical Report Lab Order 1810422

Date Reported: 10/18/2018

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: ES-19 CLIENT: APEX TITAN Collection Date: 10/5/2018 1:15:00 PM Buena Vista Stack Release **Project:** Received Date: 10/6/2018 10:00:00 AM Matrix: SOIL 1810422-019 Lab ID: Batch PQL Qual Units DF Date Analyzed Result Analyses

					A 1 1	
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 ORG	ANICS				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.

- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 19 of 27 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1810422

Date Reported: 10/18/2018

				Analysi		
Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch	
Lab ID:	1810422-020	Matrix: SOIL	Received Date: 10/6/2018 10:00:00 AM			
Project:	Buena Vista Stack Release		Collection Date	e: 10/5/2018 1:20:00 PM		
CLIENT:	APEX TITAN		Client Sample II	D: ES-20		

ND	30	mg/Kg	20	10/17/2018 4:40:41 PM 41047
GANICS				Analyst: Irm
ND	9.6	mg/Kg	1	10/12/2018 6:52:43 PM 40958
ND	48	mg/Kg	1	10/12/2018 6:52:43 PM 40958
115	50.6-138	%Rec	1	10/12/2018 6:52:43 PM 40958
				Analyst: RAA
ND	4.9	mg/Kg	1	10/11/2018 10:12:22 PM 40915
89.7	15-316	%Rec	1	10/11/2018 10:12:22 PM 40915
				Analyst: RAA
ND	0.025	mg/Kg	1	10/11/2018 10:12:22 PM 40915
ND	0.049	mg/Kg	1	10/11/2018 10:12:22 PM 40915
ND	0.049	mg/Kg	1	10/11/2018 10:12:22 PM 40915
ND	0.099	mg/Kg	1	10/11/2018 10:12:22 PM 40915
96.7	80-120	%Rec	1	10/11/2018 10:12:22 PM 40915
	ND SANICS ND 115 ND 89.7 ND ND ND ND ND ND 96.7	ND 30 SANICS ND 9.6 ND 48 115 50.6-138 ND 4.9 89.7 15-316 ND 0.025 ND 0.049 ND 0.049 ND 0.049 ND 0.099 96.7 80-120	ND 30 mg/Kg SANICS ND 9.6 mg/Kg ND 48 mg/Kg 115 50.6-138 %Rec ND 4.9 mg/Kg 89.7 15-316 %Rec ND 0.025 mg/Kg ND 0.049 mg/Kg ND 0.049 mg/Kg ND 0.099 mg/Kg 96.7 80-120 %Rec	ND 30 mg/Kg 20 SANICS ND 9.6 mg/Kg 1 ND 48 mg/Kg 1 115 50.6-138 %Rec 1 ND 4.9 mg/Kg 1 ND 4.9 mg/Kg 1 89.7 15-316 %Rec 1 ND 0.025 mg/Kg 1 ND 0.049 mg/Kg 1 ND 0.049 mg/Kg 1 ND 0.099 mg/Kg 1 ND 0.099 mg/Kg 1 96.7 80-120 %Rec 1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	
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- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- Analyte detected below quantitation limits Page 20 of 27 J
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810422**

18-Oct-18

APEX TITAN **Client: Project:** Buena Vista Stack Release TestCode: EPA Method 300.0: Anions Sample ID MB-41001 SampType: mblk Batch ID: 41001 RunNo: 54867 PRS Client ID: SeqNo: 1824301 Units: mg/Kg Analysis Date: 10/15/2018 Prep Date: 10/15/2018 %RPD **RPDLimit** Qual HighLimit SPK value SPK Ref Val %REC LowLimit Result PQL Analyte ND 1.5 Chloride TestCode: EPA Method 300.0: Anions Sample ID LCS-41001 SampType: Ics RunNo: 54867 Client ID: LCSS Batch ID: 41001 SeqNo: 1824302 Units: mg/Kg Analysis Date: 10/15/2018 Prep Date: 10/15/2018 Qual %RPD **RPDLimit** HighLimit SPK value SPK Ref Val %REC LowLimit Result PQL Analyte 110 14 1.5 15.00 0 93.4 90 Chloride TestCode: EPA Method 300.0: Anions Sample ID MB-40987 SampType: mblk Batch ID: 40987 RunNo: 54867 PBS Client ID: Units: mg/Kg SeqNo: 1824336 Prep Date: 10/12/2018 Analysis Date: 10/15/2018 SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Qual HighLimit PQL Analyte Result Chloride ND 1.5 TestCode: EPA Method 300.0: Anions Sample ID LCS-40987 SampType: Ics RunNo: 54867 Batch ID: 40987 Client ID: LCSS SeqNo: 1824337 Units: mg/Kg Analysis Date: 10/15/2018 Prep Date: 10/12/2018 HighLimit %RPD **RPDLimit** Qual %REC LowLimit Result PQL SPK value SPK Ref Val Analyte 90 110 14 1.5 15.00 0 94.0 Chloride TestCode: EPA Method 300.0: Anions SampType: mblk Sample ID MB-41047 RunNo: 54923 Client ID: PBS Batch ID: 41047 SeqNo: 1826694 Units: mg/Kg Analysis Date: 10/17/2018 Prep Date: 10/17/2018 SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual PQL Result Analyte ND 1.5 Chloride TestCode: EPA Method 300.0: Anions SampType: Ics Sample ID LCS-41047 Batch ID: 41047 RunNo: 54923 LCSS Client ID: SeqNo: 1826696 Units: mg/Kg Prep Date: 10/17/2018 Analysis Date: 10/17/2018 %RPD **RPDLimit** Qual SPK value SPK Ref Val %REC HighLimit LowLimit Result PQL Analyte 110 93.3 90 14 1.5 15.00 Ω Chloride

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

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

APEX TITAN

Client:

WO#: 1810422 18-Oct-18

Project: Buena Vis	ta Stack Rele	ase								
Sample ID LCS-40934	SampType	LCS	6	Test	Code: El	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID: LCSS	Batch ID:	409	34	R	unNo: 5	4803				
Prep Date: 10/10/2018	Analysis Date:	10/	/11/2018	S	eqNo: 1	820408	Units: mg/Kg	g		
Analyte	Result P	QL	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	MB	LK	Test	Code: E	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID: PBS	Batch ID	409	34	R	unNo: 5	4803				
Prep Date: 10/10/2018	Analysis Date	10	/11/2018	S	eqNo: 1	820409	Units: mg/K	g		
Analyte	Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50			101	50.0	420			
Surr: DNOP	10		10.00		101	50.6	130			
Sample ID LCS-40958	SampType	: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID	409	958	F	RunNo: 5	54841				
Prep Date: 10/11/2018	Analysis Date	: 10	/12/2018	5	SeqNo: 1	823156	Units: mg/K	g		
Analyte	Result P	QL	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	: Me	BLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID	: 409	958	F	RunNo: 5	54841				
Prep Date: 10/11/2018	Analysis Date	: 10)/12/2018	5	SeqNo: 1	1823157	Units: mg/K	g		
Analyte	Result F	QL	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	e: MS	3	Tes	tCode: E	EPA Method	8015M/D: Di	esel Rang	je Organics	
Client ID: ES-14	Batch ID	: 40	958	F	RunNo:	54841				
Prep Date: 10/11/2018	Analysis Date	: 10)/12/2018	:	SeqNo: '	1823280	Units: mg/k	٢g		
Analyte	Result F	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.
- 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

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:APEX TITANProject:Buena Vista Stack Release

Sample ID 1810422-014AM	SD SampT	ype: MS	D	Test	Code: El	PA Method	8015M/D: Di	esel Range	e Organics		
Client ID: ES-14	Batch	ID: 409	958	R	unNo: 54	4841					
Prep Date: 10/11/2018	Analysis D	ate: 10)/12/2018	S	eqNo: 1	823281	1 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.
- 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

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WO#: 1810422 18-Oct-18

APEX TITAN

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810422 18-Oct-18

Project:	Buena Vis	ta Stack Rele	ease								
Sample ID	LCS-40866	SampType	LCS	6	Test	Code: EF	PA Method	8015D: Gaso	line Range	e	
Client ID:	LCSS	Batch ID:	408	66	R	unNo: 54	1741				
Prep Date:	10/8/2018	Analysis Date:	10	/9/2018	S	eqNo: 18	318187	Units: mg/K	g		
Analyte		Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e 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	: MB	LK	Test	Code: EF	PA Method	8015D: Gaso	line Range	е	
Client ID:	PBS	Batch ID:	408	66	R	unNo: 54	4741				
Prep Date:	10/8/2018	Analysis Date:	10	/9/2018	S	eqNo: 18	818189	Units: mg/K	g		
Analyte		Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	ND	5.0				45	246			
Surr: BFB		920		1000		92.0	15	310			
Sample ID	LCS-40909	SampType	: LC	S	Test	Code: El	PA Method	8015D: Gaso	line Rang	е	
Client ID:	LCSS	Batch ID	409	909	R	tunNo: 5	4774				
Prep Date:	10/9/2018	Analysis Date	: 10	/10/2018	S	eqNo: 1	819349	Units: mg/K	g		
Analyte		Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	25	5.0	25.00	0	99.5	75.9	131			
Surr: BFB		1100		1000		105	15	310			
Sample ID	MB-40909	SampType	e: Me	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID:	PBS	Batch ID	: 409	909	F	RunNo: 5	4774				
Prep Date:	10/9/2018	Analysis Date	: 10	/10/2018	5	SeqNo: 1	819350	Units: mg/k	(g		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Ran	ge Organics (GRO)	ND	5.0	1000		00.0	15	216			
Surr: BFB		900		1000		09.0	15	310			
Sample ID	LCS-40915	SampType	e: LC	S	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	le	
Client ID:	LCSS	Batch ID	: 40	915	F	RunNo: 5	4814				
Prep Date:	10/10/2018	Analysis Date	: 10	0/11/2018	5	SeqNo: 1	820394	Units: mg/l	٢g		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Ran	ge Organics (GRO)	26	5.0	25.00	0	103	75.9	131 316			
Sult: BFB		1100		1000		107	10	010			
Sample ID	1810422-014AMS	SampType	e: MS	6	Tes	tCode: E	PA Method	8015D: Gas	oline Rang	je	
Client ID:	ES-14	Batch ID): 40	915	F	RunNo: 5	54814				
Prep Date	10/10/2018	Analysis Date	e: 1(0/11/2018		SeqNo: 1	821122	Units: mg/l	٨g		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1810422

18-Oct-18

Client:	APEX TITAN										
Project:	Buena Vis	sta Stack R	lelease								
Sample ID	1810422-014AMS	SampTy	ype: MS	3	Test	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID:	FS-14	Batch	ID: 405	915	R	RunNo: 54	4814				
Drop Doto:	10/10/2019	Analysis D	ate: 10	1/11/2018	S	SeaNo: 1	821122	Units: ma/k	(a		
Prep Date.	10/10/2018	Analysis De	ate. 10	////2010						DDDI insit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLIMIt	Quai
Gasoline Rang	e Organics (GRO)	26	4.7	23.72	0	109	77.8	128			
Surr: BFB		990		948.8		104	15	316			
Sample ID	1810422-014AMS	D SampT	vpe: MS	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Oliont ID:	Imple ID 1810422-014AMSD Sallip i ype. MSD Restorder El A Montod Correct Caronina and Caronica Correct Caronina and Caronica Correct Caronina and Caronica Correct Caronica Corr										
Client ID.	E3-14	Daton	10. 40;	315			004400	Linite: men/k	1		
Prep Date:	10/10/2018	Analysis D	ate: 10	0/11/2018		SeqNo: 1	821123	Units. mg/r	\y		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e 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	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015D: Gas	oline Rang	je	
Client ID:	PBS	Batch	1 ID: 40	915	F	RunNo: 5	4814				
Prep Date:	10/10/2018	Analysis D	ate: 10	0/11/2018	S	SeqNo: 1	821138	Units: mg/l	Kg		
Analyta		Becult	POI	SDK value	SPK Ref Val	%REC	Lowl imit	Highl imit	%RPD	RPDLimit	Qual
Analyte	0.000	Result	PQL	SPR value	SPR Rei Val	/orceu	LOWLINI	ingriciinit		. a Bennit	
Gasoline Ran	ge Organics (GRO)	ND	5.0	1000		00.6	15	316			
Surr: BFB		910		1000		90.6	15	310			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- Sample pH Not In Range Р
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

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APEX TITAN

Client:

Project:

1810422 WO#:

Qual

Qual

Qual

Qual

RPDLimit

RPDLimit

RPDLimit

RPDLimit

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18-Oct-18

Hall Environmental Analysis Laboratory, Inc.

Buena Vista Stack Release

Sample ID LCS-40866	SampTy	pe: LCS	6	Test	Code: EP	A Method	8021B: Volati	les
Client ID: LCSS	Batch	ID: 408	66	R	unNo: <mark>54</mark>	741		
Prep Date: 10/8/2018	Analysis Da	ate: 10	/9/2018	S	eqNo: 18	18668	Units: mg/K	g
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
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	SampTy	pe: MB	LK	Test	Code: EF	PA Method	8021B: Volat	iles
Client ID: PBS	Batch	ID: 408	366	R	unNo: 54	\$741		
Prep Date: 10/8/2018	Analysis Da	ate: 10	/9/2018	S	eqNo: 18	318670	Units: mg/K	g
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
Benzene	ND	0.025						
Toluene	ND	0.050						
Ethylbenzene	ND	0.050						
Xylenes, Total	ND	0.10						
Surr: A Bromofluorobenzene	0.99		1.000		99.0	80	120	
Sull. 4-biomonuorobenzene	0.00							
Sample ID LCS-40909	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles
Sample ID LCS-40909 Client ID: LCSS	SampT Batch	ype: LC	S 909	Tes	tCode: El RunNo: 5	PA Method 4774	8021B: Volat	tiles
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018	SampT Batch Analysis D	ype: LC ID: 40 ate: 10	S 909 0/10/2018	Tes F S	tCode: El RunNo: 5 SeqNo: 1	PA Method 4774 819469	8021B: Volat	tiles (g
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte	SampT Batch Analysis D Result	ype: LC ID: 40 ate: 10 PQL	S 909)/10/2018 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC	PA Method 4774 819469 LowLimit	8021B: Volat Units: mg/K HighLimit	tiles Kg %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene	SampT Batch Analysis D Result 0.97	ype: LC ID: 40 ate: 10 PQL 0.025	S 909 0/10/2018 SPK value 1.000	Tes F SPK Ref Val 0	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7	PA Method 4774 819469 LowLimit 77.3	8021B: Volat Units: mg/K HighLimit 128	tiles (g %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene	SampT Batch Analysis D Result 0.97 1.0	ype: LC ID: 40 ate: 10 PQL 0.025 0.050	S 909 0/10/2018 SPK value 1.000 1.000	Tes F SPK Ref Val 0 0	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103	PA Method 4774 819469 LowLimit 77.3 79.2	8021B: Volat Units: mg/K HighLimit 128 125	tiles (g %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene	SampT Batch Analysis D Result 0.97 1.0 1.0	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050	S 909 0/10/2018 SPK value 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102	PA Method 4774 819469 LowLimit 77.3 79.2 80.7	8021B: Volat Units: mg/K HighLimit 128 125 127	tiles (g %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	SampT Batch Analysis D Result 0.97 1.0 1.0 3.1	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.10	S 909 0/10/2018 SPK value 1.000 1.000 3.000	Tes F SPK Ref Val 0 0 0 0	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6	8021B: Volat Units: mg/K HighLimit 128 125 127 129	tiles (g %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	SampT Batch Analysis D Result 0.97 1.0 1.0 3.1 0.99	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.10	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000	Tes F SPK Ref Val 0 0 0 0 0	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80	8021B: Volat Units: mg/K HighLimit 128 125 127 129 120	tiles (g %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	SampT Batch Analysis D Result 0.97 1.0 1.0 1.0 3.1 0.99 SampT	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.10 .10 	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000 SLK	Tes F SPK Ref Val 0 0 0 0 Tes	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80 PA Method	8021B: Volat Units: mg/M HighLimit 128 125 127 129 120	tiles
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID MB-40909 Client ID: PBS	SampT Batch Analysis D Result 0.97 1.0 1.0 3.1 0.99 SampT Batch	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.10 Type: MI Type: 40	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000 3.000 0.000 3.000	Tes F SPK Ref Val 0 0 0 0 0 Tes F	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6 ttCode: E RunNo: 5	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 4774	8021B: Volat Units: mg/K HighLimit 128 125 127 129 120	tiles %RPD tiles
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID MB-40909 Client ID: PBS Prep Date: 10/9/2018	SampT Batch Analysis D Result 0.97 1.0 1.0 3.1 0.99 SampT Batch Analysis D	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.10 Type: MI D: 40 Date: 10	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000 3LK 909 0/10/2018	Tes F SPK Ref Val 0 0 0 0 Tes F	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6 ttCode: E RunNo: 5 SeqNo: 1	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 4774 819470	8021B: Volat Units: mg/M HighLimit 128 125 127 129 120 I 8021B: Vola Units: mg/M	tiles %RPD tiles
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID MB-40909 Client ID: PBS Prep Date: 10/9/2018 Analyte	SampT Batch Analysis D Result 0.97 1.0 1.0 3.1 0.99 SampT Batch Analysis D Result	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.050 0.10 Type: MI n D: 40 pate: 10 PQL	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000 3LK 909 0/10/2018 SPK value	Tes F SPK Ref Val 0 0 0 0 Tes F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6 tCode: E RunNo: 5 SeqNo: 1 %REC	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 4774 819470 LowLimit	8021B: Volat Units: mg/M HighLimit 128 125 127 129 120 8021B: Vola Units: mg/M HighLimit	tiles %RPD tiles %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID MB-40909 Client ID: PBS Prep Date: 10/9/2018 Analyte Benzene	SampT Batch Analysis D Result 0.97 1.0 1.0 3.1 0.99 SampT Batch Analysis D Result ND	ype: LC all: 40 ate: 10 PQL 0.025 0.050 0.050 0.10 Type: MI n ID: 40 Date: 11 PQL 0.025	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000 3LK 909 0/10/2018 SPK value	Tes F SPK Ref Val 0 0 0 0 Tes F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6 tCode: E RunNo: 5 SeqNo: 1 %REC	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 4774 819470 LowLimit	8021B: Volat Units: mg/K HighLimit 128 125 127 129 120 8021B: Vola Units: mg/K HighLimit	tiles %RPD tiles %RPD
Sample ID LCS-40909 Client ID: LCSS Prep Date: 10/9/2018 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID MB-40909 Client ID: PBS Prep Date: 10/9/2018 Analyte Benzene Toluene	SampT Batch Analysis D Result 0.97 1.0 1.0 1.0 3.1 0.99 SampT Batch Analysis D Result ND ND	ype: LC 1D: 40 ate: 10 PQL 0.025 0.050 0.050 0.10 Type: MI DID: 40 Date: 10 PQL 0.025 0.025 0.050	S 909 0/10/2018 SPK value 1.000 1.000 3.000 1.000 3LK 909 0/10/2018 SPK value	Tes F SPK Ref Val 0 0 0 0 Tes SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 96.7 103 102 103 98.6 ttCode: E RunNo: 5 SeqNo: 1 %REC	PA Method 4774 819469 LowLimit 77.3 79.2 80.7 81.6 80 PA Method 4774 819470 LowLimit	8021B: Volat Units: mg/M HighLimit 128 125 127 129 120 I 8021B: Vola Units: mg/M HighLimit	tiles %RPD tiles {g %RPD

Qualifiers:

Xylenes, Total

Surr: 4-Bromofluorobenzene

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η

ND

0.97

0.10

1.000

- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E

96.6

- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

80

120

APEX TITAN

Client:

WO#: 1810422

18-Oct-18

Hall Environmental Analysis Laboratory, Inc.

Project:	Buena Vis	sta Stack R	elease									
Sample ID	LCS-40915	SampTy	pe: LC	s	Test	Code: EF	A Method	8021B: Volat	iles			
Client ID:	LCSS	Batch	ID: 409	915	R	unNo: 5 4	1814					
Prep Date:	10/10/2018	Analysis Da	ate: 10	/11/2018	S	eqNo: 18	320396	Units: mg/K	g			
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-Bron	nofluorobenzene	0.96		1.000		96.4	80	120				
Sample ID	MB-40915	SampT	/pe: ME	BLK	Test	Code: EF	PA Method	8021B: Vola	tiles			
Client ID:	PBS	Batch	ID: 40	915	R	RunNo: 54814						
Prep Date:	10/10/2018	Analysis Da	ate: 10	0/11/2018	S	eqNo: 1	821178	Units: mg/h	٢g			
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	l	ND	0.10									
Surr: 4-Bror	nofluorobenzene	0.98		1.000		97.7	80	120				
Sample ID	1810422-015AMS	SampT	ype: MS	S	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID:	ES-15	Batch	ID: 40	915	F	RunNo: 5	4834					
Prep Date:	10/10/2018	Analysis D	ate: 1	0/12/2018	5	SeqNo: 1	822857	Units: mg/l	٨g			
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, Tota	1	2.6	0.19	2.852	0.01681	90.9	77.3	131				
Surr: 4-Bro	mofluorobenzene	18		1 901		932	80	120				
and the second se		1.0		1.001		00.2						
Sample ID	1810422-015AMS	D SampT	ype: M	SD	Tes	tCode: E	PA Method	8021B: Vola	tiles			
Sample ID Client ID:	1810422-015AMS ES-15	D SampT Batch	ype: M 1D: 40	SD 1915	Tes	tCode: E RunNo: 5	PA Method	8021B: Vola	tiles			
Sample ID Client ID: Prep Date	9 1810422-015AMS ES-15 : 10/10/2018	D SampT Batch Analysis D	ype: M D: 40 ate: 1	SD 9915 0/12/2018	Tes F	tCode: E RunNo: 5 SeqNo: 1	PA Method 4834 822858	8021B: Vola Units: mg/	ntiles Kg			
Sample ID Client ID: Prep Date: Analyte	0 1810422-015AMS ES-15 : 10/10/2018	D SampT Batch Analysis D Result	ype: Ma ID: 40 ate: 1 PQL	9915 0/12/2018 SPK value	Tes F SPK Ref Val	tCode: E RunNo: 5 SeqNo: 1 %REC	PA Method 4834 822858 LowLimit	8021B: Vola Units: mg/l HighLimit	tiles Kg %RPD	RPDLimit	Qual	
Sample ID Client ID: Prep Date: Analyte Benzene	2 1810422-015AMS ES-15 : 10/10/2018	D SampT Batch Analysis D Result 0.80	ype: M 1D: 40 ate: 1 PQL 0.023	SD 9915 0/12/2018 SPK value 0.9208	Tes F SPK Ref Val 0.01153	tCode: E RunNo: 5 SeqNo: 1 <u>%REC</u> 85.5	PA Method 4834 822858 LowLimit 68.5	8021B: Vola Units: mg/l HighLimit 133	ttiles Kg 0.505	RPDLimit 20	Qual	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene	9 1810422-015AMS ES-15 : 10/10/2018	D SampT Batch Analysis D Result 0.80 0.85	ype: Ma ID: 40 Pate: 1 PQL 0.023 0.046	5D 9915 0/12/2018 SPK value 0.9208 0.9208	Tes F SPK Ref Val 0.01153 0.009677	tCode: E RunNo: 5 SeqNo: 1 <u>%REC</u> 85.5 91.6	PA Method 4834 822858 LowLimit 68.5 75	8021B: Vola Units: mg/l HighLimit 133 130	tiles Kg 0.505 0.367	RPDLimit 20 20	Qual	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene	9 1810422-015AMS ES-15 : 10/10/2018	D SampT Batch Analysis D Result 0.80 0.85 0.86	ype: Ma n ID: 40 nate: 1 PQL 0.023 0.046 0.046	5D 9915 0/12/2018 SPK value 0.9208 0.9208 0.9208	Tes F SPK Ref Val 0.01153 0.009677 0	tCode: E RunNo: 5 SeqNo: 1 <u>%REC</u> 85.5 91.6 93.6	PA Method 4834 822858 LowLimit 68.5 75 79.4	8021B: Vola Units: mg/l HighLimit 133 130 128	ttiles Kg 0.505 0.367 1.06	RPDLimit 20 20 20	Qual	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Tota	9 1810422-015AMS ES-15 : 10/10/2018	D SampT Batch Analysis D Result 0.80 0.85 0.86 2.6	ype: Mi a ID: 40 pate: 1 0.023 0.046 0.046 0.092	SD 9915 0/12/2018 SPK value 0.9208 0.9208 0.9208 2.762	Tes F SPK Ref Val 0.01153 0.009677 0 0.01681	tCode: E RunNo: 5 SeqNo: 1 <u>%REC</u> 85.5 91.6 93.6 94.1	PA Method 4834 822858 LowLimit 68.5 75 79.4 77.3	8021B: Vola Units: mg/l HighLimit 133 130 128 131	tiles Kg 0.505 0.367 1.06 0.218	RPDLimit 20 20 20 20	Qual	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

Page 27 of 27

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hail Environmental Albu TEL: 505-345-3975 Website: www.ha	Analys 490 ique rg FAX: Henvir	is Labor 1 Hawkii we, NM 8 \$05-345- onmenta	atory ns NE 87109 St 4107 Leam	ample Log-Ir	n Check List
Client Name: APEX AZTEC	Work Order Number.	1810	422		Ro	otNo: 1
Received By: Jazzmine Burkhead	10/6/2018 10:00:00 AN	4		-1-3 ×0	н	
Completed By: Michelle Garcia Reviewed By: JAB 10/08/18	10/8/2018 12:37:46 PN	4		Minu	6 Gonia	
LB: JU IDEIX						
Chain of Custody			-			[]
 Is Chain of Custody complete? 		Yes	V	No	Not Present	
2. How was the sample delivered?		Cou	ier			
Log In				N. [7	m
3. Was an attempt made to cool the samples?		Yes	\mathbf{M}	NO L	NPA	hereit
4. Were all samples received at a temperature of	of >0° C to 5.0°C	Yes	1	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	Y	No]	
8. Was preservative added to bottles?		Yes		No M	NA	
9. VOA vials have zero headspace?		Yes		No	No VOA Vials	\checkmark
10. Were any sample containers received broken	n?	Yes		No b	# of presspund	1
				_	bottles checked	1
11. Does paperwork match bottle labels?		Yes	V	No	for pH:	<2 or >12 unless noted)
(Note discrepancies on chain or custody) 40. Are matrices correctly identified on Chain of (Cuetody2	Vac	1	No	Adjusted	2/11/
12 is it clear what analyses were requested?	o u de ou y r	Yes		No		10/4/14
14. Were all holding times able to be met?		Yes		No _	Checked I	by: IVO
(If no, notify customer for authorization.)					l	
Special Handling (if applicable)						
15. Was client notified of all discrepancies with t	his order?	Yes		No	NA	
Person Notified	Date:	uno bigana dear	in the second	encolution instantiation interna		
By Whom:	Via	eM	ail	Phone 7	Fax In Person	
Regarding			Consultant of the second			(11a)
Client Instructions:						anna i
16. Additional remarks:						
17. Cooler Information	al Intert Seal No.	Seel D	l ate	Signed B	. 1	
1 5 Good Not	Present	Sear L	ate	Signed b)		
p. 0 0000 100					1	

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Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

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roje	ct Manag	ger}	C.SW	nmers	PO/SO #:		Se	e n	iste	5		_		0	E F	111	
Ro	er's Name Inee J	Deechi	lly	1	Sampler's Sign	ature								A	PILLAN		
roj. N	0.		Project	t Name				No/Typ	pe of C	Containe	rs		1	a p	44/	111	
725	040124	153	B	wena vista.	Stack Rela	se		1		1 1		_		1		111	1810422
latrix	Date	Time	0300	r Identifying Ma	urks of Sample(s)	Start	Depth	VDA	AG 1 U.	So In So	Jar	Q	1	[]	11		Lab Sample ID (Lab Use Only)
5	10/5/14	1235	×	ES-	11						1		X	X	X		011
S	10/5/18	1240	×	ES-	12						1		X	XV	(012
5	10/5/18	1245	×	ES-	-13						1		X	XV	<		013
5	10/5/18	1250	×	ES-	14						1		X	XX			014
S	10/5/18	1255	×	ES-	-15						1		X	X			015
S	10/5/18	1300	$\boldsymbol{\langle}$	Es.	-16						1		X	X>	$\langle $		Olle
S	10/5/18	BAS	×	ES-	-17						1		X	X)	$\langle $		017
5	10/5/18	1310	X	FS-	-18						1		X	×)			018
5	10/5/18	:2.5	X	ES	-19						1		X	XX	(019
5	10 jchx	1320	X	TS	-20						1	1	×	X	X		020
iurn ar	ound time	Non	mal	25% Rush	3 50% Rush	100% R	lush			-						A A	
1 aliaque	A by (Signature)		Date: 1051816	Time: Receiv	led by: (Signat		-1	10	ate:	12	16	me:	NOTES:	PM-	Tom Long
Reling	lished by	(Signature)	5	10/5/15 18 Date:	1/ Time: Recel	ed by: (Signat	ture)	Lac)		AC Date:	18	10	:00 me:		Nan A	FE - hizient
1		(D):		Deter	Times Drawin	and have f	Cian	in ment			lata:		T	20.01			14 2673
Relinqu	uished by ((Signature)		Date:	time: receiv	red by: (Signat	ure)		1	valie:	1	18	1167			

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

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 <u>www.hallenvironmental.com</u> 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

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

EPA METHOD 300.0: ANIONS

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

EPA METHOD 8015D: GASOLINE RANGE

Chloride

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Lab Order 1811D97

Date Reported: 12/4/2018

Analyst: MRA

Analyst: Irm

Analyst: NSB

Analyst: NSB

41790

41790

41790

12/3/2018 12:40:39 PM 41846

11/30/2018 9:43:48 PM 41797

12/4/2018 6:08:29 AM

12/4/2018 6:08:29 AM

12/4/2018 6:08:29 AM

Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch
Lab ID:	1811D97-001	Matrix: SOIL	Received Dat	e: 11/29/2018 7:00:00 AM	1
Project:	Buena Vista Stack Release		Collection Dat	e: 11/28/2018 12:45:00 PI	M
CLIENT:	APEX TITAN		Client Sample II	D: ES-21	

85

ND

ND

89.9

ND

93.7

ND

ND

ND

ND

91.1

30

9.9

49

4.8

50.6-138

73.8-119

0.024

0.048

0.048

0.096

80-120

mg/Kg

mg/Kg

mg/Kg

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

20

1

1

1

1

1

1

1

1

1

1

Refer to the OC Summary report a	d sample logi	n checklist for	flagged QC	data and	preservation information	on
----------------------------------	---------------	-----------------	------------	----------	--------------------------	----

Qualifiers:

*

- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 8 J
- Р Sample pH Not In Range
- **Reporting Detection Limit** RL
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1811D97

Date Reported: 12/4/2018

Analyses		Result	PQL Qual Units	DF Date Analyzed	Batch				
Lab ID:	1811D97-002	Matrix: SOIL	Received Date: 11/29/2018 7:00:00 AM						
Project:	Buena Vista Stack Release		Collection Dat	e: 11/28/2018 12:55:00 Pl	M				
CLIENT:	APEX TITAN	Client Sample ID: ES-22							

				Analyst:	MRA
54	30	mg/Kg	20	12/3/2018 12:53:03 PM	41846
SANICS				Analyst:	Irm
ND	9.7	mg/Kg	1	12/4/2018 6:30:31 AM	41790
ND	49	mg/Kg	1	12/4/2018 6:30:31 AM	41790
98.8	50.6-138	%Rec	1	12/4/2018 6:30:31 AM	41790
				Analyst:	NSB
ND	4.8	mg/Kg	1	11/30/2018 10:06:37 PM	41797
92.5	73.8-119	%Rec	1	11/30/2018 10:06:37 PM	41797
				Analyst	NSB
ND	0.024	mg/Kg	1	11/30/2018 10:06:37 PM	1 41797
ND	0.048	mg/Kg	1	11/30/2018 10:06:37 PM	1 41797
ND	0.048	mg/Kg	1	11/30/2018 10:06:37 PM	/ 41797
ND	0.097	mg/Kg	1	11/30/2018 10:06:37 PM	/ 4 1797
90.1	80-120	%Rec	1	11/30/2018 10:06:37 PM	/ 41797
	54 ND ND 98.8 ND 92.5 ND ND ND ND ND ND 90.1	54 30 SANICS 9.7 ND 49 98.8 50.6-138 ND 4.8 92.5 73.8-119 ND 0.024 ND 0.048 ND 0.048 ND 0.097 90.1 80-120	54 30 mg/Kg SANICS ND 9.7 mg/Kg ND 49 mg/Kg 98.8 50.6-138 %Rec ND 4.8 mg/Kg 92.5 73.8-119 %Rec ND 0.024 mg/Kg ND 0.048 mg/Kg ND 0.097 mg/Kg ND 0.097 mg/Kg 90.1 80-120 %Rec	54 30 mg/Kg 20 SANICS ND 9.7 mg/Kg 1 ND 49 mg/Kg 1 98.8 50.6-138 %Rec 1 ND 4.8 mg/Kg 1 92.5 73.8-119 %Rec 1 ND 0.024 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.097 mg/Kg 1 ND 0.097 mg/Kg 1 90.1 80-120 %Rec 1	Analyst: 54 30 mg/Kg 20 12/3/2018 12:53:03 PM SANICS Analyst: ND 9.7 mg/Kg 1 12/4/2018 6:30:31 AM ND 49 mg/Kg 1 12/4/2018 6:30:31 AM 98.8 50.6-138 %Rec 1 11/30/2018 10:06:37 PM 92.5 73.8-119 %Rec 1 11/30/2018 10:06:37 PM 92.5 73.8-119 %Rec 1 11/30/2018 10:06:37 PM ND 0.024 mg/Kg 1 11/30/2018 10:06:37 PM ND <td< td=""></td<>

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

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits Page 2 of 8 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1811D97 Date Reported: 12/4/2018

Lab ID. 101	112)7 005	Matrix. SOIL	Received Date	e. 11/29/2018 7:00:00 Alvi					
Lah ID: 181	11D97-003	Matriv: SOII	Pageived Det	11/20/2018 7.00.00 AM					
Project: Bud	ena Vista Stack Release		Collection Date	e: 11/28/2018 1:05:00 PM					
CLIENT: AP	PEX TITAN	Client Sample ID: ES-23							

					v	
EPA METHOD 300.0: ANIONS Chloride	170	30	mg/Kg	20	Analyst: 12/3/2018 1:30:17 PM	MRA 41846
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				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.

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank
- Value above quantitation range E
- Analyte detected below quantitation limits Page 3 of 8 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1811D97 Date Reported: 12/4/2018

811D97-004	Matrix: SOIL	Received Date: 11/29/2018 7:00:00 AM							
uena Vista Stack Release		Collection Date: 11/28/2018 1:15:00 PM							
PEX TITAN	Client Sample ID: ES-24								
	PEX TITAN uena Vista Stack Release 311D97-004	PEX TITAN uena Vista Stack Release 311D97-004 Matrix: SOIL	PEX TITANClient Sample ID: ES-24uena Vista Stack ReleaseCollection Date: 11/28/2018 1:15:00 PMB11D97-004Matrix: SOILReceived Date: 11/29/2018 7:00:00 AM						

Analyses	Iteoure	- 2-	Z			
EPA METHOD 300.0: ANIONS Chloride	120	30	mg/Kg	20	Analyst 12/3/2018 1:42:41 PM	MRA 41846
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	Irm
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	A 41797
Surr: BFB	90.9	73.8-119	%Rec	1	11/30/2018 10:52:12 PM	VI 41797
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	11/30/2018 10:52:12 P	VI 41797
Toluene	ND	0.047	mg/Kg	1	11/30/2018 10:52:12 PI	VI 41797
Ethylbenzene	ND	0.047	mg/Kg	1	11/30/2018 10:52:12 PI	M 41797
Xylenes, Total	ND	0.094	mg/Kg	1	11/30/2018 10:52:12 PI	VI 41797
Surr: 4-Bromofluorobenzene	87.4	80-120	%Rec	1	11/30/2018 10:52:12 PI	VI 41797

ort and sample login checklist for flagged OC data and preservation information. Defer to the OC S

Refer to the QC	Summary	report and	sample	login	checklist i	or nagg	eu QC	uata anu	preservat	ion morman

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	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 Page 4 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D97**

04-Dec-18

Client: APEX TITAN

Project: Buena Vista Stack Release

Sample ID MB-41846	SampType: MBLK	TestCode: EPA Method		
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	
Sample ID LCS-41846 Client ID: LCSS	SampType: LCS Batch ID: 41846	TestCode: EPA Method RunNo: 56033	300.0: Anions	
Sample ID LCS-41846 Client ID: LCSS Prep Date: 12/3/2018	SampType: LCS Batch ID: 41846 Analysis Date: 12/3/2018	TestCode: EPA Method RunNo: 56033 SeqNo: 1871390	300.0: Anions Units: mg/Kg	
Sample ID LCS-41846 Client ID: LCSS Prep Date: 12/3/2018 Analyte	SampType: LCS Batch ID: 41846 Analysis Date: 12/3/2018 Result PQL SPK value	TestCode: EPA Method RunNo: 56033 SeqNo: 1871390 e SPK Ref Val %REC LowLimit	300.0: Anions Units: mg/Kg HighLimit %RPD	RPDLimit Qual

- * 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
- Page 5 of 8

Hall Environmental Analysis Laboratory, Inc.

WO#: 1811D97

04-Dec-18

Client: APH	X TITAN	1								
Project: Bue	na Vista Stack R	elease								
Sample ID LCS-41790	SampTy	/pe: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch	ID: 41	790	R	unNo: 56	6031				
Prep Date: 11/29/2018	Analysis Da	ate: 12	2/4/2018	S	eqNo: 18	371902	Units: mg/k	ίg		
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	SampTy	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch	ID: 41	790	F	RunNo: 5	6031				
Prep Date: 11/29/2018	Analysis Da	ate: 12	2/4/2018	5	SeqNo: 1	871903	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MR	0) ND	50								
Surr: DNOP	9.7		10.00		97.4	50.6	138			

- * 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
- Page 6 of 8

Hall Environmental Analysis Laboratory, Inc.

WO#: 1811D97

04-Dec-18

Client: APEX TITAN

Project:	Buena V	/ista Stack H	Release								
Sample ID M	B-41797	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PE	BS	Batch	n ID: 417	797	R	RunNo: 5	5985				
Prep Date: 1	11 <mark>/29/20</mark> 18	Analysis D	ate: 11	/30/2018	S	SeqNo: 1	869593	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range C Surr: BFB	Organics (GRO)	ND 910	5.0	1000		91.2	73.8	119			
Sample ID LO	CS-41797	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LO	CSS	Batcl	h ID: 41	797	F	RunNo: 5	5985				
Prep Date:	11/29/2018	Analysis D	Date: 11	1/30/2018	S	SeqNo: 1	869594	Units: mg/h	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range C	Organics (GRO)	25	5.0	25.00	0	102	80.1	123			
Gasoline Range C	Organics (GRO)	25	5.0	25.00	0	102	80.1	123			

- * 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
- Page 7 of 8

Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN Project: Buena Vista Stack Release

Sample ID MB-41797	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batc	h ID: 41	797	F	RunNo: 55985					
Prep Date: 11/29/2018	Analysis D	Date: 11	/30/2018	S	eqNo: 1	869607	Units: mg/M	٢g		
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	Samp	Type: LC	S	Tes	Code: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 41	797	F	RunNo: 5	5985				
Prep Date: 11/29/2018	Analysis I	Date: 11	/30/2018	S	eqNo: 1	869608	Units: mg/k	٢g		
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	0.0 <mark>5</mark> 0	1.000	0	<mark>98</mark> .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			
	0.04		4 000		044	00	400			

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

WO#: 1811D97

04-Dec-18

Page 8 of 8

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			ry TE 09 S 17 m	Sample Log-In Check List			
Client Name: APEX AZTEC	Work Order Number:	1811	1D97			RcptNo:	1	
Received By: Anne Thorne	11/29/2018 7:00:00 AN		8 u	ame,	A.	-		
Paviewed By: VV7, 11/29/18	11/29/2016 9:20:10 AN	6				-		
LB: DAD 11/29/18 Chain of Custody 1. Is Chain of Custody complete?		Yes		No (Not Present		
2. How was the sample delivered?		Cou	rier					
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	\checkmark	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		# of preserved bottles checked		
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No		for pH: (<2 or :	>12 unless noted)	
12. Are matrices correctly identified on Chain of Co	ustody?	Yes	\checkmark	No		Adjusted?		
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	\checkmark	No		Checkee by: D	AD 11/29/18	
Special Handling (if applicable)								
15. Was client notified of all discrepancies with the	is order?	Yes		No		NA 🗹		
Person Notified: By Whom: Regarding: Client Instructions:	Date: Via:	eM	lail 🗌 Pho	one 🗌	Fax			
 Additional remarks: 17. <u>Cooler Information</u> Cooler No Temp °C Condition Sea 	Intect Seal No S	Seal D	Date S	ligned B	by in a			

1	COOIET NO	Temp	Condition	Seal Intact Seal No Seal Date Signed By
	1	2.4	Good	Yes
	2	1.3	Good	Yes

Page 1 of 1



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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


Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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



Buena Vista Compressor Station Stack Release (Serial No. NM 093684)



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	

Release Notification

MAR 1 8 2019

DICTDICT III

NMOCD

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
0	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: <u>Jml - Julta</u>	Date:
email: <u>************************************</u>	
Received by	Date: 3/18/2019
Closure approval by the OCD does not relieve the responsible p remediate contamination that poses a threat to groundwater, surf party of compliance with any other federal, state, or local laws	party of liability should their operations have failed to adequately investigate and face water, human health, or the environment nor does not relieve the responsible and/or regulations.
Closure Approved by:	Date: 318/2019
Printed Name: Varesse Fields	Title: Environmantel parelist



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

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Ranee Deechilly Staff Scientist

umm

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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E E N S O L U M

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/I TDS	Constituent	Method	Limit	
	Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg	
≤ 50 feet	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg	
Due to	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg	
Watercourse	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 semiconsolidated 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





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 1







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

9 7057-0977Revised 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: Invoice Information: 2. Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401 Invoice Information: N38913 PM: Howard Roddy Pay Key: RB21200 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	19 eline
 Source and Description of Waste: Hydrocarbon impacted soll from remediation activities associated while a matural gas provide release. Estimated Volume <u>80</u> (yd³) bbls Known Volume (to be entered by the operator at the end of the haul) <u>CO</u> 	yd ³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS 1, Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's J regulatory determination, the above described waste is: (Check the appropriate classification)	uly 1988
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with exempt waste. Operator Use Only: Waste Acceptance Frequency I Monthly I Weekly Per Load	ith non-
□ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste haz characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, par subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardou the appropriate items)	rt 261, is. (Check
🗆 MSDS Information 🛛 RCRA Hazardous Waste Analysis 🗆 Process Knowledge 🗆 Other (Provide description in Box	x 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS	
I, <u>1-10-19</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to Generator Signature complete the required testing/sign the Generator Waste Testing Certification.	
I, <u>Civea</u> <u>Crabbre</u> , representative for <u>Envirotech. Inc.</u> do hereby cert representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	tify that e samples ne results of
6 Transporter: Ancy moustrian. (Take The 2) (To C) (Take)	
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 Zandfarm Landfill Other	
Waste Acceptance Status:	t Record)
PRINT NAME: Greg Crabbrae TITLE: Enviro Managen DATE: 1/7 SIGNATURE: MM CAR TELEPHONE NO.: 505-632-0615	7/19



APPENDIX C

Photographic Documentation

Enterprise Field Services, LLC Closure Report Quinn 340s (2018) Pipeline Release Ensolum Project No. 05A1226037



Photograph 1

View of release area.



Photograph 2

View of the excavation, facing west.



Photograph 3

View of the final excavation.



Enterprise Field Services, LLC Closure Report Quinn 340s (2018) Pipeline Release Ensolum Project No. 05A1226037



Photograph 4

View of stockpile soils.



Photograph 5

View of the final excavation after initial restoration.





APPENDIX D

Table – Soil Analytical Summary

ENSOLUM

					Qı	TAI uinn 340S (201 SOIL ANALY	BLE 1 8) Pipeline TICAL SUMM	Release ARY					
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 Ene Co	ergy, Mineral & I	Natural Resources sion, Closure Crite	s Department, Oil eria	10	NE	NE	NE	50				100	600
Excavation Soil Sample Removed by Excavation													
S-2	12 27 18	I C	10	<0.018	< 0.037	< 0.037	<0.074	ND	<3.7	42	130	172	<30
5-2	12.27.10		Beneral solutions			Stockpile Com	posite Soil Sam	ples					40
SP-1	12.27.18	С	Stockpile	<0.021	<0.042	<0.042	<0.083	ND	<4.2	<9.9	<50	ND	63
SP-2	12.27.18	С	Stockpile	<0.023	<0.045	< 0.045	<0.090	ND	<4.5	<10	<50	ND	30
SP-3	12.27.18	С	Stockpile	<0.018	< 0.036	< 0.036	< 0.073	ND	<3.6	<9.4	<47	ND	<30
SP-4	12.27.18	С	Stockpile	<0.022	<0.045	< 0.045	<0.089	ND	<4.5	<9.9	~43	I III	
						Excavation Co	nposite Soil San	nples	<1.0	<0.8	<49	ND	<30
S-1	12.27.18	С	0 to 10	<0.020	< 0.040	<0.040	<0.080	ND	<4.0	<9.0	<50	ND	54
S-3	12.27.18	С	0 to 10	<0.023	< 0.046	<0.046	<0.091	ND	<4.0	<9.9	<50	ND	71
S-4	12.27.18	С	10	<0.021	< 0.041	<0.041	<0.083		<4.1	<9.5	<47	ND	110
S-5	12.27.18	С	0 to 10	< 0.023	< 0.047	<0.047	<0.093	ND	<4.3	<9.3	<46	ND	59
S-6	12.27.18	С	0 to 10	<0.021	< 0.043	<0.043	<0.086		<2.0	<9.4	<47	ND	<30
S-7	1.07.19	С	11	<0.019	< 0.039	< 0.039	<0.077	ND	-3.9	-9.4			

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 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

OrderNo.: 1812E55

Dear Kyle Summers:

RE: Quinn 340S

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1812E55 Date Reported: 12/31/2018

Datah

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	APEX TITAN	Client Sample ID: SP-1
Project:	Quinn 340S	Collection Date: 12/27/2018 10:30:00 AM
Lab ID:	1812E55-001	Matrix: MEOH (SOIL) Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Baten
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	40	30		mg/Kg	20	12/28/2018 11:40:07 A	M 42356
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/28/2018 11:24:13 A	M 42355
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/28/2018 11:24:13 A	M 42355
Surr: DNOP	90.1	50.6-138		%Rec	1	12/28/2018 11:24:13 A	M 42355
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: NSB
	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
ERA METHOD 8021B: VOLATILES						Analys	t: NSB
EPA METHOD GOLID: VOLKHELG	ND	0 021		ma/Ka	1	12/28/2018 9:48:00 AM	A B56652
Benzene	ND	0.042		ma/Ka	1	12/28/2018 9:48:00 AM	A B56652
Toluene	ND	0.042		ma/Ka	1	12/28/2018 9:48:00 AM	A B56652
Ethylbenzene	ND	0.083		ma/Ka	1	12/28/2018 9:48:00 AM	A B56652
Xylenes, I otal	112	80.120		%Rec	1	12/28/2018 9:48:00 AM	A B56652
Surr: 4-Bromofluorobenzene	115	00-120		101100	1		

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 Page 1 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- 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
 Client Sample ID: SP-2

 Project:
 Quinn 340S
 Collection Date: 12/27/2018 10:35:00 AM

 Lab ID:
 1812E55-002
 Matrix: MEOH (SOIL)
 Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
FPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	63	30	mg/Kg	20	12/28/2018 11:52:32 A	M 42356
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	st: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/28/2018 11:47:59 A	AM 42355
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/28/2018 11:47:59 A	M 42355
Surr: DNOP	90.5	50.6-138	%Rec	1	12/28/2018 11:47:59 4	AM 42355
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: 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					Analys	st: 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.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 8
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	POL	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
 Client Sample ID: SP-3

 Project:
 Quinn 340S
 Collection Date: 12/27/2018 10:40:00 AM

 Lab ID:
 1812E55-003
 Matrix: MEOH (SOIL)
 Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	30	30	mg/Kg	20	12/28/2018 12:04:57	PM 42356
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analy	st: 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					Analy	st: 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					Analy	st: 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.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 8
	ND	Not Detected at the Reporting Limit	Р	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.

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Client Sample ID: SP-4 CLIENT: APEX TITAN Collection Date: 12/27/2018 10:45:00 AM **Project:** Quinn 340S Received Date: 12/28/2018 8:20:00 AM Matrix: MEOH (SOIL) 1812E55-004 Lab ID:

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	1 42356
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					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	VI 42355
Surr: DNOP	89.5	50.6-138		%Rec	1	12/28/2018 12:35:29 PI	M 42355
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	12/28/2018 11:44:47 Al	M G56652
Surr: BFB	88.6	73.8-119		%Rec	1	12/28/2018 11:44:47 Al	M G56652
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.022		mg/Kg	1	12/28/2018 11:44:47 Al	M B56652
Toluene	ND	0.045		mg/Kg	1	12/28/2018 11:44:47 A	M B56652
Ethylbenzene	ND	0.045		mg/Kg	1	12/28/2018 11:44:47 A	M B56652
Xylenes Total	ND	0.089		mg/Kg	1	12/28/2018 11:44:47 A	M B56652
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	12/28/2018 11:44:47 A	M B56652

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the as
	D	Sample Diluted Due to Matrix	Е	Value above quantitation
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below qu
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	POL	Practical Quanitative Limit	RL	Reporting Detection Limi
	S	% Recovery outside of range due to dilution or matrix	W	Sample container tempera

- ssociated Method Blank
- range
- uantitation limits Page 4 of 8
- it
- ature is out of limit as specified

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:APEX TITANProject: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 High	1Limit %RPD RPDLimit Qual				
Chloride	ND 1.5						
	SampType: LCS TestCode: EPA Method 300.0: Anions						
Sample ID LCS-42356	SampType: LCS	TestCode: EPA Method 300.0	: Anions				
Sample ID LCS-42356 Client ID: LCSS	SampType: LCS Batch ID: 42356	TestCode: EPA Method 300.0 RunNo: 56645	: Anions				
Sample ID LCS-42356 Client ID: LCSS Prep Date: 12/28/2018	SampType: LCS Batch ID: 42356 Analysis Date: 12/28/2018	TestCode: EPA Method 300.0 RunNo: 56645 SeqNo: 1896540 Unit	: Anions 8: mg/Kg				
Sample ID LCS-42356 Client ID: LCSS Prep Date: 12/28/2018 Analyte	SampType: LCS Batch ID: 42356 Analysis Date: 12/28/2018 Result PQL SPK value	TestCode: EPA Method 300.0 RunNo: 56645 SeqNo: 1896540 Unit: SPK Ref Val %REC LowLimit Hig	: Anions s: mg/Kg hLimit %RPD RPDLimit Qual				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

WO#: 1812E55 31-Dec-18

Page 5 of 8

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E55

31-Dec-18

Client:APEX TProject:Quinn 3	TITAN 40S								0			
Sample ID MB-42355	SampTy	pe: MB	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch	ID: 423	355	RunNo: 56641								
Prep Date: 12/28/2018	Analysis Da	ate: 12	2/28/2018	018 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	SampTy	pe: LC	S	Test	Code: El	PA Method	8015M/D: Di	esel Rang	e Organics			
Client ID: LCSS	Batch	ID: 42	355	R	tunNo: 5	6641						
Prep Date: 12/28/2018	Analysis Da	ate: 12	2/28/2018	S	eqNo: 1	895559	Units: mg/h	٢g				
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					

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
- Page 6 of 8

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client:	APEX TI	TAN									
Project:	Quinn 34	0S									
Sample ID	RB	Samp	Гуре: М	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batc	h ID: G	56652	F	RunNo: 5	6652				
Prep Date:		Analysis [Date: 1	2/28/2018	S	SeqNo: 1	896127	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	ge Organics (GRO)	ND 920	5.0	1000		92.2	73.8	119			
Sample ID	2.5UG GRO LCS	Samp	Type: LC	cs	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batc	h ID: G	56652	F	RunNo: 5	6652				
Prep Date:		Analysis [Date: 1	2/28/2018	S	SeqNo: 1	896128	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge 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	Samp	Гуре: М	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID:	SP-1	Batc	h ID: G	56652	F	RunNo: 5	6652				
Prep Date:		Analysis [Date: 1	2/28/2018	5	SeqNo: 1	896129	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge 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	1812E55-001AMS	D Samp	Гуре: М	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	SP-1	Batc	h ID: G	56652	F	RunNo: 5	6652				
Prep Date:		Analysis [Date: 1	2/28/2018	S	eqNo: 1	896130	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	21	4.2	20.80	0	99.2	77.8	128	0.282	20	

Qualifiers:

Surr: BFB

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

1200

832.0

- 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

73.8

119

0

0

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S

142

WO#: 1812E55

31-Dec-18
QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN Project: Quinn 340S

Sample ID	RB	Samp	Туре: МЕ	BLK	Test	Code: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Bato	h ID: B5	6652	R	unNo: 5	6652				
Prep Date:		Analysis I	Date: 12	2/28/2018	S	eqNo: 1	896133	Units: mg/k	٢g		
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								
Xvlenes, Total		ND	0.10								
Surr: 4-Bron	nofluorobenzene	0.94		1.000		93.8	80	120			
Sample ID	100NG BTEX LCS	Samp	Type: LC	S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Bato	h ID: B5	6652	R	RunNo: 5	6652				
Prep Date:		Analysis	Date: 12	2/28/2018	S	eqNo: 1	896134	Units: mg/k	٢g		
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-Bron	nofluorobenzene	0.94		1.000		93.8	80	120			
Sample ID	1812E55-002AMS	Samp	Type: MS	5	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	SP-2	Bato	h ID: B	6652	F	RunNo: 5	6652				
Prep Date:		Analysis	Date: 1	2/28/2018	S	SeqNo: 1	896135	Units: mg/k	۲g		
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			
Xvlenes, Total		2.7	0.090	2,710	0	99.7	71.8	131			
Surr: 4-Bror	nofluorobenzene	0.92	0.000	0.9033	Ū	102	80	120			
Sample ID	1812E55-002AMS	D Samp	Type: M	SD	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	SP-2	Bato	h ID: B	6652	F	RunNo: 5	6652				
Prep Date:		Analysis	Date: 1	2/28/2018	S	SeqNo: 1	896136	Units: mg/ł	۲g		
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	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

H Holding times for preparation or analysis exceeded

0.87

0.9033

- 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

96.2

- 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

80

120

0

0

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WO#: 1812E55

31-Dec-18

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmen A TEL: 505-345-39 Website: www.	tal Analysis Labo 4901 Hawk (Ibuquerque, NM 975 FAX: 505-342 hallenvironment)	ratory ins NE 87109 Sar 5-4107 al.com	nple Log-In Ch	eck List
Client Name: APEX AZTEC	Work Order Numb	er: 1812E55		RcptNo:	1
Received By: Jazzmine Burkhead	12/28/2018 8:20:00	AM	ayer Barka		
Completed By: Erin Melendrez	12/28/2018 8:31:51	AM	MA	5	
Reviewed By: DAI) 12/20/18					
CB. 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 🗌		
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) properl	y 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 broke	n?	Yes	No 🗹	· · · · · · · · · · · · · · · · · · ·	.0
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	# of preserved bottles checked for pH:	Bulless noted)
12. Are matrices correctly identified on Chain of	Custody?	Yes 🖌	No 🗌	Adjusted?	
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌	(NP	
 Were all holding times able to be met? (If no, notify customer for authorization.) 		Yes 🗹	No 🗌	Checked by:	
Special Handling (if applicable)					
15. Was client notified of all discrepancies with t	his order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date:	<u> </u>	ni uni bitanà màscad autana mana ara		
By Whom:	Via:	eMail	Phone 🗌 Fax	In Person	
Regarding:		a la deministración en actano do 6 y el garo	ice with the range of the second standards	an a	
Client Instructions:					
ID. Additional remarks:					
17. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition Se 1 5.4 Good Yes	al Intact Seal No	Seal Date	Signed By	-	

CHAIN OF CUSTODY RECORD

						Loboratory	Ha		Enu	10	m	ent	fel	A R	NAL) EQU	(SIS EST	ED /	5	$\left[\right]$	//	//	7	/		Lab Due	use only Date:		
AP Office I Gra Azt Project Sampler's	EX ocatio	Mm ger R	5 7;7 8 550	R. 1-74	110 110 110	Address: Address: Contact: Phone: PO/SO #: Sampler's Sign	490 490 A. SOS	pre Fre	Haw N en 45	king an - 30	5 87/ 77	NE 07	2		X	(cap a	ed mener	es and							Temp when 1 Page	2 3	2°): 5, d 4 5 0f	
Proj. No.	10.17	5117	Proje	ect Na	ame	3405			No/Ty	pe of C	ontain	ers			1/	0	6	/										
Matrix	Date	Time	CoEp	Grab	Identifying Mar	ks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	0	201	R	Y				/ /	/ /	/	181 Lab S	ZE5	D (Lab Use	Only)	
5 3	17/18	1030	X	5	SP-	1	-	-				١		Ŕ	N	X							-0	10				
SP	37/18	1035	Y		SP-	2	-	-				1		X	X	x							-01	SC				
5 2	37/18	10410	6		SP.	3	-	-				l		4	X	K					_	-	- 00	3				_
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																			100	X	5							_
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Matrix	ww	V - Wastewa	ter		W - Water S	Glass 1 Liter	lid L	- Liquid	d A	- Air Ba	g	C -	- Cha	rcoal	tube	S	L - slu	k 2 dge	Se	2. jn 0 - 0il	le	D	ery	Je	9-9.	5-18)	

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

OrderNo.: 1812E56

Dear Kyle Summers:

RE: Ouinn 340S

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
 Client Sample ID: S-1

 Project:
 Quinn 340S
 Collection Date: 12/27/2018 10:00:00 AM

 Lab ID:
 1812E56-001
 Matrix: MEOH (SOIL)
 Received Date: 12/28/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: MRA
Chloride	ND	30	mg/Kg	20	12/28/2018 12:29:45 F	PM 42356
EPA METHOD 8015D MOD: GASOLINE RANGE					Analys	st: AG
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	12/28/2018 11:25:43 A	M B56651
Surr: BFB	96.8	70-130	%Rec	1	12/28/2018 11:25:43 A	AM B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analys	st: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/28/2018 10:34:26 A	AM 42355
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/28/2018 10:34:26 A	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					Analys	st: AG
Benzene	ND	0.020	mg/Kg	1	12/28/2018 11:25:43 A	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 A	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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 10
	ND	Not Detected at the Reporting Limit	Р	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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1812E56 Date Reported: 12/31/2018

CLIENT:	APEX TITAN	Client Sample ID: S-2
Project:	Quinn 340S	Collection Date: 12/27/2018 10:05:00 Al
Lab ID:	1812E56-002	Matrix: MEOH (SOIL) 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 PI	M 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 AI	M B56651
Surr: BFB	97.2	70-130	%Rec	1	12/28/2018 11:54:17 AI	M B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	: Irm
Diesel Range Organics (DRO)	42	9.6	mg/Kg	1	12/28/2018 10:56:30 AI	M 42355
Motor Oil Range Organics (MRO)	130	48	mg/Kg	1	12/28/2018 10:56:30 AI	M 42355
Surr: DNOP	90.1	50.6-138	%Rec	1	12/28/2018 10:56:30 AI	M 42355
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst	AG
Benzene	ND	0.018	mg/Kg	1	12/28/2018 11:54:17 Al	M A56651
Toluene	ND	0.037	mg/Kg	1	12/28/2018 11:54:17 Al	M A56651
Ethylbenzene	ND	0.037	mg/Kg	1	12/28/2018 11:54:17 Al	M A56651
Xylenes, Total	ND	0.074	mg/Kg	1	12/28/2018 11:54:17 Al	M A56651
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	12/28/2018 11:54:17 Al	M A56651
Surr: Toluene-d8	96.9	70-130	%Rec	1	12/28/2018 11:54:17 Al	M A56651

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 10
	ND	Not Detected at the Reporting Limit	Р	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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1812E56 Date Reported: 12/31/2018

CLIENT:	APEX TITAN	0	Client Sample ID: S-3
Project:	Quinn 340S		Collection Date: 12/27/2018 10:10:00 AM
Lab ID:	1812E56-003	Matrix: MEOH (SOIL)	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 PI	M B56651
Surr: BFB	98.6	70-130	%Rec	1	12/28/2018 12:22:50 PI	M B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/28/2018 11:18:29 AI	M 42355
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/28/2018 11:18:29 Al	M 42355
Surr: DNOP	86.8	50.6-138	%Rec	1	12/28/2018 11:18:29 AI	M 42355
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst	: AG
Benzene	ND	0.023	mg/Kg	1	12/28/2018 12:22:50 PI	M A56651
Toluene	ND	0.046	mg/Kg	1	12/28/2018 12:22:50 PI	M A56651
Ethylbenzene	ND	0.046	mg/Kg	1	12/28/2018 12:22:50 PI	M A56651
Xylenes, Total	ND	0.091	mg/Kg	1	12/28/2018 12:22:50 PI	M A56651
Surr: 4-Bromofluorobenzene	96.8	70-130	%Rec	1	12/28/2018 12:22:50 PI	M A56651
Surr: Toluene-d8	98.1	70-130	%Rec	1	12/28/2018 12:22:50 PI	M A56651

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 10
	ND	Not Detected at the Reporting Limit	Р	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 Sample ID: S-4 CLIENT: APEX TITAN Collection Date: 12/27/2018 10:15:00 AM **Project:** Quinn 340S Received Date: 12/28/2018 8:20:00 AM 1812E56-004 Matrix: MEOH (SOIL) Lab ID:

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	<mark>4</mark> .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	/I B56651
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/28/2018 11:40:37 AM	1 42355
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/28/2018 11:40:37 AM	1 42355
Surr: DNOP	77.9	50.6-138		%Rec	1	12/28/2018 11:40:37 AM	1 42355
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	AG
Benzene	ND	0.021		mg/Kg	1	12/28/2018 12:51:21 PM	A A 56651
Toluene	ND	0.041		mg/Kg	1	12/28/2018 12:51:21 PM	A A 56651
Ethylbenzene	ND	0.041		mg/Kg	1	12/28/2018 12:51:21 PM	A A 56651
Xylenes, Total	ND	0.083		mg/Kg	1	12/28/2018 12:51:21 PM	A A 56651
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	12/28/2018 12:51:21 PM	A A 56651
Surr: Toluene-d8	95.9	70-130		%Rec	1	12/28/2018 12:51:21 PM	A A 56651

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	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

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 10 J
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1812E56 Date Reported: 12/31/2018

CLIENT:	APEX TITAN		Client Sample ID: S-5
Project:	Quinn 340S		Collection Date: 12/27/2018 10:20:00 AM
Lab ID:	1812E56-005	Matrix: MEOH (SOIL)	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 ORGA	NICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/28/2018 12:02:37 PI	M 42355
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/28/2018 12:02:37 PI	M 42355
Surr: DNOP	76.5	50.6-138	%Rec	1	12/28/2018 12:02:37 PI	M 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 PN	A56651
Xylenes, Total	ND	0.093	mg/Kg	1	12/28/2018 1:20:01 PN	A56651
Surr: 4-Bromofluorobenzene	95.5	70-130	%Rec	1	12/28/2018 1:20:01 PN	A56651
Surr: Toluene-d8	96.7	70-130	%Rec	1	12/28/2018 1:20:01 PN	A56651

Qualifiers:	*	Value exc
	D	Sample D

- * 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 Page 5 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- 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
 Client Sample ID: S-6

 Project:
 Quinn 340S
 Collection Date: 12/27/2018 10:25:00 AM

 Lab ID:
 1812E56-006
 Matrix: MEOH (SOIL)
 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 ORGA	NICS				Analyst	Irm
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 10
	ND	Not Detected at the Reporting Limit	Р	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.

Client: Project:

APEX TITAN 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 Qua	al
Chloride	ND 1.5				
Chionde					
Sample ID LCS-42356	SampType: LCS	TestCode: EPA Method	300.0: Anions		
Sample ID LCS-42356 Client ID: LCSS	SampType: LCS Batch ID: 42356	TestCode: EPA Method RunNo: 56645	300.0: Anions		
Sample ID LCS-42356 Client ID: LCSS Prep Date: 12/28/2018	SampType: LCS Batch ID: 42356 Analysis Date: 12/28/2018	TestCode: EPA Method RunNo: 56645 SeqNo: 1896540	300.0: Anions Units: mg/Kg		
Sample ID LCS-42356 Client ID: LCSS Prep Date: 12/28/2018 Analyte	SampType: LCS Batch ID: 42356 Analysis Date: 12/28/2018 Result PQL SPK value	TestCode: EPA Method RunNo: 56645 SeqNo: 1896540 SPK Ref Val %REC LowLimit	300.0: Anions Units: mg/Kg HighLimit %RPD	RPDLimit Qua	al

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

Page 7 of 10

WO#: 1812E56 31-Dec-18

Client:	APEX TIT	TAN									
Project:	Quinn 340	S									
Sample ID MI	B-42355	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PE	BS	Batch	ID: 42	355	F	RunNo: 5	6641				
Prep Date: 1	2/28/2018	Analysis D	ate: 12	2/28/2018	S	eqNo: 1	895558	Units: mg/M	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	anics (DRO)	ND	10								
Motor Oil Range O	organics (MRO)	ND	50								
Surr: DNOP		9.0		10.00		90.4	50.6	138			
Sample ID LC	CS-42355	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LC	CSS	Batch	ID: 42	355	F	RunNo: <mark>5</mark>	6641				
Prep Date: 1	2/28/2018	Analysis D	ate: 12	2/28/2018	S	SeqNo: 1	895559	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	anics (DRO)	42	10	50.00	0	84.2	70	130			
Surr: DNOP		4.4		5.000		87.5	50.6	138			
Sample ID 18	12E56-006AMSD	SampT	ype: MS	3D	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: S-	6	Batch	ID: 42	355	F	RunNo: 5	6647				
Prep Date: 1	2/28/2018	Analysis D	ate: 12	2/28/2018	S	SeqNo: 1	895651	Units: mg/M	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	anics (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 18	12E56-006AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: S-	6	Batch	ID: 42	355	F	RunNo: 5	6647				
Prep Date: 1	2/28/2018	Analysis D	ate: 12	2/28/2018	S	eqNo: 1	895652	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	anics (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.

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

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WO#: **1812E56** *31-Dec-18*

Client: APEX TITAN Project: Quinn 340S

Sample ID 100ng Ics	Samp	ype: LC	s	Test	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: LCSS	Batch ID: A56651 RunNo: 56651									
Prep Date:	Analysis [ate: 12	2/28/2018	S	SeqNo: 1	895685	Units: mg/K	(g		
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	Samp	vpe: ME	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: DBS	Dete		CCEA			0054			1.00	
Client ID. PBS	Date	TID. AS	1000	r -	univo. 5	1000				
Prep Date:	Analysis [Date: 12	2/28/2018	S	SeqNo: 1	895693	Units: mg/K	g		
Analyte	Result	DOI	CDK uslus			1 1			DDDI in it	0
	rteout	PQL	SPK value	SPK Rei vai	%REC	LowLimit	HighLimit	%RPD	RPDLIMIt	Quai
Benzene	ND	0.025	SPK value	SPK Rei Val	%REC	LowLimit	HighLimit	%RPD	RPDLIMI	Quai
Benzene Toluene	ND ND	0.025 0.050	SPK value	SPK Rei Val	%REC	LowLimit	HighLimit	%RPD	RPDLIMIt	Quai
Benzene Toluene Ethylbenzene	ND ND ND	0.025 0.050 0.050	SPK value	SPK Rei Val	%REC	LowLimit	HighLimit	%RPD	RPDLIMIt	Quai
Benzene Toluene Ethylbenzene Xylenes, Total	ND ND ND ND	0.025 0.050 0.050 0.10	SPK value	SPK Rei Val	%REC	LowLimit	HighLimit	%RPD	RPDLIMIt	Quai
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4	ND ND ND ND 0.47	0.025 0.050 0.050 0.10	0.5000	SPK Rei Val	%REC 94.7	LowLimit	HighLimit 130	%RPD	RPDLIMIt	Quai
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	ND ND ND 0.47 0.48	0.025 0.050 0.050 0.10	0.5000 0.5000	SPR Rei Val	94.7 96.4	LowLimit 70 70	HighLimit 130 130	%RPD	RPDLIMIt	Quai
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane	ND ND ND 0.47 0.48 0.49	0.025 0.050 0.050 0.10	0.5000 0.5000 0.5000	SPR Rei Val	94.7 96.4 98.7	200 200 200 200 200	HighLimit 130 130 130	%RPD	RPDLIMIt	Quai

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

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Client:	APE
Project:	Quin

APEX TITAN Quinn 340S

Sample ID 2.5ug gro Ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID: LCSS	Batch	n ID: 85	6651	R	RunNo: 5	6651				
Prep Date:	Analysis D	ate: 12	2/28/2018	S	SeqNo: 1	895702	Units: mg/k	۲g		
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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch	n ID: B5	6651	F	RunNo: 5	6651				
Prep Date:	Analysis D	ate: 12	2/28/2018	S	SeqNo: 1	895703	Units: mg/l	٨g		
Analyte	Result	POI	SPK value	SPK Ref Val	%REC	Low/ imit	Highl imit	%RPD	RPDI imit	Qual
Gasoline Range Organics (GRO)	ND	5.0	of it value	of it iter var	/inteo	LOWLINI	riigiiLiint		TH DEITH	Quui
Surr: BEB	490		500.0		98.8	70	130			
Sull. DI D	400		500.0		30.0	10	100			
Sample ID 1812e56-001ams	SampT	vpe: MS	300.0	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Sample ID 1812e56-001ams Client ID: S-1	Samp1 Batcl	ype: Ms	6651	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Sample ID 1812e56-001ams Client ID: S-1 Prep Date:	SampT Batcl Analysis D	Type: MS n ID: B5 Date: 12	6651 2/28/2018	Tes F	tCode: El RunNo: 5 SeaNo: 1	PA Method 6651 896232	8015D Mod: Units: mg/l	Gasoline	Range	
Sample ID 1812e56-001ams Client ID: S-1 Prep Date:	SampT Batcl Analysis D	Type: MS n ID: B5 Date: 12	500.0 5 66651 2/28/2018	Tes F	tCode: El RunNo: 5 SeqNo: 1	PA Method 6651 896232	8015D Mod: Units: mg/l	Gasoline	Range	
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte	SampT Batcl Analysis D Result	ype: MS n ID: B5 Date: 12 PQL	500.0 5 66651 2/28/2018 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC	PA Method 6651 896232 LowLimit	8015D Mod: Units: mg/l HighLimit	Gasoline <g %RPD</g 	Range RPDLimit	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO)	Sampī Batcl Analysis E Result 19	Type: MS n ID: B5 Date: 12 PQL 4.0	500.0 5 66651 2/28/2018 SPK value 20.02	Tes F SPK Ref Val 0	tCode: El RunNo: 5 SeqNo: 1 %REC 94.5	PA Method 6651 896232 LowLimit 68.2	8015D Mod: Units: mg/l HighLimit 135	Gasoline Kg %RPD	Range RPDLimit	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB	SampT Batch Analysis D Result 19 380	Type: MS n ID: B5 Date: 12 PQL 4.0	500.0 5 6651 2/28/2018 SPK value 20.02 400.3	Tes F S SPK Ref Val 0	tCode: El RunNo: 5 SeqNo: 1: %REC 94.5 95.8	PA Method 6651 896232 LowLimit 68.2 70	8015D Mod: Units: mg/l HighLimit 135 130	Gasoline <g %RPD</g 	Range RPDLimit	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB	SampT Batcl Analysis D Result 19 380	ype: MS n ID: B5 Date: 12 PQL 4.0	500.0 5 66651 2/28/2018 20.02 400.3 5D	Tes F SPK Ref Val 0 Tes	tCode: El RunNo: 5 SeqNo: 1 %REC 94.5 95.8 tCode: El	PA Method 6651 896232 LowLimit 68.2 70 PA Method	8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod:	Gasoline Kg %RPD Gasoline	Range RPDLimit Range	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1812e56-001amso Client ID: S-1	Sampī Batcl Analysis E Result 19 380 d Sampī Batcl	ype: Ms n ID: B5 ate: 1 PQL 4.0	300.0 36651 2/28/2018 SPK value 20.02 400.3 35D 36651	Tes F SPK Ref Val 0 Tes F	tCode: El RunNo: 5 SeqNo: 1 %REC 94.5 95.8 tCode: El RunNo: 5	PA Method 6651 896232 LowLimit 68.2 70 PA Method 6651	8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod:	Gasoline <g %RPD Gasoline</g 	Range RPDLimit Range	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1812e56-001amso Client ID: S-1 Prep Date:	SampT Batcl Analysis D Result 19 380 SampT Batcl Analysis D	Type: M \$ n ID: B5 Date: 12 PQL 4.0 Type: M \$ fype: M \$ m ID: B5 Date: 12	300.3 36651 2/28/2018 SPK value 20.02 400.3 36D 36651 2/28/2018	Tes F SPK Ref Val 0 Tes F	tCode: El RunNo: 5 SeqNo: 1 %REC 94.5 95.8 tCode: El RunNo: 5 SeqNo: 1	PA Method 6651 896232 LowLimit 68.2 70 PA Method 6651 896233	8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l	Gasoline Kg %RPD Gasoline	Range RPDLimit Range	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1812e56-001amso Client ID: S-1 Prep Date: Analyte	Sampī Batcl Analysis E Result 19 380 d Sampī Batcl Analysis E Result	Type: MS n ID: B5 Date: 1 PQL 4.0 Type: MS n ID: B5 Date: 1 PQL	500.0 5 66651 2/28/2018 20.02 400.3 5 5 5 6 6 6 5 1 2/28/2018 SPK value	Tes F SPK Ref Val 0 Tes F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 94.5 95.8 tCode: El RunNo: 5 SeqNo: 1 %REC	PA Method 6651 896232 LowLimit 68.2 70 PA Method 6651 896233 LowLimit	8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l HighLimit	Gasoline ⁽ g ⁽ RPD) Gasoline ⁽ g ⁽ RPD)	RPDLimit RPDLimit Range	Qual
Sample ID 1812e56-001ams Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1812e56-001amso Client ID: S-1 Prep Date: Analyte Gasoline Range Organics (GRO)	SampT Batcl Analysis D Result 19 380 SampT Batcl Analysis D Result 18	Type: M: n ID: B5 Date: 12 PQL 4.0 Type: M: fype: M: pype: M:	300.0 30	Tes F SPK Ref Val 0 Tes F SPK Ref Val 0	tCode: El RunNo: 5 SeqNo: 1: %REC 94.5 95.8 tCode: El RunNo: 5 SeqNo: 1 %REC 88.4	PA Method 6651 896232 LowLimit 68.2 70 PA Method 6651 896233 LowLimit 68.2	8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l HighLimit 135	Gasoline (g %RPD Gasoline (g %RPD 6.60	Range RPDLimit Range RPDLimit 20	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
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- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
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- P Sample pH Not In Range
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- W Sample container temperature is out of limit as specified

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WO#: **1812E56** *31-Dec-18*

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb TEL: 505-345-3975 Website: www.he	Analy. 490 uquerq FAX: ullenvir	sis Laborata 1 Hawkins 1 ue, NM 871 505-345-41 conmental.co	079 NE 09 Sa 07 07	mple Log-In C	heck List
Client Name: APEX AZTEC	Work Order Number	1812	2E56		RcptNo	: 1
Received By: Jazzmine Burkhead Completed By: Erin Melendrez	12/28/2018 8:20:00 AI	N		N_U_	L	
Reviewed By: DAD 12/28/18						
LB. ENM 12/28/18						
Lis Chain of Custody complete?		Vac		No 🗍	Not Present	
2 How was the sample delivered?		Cou	rier			
2 ,		000				
3. Was an attempt made to cool the samples?		Yes		No 🗌	NA 🗌	
4. Were all samples received at a temperature of	f >0° C to 6.0°C	Yes	\checkmark	No 🗌	NA 🗌	
5. Sample(s) in proper container(s)?		Yes	\checkmark	No 🗌		
6. Sufficient sample volume for indicated test(s)'	?	Yes	\checkmark	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 🗹	# of processed	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No 🗌	bottles checked for pH:	HID 12 unless noted)
12. Are matrices correctly identified on Chain of C	ustody?	Yes	\checkmark	No 🗌	Adjusted	
13. Is it clear what analyses were requested?		Yes		No 🗌	FDI	
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes		No 🗔	Checked by:	
Special Handling (if applicable)						
15. Was client notified of all discrepancies with the	is order?	Yes		No 🗌	NA 🗹	
Person Notified:	Date:					
By Whom:	Via: [eMa	ail 🔄 Ph	one 🔄 Fax	In Person	
Client Instructions:		*****	NAM-ANTO-IN IS NO. IN COLUMN	la 21-recentRober a bilizado	to a film the set of a sub-biostic and a film figure of	
16. Additional remarks:						
17. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition Sea 1 5.4 Good Yes	al Intact Seal No S	Seal D	ate S	Signed By	-	

CHAIN OF CUSTODY RECORD

							Ho	-11	Enu	1.40	nm	ica	4	A	NALY	SIS		11	/	/	/	/	/ /	/	1	Lab use only	
						Laboratory:	20	5						R	EQU	EST	ED	5		/ /	/ /	/ /		/		Due Date:	
A	PEX			0		Address:	490	011	Han	K.	ns	N	E				/	5				/		/ /	/	Temp. of coolers	110
Offic	e Locatio	on 606 Su	5;7	K	1	AI bogo Contact:	er q A.	Fr-	Neen	nau	871	07	7				moin	2		/ ,			[]			when received (C°): 2.	5
Ha	tec -	Vm	8	74	10	Phone: 5	05	- 30	15-	- 39	75	_				1	S	R/	/	/	/	/		/	I	Page of	
Proj	ect Mana	ger <u>K</u>	S	m	mers	PO/SO #:									2		21.	3/	/		/			/			
Sam	lier's Name					Sampler's Sign	ature	1							4	100	X	,/	/	/	/	/ /					
Proi	- DAD	onti	Proie	ect N	ame	and 1	wit	62	No/To	me of (Contair	hers		-	1	0	15	/ /		/ /	/						
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Matrix	Date	Time	CoEp	Grab	Identifying N	farks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O		2/2	10	Y						/	Lab		mple ID (Lab Use Only)	
5	267/18	1000	X		5-	1	0	10				1		X	10	¥								00	1		
5	0/37/18	1005	x		Sa	2	è	10				1		V	X	¥							_	007	2		
5	2/07/18	1010	Ø		S-	3	0	10				1		K	4	X							-(003	3		
5	12/20/18	1015	iq		Se	1	ì	10				1		Y	¥	X							- (004	1		
S	13/18	1020	9		5-	5	0	10				(¥	Ŷ	ip							-1	005	5		
5	1/20/18	1025	X		5-	6	D	10				1		¥	p	p							- 0	04	ρ		
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																			1	5							
														+													
Turn	around time	O Nor	mal		25% Rush	□ 50% Rush [C100%	Rush		1			1	1	1		1	1				I					
Relin	quished by	(Signature)		6	Date:	Time: Receiv	red by:	Signa	ature)	5		Date	a:	is 1	Time:	3	NOT	ES:	ay	h	ey	¥	KI	32	12	00	
Flelin	quished by	(Signature)	ti	1	Date:	Time: Receiv	ed by	(Signa	ture)	head	1	Date	8/18	C	Time: 8:20	, (Cours	erP	m	TO	in	20	ny				
Relin	uished by	(Signature)			Date:	Time: Receiv	ed by:	(Signa	ature)	of		Date	e:		Time:			AI	E	#,	N.	58	13				
Relin	quished by	(Signature)			Date:	Time: Receiv	ved by:	: (Signa	ature)			Date	e:		Time:				Ť	t.	S	an	rec	du	y	12-28-18	-)
Matrix	ww ner VO	V - Wastewa	ter		W - Water A/G - Amber /	S - Soil SD - So Or Glass 1 Liter	lid	L - Liqui	d A Glass	- Air Ba	ag	C	- Cha /0 - P	rcoal	tube or oth	er	SL - sl	udge		0-0)il						

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204



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

OrderNo.: 1901185

Dear Kyle Summers:

RE: Ouinn 340 S

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 <u>www.hallenvironmental.com</u> 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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1901185 Date Reported: 1/9/2019

CLIENT :	APEX TITAN		Client Sample ID: S-7
Project:	Quinn 340 S		Collection Date: 1/7/2019 12:00:00 PM
Lab ID:	1901185-001	Matrix: SOIL	Received Date: 1/8/2019 8:25:00 AM
Analyses		Result	POL Qual Units DF Date Analyzed

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 ORGA	NICS				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above quar
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not I
	PQL	Practical Quanitative Limit	RL	Reporting Detect
	S	% Recovery outside of range due to dilution or matrix	W	Sample container

- in the associated Method Blank
- intitation range
- below quantitation limits Page 1 of 7
- In Range tion Limit
- r temperature is out of limit as specified

Client: Project: Quinn 340 S

APEX	TITAN
Outing	240 0

3				
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: Ics	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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

WO#: 1901185

09-Jan-19

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WO#: **1901185**

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09-Jan-19

APEX TITAN **Client:** Ouinn 340 S **Project:** TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID MB-42481 SampType: MBLK Client ID: PBS Batch ID: 42481 RunNo: 56822 SeqNo: 1902031 Units: mg/Kg Analysis Date: 1/8/2019 Prep Date: 1/8/2019 SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual LowLimit Result PQL Analyte Diesel Range Organics (DRO) ND 10 ND 50 Motor Oil Range Organics (MRO) 101 50 6 138 Surr: DNOP 10 10.00 TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID LCS-42481 SampType: LCS RunNo: 56822 Batch ID: 42481 Client ID: LCSS SegNo: 1902039 Units: mg/Kg Prep Date: 1/8/2019 Analysis Date: 1/8/2019 %REC HighLimit %RPD **RPDLimit** Qual PQL SPK value SPK Ref Val LowLimit Analyte Result Diesel Range Organics (DRO) 10 50.00 0 97.6 70 130 49 50.6 138 5.000 93 6 Surr: DNOP 4.7 TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID 1901185-001AMS SampType: MS RunNo: 56822 Batch ID: 42481 Client ID: S-7 SeqNo: 1902178 Units: mg/Kg Prep Date: 1/8/2019 Analysis Date: 1/8/2019 %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result PQL SPK value SPK Ref Val Analyte 9.5 47.71 0 69.1 53.5 126 Diesel Range Organics (DRO) 33 50.6 138 3.2 4.771 66.1 Surr: DNOP TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID 1901185-001AMSD SampType: MSD RunNo: 56822 Batch ID: 42481 Client ID: S-7 Analysis Date: 1/8/2019 SeqNo: 1902179 Units: mg/Kg Prep Date: 1/8/2019 LowLimit %RPD **RPDLimit** Qual SPK value SPK Ref Val %REC HighLimit Analyte Result PQL 41.3 21.7 R 50 9.6 48.17 0 104 53.5 126 Diesel Range Organics (DRO) 138 0 96.9 50.6 0 Surr: DNOP 4.7 4.817 Sample ID LCS-42474 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 56822 Batch ID: 42474 Client ID: LCSS SeqNo: 1902180 Units: %Rec Prep Date: 1/7/2019 Analysis Date: 1/8/2019 PQL SPK value SPK Ref Val %REC LowI imit HighLimit %RPD **RPDLimit** Qual Result Analyte 90.4 50.6 138 Surr: DNOP 4.5 5.000 TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID MB-42474 SampType: MBLK Client ID: PBS Batch ID: 42474 RunNo: 56822 Prep Date: 1/7/2019 Analysis Date: 1/8/2019 SeqNo: 1902181 Units: %Rec **RPDLimit** %RPD Qual Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit

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

Client: APEX TITAN Project: Quinn 340 S

Sample ID MB-42474	SampTyp	e: MBLK	Tes	tCode: El	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID: PBS	Batch II	D: 42474	F	RunNo: 5	6822				
Prep Date: 1/7/2019	Analysis Date	e: 1/8/2019	S	SeqNo: 1	902181	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.
- 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

WO#: **1901185** *09-Jan-19*

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Client: Project:

APEX TITAN Quinn 340 S

Sample ID 100ng Ics	SampT	ype: LC	S	Test	Code: EF	PA Method	8260B: Volat	tiles Short	List					
Client ID: LCSS	Batch	n ID: R5	6828	R	unNo: 50	6828								
Prep Date:	Analysis D)ate: 1/3	8/2019	S	eqNo: 1	902115	Units: mg/K	ζg						
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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List					
Client ID: PBS	Batc	h ID: R5	6828	F	RunNo: 5	6828								
Prep Date:	Analysis E	Date: 1/	8/2019	S	SeqNo: 1	902117	Units: mg/M	٢g						
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	Samp	Гуре: МЗ	6	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List					
Client ID: S-7	Batc	h ID: R5	6828	F	RunNo: 5	6828								
Prep Date:	Analysis [Date: 1/	8/2019	S	SeqNo: 1	902481	Units: mg/k	٢g						
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 1901185-001amsc	Samp	Гуре: МS	SD	Tes	tCode: E	PA Method	8260B: Vola	tiles Shor	List					
Client ID: S-7	Batch ID: R56828			F	RunNo: 5	6828								
Prep Date:	Date: Analysis Date: 1/8/2019			S	SeqNo: 1	902482	Units: mg/k	۲g						
Analyte	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene	zene 0.62 0.019 0.77			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.

Sample Diluted Due to Matrix D

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

PQL Practical Quanitative Limit

- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits J

Р Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified W

WO#: 1901185

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Client: APEX TITAN Project: Quinn 340 S

Sample ID 1901185-001amsc	l SampT	ype: MS	SD	Test	Code: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: S-7	Batch	1D: R5	6828	R	unNo: 5	6828				
Prep Date:	Analysis D	Analysis Date: 1/8/2019			eqNo: 1	902482	Units: mg/k	(g		
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.
- 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

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WO#: **1901185** *09-Jan-19*

WO#: **1901185**

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09-Jan-19

Client: Project: APEX TITAN Quinn 340 S

0											
Sample ID	2.5ug gro lcs	SampT	ype: LC	S	Test	Code: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	LCSS	Batch	ID: A5	6828	R	unNo: 5	6828				
Prep Date:		Analysis D	ate: 1/	8/2019	S	eqNo: 1	902121	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	28	5.0	25.00	0	112	70	130			
Surr: BFB		490		500.0		98.4	70	130			
Sample ID	rb	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	PBS	Batch	n ID: A5	6828	F	RunNo: 5	6828				
Prep Date:		Analysis D	ate: 1/	8/2019	S	SeqNo: 1	902122	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ND	5.0								
Surr: BFB		490		500.0		97.0	70	130			
Surr: BFB	1901185-001ams	490 SampT	ype: MS	500.0	Tes	97.0 tCode: E	70 PA Method	130 8015D Mod:	Gasoline	Range	
Surr: BFB Sample ID Client ID:	1901185-001ams S-7	490 SampT Batcl	ype: MS	500.0 6828	Tes	97.0 tCode: E RunNo: 5	70 PA Method 6828	130 8015D Mod:	Gasoline	Range	
Surr: BFB Sample ID Client ID: Prep Date:	1901185-001ams S-7	490 SampT Batcl Analysis D	ype: M ID: A5 Date: 1 /	500.0 6828 8/2019	Tes F	97.0 tCode: E RunNo: 5 SeqNo: 1	70 PA Method 6828 902479	130 8015D Mod: Units: mg/l	Gasoline <g< td=""><td>Range</td><td></td></g<>	Range	
Surr: BFB Sample ID Client ID: Prep Date: Analyte	1901185-001ams S-7	490 SampT Batcl Analysis D Result	ype: MS h ID: A5 Date: 1/ PQL	500.0 6828 8/2019 SPK value	Tes F SPK Ref Val	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC	70 PA Method 6828 902479 LowLimit	130 8015D Mod: Units: mg/l HighLimit	Gasoline <g %RPD</g 	Range RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	1901185-001ams S-7 ge Organics (GRO)	490 SampT Batcl Analysis D Result 20	ype: MS h ID: A5 Date: 1/ PQL 3.9	500.0 6828 8/2019 SPK value 19.29	Tes F S SPK Ref Val 0	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104	70 PA Method 66828 902479 LowLimit 68.2	130 8015D Mod: Units: mg/l HighLimit 135	Gasoline <g %RPD</g 	Range RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	1901185-001ams S-7 ge Organics (GRO)	490 SampT Batch Analysis D Result 20 370	Type: MS h ID: A5 Date: 1/ PQL 3.9	500.0 6828 8/2019 SPK value 19.29 385.8	Tes F SPK Ref Val 0	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104 95.6	70 PA Method 66828 902479 LowLimit 68.2 70	130 8015D Mod: Units: mg/l HighLimit 135 130	Gasoline <g %RPD</g 	Range RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID	1901185-001ams S-7 ge Organics (GRO) 1901185-001amsc	490 SampT Batcl Analysis D Result 20 370	ype: M h ID: A5 Date: 1/ <u>PQL</u> 3.9	500.0 6828 8/2019 SPK value 19.29 385.8	Tes F SPK Ref Val 0 Tes	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104 95.6 tCode: E	70 PA Method 66828 902479 LowLimit 68.2 70 PA Method	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod:	Gasoline <g %RPD Gasoline</g 	Range RPDLimit Range	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	1901185-001ams S-7 ge Organics (GRO) 1901185-001amsc S-7	490 SampT Batcl Analysis D Result 20 370 d SampT Batcl	Type: MS h ID: A5 Date: 1/ PQL 3.9 Fype: MS h ID: A5	500.0 6828 8/2019 SPK value 19.29 385.8 5D 66828	Tes F SPK Ref Val 0 Tes F	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104 95.6 tCode: E RunNo: 5	70 PA Method 66828 902479 LowLimit 68.2 70 PA Method 66828	130 8015D Mod: Units: mg/k HighLimit 135 130 8015D Mod:	Gasoline Kg %RPD Gasoline	Range RPDLimit Range	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date:	1901185-001ams S-7 ge Organics (GRO) 1901185-001amsc S-7	490 SampT Batcl Analysis D Result 20 370 d SampT Batcl Analysis D	Type: MS h ID: A5 Date: 1/ PQL 3.9 Type: MS h ID: A5 Date: 1/	500.0 6828 8/2019 SPK value 19.29 385.8 5D 66828 /8/2019	Tes F SPK Ref Val 0 Tes F	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104 95.6 tCode: E RunNo: 5 SeqNo: 1	70 PA Method 66828 902479 LowLimit 68.2 70 PA Method 66828 902480	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l	Gasoline Kg Gasoline	Range RPDLimit Range	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	1901185-001ams S-7 ge Organics (GRO) 1901185-001amsc S-7	490 SampT Batcl Analysis D Result 20 370 370 SampT Batcl Analysis D Result	Type: MS h ID: A5 Date: 1/ PQL 3.9 Type: MS h ID: A5 Date: 1/ Oate: 1/ Date: 1/ Date: 1/ Date: 1/ PQL 2	500.0 6828 8/2019 SPK value 19.29 385.8 5D 6828 8/2019 SPK value	Tes F SPK Ref Val 0 Tes F SPK Ref Val	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104 95.6 tCode: E RunNo: 5 SeqNo: 1 %REC	70 PA Method 6828 902479 LowLimit 68.2 70 PA Method 66828 902480 LowLimit	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l HighLimit	Gasoline %g %RPD Gasoline %g %RPD	RPDLimit RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	1901185-001ams S-7 ge Organics (GRO) 1901185-001amsc S-7 :	490 SampT Batcl Analysis D Result 20 370 Batcl Analysis D Result 20	Type: MS h ID: A5 Date: 1/ PQL 3.9 Type: MS h ID: A5 Date: 1/ PQL 3.9	500.0 6828 8/2019 SPK value 19.29 385.8 5D 66828 78/2019 SPK value 19.29	Tes F SPK Ref Val 0 Tes F SPK Ref Val 0	97.0 tCode: E RunNo: 5 SeqNo: 1 %REC 104 95.6 tCode: E RunNo: 5 SeqNo: 1 %REC 104	70 PA Method 6828 902479 LowLimit 68.2 70 PA Method 66828 902480 LowLimit 68.2	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l HighLimit 135	Gasoline Kg %RPD Gasoline Kg %RPD 0.193	Range RPDLimit Range RPDLimit 20	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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 Albi TEL: 505-345-3975 Website: www.ha	Analys 4901 uquerqu FAX: 5 illenvirc	s Laboratory Hawkins NE e, NM 87109 05-345-4107 mmental.com	San	nple Log-In Check List
Client Name: APEX AZTEC	Work Order Number:	1901	185		RcptNo: 1
Received By: Anne Thorne	1/8/2019 8:25:00 AM		ć	Anne H-	~
Completed By: Anne Thorne Reviewed By: ENM Labeled by; AT01/08/19	1/8/2019 8:31:37 AM /8/ ¥			Anne H	
Chain of Custody					
1. Is Chain of Custody complete?		Yes	\checkmark	No 🛄	Not Present
2. How was the sample delivered?		Couri	er		
Log In 3. Was an attempt made to cool the samples?		Yes	~	No 🗌	NA 🗌
4. Were all samples received at a temperature of	of >0° C to 6.0°C	Yes	\checkmark	No 🗌	
5. Sample(s) in proper container(s)?		Yes	\checkmark	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 broker	1?	Yes		No 🗹	# of preserved
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	✓	No 🗌	bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of C	Custody?	Yes		No 🗌	Adjusted?
13. Is it clear what analyses were requested?		Yes	\checkmark	No 🗌	
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	✓	No 🗌	Checked by:
Special Handling (if applicable)					
15. Was client notified of all discrepancies with the	his order?	Yes		No 🗌	NA 🗹
Person Notified: By Whom: Regarding: Client Instructions:	Date Via:] eMa	il 🔲 Phon	e 🛄 Fax	in Person
16 Additional remarks:				*	
17. <u>Cooler Information</u> Cooler No. Temp °C Condition Se 1 1.4 Good Yes	al Intact Seal No S	Seal Da	te Sig	ned By	

Page 1 of 1

																					C	HAI	N OF	FC	USTO	DDY RI	ECORE
A	PEX			0	0	Laboratory: Address: 4	He 20	all ab 1 1	En	k:	25	NE	H	ANALY	SIS ESTE	D	ting	/	/	/					Lab us Due D	e only ate:	1.40
Offic Gran	e Locatio	n 606 Su: 4 NM	4	S.1 A 74	10	Albra. Contact: Phone: _S	A	Fra 34		m 221 35	87 75-		<u>e</u>			the main	P	/	/	//	/			(Page_	3 of). 4 5
Proje Sampl	ect Manag er's Name DApc	per <u>r</u>	20	201	nas	Sampler's Signa	ature	6						g g	2	X	/	/ /	/	/ /	/ /	/ /					
Proj. N	lo. Silonz J	547	Proje	ect Na	Quinn	340 S			No/Ty	pe of C	Contain	ers		W	× A	S	/	/	/		/						
Matrix	Date	Time	Comp	Grab	Identifying Ma	rks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	D/O	N. R	Ye					/ /	/		La	b Sa	mple ID	(Lab Use	Only)
5	1-7-19	1200	V		5-7	7	~	11				l		8 7	X						_			10	701	185	col
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Turn a	round time	D Nor	mal	02	5% Rush	50% Rush	100%	Rush													1						
Relind	uished by	(Signature)		1	Date:	Time: Receiv	ved by	(Signa	ture)		ı	Date	19	Time:) N	IOTE	s: p	ay	K	ey	F	RB	21	20	90		
Relino	wished by (Signature)	,t	1	Date:	Time: Receiv	red by:	(Signa	ture)	~	0	Date	119	US25 Time:	-		P. Ai	n - FE	- 7	Dr H	N	38	91	3			
Relinc	uished by ((Signature)			Date:	Time: Receiv	/ed by:	(Signa	iture)			Date	-	Time:	-		2	S	e-w	u	P	az	1-	-8	-19)	
Matrix	WV	V - Wastewa	ter		W - Water	S - Soll SD - So	lid I	- Liqui	d A Glass v	- Air Ba	ag	C	Cha	rcoal tube astic or othe	SL	- slu	dge		0-0	il					-		

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

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

MAR 1 8 2019

NMOCD

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.

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: Jal. Full	Date: 3-8-19			
email: jefields@eprod.com	Telephone:713-381-6595			
OCD Only Received by:	Date: 3118/2019			
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: 3181209			
Printed Name: ANDESSE Fiddes	Title: Environmental Opacilist			

E 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

umm

Kyle Summers, CPG Sr. Project Manager

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E ENSOLUM

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/I TDS	Constituent	Method	Limit	
≤ 50 feet	Chloride	EPA 300.0 or SM4500 CI 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








APPENDIX B

Executed C-138 Solid Waste Acceptance Form

District 1 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.

12/5/18

REOUEST FOR APPROVAL TO ACCEPT SOLID WASTE 1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401 **Originating Site:** 2. **MD-7** Loop Location of Material (Street Address, City, State or ULSTR): 3. 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) **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS** 5. I, Thomas Long them Ly, 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-Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load exempt waste. 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 12-5-18, representative for Enterprise Products Operating authorizes <u>IEI</u>, Inc. to complete **Generator Signature** the required testing/sign the Generator Waste Testing Certification. do hereby certify that I.T , representative for IEI, Inc. 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. **Transporter: Riley Industrial** 5. **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 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: Boubara Labors TITLE: CLERK DATE: 12/5/18 ATURE: TELEPHONE NO.: 505-632-1782 Surface Waste Management Facility Authorized Agent



APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC Closure Report MD-7 Loop Pipeline Release (2018) Ensolum Project No. 05A1226035





SITE PHOTOGRAPHS

Enterprise Field Services, LLC Closure Report MD-7 Loop Pipeline Release (2018) Ensolum Project No. 05A1226035







APPENDIX D

Table 1 – Soil Analytical Summary

ENSOLUM

					м	TA D-7 Loop Pipe SOIL ANALY	BLE 1 eline Relea: TICAL SUMN	se (2018) IARY					
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 Ene Co	ergy, Mineral &	Natural Resource ision, Closure Crit	s Department, Oil teria	10	NE	NE	NE	50				100	600
					E	xcavation Soil Sam	ble Removed by	Excavation					
S-1	12.07.18	С	7	<0.10	0.23	<0.20	<0.41	0.23	26	790	4,000	4,816	130
	present and the		The second second second			Excavation Cor	nposite Soil San	nples	达和中国不用的	And the second second			
S-2	12.17.18	С	13	< 0.016	< 0.033	< 0.033	<0.066	ND	<3.3	<9.8	<49	ND	32
S-3	12.17.18	С	0 to 13	<0.021	<0.042	< 0.042	< 0.083	ND	<4.2	<9.5	<48	ND	160
S-4	12.17.18	С	0 to 13	<0.020	<0.041	< 0.041	<0.081	ND	<4.1	<9.3	<46	ND	140
Note: Concentrati	ions in bold and	d yellow exceed the	applicable NM EMI	NRD Closure Crit	eria								

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: <u>www.hallenvironmental.com</u>

December 12, 2018

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

OrderNo.: 1812437

Dear Kyle Summers:

RE: MD 7 Loop

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 <u>www.hallenvironmental.com</u> 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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1812437 Date Reported: 12/12/2018

Page 1 of 5

CLIENT:	APEX TITAN		(Client Sample ID: S-1
Project:	MD 7 Loop			Collection Date: 12/7/2018 2:00:00 PM
Lab ID:	1812437-001	Matrix:	MEOH (SOIL)	Received Date: 12/8/2018 1:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analy	st: MRA
Chloride	130	30		mg/Kg	20	12/10/2018 12:13:31	PM 42000
EPA METHOD 8015D MOD: GASOLINE RANGE						Analy	st: 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 ORGA	NICS					Analy	st: Irm
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						Analy	st: 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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of
	ND	Not Detected at the Reporting Limit	Р	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 TIT	AN									
Project:	MD 7 Loo	р									
Sample ID	MB-42000	SampT	ype: ml	olk	Test	Code: EF	PA Method	300.0: Anion	s		
Client ID:	PBS	Batcl	h ID: 42	000	R	unNo: 56	6209				
Prep Date:	12/10/2018	Analysis D	Date: 12	2/10/2018	S	eqNo: 18	878477	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-42000	SampT	Type: Ics	6	Tes	Code: El	PA Method	300.0: Anion	S		
Client ID:	LCSS	Batc	h ID: 42	000	F	lunNo: 5	6209				
Prep Date:	12/10/2018	Analysis [Date: 1	2/10/2018	S	eqNo: 1	878479	Units: mg/K	g		
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. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1812437 12-Dec-18

Page 2 of 5

Hall Environmental Analysis Laboratory, Inc.

Client: AP	EX TITAN									
Project: MD	7 Loop									
Sample ID LCS-41992	SampTyp	e: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCSS	Batch II	D: 41	992	F	RunNo: 5	6213				
Prep Date: 12/10/2018	Analysis Date	e: 1:	2/10/2018	S	SeqNo: 1	877826	Units: mg/k	٢g		
Analyte	Result I	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	SampTyp	e: MI	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch II	D: 41	992	F	RunNo: 5	6213				
Prep Date: 12/10/2018	Analysis Date	e: 1	2/10/2018	5	SeqNo: 1	877827	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MF	(O) ND	50								
O DUOD	0.0		10.00		00.2	EO C	120			

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

Page 3 of 5

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN **Project:**

MD 7 Loop

Sample ID 100ng lcs	SampT	ype: LC	S	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch	ID: C5	6208	RunNo: 56208								
Prep Date:	Analysis D	ate: 12	2/10/2018	S	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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List			
Client ID: PBS	Batch	n ID: C5	6208	F	RunNo: 5	6208						
Prep Date:	Analysis D	ate: 12	2/10/2018	5	SeqNo: 1	877680	Units: mg/K	(g				
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	SampT	ype: LC	s	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	t List			
Client ID: LCSS	Batch	n ID: 41	968	F	RunNo: 5	56208						
Prep Date: 12/7/2018	Analysis D	ate: 12	2/10/2018	5	SeqNo: 1	878755	Units: %Re	с				
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	SampT	уре: М	BLK	Tes	tCode: E	PA Method	8260B: Vola	tiles Shor	t List			
Client ID: PBS	Batch	n ID: 41	968	F	RunNo: 5	6208						
Prep Date: 12/7/2018	Analysis D	Date: 1	2/10/2018	5	SeqNo: 1	878756	Units: %Re	с				
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. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

WO#: 1812437

Page 4 of 5

Hall	Environmental	Analysis	Laboratory,	Inc.
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ND

480

Gasoline Range Organics (GRO)

Surr: BFB

5.0

WO#:	1	8124	37
	10	D	10

Qual

Qual

RPDLimit

RPDLimit

12-Dec-18

Client:APEX TProject:MD 7 Lope	ITAN Dop								
Sample ID 2.5ug gro Ics	SampT	ype: LC	s	Test	Code: E	PA Method	8015D Mod:	Gasoline	Range
Client ID: LCSS	Batch	ID: A5	6208	R	unNo: 5	6208			
Prep Date:	Analysis D	ate: 12	2/10/2018	S	eqNo: 1	877675	Units: mg/k	(g	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD
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	SampT	уре: МІ	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range
Client ID: PBS	Batch	D: A5	6208	F	RunNo: 5	6208			
Prep Date:	Analysis D	ate: 1	2/10/2018	S	SeqNo: 1	877676	Units: mg/k	٨g	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD

500.0

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range Е

96.4

70

130

- Analyte detected below quantitation limits J
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Page 5 of 5

Client Name: APEX AZTEC Work Order Number: 1812437 RcptNo: 1	
Received By: Andy Freeman 12/8/2018 1:30:00 PM	
Completed By: Isaiah Ortiz 12/10/2018 8:21:47 AM	
Reviewed By: DA13 12/10/18	
LBENM 12/10/18	
Chain of Custody	
1. Is Chain of Custody complete? Yes ⊻ No Not Present	
2. How was the sample delivered? <u>Courier</u>	
Log In	
3. Was an attempt made to cool the samples? Yes V No No	
4. Were all samples received at a temperature of 20 C to 5.0 C Yes V Ros	
5. Sample(s) in proper container(s)? Yes V 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 V No GrpH:	
(Note discrepancies on chain of custody)	ess noted)
12, Are matrices correctly identified on Chain of Custody? Yes No Adjusted?	
13. Is it clear what analyses were requested? Yes No Version V	
14. Were all holding times able to be met? Yes	
Special Handling (if applicable)	
15 Was client notified of all discremancies with this order? Ves No No NA	
By Whom:	
Client Instructions:	
16. Additional remarks:	
Cooler No Temp C Condition Seal Intact Seal No Seal Date Signed By	
1 1.7 Good Yes	

APEX Hall Environmental Laboratory: Leb Adress: Lob ANALYSIS REQUESTED ANALYSIS Recuested Laburatory: Leb Bac: Terra, of codes Laburatory: Leb Bac: Adress: Lob ANALYSIS Recuested ANALYSIS Recuested Analysis Othose Location Laburatory: Leb Back Laboratory: Leb Back Andress: Lob Analysis Recuested Cristic Back Image: Back Image: Ba												CHAIN OF CUSTODY RECOR
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Gunde Suit A Contact: A: Freeman Aztec Mm STAID Phone: SSS: 3975 Project Manager K. Summers POISO #: Sumpler's Signature Jamper's Name Sampler's Signature Sampler's Signature Not Type of Contacter. Not Type of Contacter. Yoj No Project Name Sampler's Signature Not Type of Contacter. Not Type of Contacter. Not Type of Contacter. Yoj No Project Name Mark of Sample(s) Signature Not Type of Contacter. Not Type of Contacter. Yoj No Project Name Mark of Sample(s) Signature Not Type of Contacter. Not Type of Contacter. Signature Mark Otic Contacter. The Regived by Signature Not Type of Contacter. Not Type of Contacter. Not Type of Contacter. Signature Dots. Rush	Office Location	6de	SK	10	Albergo	in	pure	- 1.	m.	8710	2	when received (C"):
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Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204



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

OrderNo.: 1812982

RE: MD-7 LOOP 2018

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 <u>www.hallenvironmental.com</u> 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,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Surr: Toluene-d8

Lab Order 1812982

Date Reported: 12/19/2018

12/18/2018 10:49:31 AM A56420

CLIENT:	APEX TITAN		C	lient Sample I	D: S-	4	
Project:	MD-7 LOOP 2018		(Collection Dat	e: 12	/17/2018 2:00:00 PN	1
Lab ID:	1812982-001	Matrix: SOII	_	Received Dat	e: 12	/18/2018 8:05:00 AM	Λ
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	THOD 300.0: ANIONS					Analy	st: MRA
Chloride		140	30	mg/Kg	20	12/18/2018 10:48:59	AM 42165
EPA MET	THOD 8015D MOD: GASO	LINE RANGE				Analy	vst: AG
Gasoline	e Range Organics (GRO)	ND	4.1	mg/Kg	1	12/18/2018 10:49:31	AM B56420
Surr: E	BFB	91.4	70-130	%Rec	1	12/18/2018 10:49:31	AM B56420
EPA MET	THOD 8015M/D: DIESEL R	ANGE ORGANICS				Analy	/st: JME
Diesel R	ange Organics (DRO)	ND	9.3	mg/Kg	1	12/18/2018 10:30:16	AM 42163
Motor Oi	il Range Organics (MRO)	ND	46	mg/Kg	1	12/18/2018 10:30:16	AM 42163
Surr: I	DNOP	78.9	50.6-138	%Rec	1	12/18/2018 10:30:16	AM 42163
EPA MET	THOD 8260B: VOLATILES	SHORT LIST				Analy	/st: 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
Ethylben	izene	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	4-Bromofluorobenzene	95.5	70-130	%Rec	1	12/18/2018 10:49:31	AM A56420

99.0

70-130

%Rec

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 9
	ND	Not Detected at the Reporting Limit	Р	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.

Lab Order 1812982 Date Reported: 12/19/2018

CLIENT:	APEX TITAN		Client	Sample II): S-2	2	
Project:	MD-7 LOOP 2018		Coll	ection Date	e: 12/	17/2018 2:05:00 PM	б м
Lab ID:	1812982-002	Matrix: SOIL	Ree	ceived Date	e: 12/	18/2018 8:05:00 AM	ĺ
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analys	st: MRA
Chloride		32	30	mg/Kg	20	12/18/2018 11:01:23	AM 42165

EPA METHOD 8015D MOD: GASOLINE RANG	E				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 ORG					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 LIS	бт				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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 9
	ND	Not Detected at the Reporting Limit	Р	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.

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

EPA METHOD 8260B: VOLATILES SHORT LIST

Diesel Range Organics (DRO)

Surr: DNOP

Benzene

Toluene Ethylbenzene

Xylenes, Total

Surr: Toluene-d8

Motor Oil Range Organics (MRO)

Surr: 4-Bromofluorobenzene

Lab Order **1812982** Date Reported: **12/19/2018**

Analyst: JME

Analyst: AG

12/18/2018 11:14:20 AM 42163

12/18/2018 11:14:20 AM 42163

12/18/2018 11:14:20 AM 42163

12/18/2018 11:46:46 AM A56420

12/18/2018 11:46:46 AM A56420

12/18/2018 11:46:46 AM A56420 12/18/2018 11:46:46 AM A56420

12/18/2018 11:46:46 AM A56420

12/18/2018 11:46:46 AM A56420

					April 1 and 1 and 1				
CLIENT:	APEX TITAN			Cl	ient Sam	ple ID	: S-3	3	
Project:	MD-7 LOOP 2018			(Collectio	n Date	: 12/	/17/2018 2:10:00 PM	
Lab ID:	1812982-003	Matrix:	SOIL		Receive	d Date	: 12/	/18/2018 8:05:00 AM	
Analyses		R	lesult	PQL	Qual U	J nits	DF	Date Analyzed	Batch
EPA MET	THOD 300.0: ANIONS							Analyst:	MRA
Chloride			160	30	r	ng/Kg	20	12/18/2018 11:13:47 AM	42165
EPA MET	HOD 8015D MOD: GASOL	INE RANGE						Analyst:	AG
Gasoline	Range Organics (GRO)		ND	4.2	r	ng/Kg	1	12/18/2018 11:46:46 AM	B56420
Surr: I	BFB		91.8	70-130	c	%Rec	1	12/18/2018 11:46:46 AM	I B56420

ND

ND

91.4

ND

ND

ND

ND

93.6

97.1

9.5

48

50.6-138

0.021

0.042

0.042

0.083

70-130

70-130

mg/Kg

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

1

1

1

1

1

1

1

1

1

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 Page 3 of 9
- 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.

Batch ID: 42165

WO#: **1812982**

Qual

RPDLimit

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19-Dec-18

Client: APEX TITAN MD-7 LOOP 2018 **Project:** TestCode: EPA Method 300.0: Anions Sample ID MB-42165 SampType: MBLK Client ID: PBS Batch ID: 42165 RunNo: 56417 SeqNo: 1887503 Units: mg/Kg Prep Date: 12/18/2018 Analysis Date: 12/18/2018 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Analyte Chloride ND 1.5 TestCode: EPA Method 300.0: Anions Sample ID LCS-42165 SampType: LCS

Prep Date:	12/18/2018	Analysis D	ate: 12	2/18/2018	S	SeqNo: 1	887504	Units: mg/K	g		
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			

RunNo: 56417

Qualifiers:

Client ID: LCSS

- * 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

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: **1812982**

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19-Dec-18

Client:	APEX TI	ΓAN OD 2010									
Project:	MD-7 LO	OP 2018									
Sample ID	MB-42163	SampTyp	e: ME	BLK	Test	Code: El	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	PBS	Batch I	D: 42	163	R	unNo: 5	6397				
Prep Date:	12/18/2018	Analysis Dat	e: 12	2/18/2018	S	eqNo: 1	885920	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	ND	10								
Motor Oil Rang	e Organics (MRO)	ND	50	10.00		95.6	50.6	138			
Suff: DNOP		9.0		10.00		95.0	50.0	150			
Sample ID	LCS-42163	SampTyp	be: LC	S	Test	Code: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch I	D: 42	163	R	unNo: 5	6397				
Prep Date:	12/18/2018	Analysis Dat	te: 12	2/18/2018	S	eqNo: 1	885921	Units: mg/K	g		
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	SampTyp	be: MS	5	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	S-4	Batch I	D: 42	163	F	RunNo: 5	6397				
Prep Date:	12/18/2018	Analysis Dat	te: 12	2/18/2018	S	eqNo: 1	886315	Units: mg/K	g		
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	1812982-001AMSE	SampTy	pe: MS	SD	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	S-4	Batch I	D: 42	163	F	RunNo: 5	6397				
Prep Date:	12/18/2018	Analysis Dat	te: 12	2/18/2018	S	SeqNo: 1	886316	Units: mg/K	g		
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	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	PBS	Batch I	D: 42	144	F	RunNo: 5	6397				
Prep Date:	12/17/2018	Analysis Da	te: 12	2/18/2018	S	SeqNo: 1	886799	Units: %Re	C		
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	SampTy	pe: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	LCSS	Batch I	D: 42	144	F	RunNo: 5	6397				
Prep Date:	12/17/2018	Analysis Da	te: 12	2/18/2018	S	SeqNo: 1	886800	Units: %Re	C		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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.
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Client:	APE	X TITAN									
Project:	MD-	7 LOOP 2018									
Sample ID	LCS-42144	SampTy	be: LC	s	Test	Code: El	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	LCSS	Batch I	D: 42	144	R	lunNo: 5	6397				
Prep Date:	12/17/2018	Analysis Da	te: 1	2/18/2018	S	eqNo: 1	886800	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.
- 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

WO#: **1812982** *19-Dec-18*

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APEX TITAN

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812982** *19-Dec-18*

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Project: MD-7 LO	OP 2018									
Sample ID 100ng Ics	SampTy	ype: LC	S	Test	Code: EF	PA Method	8260B: Volat	iles Short	List	
Client ID: LCSS	Batch	ID: A5	6420	R	unNo: 56	6420				
Prep Date:	Analysis Da	ate: 12	2/18/2018	S	eqNo: 18	886354	Units: mg/K	g		
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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batch	1D: A5	6420	F	lunNo: 5	6420				
Prep Date:	Analysis D	ate: 12	2/18/2018	S	eqNo: 1	886362	Units: mg/K	g		
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	SampT	уре: М	S	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	List	
Client ID: S-4	Batch	n ID: A5	6420	F	RunNo: 5	6420				
Prep Date:	Analysis D	ate: 1	2/18/2018	5	SeqNo: 1	886790	Units: mg/h	٢g		
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 1812982-001ams	d SampT	ype: M	SD	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	t List	
Client ID: S-4	Batch	h ID: AS	56420	F	RunNo: 5	6420				
Prep Date:	Analysis D	Date: 1	2/19/2018	S	SeqNo: 1	886791	Units: mg/ł	٨g		
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.
- 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: MD-7 LOOP 2018

Sample ID 1812982-001amsd	SampT	ype: MS	SD	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: S-4	Batch	n ID: A5	6420	F	RunNo: 5	6420				
Prep Date:	Analysis D	ate: 12	2/19/2018	S	SeqNo: 1	886791	Units: mg/k	(g		
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.
- 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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1812982**

19-Dec-18

Client:	APE
Project:	MD-

APEX TITAN MD-7 LOOP 2018

										the second se	
Sample ID	2.5ug gro Ics	SampT	ype: LC	s	Test	Code: EF	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	LCSS	Batch	ID: B5	6420	R	unNo: 50	6420				
Prep Date:		Analysis D	ate: 12	2/18/2018	S	eqNo: 18	886341	Units: mg/k	٢g		
Analuta		Popult	POI	SPK value	SPK Ref Val	%REC	Lowl imit	HighLimit	%RPD	RPDLimit	Qual
Analyte	o Organice (GPO)	23	5.0	25 00	0	92.0	70	130	, or al 2		
Surr BER	ge organics (orco)	460	0.0	500.0	Ū	92.7	70	130			
		100						141-50-50			
Sample ID	rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	PBS	Batch	n ID: B5	6420	F	RunNo: 5	6420				
Prep Date:		Analvsis D	ate: 12	2/18/2018	S	SegNo: 1	886342	Units: mg/k	٢g		
Tiop Date.		,				NDEO	1	L Karla L Sana M		DDDI imit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ne Organics (GRO)	ND	5.0								
	go olganico (olto)					04.0	70	120			
Surr: BFB	go olgamos (olto)	470		500.0		94.0	70	130			
Surr: BFB	1812982-002ams	470 SampT	уре: М	500.0	Tes	94.0 tCode: E	70 PA Method	130 8015D Mod:	Gasoline	Range	
Surr: BFB Sample ID Client ID:	1812982-002ams S-2	470 SampT Batch	ype: M \$	500.0 5 6420	Tes	94.0 tCode: El RunNo: 5	70 PA Method 6420	130 8015D Mod:	Gasoline	Range	
Surr: BFB Sample ID Client ID: Prep Date:	1812982-002ams S-2	470 SampT Batch Analysis D	ype: MS h ID: B5 Date: 12	500.0 5 6420 2/19/2018	Tes F	94.0 tCode: El RunNo: 5 SeqNo: 1	70 PA Method 6420 886868	130 8015D Mod: Units: mg/l	Gasoline <g< td=""><td>Range</td><td></td></g<>	Range	
Surr: BFB Sample ID Client ID: Prep Date:	1812982-002ams S-2	470 SampT Batch Analysis D	Type: MS h ID: B5 Date: 12	500.0 5 66420 2/19/2018	Tes F SDK Bef Val	94.0 tCode: El RunNo: 5 SeqNo: 1	70 PA Method 6420 886868	130 8015D Mod: Units: mg/l	Gasoline Kg	Range RPDI imit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte	1812982-002ams S-2	470 SampT Batch Analysis D Result	Type: MS h ID: B5 Date: 12 PQL	500.0 5 66420 2/19/2018 SPK value	Tes F SPK Ref Val	94.0 tCode: El RunNo: 5 SeqNo: 1 %REC 90.3	70 PA Method 6420 886868 LowLimit 68.2	130 8015D Mod: Units: mg/l HighLimit 135	Gasoline Kg %RPD	Range RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	1812982-002ams S-2 ge Organics (GRO)	470 SampT Batch Analysis D Result 15	Type: MS h ID: B5 Date: 12 PQL 3.3	500.0 5 66420 2/19/2018 SPK value 16.42 328 3	Tes F SPK Ref Val 0	94.0 tCode: El RunNo: 5 SeqNo: 1 %REC 90.3 92.3	70 PA Method 6420 886868 LowLimit 68.2 70	130 8015D Mod: Units: mg/l HighLimit 135 130	Gasoline Kg %RPD	Range RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Ran Surr: BFB	1812982-002ams S-2 ge Organics (GRO)	470 SampT Batch Analysis D Result 15 300	ype: MS h ID: B5 Date: 12 PQL 3.3	500.0 56420 2/19/2018 SPK value 16.42 328.3	Tes F SPK Ref Val 0	94.0 tCode: El RunNo: 5 SeqNo: 1 %REC 90.3 92.3	70 PA Method 6420 886868 LowLimit 68.2 70	130 8015D Mod: Units: mg/l HighLimit 135 130	Gasoline Kg %RPD	Range RPDLimit	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	1812982-002ams S-2 ge Organics (GRO) 1812982-002amso	470 SampT Batch Analysis D Result 15 300	Type: MS h ID: B5 Date: 1 20 20 20 20 20 20 20 20 20 20 20 20 20	500.0 66420 2/19/2018 SPK value 16.42 328.3 SD	Tes F SPK Ref Val 0 Tes	94.0 tCode: E RunNo: 5 SeqNo: 1 %REC 90.3 92.3 tCode: E	70 PA Method 6420 886868 LowLimit 68.2 70 PA Method	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod:	Gasoline Kg %RPD Gasoline	Range RPDLimit Range	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	1812982-002ams S-2 ge Organics (GRO) 1812982-002amsc S-2	470 SampT Batch Analysis D Result 15 300 d SampT Batch	Type: MS h ID: B5 Date: 1 PQL 3.3 Type: MS h ID: B5	500.0 56420 2/19/2018 SPK value 16.42 328.3 5D 56420	Tes F SPK Ref Val 0 Tes F	94.0 tCode: El RunNo: 5 SeqNo: 1 %REC 90.3 92.3 tCode: E RunNo: 5	70 PA Method 6420 886868 LowLimit 68.2 70 PA Method 6420	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod:	Gasoline Kg %RPD Gasoline	Range RPDLimit Range	Qual
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date:	1812982-002ams S-2 ge Organics (GRO) 1812982-002amso S-2	470 SampT Batch Analysis D Result 15 300 d SampT Batch Analysis D	Type: MS h ID: B5 Date: 1 2 3.3 Type: MS h ID: B5 Date: 1 2	500.0 56420 2/19/2018 SPK value 16.42 328.3 SD 56420 2/19/2018	Tes F SPK Ref Val 0 Tes F	94.0 tCode: El RunNo: 5 SeqNo: 1 <u>%REC</u> 90.3 92.3 tCode: E RunNo: 5 SeqNo: 1	70 PA Method 6420 886868 LowLimit 68.2 70 PA Method 6420 886869	130 8015D Mod: Units: mg/l HighLimit 135 130 8015D Mod: Units: mg/l	Gasoline Kg Gasoline Kg	Range RPDLimit Range	Qual
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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
- Page 9 of 9

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Envir TEL: 505- Website	ronmental Analy: 490 Albuquerq -345-3975 FAX: 2: www.hallenvir	is Laboratory 1 Hawkins Nl ue, NM 8710 505-345-410 onmental.com	y 9 San 7	nple Log-In C	Check List
Client Name: APEX AZTEC	Work Order	Number: 1812	2982		RcptNo	: 1
Received By: Isaiah Ortiz	12/18/2018 8:	:05:00 AM		I-0	¥	
Completed By: Anne Thorne	12/18/2018 8:	:11:18 AM		anne Hr.	~	
Reviewed By: DAD 12/12	/18					
Labeled by: AF	12/15/18					
Chain of Custody	12/18/18					
1. Is Chain of Custody complete	?	Yes		No 🗌	Not Present	
2. How was the sample delivere	d?	Cou	ier			
Log In 3. Was an attempt made to cool	the samples?	Yes	V	No 🗌		
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 in	ndicated test(s)?	Yes	\checkmark	No 🗌		
7. Are samples (except VOA and	ONG) properly preserved?	Yes	\checkmark	No 🗌		
8. Was preservative added to bo	ttles?	Yes		No 🖌	NA	
9. VOA vials have zero headspa	ce?	Yes		No	No VOA Vials 🗹	,
10. Were any sample containers	received broken?	Yes		No 🖌		-70
			_		bottles shecked	12/18/18
11. Does paperwork match bottle	labels?	Yes	\checkmark	No 🗌	for pH:	>12 unless noted)
12 Are matrices correctly identifie	d on Chain of Custodv?	Yes	\checkmark	No 🗆	Adjusted?	
13. Is it clear what analyses were	requested?	Yes	~	No 🗌		
14. Were all holding times able to (If no, notify customer for auth	be met? orization.)	Yes	\checkmark	No 🗌	Checked by:	
Special Handling (if applic	able)					
15. Was client notified of all discr	epancies with this order?	Yes		No 🗌	NA 🗸	
Person Notified:		Date				
By Whom:		Via: eM	ail 🗌 Pho	ne 🗌 Fax	In Person	
Regarding:						
Client Instructions:						
16. Additional remarks:						-
CUSTODY SEALS INT	ACT ON SOIL JARS/at 12/18/	18				
17. <u>Cooler Information</u>	1. Fallen bladet i sjoel of ferste strike som af at state to state. De state state of		and the second states of th	uisii iisii ji dhishaaraa	4	
Cooler No Temp °C	Condition Seal Intact Sea	I NO Seal D	ate Si	gned By		
2 2.4 G	pod Yes		(1,2)* (2) (1,4)* Abase of Gamma and course a			

13	1	0	
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I ugo		VI.	

			CHAIN OF CUSTODY RECORD
APEX Office Location Celle S L'O Carande Su; F A Arfec NM 874100	Hell Environmentel Laboratory: Lob Address: 4901 Howkins NE Albuquerque Nm 87/29 Contact: A Freeman Phone: 505-345-3975	ANALYSIS REQUESTED	Lab use only Due Date: Temp. of coolers when received (C°): 7.1°C 1 2×3 4 5 Page_(of
Sampler's Name CDAPONTI Proj. No. 225040112545 MD-720	Sampler's Signature	A C C C C C C C C C C C C C C C C C C C	
Matrix Date Time $\begin{bmatrix} C & G \\ m & r \\ p & b \end{bmatrix}$ Identifying M $S = \frac{1}{17}\frac{1}{18}$ $\frac{14}{1000}$ 0 $S = \frac{1}{2}$ $S = \frac{1}{17}\frac{1}{18}$ $\frac{1405}{1405}$ 9 $S = \frac{3}{2}$ $S = \frac{3}{17}\frac{1}{17}\frac{1}{18}$ $\frac{1410}{1915}$ 9 $S = \frac{3}{2}$ $S = \frac{3}{17}\frac{1}{17}\frac{1}{18}$ $\frac{1915}{1910}$ $\frac{9}{19}$ $S = \frac{5}{2}$	arks of Sample(s) I_{IIII} $I_{IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII$		Lab Sample ID (Lab Use Only) /8/2982-00/
Turn around time Normal 25% Rush Relinquished by (Signature) Date: With Wate Date: Relinquished by (Signature) Date: Matrix WW - Wastewater W - Water	50% Rush 100% Rush 12~18-18 Time: Received by: (Signature) Date: 32 Amount of the second secon	Time: NOTES: 1532 Time: Pay Kry # R. Pay	B 21200 8 915 Seme Day 12-18-18)

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

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

Responsible Party

MAR 2 1 2010

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?	
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?	If YES, for what reason(s) does the responsible party consider	this a major release?	1
If YES, was immediate no	tice given to the OCD? By whom? To whom? When and by wh	at means (phone, en	nail, 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.

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 Signature: Jon F. Hudd	Title: Director, Field Environmental 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	1110 OD
F	20	31N	8W	San Juan	NMUCD

Surface Owner: State Federal Tribal Private (Name: James R. Erbes

Nature and Volume of Release

DISTRICT III

MAR 2 1 2019

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.

Form C-141 Page 2 State of New Mexico Oil Conservation Division

Incident ID	E
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:	Title: Director, Field Environmental	
Signature: / N. Teuks	Date: 3 - 11 - 19	
email: jefields@eprod.com	Telephone:	
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: COO; ronmontal Operatist	



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

umm

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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Appendix B:	Executed	C-138 Solid Waste Acceptance Form
Appendix C:	Photogra	phic Documentation
Appendix D:	Table 1 - S	Soil Analytical Summary
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E ENSOLUM

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						
	Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg						
< 50 foot	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg						
Due to	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg						
Watercourse	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.



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APPENDIX A

Figures









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

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

Form C-138 Energy Minerals and Natural Resources 97057-0966 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
 Source and Description of Waste: Hydrocarbon impacted soil/sludge from remediation activities associated with a natural gas pipeline release. Estimated Volume80yd/ bbls Known Volume (to be entered by the operator at the end of the haul)Z dfd³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <u>PRINT & SIGN NAME</u> 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 I Monthly I 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, <u>12-20-18</u> , representative for <u>Enterprise Field Services. LLC</u> authorize Envirotech, Inc. to Generator Signature complete the required testing/sign the Generator Waste Testing Certification.
I, <u>Gree Crabtree</u> , representative for <u>Envirotech. Inc.</u> 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, Frado 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:
Waste Acceptance Status:
PRINT NAME: Gives Crabbre TITLE: Enviro Managen DATE: 12/21/18 SIGNATURE: Management Facility Authorized Agent TELEPHONE NO.: 505-632-0615



APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC Closure Report MB-18 (2018) Pipeline Release Ensolum Project No. 05A1226034



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.



SITE PHOTOGRAPHS

Enterprise Field Services, LLC Closure Report MB-18 (2018) Pipeline Release Ensolum Project No. 05A1226034



Photograph 4

View of the final excavation after initial restoration.





APPENDIX D

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1 MB-18 (2018) Pipeline Release SOIL ANALYTICAL SUMMARY Sample I.D. Date Sample Type Sample Depth Benzene Toluene Ethylbenzene **Xylenes** Total BTEX TPH TPH TPH Combined Chloride **C-Composite** (feet) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) GRO DRO MRO TPH (mg/kg) G - Grab GRO/DRO/MRO (mg/kg) (mg/kg) (mg/kg) (mg/kg) New Mexico Energy, Mineral & Natural Resources Department, Oil 10 NE NE NE 50 100 600 **Conservation Division, Closure Criteria** Stockpile Composite Soil Sample SP-1 12.20.18 С 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 С 0 to 5 < 0.017 < 0.034 < 0.034 <0.068 ND <3.4 <9.6 <48 ND <30 S-2 12.20.18 С 0 to 5 < 0.019 < 0.037 < 0.037 < 0.074 ND <3.7 <9.7 <49 ND <30 S-3 12.20.18 С 0 to 5 < 0.018 < 0.037 < 0.037 < 0.073 ND <3.7 <9.6 <48 ND <30 S-4 12.20.18 С 5 < 0.018 < 0.035 < 0.035 < 0.070 ND <3.5 13 <49 <30 13 S-5 12.20.18 С 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

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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,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1812B37 Date Reported: 12/26/2018

~~~~~											
CLIENT:	APEX TITAN		Cl	ient Sample II	): S-	1					
<b>Project:</b>	MB 18 6 inch	Collection Date: 12/19/2018 1:00:00 PM									
Lab ID:	1812B37-001	Matrix: SOIL		Received Date	e: 12	/20/2018 8:00:00 AM					
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch				
EPA MET	THOD 300.0: ANIONS					Analys	t: MRA				
Chloride		ND	30	mg/Kg	20	12/20/2018 11:43:41 A	M 42231				
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: Irm				
Diesel R	ange Organics (DRO)	ND	9.6	mg/Kg	1	12/20/2018 10:16:10 A	M 42227				
Motor Oi	I Range Organics (MRO)	ND	48	mg/Kg	1	12/20/2018 10:16:10 A	M 42227				
Surr: [	ONOP	88.5	50.6-138	%Rec	1	12/20/2018 10:16:10 A	M 42227				
EPA MET	HOD 8015D: GASOLINE RANGE	E				Analys	t: NSB				
Gasoline	Range Organics (GRO)	ND	3.4	mg/Kg	1	12/20/2018 9:41:45 AM	1 R56489				
Surr: E	3FB	91.7	73.8-119	%Rec	1	12/20/2018 9:41:45 AN	R56489				
EPA MET	HOD 8021B: VOLATILES					Analys	t: NSB				
Benzene	L.	ND	0.017	mg/Kg	1	12/20/2018 9:41:45 AM	1 R56489				
Toluene		ND	0.034	mg/Kg	1	12/20/2018 9:41:45 AM	1 R56489				
Ethylben	zene	ND	0.034	mg/Kg	1	12/20/2018 9:41:45 AM	1 R56489				
Xylenes,	Total	ND	0.068	mg/Kg	1	12/20/2018 9:41:45 AM	R56489				
Surr: 4	4-Bromofluorobenzene	95.1	80-120	%Rec	1	12/20/2018 9:41:45 AM	R56489				

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Bla	ank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range	
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Daga 1 of 5
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	age 1 01 5
	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 a	is specified

Hall	Enviro	nmental	Analysis	Laboratory.	, Inc.
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WO#: 1812B37

26-Dec-18

Client: Project: APEX TITAN MB 18 6 inch

Sample ID MB-42231	SampType: mbl	lk	TestCode: EPA Method 300.0: Anions						
Client ID: PBS	Batch ID: 422	31	R	RunNo: 5	6495				
Prep Date: 12/20/2018	Analysis Date: 12/	20/2018	S	eqNo: 1	890343	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND 1.5								
Sample ID LCS-42231	SampType: Ics		Test	tCode: El	PA Method	300.0: Anion	s		
Sample ID LCS-42231 Client ID: LCSS	SampType: Ics Batch ID: 422	31	Test	tCode: El	PA Method 6495	300.0: Anion	5		
Sample ID LCS-42231 Client ID: LCSS Prep Date: 12/20/2018	SampType: Ics Batch ID: 422; Analysis Date: 12/	31 20/2018	Test R S	tCode: EF RunNo: 50 SeqNo: 11	PA Method 6495 890344	300.0: Anion Units: mg/K	s g		
Sample ID LCS-42231 Client ID: LCSS Prep Date: 12/20/2018 Analyte	SampType: Ics Batch ID: 422 Analysis Date: 12/ Result PQL	<b>31</b> 20/2018 SPK value	Test R S SPK Ref Val	tCode: EF RunNo: 56 SeqNo: 11 %REC	PA Method 6495 890344 LowLimit	<b>300.0: Anion</b> Units: <b>mg/K</b> HighLimit	s g %RPD	RPDLimit	Qual

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

Page 2 of 5

Hall	Environmental	Analysis	Laboratory,	Inc.
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4.2

4.941

Client:	APEX TI	TAN										
Project:	MB 18 6	inch										
Sample ID	LCS-42227	Samp	Туре:	LCS		Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Bato	h ID:	42227		F	RunNo: 5	6487				
Prep Date:	12/20/2018	Analysis	Date:	12/20/201	18	S	eqNo: 1	889406	Units: mg/l	۲g		
Analyte		Result	PQI	L SPK v	alue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	45	1	10 5	0.00	0	89.3	70	130			
Surr: DNOP		4.4		5	.000		87.1	50.6	138			
Sample ID	MB-42227	Samp	Туре:	MBLK		Test	Code: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Bato	h ID:	42227		R	unNo: 5	6487				
Prep Date:	12/20/2018	Analysis	Date:	12/20/201	18	S	eqNo: 1	889407	Units: mg/k	٢g		
Analyte		Result	PQI	L SPK v	alue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	ND	1	0								
Motor Oil Rang	e Organics (MRO)	ND	5	50								
Surr: DNOP		9.7		1	0.00		97.2	50.6	138			
Sample ID	1812B37-001AMS	Samp	Type: I	MS		Test	Code: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	S-1	Bato	h ID: 🧃	42227		R	unNo: 5	6487				
Prep Date:	12/20/2018	Analysis I	Date:	12/20/201	8	S	eqNo: 1	891023	Units: mg/k	٢g		
Analyte		Result	PQL	_ SPK v	alue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	65	1	0 49	9.95	1.946	126	53.5	126			S
Surr: DNOP		6.1		4.	.995		123	50.6	138			
Sample ID	1812B37-001AMS	Samp	Туре: Г	MSD		Test	Code: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID:	S-1	Batc	h ID: 4	42227		R	unNo: 5	6487				
Prep Date:	12/20/2018	Analysis I	Date:	12/20/201	8	S	eqNo: 1	891024	Units: mg/k	٢g		
Analyte		Result	PQL	_ SPK v	alue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	44	9.	9 49	9.41	1.946	84.6	53.5	126	39.3	21.7	R

#### Qualifiers:

Surr: DNOP

* 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

85.5

50.6

138

0

0

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

WO#: 1812B37

26-Dec-18

Page 3 of 5

## Hall Environmental Analysis Laboratory, Inc.

1000

Client: Project:	APEX T MB 18 6	FITAN 6 inch						
Sample ID	MB-42210	SampType: MBLK	TestCode:	EPA Method	8015D: Gasol	ine Range	e	
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	e SPK Ref Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		880 100	0 87.8	73.8	119			
Sample ID	LCS-42210	SampType: LCS	TestCode:	EPA Method	8015D: Gasol	ine Range	e	
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	e SPK Ref Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

1000

104

73.8

119

Surr: BFB

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1812B37

26-Dec-18

Page 4 of 5

## Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN
Project: MB 18 6 inch
Sample ID MB-42210 Sa

TestCade: EDA Matha

Sample ID MB-42210	SampType: MBLK	TestCode: I	EPA Method 8021B: V	olatiles	
Client ID: PBS	Batch ID: 42210	RunNo:	56489		
Prep Date: 12/19/2018	Analysis Date: 12/20/20	018 SeqNo:	1889786 Units: %	Rec	
Analyte	Result PQL SPK	value SPK Ref Val %REC	LowLimit HighLim	it %RPD RPI	DLimit Qual
Surr: 4-Bromofluorobenzene	0.92	1.000 91.6	80 12	0	
Sample ID LCS-42210	SampType: LCS	TestCode: I	EPA Method 8021B: V	platiles	
Sample ID LCS-42210 Client ID: LCSS	SampType: LCS Batch ID: 42210	TestCode: I RunNo:	EPA Method 8021B: V 56489	olatiles	
Sample ID LCS-42210 Client ID: LCSS Prep Date: 12/19/2018	SampType: LCS Batch ID: 42210 Analysis Date: 12/20/20	TestCode: I RunNo: 018 SeqNo:	EPA Method 8021B: V 56489 1889787 Units: %	olatiles Rec	
Sample ID LCS-42210 Client ID: LCSS Prep Date: 12/19/2018 Analyte	SampType: <b>LCS</b> Batch ID: <b>42210</b> Analysis Date: <b>12/20/20</b> Result PQL SPK	TestCode: I RunNo: 018 SeqNo: value SPK Ref Val %REC	EPA Method 8021B: V 56489 1889787 Units: % LowLimit HighLim	<b>Diatiles</b> Rec it %RPD RPI	DLimit Qual

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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

WO#: 1812B37

26-Dec-18

### Page 5 of 5

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environment Ai TEL: 505-345-397 Website: www.i	al Analysis Labo 4901 Hawki Ibuquerque, NM 75 FAX: 505-345 hallenvironmenta	ratory ins NE 87109 <b>San</b> -4107 al.com	nple Log-In Check List	
Client Name: APEX AZTEC	Work Order Numbe	er: 1812B37		RcptNo: 1	
Received By: Anne Thome	12/20/2018 8:00:00	AM	anne Hr	~	
Completed By: Anne Thorne Reviewed By: DAD 12/20/18 Labulus by: Ot 12/20/18	12/20/2018 8:18:00 A	AM	Anne Hr.	~	
<u>Chain of Custody</u>					
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 🗌		
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌		
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) proper	ly 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 broke	en?	Yes	No 🗹		٦
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	# of preserved bottles checked for pH: (<2 or >12 unless noted)	
12, Are matrices correctly identified on Chain of	Custody?	Yes 🖌	No 🗌	Adjusted?	
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 🗌	Checked by:	
Special Handling (if applicable)	×				
15. Was client notified of all discrepancies with	this order?	Yes	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:	Date Via:			☐ In Person	
16. Additional remarks: UStudy 17. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition Su	Seal Intact	et on Seal Date	Sal Ja- Signed By	1 12/2018	
5 1.0 Good Yes	5				
An and the second s			a 11 cure and cure and cure cure cure cure cure and cure	I	

			CHAIN OF CUSTODY RECO
	plail	Environment	ANALYSIS / Lab use only
	Laboratory: Lab		REQUESTED / '' / / / / / Due Date:
IAPEX	Address: 4901 H	Low Kins NE	
Office Location 606 S Roio	Albunnerau	e Nm 87100	Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail of coolers       Image: mail of coolers     Image: mail of coolers     Image: mail of coolers     Image: mail o
Cocarde S. + A	Contact: A Film	eman	$\frac{1}{124}$
Artee Nm \$7410	Phone: 505 7	45 3375	
Project Manager K Summers	PO/SO #		R R R R R R R R R R R R R R R R R R R
Sampler's Name	Sampler's Signature		
CAPAL	n Att		
Project Name		No/Type of Containers	
725040112549 mB-18	Ginch		W W W W
Matrix Date Time C G I Identifying Mar	ks of Sample(s)	OA ass ar ass	
p b		> 4- 0 - 3-	Lab Sample ID (Lab Use Only)
5 B2 19 18 1300 K S-1	0 5	1	XEX 1812B37-001
Turn around time 🔲 Normal 🔲 25% Rush 🗆	50% Rush 😭 100% Rush		
Relinquished by (Signature) Date: T	ime: Received by: (Signa	ture) Date:	Time: NOTES: # RR21200
Relinquished by (Signature) Date: T	ime: Received by Signa	ture) Date:	Time: Dry Ton Long
Relinguished by (Signature) Pater	ime: Hacquird hat (Simo	12/19/15	LITOO PART AFE H 117 CO17
hught 12/19/18 19	UT linn	12/20	18 U800
Relinguished by (Signature) Date: T	ime: Received by: (Signa	ture) Date:	Time:
Matrix WW - Wastewater W - Water S	- Soil SD - Solid L - Liquid	A - Air Bag C - 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

## 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

OrderNo.: 1812C52

Dear Kyle Summers:

RE: MB 18 6 inch

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,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** 

## Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

Lab Order 1812C52 Date Reported: 12/26/2018

12/21/2018 9:54:27 AM C56527

CLIENT:	APEX TITAN		Cl	ient Sample II	<b>):</b> S-2	2	
Project:	MB 18 6 inch		(	Collection Date	e: 12	/20/2018 1:00:00 PM	
Lab ID:	1812C52-001	Matrix: SOIL		Received Date	e: 12	/21/2018 8:00:00 AM	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analys	MRA
Chloride		ND	30	mg/Kg	20	12/21/2018 11:39:40 A	M 42261
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	: Irm
Diesel Ra	ange Organics (DRO)	ND	9.7	mg/Kg	1	12/21/2018 10:29:44 A	M 42255
Motor Oi	Range Organics (MRO)	ND	49	mg/Kg	1	12/21/2018 10:29:44 A	M 42255
Surr: [	DNOP	91.7	50.6-138	%Rec	1	12/21/2018 10:29:44 A	M 42255
EPA MET	HOD 8015D: GASOLINE RANGE					Analys	NSB
Gasoline	Range Organics (GRO)	ND	3.7	mg/Kg	1	12/21/2018 9:54:27 AN	A56527
Surr: E	3FB	94.0	73.8-119	%Rec	1	12/21/2018 9:54:27 AN	A56527
EPA MET	HOD 8021B: VOLATILES					Analys	: 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 AN	C56527
Ethylben	zene	ND	0.037	mg/Kg	1	12/21/2018 9:54:27 AN	C56527
Xylenes,	Total	ND	0.074	mg/Kg	1	12/21/2018 9:54:27 AN	C56527

104

80-120

%Rec

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation lim

- Р Sample pH Not In Range
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- od Blank
- mits Page 1 of 9
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

**Analytical Report** Lab Order 1812C52

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/26/2018

CLIENT:	APEX TITAN			С	lient Sa	ample II	<b>D:</b> S-3	3		
<b>Project:</b>	MB 18 6 inch				Collect	ion Dat	<b>e:</b> 12/	/20/2018 1:0	5:00 PM	
Lab ID:	1812C52-002	Matrix: S	SOIL		Recei	ved Dat	<b>e:</b> 12/	/21/2018 8:0	0:00 AM	[
Analyses		Res	sult	PQL	Qual	Units	DF	Date Analy	zed	Batch
EPA MET	THOD 300.0: ANIONS								Analys	st: MRA
Chloride			ND	30		mg/Kg	20	12/21/2018	11:52:05 A	M 42261
EPA MET	THOD 8015M/D: DIESEL RANGE	ORGANICS	5						Analys	st: Irm
Diesel R	ange Organics (DRO)		ND	9.6		mg/Kg	1	12/21/2018	10:53:54 A	AM 42255
Motor Oi	il Range Organics (MRO)		ND	48		mg/Kg	1	12/21/2018	10:53:54 A	M 42255
Surr: I	DNOP	ç	90.7	50.6-138		%Rec	1	12/21/2018	10:53:54 A	M 42255
EPA MET	THOD 8015D: GASOLINE RANGE								Analys	st: NSB
Gasoline	e Range Organics (GRO)		ND	3.7		mg/Kg	1	12/21/2018	10:17:10 A	M A56527
Surr: I	BFB	ç	91.3	73.8-119		%Rec	1	12/21/2018	10:17:10 A	M A56527
EPA MET	THOD 8021B: VOLATILES								Analys	st: NSB
Benzene	•		ND	0.018		mg/Kg	1	12/21/2018	10:17:10 A	AM C56527
Toluene			ND	0.037		mg/Kg	1	12/21/2018	10:17:10 A	M C56527
Ethylben	izene		ND	0.037		mg/Kg	1	12/21/2018	10:17:10 A	M C56527
Xylenes,	Total		ND	0.073		mg/Kg	1	12/21/2018	10:17:10 A	M C56527
Surr: 4	4-Bromofluorobenzene		101	80-120		%Rec	1	12/21/2018	10:17:10 A	M C56527

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 9
	ND	Not Detected at the Reporting Limit	Р	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

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/26/2018

CLIENT:	APEX TITAN		CI	ient Sample II	): S-	4	
<b>Project:</b>	MB 18 6 inch		(	Collection Dat	e: 12	/20/2018 1:10:00 PM	[
Lab ID:	1812C52-003	Matrix: SOIL		Received Date	e: 12	/21/2018 8:00:00 AM	1
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analy	st: MRA
Chloride		ND	30	mg/Kg	20	12/21/2018 12:04:29	PM 42261
EPA MET	HOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analy	st: Irm
Diesel R	ange Organics (DRO)	13	9.8	mg/Kg	1	12/21/2018 11:18:15	AM 42255
Motor Oi	I 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 MET	HOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline	Range Organics (GRO)	ND	3.5	mg/Kg	1	12/21/2018 10:40:01	AM A56527
Surr: E	3FB	88.1	73.8-119	%Rec	1	12/21/2018 10:40:01	AM A56527
EPA MET	HOD 8021B: VOLATILES					Analy	st: 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
Ethylben	zene	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	I-Bromofluorobenzene	97.5	80-120	%Rec	1	12/21/2018 10:40:01	AM C56527

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Dags 2 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	matrix W Sample container temperature is out of limit a	

Analytical Report

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 1812C52 Date Reported: 12/26/2018

CLIENT:	APEX TITAN		Cl	ient Sample II	): S-:	5	
<b>Project:</b>	MB 18 6 inch		(	Collection Date	e: 12	/20/2018 1:15:00 PM	[
Lab ID:	1812C52-004	Matrix: SOIL		Received Date	e: 12	/21/2018 8:00:00 AN	1
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	THOD 300.0: ANIONS					Analy	st: MRA
Chloride		ND	30	mg/Kg	20	12/21/2018 12:16:53	PM 42261
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analy	st: Irm
Diesel R	ange Organics (DRO)	ND	9.9	mg/Kg	1	12/21/2018 11:42:33	AM 42255
Motor Oi	I Range Organics (MRO)	ND	50	mg/Kg	1	12/21/2018 11:42:33	AM 42255
Surr: [	ONOP	92.3	50.6-138	%Rec	1	12/21/2018 11:42:33	AM 42255
EPA MET	HOD 8015D: GASOLINE RANGE	E				Analy	st: NSB
Gasoline	Range Organics (GRO)	ND	3.7	mg/Kg	1	12/21/2018 11:02:47	AM A56527
Surr: E	3FB	88.9	73.8-119	%Rec	1	12/21/2018 11:02:47	AM A56527
EPA MET	THOD 8021B: VOLATILES					Analy	st: 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
Ethylben	zene	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	4-Bromofluorobenzene	97.5	80-120	%Rec	1	12/21/2018 11:02:47	AM C56527

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Bl	lank
	<ul><li>D Sample Diluted Due to Matrix</li><li>H Holding times for preparation or analysis exceeded</li></ul>		Е	Value above quantitation range	
			J	Analyte detected below quantitation limits	Dage 1 of 0
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 age 4 01 9
	<ul><li>PQL Practical Quanitative Limit</li><li>S % Recovery outside of range due to dilution or matrix</li></ul>		RL	Reporting Detection Limit	
			W	Sample container temperature is out of limit a	as specified

Analytical Report Lab Order 1812C52

## Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Lab Order 1812C52 Date Reported: 12/26/2018

12/21/2018 11:25:34 AM C56527

CLIENT:	APEX TITAN		Cl	ient Sample II	): SP	-1						
<b>Project:</b>	MB 18 6 inch	Collection Date: 12/20/2018 1:20:00 PM										
Lab ID:	1812C52-005	Matrix: SOIL		Received Date	ved Date: 12/21/2018 8:00:00 AM							
Analyses		Result	PQL	Qual Units	DF	Date Analyzed Batch						
EPA MET	HOD 300.0: ANIONS					Analyst: MRA						
Chloride		ND	30	mg/Kg	20	12/21/2018 12:29:17 PM 42261						
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: Irm						
Diesel Ra	ange 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: D	NOP	93.6	50.6-138	%Rec	1	12/21/2018 12:06:55 PM 42255						
EPA MET	HOD 8015D: GASOLINE RANGI	E				Analyst: NSB						
Gasoline	Range Organics (GRO)	ND	4.0	mg/Kg	1	12/21/2018 11:25:34 AM A56527						
Surr: B	FB	83.6	73.8-119	%Rec	1	12/21/2018 11:25:34 AM A56527						
EPA MET	HOD 8021B: VOLATILES					Analyst: NSB						

ND

ND

ND

ND

92.1

0.020

0.040

0.040

0.080

80-120

mg/Kg 1

mg/Kg 1

mg/Kg 1

mg/Kg 1

1

%Rec

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 9
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL Practical Quanitative Limit			Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Env	vironmental	Analysis	Laboratory,	Inc.
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WO#: 1812C52

26-Dec-18

Client: Project:	APEX 1 MB 18	TIAN 6 inch							
Froject.	IVID 18								
Sample ID	MB-42261	SampType	mblk	Test	Code: EPA Method	300.0: Anions			
Client ID:	PBS	Batch ID:	42261	R	unNo: <b>56535</b>				
Prep Date:	12/21/2018	Analysis Date:	12/21/2018	Se	eqNo: 1892359				
Analyte		Result P	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit %	RPD	RPDLimit	Qual
Chloride		ND	1.5						
Sample ID	LCS-42261	SampType	lcs	Test	Code: EPA Method	300.0: Anions			
Client ID:	LCSS	Batch ID:	42261	R	unNo: <b>56535</b>				
Prep Date:	12/21/2018	Analysis Date:	12/21/2018	S	eqNo: <b>1892360</b>	Units: <b>mg/Kg</b>			
Analyte		Result P	QL 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.

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
- Page 6 of 9

## Hall Environmental Analysis Laboratory, Inc.

Client:	APEX TI	ΓΑΝ									
Project:	MB 18 6	inch									
Sample ID	LCS-42255	SampT	ype: L	cs	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batc	h ID: 4:	2255	F	RunNo: 5	6487				
Prep Date:	12/21/2018	Analysis D	)ate: 1	2/21/2018	S	SeqNo: 1	891052	Units: mg/ł	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Or Surr: DNOP	rganics (DRO)	43 4.3	10	50.00 5.000	0	86.8 86.1	70 50.6	130 138			
Sample ID	WB-42255	SampT	уре: М	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Batc	n ID: 42	2255	F	RunNo: 5	6487				
Prep Date:	12/21/2018	Analysis E	)ate: 1	2/21/2018	S	SeqNo: 1	891053	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Or	rganics (DRO)	ND	10								
Motor Oil Range	Organics (MRO)	ND	50								
Surr: DNOP		8.7		10.00		87.3	50.6	138			
Sample ID 1	1812C52-005AMS	SampT	ype: M	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	SP-1	Batcl	n ID: 42	2255	F	RunNo: 5	6487				
Prep Date:	12/21/2018	Analysis D	)ate: 1	2/21/2018	S	SeqNo: 1	891064	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Or	ganics (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 1	1812C52-005AMSE	) SampT	уре: М	SD	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	SP-1	Batch	n ID: 42	2255	R	unNo: 5	6487				
Prep Date:	12/21/2018	Analysis D	ate: 1	2/21/2018	S	eqNo: 1	891065	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Or	ganics (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.
- 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

Page 7 of 9

WO#: 1812C52 26-Dec-18

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1812C52

Page 8 of 9

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 %RPD Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit **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 SPK value Analyte Result POL 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 73.8 112 119 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

.m

#### 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 TI	TAN									
Project:	MB 18 6	inch									
Sample ID	RB	Tes	TestCode: EPA Method 8021B: Volatiles								
Client ID:	PBS	Batc	h ID: C5	56527	F	RunNo: 5	6527				
Prep Date:		Analysis [	Date: 12	2/21/2018	5	SeqNo: 1	892685	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-Brom	nofluorobenzene	1.1		1.000		106	80	120			
Sample ID	100NG BTEX LCS	Samp	Type: LC	s	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: C5	6527	F	RunNo: 5	6527				
Prep Date:		Analysis [	Date: 12	2/21/2018	5	SeqNo: 1	892686	Units: mg/k	٢g		
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-Brom	nofluorobenzene	1.1		1.000		111	80	120			
Sample ID	1812C52-002AMS	Samp	Гуре: МЗ	8	TestCode: EPA Method 8021B: Volatiles						
Client ID:	S-3	Batc	h ID: C5	6527	F	RunNo: 5	6527				
Prep Date:		Analysis [	Date: 12	2/21/2018	SeqNo: 1892687 Units: mg/Kg				٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	<b>HighLimit</b>	%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-Brom	ofluorobenzene	0.77		0.7326		106	80	120			
Sample ID	1812C52-002AMSE	Samp1	ype: MS	SD.	TestCode: EPA Method 8021B: Volatiles						
Client ID:	S-3	Batcl	h ID: C5	6527	R	unNo: 56	6527				
Prep Date:		Analysis D	Date: 12	2/21/2018	S	eqNo: 18	892688	Units: mg/K	g		
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	

#### 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

Page 9 of 9

WO#: 1812C52 26-Dec-18
HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environme TEL: 505-345-3 Website: www	ntal Analysis Labora 4901 Hawkins Albuquerque, NM 87 8975 FAX: 505-345-4 w.hallenvironmental.	tory NE 109 507 507 507 507 507 507 507 507	nple Log-In Check L	ist
Client Name: APEX AZTEC	Work Order Num	ber: 1812C52		RcptNo: 1	
Received By: Anne Thorne Completed By: Anne Thorne	12/21/2018 8:00:00 12/21/2018 8:21:45	D AM 9 AM	Anne Hr.	~	
Reviewed By: DAD 12/21/18			Cane Jru	~	
Chiberted by . fr /2 Chain of Custody	2/21118				
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 samp	es?	Yes 🗹	No 🗌	NA 🗆	
4. Were all samples received at a temperat	ture of >0° C to 6.0°C	Yes 🗸	No 🗌		
5. Sample(s) in proper container(s)?		Yes 🗸	No 🗌		
6. Sufficient sample volume for indicated te	st(s)?	Yes 🗹	No 🗌		
7. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🗹	No 🗌		
8. Was preservative added to bottles?		Yes	No 🗹		
9. VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🗹	
10. Were any sample containers received be	oken?	Yes	No 🗹	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH: (<2 or >12 unless n	oted)
12. Are matrices correctly identified on Chain	of Custody?	Yes 🗹	No 🗌	Adjusted?	
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 🗌	Checked by:	
Special Handling (if applicable)					
15. Was client notified of all discrepancies w	ith this order?	Yes	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:	Date Via:	eMail Ph	one []] Fax		
16. Additional remarks: CUS Frd	1 Sals int.	act on s	soul Ja	15 / KT 12/2/110	
17. <u>Cooler Information</u> Cooler No. Temp ^o C Condition 1 1.0 Good	Seal Intact Seal No . Yes	Seal Date S	Signed By	· · · ·	

#### CHAIN OF CUSTODY RECORD

APEX Office Location 606 5 R.O Grande Su; + A Actu Nn 87410 Project Manager K Summers	Hc.II $\notin$ Laboratory: $225$ Address: $4901$ Al $24902$ Contact: $4.712$ Phone: $505-347$ PO/SO #:	Hawking NE Nom 87109 Leman 15-3915	ANALYSIS REQUESTED 5 Temp. of coolers/.0 when received (C°): 1 2 3 4 5 Pageof
Sampler's Name	Sampler's Signature		d'or w
Proi. No. Project Name	for	No/Type of Containers	
7250410112549 MB-18 6	inch		
Matrix Date Time C G o r m a P b	ks of Sample(s)	VOA VOA 1Lt. 1Lt. 250 ml Glass Jar P/O	Lab Sample ID (Lab Use Only)
5 P/20/18 1300 4 5-2	05		X V X R12(52-001
5 Prolig 1305 10 5-3	0 5		X N P ZOZ
S 1/20/18 1310 P 5-4	- 5	1	Y X D -CC3
S 8/20/18 1315 10 5-5	- 05		v x x z zo4
S 12/18 1320 ¥ SP-1		1	000
			A BOG
			2
Turn around time     Normal     25% Rush       Relinquished by (Signature)     Date:     1       Manual Mathematical Structure     izzamis     15	50% Rush         Ø/100% Rush           īme:         Beceived by; (Sign: 30)	1)-1)1-18 ature) Date: 12/2018	Time: NOTES: 1530 Pary Key # B1321200
Relinquished by (Signature) Date: 12/20/18 / 8	ime: Received by: (Signa	ature) Date: 12/2/1/8	Time: pm - Tom Long 0300 AFT- # 1129012
Relirequished by (Signature) Date: 1	ime: Received by: (Signa	ature) Date:	Time: MFE W N 38 110
Relinquished by (Signature) Date: T	ime: Received by: (Signa	ature) Date:	Time: # (Same Day 12-21-18)
Matrix WW - Wastewater W - Water S Container VOA - 40 ml vial A/G - Amber / Or	- Soil SD - Solid L - Liqui Glass 1 Liter 250 ml	id A - Air Bag C - Char - Glass wide mouth P/O - Pl	arcoal tube SL - sludge O - Oil

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

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	
and before the second	

### **Release Notification**

MAR 1 8 2019

NMUCD

#### **Responsible Party**

DISTRICT III

Responsible Party: Enterprise Field Services, LLC	OGRID: <b>151618</b>
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.

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 Tit	le:Director, Field Environmental
Signature: Joy E. Fulls Dat	e: 3-11-19
email: Teleph	one: <u>713-381-6684</u>
OCD Only Received by: Crosse Fields	Date: 3/18/2019
Closure approval by the OCD does not relieve the responsible party of remediate contamination that poses a threat to groundwater, surface was party of compliance with any other federal, state, or local laws and/or	f liability should their operations have failed to adequately investigate and ater, human health, or the environment nor does not relieve the responsible regulations.
Closure Approved by:	Date: 3/2/e/2019
Printed Name: Vanossa Fields	Title: E. NUIFONMENTEL Decisist

# 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

umm

Kyle Summers, CPG Sr. Project Manager

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6.0	DATA EVALUATION	4
7.0	RECLAMATION AND RE-VEGETATION	4
8.0	FINDINGS AND RECOMMENDATION	4
9.0	STANDARDS OF CARE, LIMITATIONS, AND RELIANCE 9.1 STANDARD OF CARE 9.2 ADDITIONAL LIMITATIONS 9.3 RELIANCE	5 5 5 5 5

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Appendix B:	Executed	C-138 Solid Waste Acceptance Form
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Appendix D:	Table 1 - Soil Analytical Summary	
Appendix E:	Laboratory Data Sheets & Chain of Custody Documentation	

# **E** ENSOLUM

#### **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 f	or Soils Impacted by a Rel	ease
Minimum depth below any point within horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Method	Limit
	Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg
≤ 50 feet	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





PROJECT NUMBER: 05A1226029





APPENDIX B

Executed C-138 Solid Waste Acceptance Form

District | State of New Mexico 1625 N. French Dr., Hobbs, NM 88240 97057-0961 Form C-138 Revised 08/01/11 District II Energy Minerals and Natural Resources 1301 W. Grand Avenue, Artesia, NM 88210 Oil Conservation Division District III *Surface Waste Management Facility Operator and Generator shall maintain and make this 1000 Rio Brazos Road, Aztec, NM 87410 1220 South St. Francis Dr. District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 documentation available for Division inspection. Santa Fe, NM 87505 **REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE** 1. Generator Name and Address: Non AFE: N38649 Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401 **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. 2019 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) yd / bbls GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS 5. 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 nonexempt 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. ( va btrey, representative for (Ina 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: PRINT NAME: Greg Crabbell SIGNATURE: Management Facility Authorized Agent X APPROVED DENIED (Must Be Maintained As Permanent Record) ____ DATE: _/1/29/19 TITLE: Enviro Manager 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



#### 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.



#### SITE PHOTOGRAPHS

Enterprise Field Services, LLC Closure Report Angel Peak 11A #4 Meter Tube Release Ensolum Project No. 05A1226029



#### 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 Type Sample Depth Benzene Toluene Ethylbenzene Xylenes Total BTEX TPH TPH TPH Combined Chloride

		C- Composite G - Grab	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH GRO/DRO/MRO (mg/kg)	(mg/kg)
New Mexico Ene Co	ergy, Mineral & N enservation Divis	latural Resources ion, Closure Crite	Department, Oil ria	10	NE	NE	NE	50				100	600
and the second second				And Anger		Flow Path Cor	mposite Soil Sam	iple			and the second s		
FP-1	11.29.18	С	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

Date

NA = Not Analyzed

Sample I.D.

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

OrderNo.: 1811E78

Dear Kyle Summers:

RE: Angel Peak 11A 4

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,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

### Hall Environmental Analysis Laboratory, Inc.

Lab Order **1811E78** Date Reported: **12/7/2018** 

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CLIENT: Project: Lab ID:	APEX TITAN Angel Peak 11A 4 1811E78-001	Client Sample ID: FP-1           Collection Date: 11/29/2018 10:00:00 AM           Matrix: SOIL         Received Date: 11/30/2018 8:25:00 AM								
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch			
EPA MET	HOD 300.0: ANIONS					Analyst	MRA			
Chloride		ND	30	mg/Kg	20	12/5/2018 2:52:50 AM	41883			
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	Irm			
Diesel Ra	ange 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: D	NOP	107	50.6-138	%Rec	1	12/5/2018 3:33:23 AM	41858			
EPA MET	HOD 8015D: GASOLINE RANG	E				Analyst:	NSB			
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	12/3/2018 9:33:21 PM	41830			
Surr: B	FB	89.1	73.8-119	%Rec	1	12/3/2018 9:33:21 PM	41830			
EPA MET	HOD 8021B: VOLATILES					Analyst:	NSB			
Benzene		ND	0.024	mg/Kg	1	12/3/2018 9:33:21 PM	41830			
Toluene		ND	0.049	ma/Ka	1	12/2/2019 0:22:21 DM	44000			

Toluene	ND	0.049	ma/Ka	1	12/3/2018 9:33:21 PM	41830
Ethylbenzene	ND	0.049	ma/Ka	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.	В	Analyte detected in the associated Method 1	Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	D 1 07
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	Page 1 of 5
	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	t as specified

## Hall Environmental Analysis Laboratory, Inc.

Client:	APEX 7	TITAN									
Project:	Angel P	eak 11A 4									
Sample ID	MB-41883	SampType: <b>mblk</b>				TestCode: EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID: 4	1883	F	RunNo: 5	6076					
Prep Date:	12/4/2018	Analysis Date:	12/4/2018	5	SeqNo: 1	872787	Units: mg/K	g			
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		ND 1.	5								
Sample ID	LCS-41883	SampType: I	cs	Tes	tCode: EF	PA Method	300.0: Anion	s			
Client ID:	LCSS	Batch ID: 4	1883	F	RunNo: 56	6076					
Prep Date:	12/4/2018	Analysis Date:	12/4/2018	S	SeqNo: 18	872788	Units: mg/K	g			
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		15 1.5	5 15.00	0	974	90	110				

0

97.4

90

110

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. *

D Sample Diluted Due to Matrix

- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

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WO#: 1811E78 07-Dec-18

#### 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: Analysis Date: 12/4/2018 12/3/2018 SeqNo: 1872034 Units: mg/Kg Analyte Result PQL %REC SPK value SPK Ref Val 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: Analysis Date: 12/5/2018 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.
- 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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1811E78 07-Dec-18

Client:	APEX T	TTAN								
Project:	Angel P	eak 11A 4								
Sample ID	MB-41830	SampType:	MBLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch ID:	41830	F	RunNo: 58	6032				
Prep Date:	11/30/2018	Analysis Date:	12/3/2018	S	SeqNo: 18	370919	Units: mg/K	g		
Analyte		Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	ND 5	5.0							
Surr: BFB		910	1000		91.2	73.8	119			
Sample ID	LCS-41830	SampType:	LCS	Tes	tCode: EP	A Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batch ID:	41830	F	RunNo: 56	6032				
Prep Date:	11/30/2018	Analysis Date:	12/3/2018	5	SeqNo: 18	370920	Units: mg/K	g		
Analyte		Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e 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	Tes	tCode: EP	A Method	8015D: Gaso	ine Rang	e	
Client ID:	PBS	Batch ID:	41865	F	unNo: 56	073				
Prep Date:	<b>12/3/2018</b>	Analysis Date:	12/4/2018	S	eqNo: 18	72520	Units: %Rec			
Analyte		Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	<b>RPDL</b> imit	Qual
Surr: BFB		940	1000		93.6	73.8	119			duu
Sample ID	LCS-41865	SampType:	LCS	Test	Code: EP	A Method	8015D: Gasol	ine Range	9	
Client ID:	LCSS	Batch ID:	41865	R	unNo: 56	073		0		
Prep Date:	12/3/2018	Analysis Date:	12/4/2018	S	eqNo: 18	72521	Units: %Rec			
Analyte		Result PQI	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.
- 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

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APEX TITAN

**Client:** 

Hall Environmental Analysis Laboratory, Inc.

Project:	Angel P	'eak 11A 4									
Sample ID	MB-41830	Samp	Type: MF	BLK	Tes	stCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: 41	830	F	RunNo: 5	6032				
Prep Date:	11/30/2018	Analysis [	Date: 12	2/3/2018	٤	SeqNo: 1	870962	Units: mg/k	٢g		
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-Bromo	ofluorobenzene	0.96		1.000		96.1	80	120			
Sample ID	LCS-41830	SampT	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID:	LCSS	Batc	h ID: 411	830	F	RunNo: 56032					
Prep Date:	11/30/2018	Analysis E	Date: 12	2/3/2018	S	SeqNo: 11	870963	Units: mg/K	(g		
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-Bromo	ofluorobenzene	1.0		1.000		101	80	120			
Sample ID	MB-41865	SampT	ype: ME	3LK	Test	tCode: EF	PA Method	8021B: Volat	iles		
Client ID:	PBS	Batch	n ID: 418	365	R	unNo: 5f	6073				
Prep Date:	12/3/2018	Analysis D	Date: 12	/4/2018	S	eqNo: 18	372563	Units: %Rec	5		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromo	ofluorobenzene	1.0		1.000		101	80	120			
Sample ID	LCS-41865	SampT	ype: LC:	S	Test	Code: EF	A Method	8021B: Volat	iles		
Client ID:	LCSS	Batch	n ID: 418	365	R	unNo: 56	6073				
Prep Date:	<b>12/3</b> /2018	Analysis D	ate: 12	/4/2018	S	eqNo: 18	372564	Units: %Rec	;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	Lowl imit	Highl imit	%RPD		Qual

Surr: 4-Bromofluorobenzene 1.0 1.000

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Value above quantitation range E

100

80

120

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- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

WO#: 1811E78

07-Dec-18

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environn TEL: 505-345 Website: wi	nental Analysis Labor 4901 Hawkir Albuquerque, NM 8 -3975 FAX: 505-345- ww.hallenvironmental	atory ns NE 87109 <b>Sar</b> 4107 1.com	nple Log-In Check List
Client Name: APEX AZTEC	Work Order Nu	mber: 1811E78		RcptNo: 1
Received By: Erin Melendrez	11/30/2018 8:25:(	MA 00	ing	, <del>.</del>
Completed By: Isaiah Ortiz Reviewed By: ENM UB1 DAD 11/30/18 Chain of Custody	11/30/2018 9:18:	59 AM	IGh	
1. Is Chain of Custody complete?		Vec V	No 🗍	Not Present
2. How was the sample delivered?		Courier		
Log In 3. Was an attempt made to cool the samples?		Yes 🖌	No 🗌	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🖌	No 🗌	
5. Sample(s) in proper container(s)?		Yes 🗸	No 🗌	
6. Sufficient sample volume for indicated test(s)	?	Yes V	No	
7. Are samples (except VOA and ONG) properly	preserved?	Yes V	No 🗌	
8. Was preservative added to bottles?		Yes	No 🔽	NA 🗌
9. VOA vials have zero headspace?		Ves	No	
10. Were any sample containers received broker	1?	Vec		
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	# of preserved bottles checked for pH: (<2.or >12 unless noted)
12. Are matrices correctly identified on Chain of C	ustody?	Yes 🖌	No 🗌	Adjusteda
13. Is it clear what analyses were requested?		Yes 🔽	No 🗌	
<ol> <li>Were all holding times able to be met? (If no, notify customer for authorization.)</li> </ol>		Yes 🗹	No 🗌	Checked by: DAD 11/30/19
Special Handling (if applicable)				
15. Was client notified of all discrepancies with the	is order?	Yes	No 🗌	NA 🗹
Person Notified: By Whom: Regarding:	Date: Via:	eMail Ph	one 🗌 Fax	In Person
16 Additional				
17. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition Sea <u>1</u> 1.7 Good Yes	I Intact   Seal No	Seal Date S	Signed By	
2 2.7 Good Yes				

			CHAIN OF CUSTODY RE	CORD
	Hall .	Envilormenta	ANALYSIS / / / Lab use only	
	Laboratory: Lab	2	REQUESTED	
APEX	Address: 4901	Hawking NE		10
Office Location 606 S A.O	Albuquerque	NM 87107	- / Temp. of coolers when received (C°):	1.7.2.7
Corande SuittA	Contact: A Fie	eman		5
Artec NM 87410	Phone: 505-3	345-3375		
Project Manager K Summers	PO/SO #:			
Sampler's Name	Sampler's Signature			
C DAponti	2 Alt		, / pXy/ / / / /	
Proj. No. Project Name	e groce e	No/Type of Containers		
725040112538 Angle Pear	K 11A #4			
Matrix Date Time O r Identifying Mai	rks of Sample(s)	VOA VOA AVG 1LL. 250 ml Glass Jar P/O	Lab Sample ID (Lab Use Or	nly)
S 1/29/18 1000 ¥ FP-1	- 1'	1	X X X 1811E78 -001	
			2-5	
Turn around time XI Normal 25% Rush	50% Rush 🖸 100% Rush			
Relinquished by (Signature) Date:	ime: Received by: (Signa	ature) Date:	Time: NOTES: De K # DE alance Amilie	105
Relinquished by (Signature) Date:	ime: Received by:/Signa	ature) Date:	1500 Pay hey Prestant Amile	-0
houstu Waster 11/29/15 15	subitte	11/30/19	0825 PM Tom Long	
Beinquisned by (Signature) Date:'	me: Received by: (Signa	ature) Date:	Time: AFE # N38649	
Relinquished by (Signature) Date: T	ime: Received by: (Signa	ature) Date:	Time:	
Matrix WW - Wastewater W - Water S Container VOA - 40 ml vial A/G - Amber / Or	- Soil SD - Solid L - Liqui Glass 1 Liter 250 ml -	id A - Air Bag C - Cha - Glass wide mouth P/O - Pl	arcoal tube SL - sludge O - Oil 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