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-144
Revised April 3, 2017

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pmt# 16188
TRK# 16509

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action:
- ☐ Below grade tank registration
- ☐ Permit of a pit or proposed alternative method
- ☒ Closure of a pit, below-grade tank, or proposed alternative method pCS1801034847
- ☐ Modification to an existing permit/or registration
- ☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Enterprise Products Operating LLC OGRID #: NMOCD
Address: P.O Box 4324, Houston, TX 77210 OCT 09 2018
Facility or well name: Earthen Pit C-144 Admin#16188 DISTRICT III
API Number: OCD Permit Number:
U/L or Qtr/Qtr K Section 7 Township 28N Range 8W County: San Juan
Center of Proposed Design: Latitude 36.673407 N Longitude 107.723131 W NAD83
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☒ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☒ no
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☒ Other In Line Drip Pit
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____bbl Dimensions: L 20 x W 20 x D _____

3.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: _____bbl Type of fluid: _____
Tank Construction material: _____
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____mil ☐ HDPE ☐ PVC ☐ Other _____

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*
☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
☐ Alternate. Please specify_____

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6.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other_____

☐ Monthly inspections (If netting or screening is not physically feasible)

7.

Signs: Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. **Siting criteria does not apply to drying pads or above-grade tanks.**

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit . NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
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, as amended. **(Does not apply to below grade tanks)** - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)** - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. **(Does not apply to below grade tanks)** - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. **(Does not apply to below grade tanks)** - FEMA map	☐ Yes ☐ No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
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, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

10.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.

Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ A List of wells with approved application for permit to drill associated with the pit.
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method:
- ☒ Waste Excavation and Removal
- ☐ Waste Removal (Closed-loop systems only)
- ☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
  - ☐ In-place Burial ☐ On-site Trench Burial
- ☐ Alternative Closure Method

14.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
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, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

16.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.
OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** 11/30/18

Title: Environmental Spec. **OCD Permit Number:** _____

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

20.
Closure Method:

☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain.

21.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☒ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☒ Disposal Facility Name and Permit Number
- ☒ Soil Backfilling and Cover Installation
- ☒ Re-vegetation Application Rates and Seeding Technique
- ☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☒ 1983

22.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Jon E. Fields | Title: Director, Field Environmental

Signature: Jon E. Fields | Date: 10/4/2018

e-mail address: jefield@eprod.com | Telephone: 713-381-6684

CLOSURE REPORT

Property:

Earthen Pit
SW 1/4, S7 T28N R8W
San Juan County, New Mexico

September 26, 2018
Apex Project No. 725040112418

Prepared for:

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

Prepared by:

Ranee Deechilly
Project Scientist

Kyle Summers, CPG
Branch Manager / Senior Geologist

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APEX

CLOSURE REPORT

Earthen Pit
SW 1/4, S7 T28N R8W
San Juan County, New Mexico

Apex Project No. 725040112418

1.0 INTRODUCTION

1.1 Site Description & Background

The Earthen Pit site, referred to hereinafter as the "Site", is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 7, Township 28 North, Range 8 West, in San Juan County, New Mexico (36.67341N, 107.72313W). The Site is located on land managed by the Bureau of Land Management (BLM). The surrounding area is predominately rangeland that is periodically interrupted by oil and gas production and gathering facilities.

During November 2017, an out-of-service non-permitted earthen pit was identified within the Enterprise ROW by a New Mexico Energy, Minerals and Natural Resources (EMNRD) Oil Conservation Division (OCD) inspector. During July 2018, in accordance with the approved Closure Plan, Apex TITAN, Inc (Apex) performed preliminary sampling activities at the Site to evaluate the presence of constituents of concern (COCs) in soil. Five (5) soil borings (BH-1 through BH-5) were advanced utilizing a hang auger to total depths of approximately five (5) feet below grade surface (bgs). Based on input from the onsite EMNRD OCD inspector, one (1) composite soil sample (EP-1) was collected from the soil borings by selecting the interval (aliquot) from each borehole that exhibited the highest volatile organics result from a photoionization detector. Based on subsequent analytical results, that sample exhibited a combined total petroleum hydrocarbon (TPH) gasoline range organic (GRO) diesel range organics (DRO) and motor oil/lube oil range organics (MRO) concentration above the applicable New Mexico EMNRD OCD closure standard. During August 2018, Enterprise initiated excavation activities to remediate petroleum hydrocarbon impact.

The approved **Closure Plan** is provided in **Appendix A**. The **Closure Notification** to the BLM Farmington Field Office and New Mexico ENMRD OCD is provided in **Appendix B**. 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 C**. **Figure 3** is a map with soil sample locations that depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix C**). Soil boring logs are provided in **Appendix D**. Soil analytical results are summarized in **Table 1** (**Appendix E**) and executed chain-of-custody forms and laboratory data sheets provided in **Appendix F**.

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 EMNRDOCD closure criteria using the New Mexico EMNRD OCD's New Mexico Administrative Code (NMAC) 19.15.17 *Pits, Closed-Loop Systems, Below-Grade Tanks and Sumps* as guidance.

2.0 CLOSURE CRITERIA

In accordance with NMAC 19.15.17, the closure criteria for soils remaining in place at the Site include:

- 10 milligrams per kilogram (mg/kg) for benzene
- 50 mg/kg for total benzene, toluene, ethylbenzene and total xylenes (BTEX)
- 100 mg/kg for combined TPH GRO/DRO/MRO
- 600 mg/kg for Chloride.

The closure criteria are based on the following siting information:

- Eleven (11) points of diversion (POD) (SJ 04069 POD1 through SJ 04069 POD11) were identified 0.83 miles northwest of the Site on the New Mexico Office of the State Engineer (OSE) Water Rights Reporting System (WRSS) database. The nearest POD (SJ 04069 POD6) has a recorded depth to groundwater (based on a Hilcorp Energy *2017 Annual Groundwater Report* for Standard Oil Com #1 (Unit N, Sec 36 T29N R9W)) of approximately 28 feet below grade surface (bgs). In addition, two (2) nearby cathodic wells (Riddle G #1A and Riddle G #1) (located less than 0.5 miles from the site) identified on the New Mexico EMNRD OCD Imaging database identify depths to groundwater of 20 feet bgs and 60 feet bgs. Based on the information identified on the OSE and New Mexico OCD databases, relative elevations, and the proximity to Largo Canyon Wash, depth to groundwater below the bottom of pit is potentially less than 50 feet (bgs). Cathodic well and OSE POD information are provided in **Appendix G**.

- The Site is located within 300 feet of a continuously flowing watercourse. The Site is located approximately 140 feet north of Largo Canyon 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 any other significant watercourse or lakebed, sinkhole or playa lake.

- The Site is not located within 1,000 feet from a permanent residence, school, hospital, institution or church.

- No springs or private domestic water sources were identified within 500 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 500 feet of a wetland that is not within the confines of Largo Wash.

- 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.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

During August 2018, Enterprise initiated excavation activities to remediate petroleum hydrocarbon impact. During the earthwork activities, West States Energy Contractors Inc., provided heavy equipment and labor support, and Apex provided environmental consulting support.

The final remediation excavation measured approximately 25 feet long by 20 feet wide. The maximum depth of the excavation measured approximately ten (10) feet bgs.

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

A total of approximately 202 cubic yards 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 H**. The excavation was backfilled with imported fill and contoured to surrounding grade.

Photographic documentation of the field activities is included in **Appendix I**.

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 8, 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.

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 BTEX using Environmental Protection Agency (EPA) SW-846 Method #8021/8260, TPH GRO/DRO/MRO using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to Pits, the New Mexico EMNRD OCD utilizes the NMAC 19.15.17 *Pits, Closed-Loop Systems, Below-Grade Tanks and Sumps*. This guidance document establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Soil Samples

Apex compared the BTEX and TPH concentrations or laboratory practical quantitation limits (PQLs) associated with the composite soil samples (S-1 through S-5) from the remediation excavation 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 analyses of the 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 59 mg/kg (S-3), which are below the New Mexico OCD closure criteria of 600 mg/kg.

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

5.0 BURIAL MARKER

In accordance with the approved Closure Plan, Enterprise installed a burial marker at the Site. To prevent a surface impediment the New Mexico EMNRD OCD requested that the burial marker be buried three (3) feet bgs instead of protruding above the surface at this location.

6.0 RECLAMATION AND RE-VEGETATION

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

7.0 FINDINGS AND RECOMMENDATIONS

The Earthen Pit Site is located within the Enterprise pipeline ROW in the SW ¼ of Section 7, Township 28 North, Range 8 West, in San Juan County, New Mexico. The Site is located on land managed by the BLM. The surrounding area is predominately rangeland that is periodically interrupted by oil and gas production and gathering facilities.

During November 2017, an out-of-service non-permitted earthen pit was identified within the Enterprise ROW by a New Mexico EMNRD OCD inspector. During July 2018, in accordance with the approved Closure Plan, Apex performed preliminary sampling activities at the Site to evaluate the presence of COCs in soil. Five (5) soil borings (BH-1 through BH-5) were advanced utilizing a

hang auger to total depths of approximately five (5) feet bgs. Based on input from the onsite EMNRD OCD inspector, one (1) composite soil sample (EP-1) was collected from the soil borings by selecting the interval from each borehole that exhibited the highest volatile organics result from a photoionization detector. Based on analytical results, that sample exhibited a combined TPH GRO/DRO/MRO concentration above the applicable New Mexico EMNRD OCD closure standard. During August 2018, Enterprise initiated excavation activities to remediate petroleum hydrocarbon impact.

- 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 19.15.17 *Pits, Closed-Loop Systems, Below-Grade Tanks and Sumps* 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 25 feet long by 20 feet wide. The maximum depth of the excavation measured approximately ten (10) feet bgs.

- Prior to backfilling, five (5) 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 202 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 contoured to surrounding grade.

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

8.0 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

Approved Closure Plan

Enterprise Products

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

ENTERPRISE PRODUCTS OPERATING LLC

February 12, 2018

7016 3010 0000 0899 6389
Return Receipt Requested

ENMRD Oil Conservation Division
Aztec District III Office
Attention Cory Smith
Aztec, New Mexico 87410

RE: Revised Non-Permitted Earthen Pit Closure Plan
UL K Township 28 North Rage 8 West; 36.673407, -107.723131
Enterprise Products Operating, LLC

Mr. Smith,

Enterprise Products Operating, LLC ("Enterprise") is submitting the enclosed revised non-permitted earthen pit closure plan for the site referenced above. Enterprise is submitting this closure plan for the earthen pit that New Mexico Oil Conservation Division (NMOCD) discovered on November 13, 2017. The pit is located at UL K Township 28 North Rage 8 West; 36.673407, -107.723131. This closure plan has been prepared in accordance with the NMOCD Pit Rules 19.15.17 of the New Mexico Administrative Code.

If you have any questions or concerns, please feel free to contact our area Environmental representative, Thomas Long at 505-599-2286 or me directly at 713-381-1753.

Thank you,

Jon E. Fields
Director-Field Environmental

/sjn
enclosure

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

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

Non-Permitted Earthen Pit Closure Plan

On November 13, 2017, the New Mexico Oil Conservation Division (NMOCD) notified Enterprise Products Operating, LLC (Enterprise) via email, that during inspections in the area, an inspector found an earthen pit near an Enterprise pipeline. Enterprise confirmed it was the operator of the earthen pit and that it was an out of service in-line drip previously used to remove produced water and condensate from the adjacent pipeline. During subsequent email correspondence with NMOCD, Enterprise was instructed to submit a closure plan for approval prior to implementation of closure activities.

The following Closure Plan Packet including the C-144 form accordance with the NMOCD Pit Rules per 19.15.17 NMAC for the non-permitted earthen pit is located UL K Township 28 North Rage 8 West; 36.673407, -107.723131. Enterprise will not commence closure activities without first obtaining approval of the closure plan pursuant to 19.15.17.13 NMAC.

1.0 Closure Criteria

Due the proximity and elevation difference from the non-permitted earthen pit and Largo Wash, groundwater is estimated to be less than fifty feet below ground surface (bgs). According to the NMOCD Pit Rules soil closure criteria in Table I of 19.15.17.13 NMAC, soil contaminant concentrations shall meet the following:

Table 1: Closure Criteria

Constituent	Method	Limit
Chloride	EPA Method 300.0	600 mg/kg
TPH	EPA Method 8015 DRO/GRO/MRO	100 mg.kg
BTEX	EPA Method 8021B	50 mg/kg
Benzene	EPA Method 8021B	10 mg/kg

2.0 Closure Methods

Enterprise may close this non-permitted earthen pit by the following methods:

Method 1: In Place Closure

Enterprise shall conduct a subsurface investigation by installing five soil borings utilizing a hand auger. Soil boring placement is illustrated in in Figure 1, Site Map. One soil boring will be placed in the center of the earthen pit. The other four soil borings will be placed in each cardinal direction just outside of the berm of the earthen pit. Each soil boring advanced to a maximum of five feet bgs. Composite soil samples will be collected at one foot intervals. Each soil sample will be field screened for volatile

organic compounds utilizing a calibrated photo-ionization detector (PID). Soil samples that exhibited the highest observed field screening PID result will be collected and submitted for laboratory analysis. Soil samples will be analyzed for constituents in the above referenced Table 1.

If laboratory sample results meet contaminant concentrations in Table 1, Enterprise will request in place closure and perform the site reclamation and re-vegetation activities outlined in Section 3.

Method 2: Waste Excavation and Removal

If laboratory analysis from the subsurface investigation indicates contaminant concentrations exceed the closure limits in the above referenced Table 1, Enterprise will implement closure activities by waste excavation and removal. All excavation activities will be overseen by a third party environmental contractor. The third party environmental contractor will conduct field screening (headspace analysis) with a calibrated PID to guide the excavation activities. When field screening results indicate contaminant concentrations are compliant with the NMOCD site specific remediation standard, soil samples will be collected for laboratory analysis from the excavation. All soil samples will be analyzed for constituents in Table 1. Enterprise will notify NMOCD twenty four hours (24) prior to the collection final (closure) soil samples.

The excavation will remain open until receipt of laboratory analysis and confirmation that contaminants meet the site specific NMOCD remediation standard. Upon confirmation that contaminant concentrations comply with the applicable NMOCD remediation standard, the laboratory analytical reports will be emailed to the NMOCD for prompt review. After approval from NMOCD, the excavation will be backfilled with non-land farm soils. All hydrocarbon impacted soils generated during excavation activities will be loaded onto tandem trucks for transport to Envirotech, Inc. land farm, a NMOCD approved land farm facility, for proper disposal.

3.0 Site Reclamation and Re-vegetation Plans

A. In Place Closure

If in place closure is determined suitable, Enterprise will remove the fence and level the earthen berms. Enterprise will perform these activities so that there is minimal impact to the surrounding land surface and the existing vegetation.

B. Waste Excavation and Removal

If closure by waste excavation and removal was the chosen strategy, Enterprise will backfill the excavation with non-land farm soils. The ground surface will be re-contoured as much as practical to the existing grade prior to disturbance. The disturbed area will be re-seeding with a Bureau of Land Management Farmington Field Office approved seed mixture during the next favorable growing season.

CLOSURE REQUIREMENTS

Enterprise shall not commence closure without first obtaining approval of the closure plan submitted with the permit application or registration pursuant to 19.15.17.13 NMAC.

CLOSURE NOTIFICATION

Enterprise shall notify the appropriate division district office verbally, and in writing, at least 72 hours, but not more than one week, prior to any closure operation. The notice shall include the Enterprise name and the location to be closed, including the unit letter, section, township, and range. Enterprise shall notify the surface owner by certified mail (return receipt requested) that Enterprise plans closure operations at least 72 hours, but not more than one week, prior to any closure operation. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement per 19.15.17.13.E

RECLAMATION AND RE-VEGETATION/ RECLAMATION OF AREAS NO LONGER IN USE

1.0 If in place closure is determined suitable, Enterprise will remove the fence and level the earthen berms. Enterprise will perform these activities so that there is minimal impact to the surrounding land surface and the existing vegetation.

2.0 If excavation is required, all areas disturbed, except areas reasonably needed for production operations or for subsequent drilling operations, shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable. Enterprise shall replace topsoils and subsoils to their original relative positions and shall be contoured to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded per BLM requirements per 19.15.17.13.H in the first favorable growing season following closure of the pit.

Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.

OTHER REGULATORY REQUIREMENTS

The re-vegetation and reclamation obligations imposed by other applicable federal or tribal agencies on lands managed by those agencies shall supersede these provisions

and govern the obligations of any operations subject to those provisions, provided the other requirements provide equal or better protection of fresh water, human health and the environment. Enterprise shall notify the division when reclamation and re-vegetation are complete.

BURIAL MARKER

Enterprise shall install a burial a marker approximately three feet below ground surface instead of installing an above ground burial marker as that it poses a safety risk on an active right-of-way. This burial marker at approximately three feet below ground surface will satisfied NMAC 19.15.17.13.F.

CLOSURE REPORT

Within 60 days of closure completion, Enterprise shall submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results, information required by 19.15.17 NMAC, and details on back-filling, capping and covering, where applicable. In the closure report, Enterprise shall certify that all information in the report and attachments is correct and that Enterprise has complied with all applicable closure requirements and conditions specified in the approved closure plan.

LEGEND:

- EARTHEN PIT
- PROPOSED SOIL BORING LOCATION

0 40 80 160

APPROXIMATE SCALE: 1"=80'

FIGURE 1: SITE MAP

ENTERPRISE PRODUCTS OPERATING, LLC
UL K TOWNSHIP 28 NORTH RANGE 8 WEST
36.673407, -107.723131
SAN JUAN COUNTY, NEW MEXICO

Enterprise Products

DRAWN BY: TJLONG	DATE: 11-20-2017
CHECKED BY: BSTONE	DATE: 11-20-2017
APPROVED BY: BSTONE	DATE: 11-20-2017

PROJ. ID:	SCALE:	DRAWING NUMBER:
DRIPPIT	~1"=80'	1

APPENDIX B

Closure Notification

From: Long, Thomas
To: l1thomas@blm.gov
Cc: "Smith, Cory, EMNRD (Cory.Smith@state.nm.us)"; "jonathan.kelly@state.nm.us"; Stone, Brian
Subject: Earthen Pit Closure - UL K Township 28 North Rage 8 West; 36.673407, -107.723131
Date: Wednesday, August 1, 2018 7:34:00 AM

Whitney,

This email is to notify you that Enterprise has scheduled the closure of an earthen pit to begin on Tuesday, August 7, 2018. This earthen pit was initially non-permitted and discovered by the NMOCD. Enterprise subsequently submitted a proper permit application and permit approval was granted by the NMOCD (permit #16188). The earthen pit is located at UL K Township 28 North Rage 8 West; 36.673407, -107.723131. If you have any questions, please call or email.

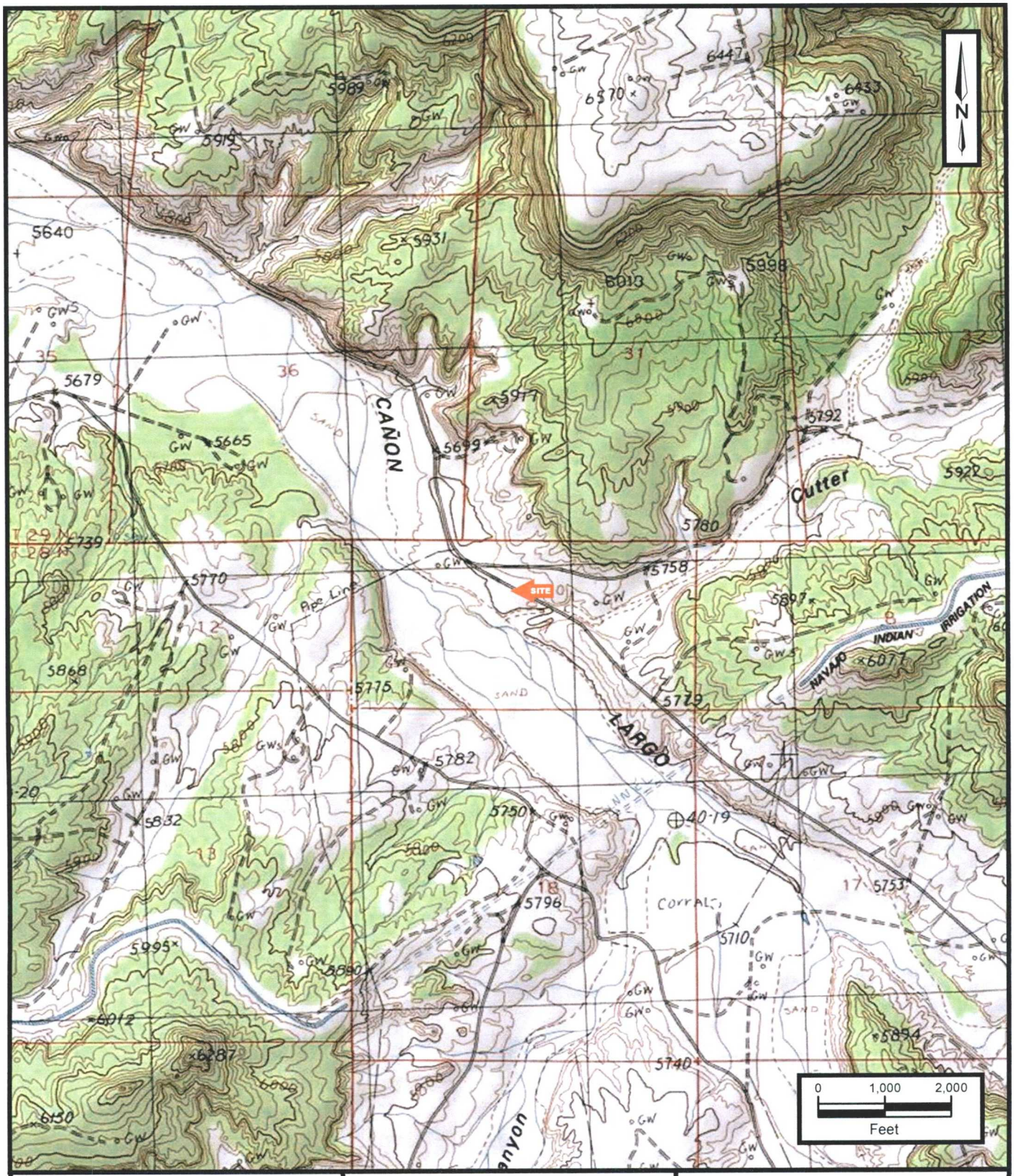
Sincerely,

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

Enterprise Products

APPENDIX C

Figures



Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

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

FIGURE 1

Topographic Map

Q:\Projects\725040112418\Figure 1.mxd Modified 8/30/2018 by JSimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System

Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

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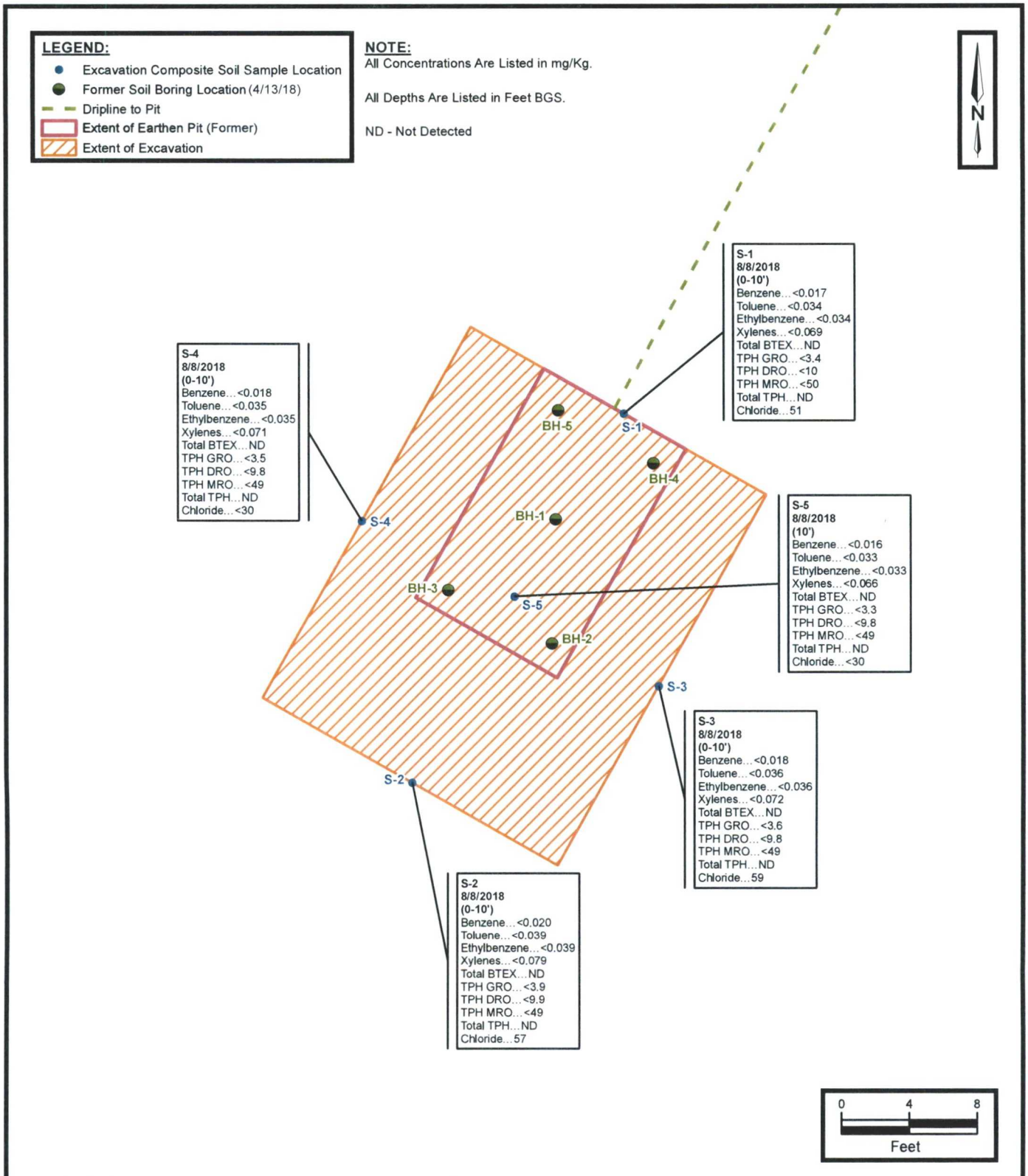
Aztec, New Mexico 87410
Phone: (505) 334-5200
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 2

Site Vicinity Map

Q:\Projects\725040112418\Figure 2.mxd Modified 9/5/2018 by JC Simpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System



Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

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Aztec, New Mexico 87410
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FIGURE 3

Site Map with Soil Analytical Results

Q:\Projects\725040112418\Figure 3.mxd Modified 9/5/2018 by JC Simpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System

APPENDIX D

Soil Boring Logs

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

Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

Soil Boring/Monitoring Well

BH-1

Date Sampled:	4/13/2018	Ground Surface Elevation:	N/A	Borehole Diameter:	2"
Drilled by:	N/A	Top of Casing Elevation:	N/A	Casing Diameter:	N/A
Driller:	N/A	North Coordinate:	N/A	Well Materials:	N/A
Logged by:	C. D'Aponti	West Coordinate:	N/A	Surface Completion:	Excavated
Sampler:	C. D'Aponti	Bench Mark Elevation:	N/A	Boring Method:	Hand Auger
Project Manager:	K. Summers	Groundwater Depth Observed During Drilling:	▽		

Depth (Feet BGS)	Sample Interval	Sample ID	Recovery (%)	PID Value (ppm)	Groundwater Elevation	Geologic Symbol	Geologic Description	Boring/Well Completion (Graphic Depiction)
0								
0–5	X	EP-1 Aliquot	100	0.2 / 0.3 / 0.7 / 0.4 / 0.8			SILTY SAND, Moderate Yellowish Brown, Dry, No Odor -Transition to Compacted Silty Sand at 3-Feet BGS Slightly Moist, No Odor	Backfilled with Soil Cuttings
5							Bottom of Boring at 5-Feet BGS	-5'

Boring subsequently excavated during remediation

Apex TITAN, Inc.
606 South Rio Grande, Suite A
Aztec, New Mexico 87410
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www.apexcos.com
A Subsidiary of Apex Companies, LLC

Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

Soil Boring/Monitoring Well

BH-2

Date Sampled:	4/13/2018	Ground Surface Elevation:	N/A	Borehole Diameter:	2"
Drilled by:	N/A	Top of Casing Elevation:	N/A	Casing Diameter:	N/A
Driller:	N/A	North Coordinate:	N/A	Well Materials:	N/A
Logged by:	C. D'Aponti	West Coordinate:	N/A	Surface Completion:	Excavated
Sampler:	C. D'Aponti	Bench Mark Elevation:	N/A	Boring Method:	Hand Auger
Project Manager:	K. Summers	Groundwater Depth Observed During Drilling:	▽		

Depth (Feet BGS)	Sample Interval	Sample ID	Recovery (%)	PID Value (ppm)	Groundwater Elevation	Geologic Symbol	Geologic Description	Boring/Well Completion (Graphic Depiction)
0								
0				0.0			SILTY SAND, Moderate Yellowish Brown, Dry, No Odor	Backfilled with Soil Cuttings
1				0.0				
2	X	EP-1 Aliquot	100	0.4				
3				0.0			-Transition to Compacted Silty Sand at 3-Feet BGS Slightly Moist, No Odor	
4				0.0				
5							Bottom of Boring at 5-Feet BGS	-5'
6							Boring subsequently excavated during remediation	
7								
8								
9								
10								

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Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

Soil Boring/Monitoring Well

BH-3

Date Sampled:	4/13/2018	Ground Surface Elevation:	N/A	Borehole Diameter:	2"
Drilled by:	N/A	Top of Casing Elevation:	N/A	Casing Diameter:	N/A
Driller:	N/A	North Coordinate:	N/A	Well Materials:	N/A
Logged by:	C. D'Aponti	West Coordinate:	N/A	Surface Completion:	Excavated
Sampler:	C. D'Aponti	Bench Mark Elevation:	N/A	Boring Method:	Hand Auger
Project Manager:	K. Summers	Groundwater Depth Observed During Drilling:	▽		

Depth (Feet BGS)	Sample Interval	Sample ID	Recovery (%)	PID Value (ppm)	Groundwater Elevation	Geologic Symbol	Geologic Description	Boring/Well Completion (Graphic Depiction)
0								
0				0.0			SILTY SAND, Moderate Yellowish Brown, Dry, No Odor	
1				0.0				
2	X	EP-1 Aliquot	100	0.3				
3	X			0.0			-Transition to Compacted Silty Sand at 3-Feet BGS Slightly Moist, No Odor	
4	X			0.0				
5							Bottom of Boring at 5-Feet BGS	-5'
6							Boring subsequently excavated during remediation	
7								
8								
9								
10								

Backfilled with Soil Cuttings

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

Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

Soil Boring/Monitoring Well

BH-4

Date Sampled:	4/13/2018	Ground Surface Elevation:	N/A	Borehole Diameter:	2"
Drilled by:	N/A	Top of Casing Elevation:	N/A	Casing Diameter:	N/A
Driller:	N/A	North Coordinate:	N/A	Well Materials:	N/A
Logged by:	C. D'Aponti	West Coordinate:	N/A	Surface Completion:	Excavated
Sampler:	C. D'Aponti	Bench Mark Elevation:	N/A	Boring Method:	Hand Auger
Project Manager:	K. Summers	Groundwater Depth Observed During Drilling:	▽		

Depth (Feet BGS)	Sample Interval	Sample ID	Recovery (%)	PID Value (ppm)	Groundwater Elevation	Geologic Symbol	Geologic Description	Boring/Well Completion (Graphic Depiction)
0								
0–5		EP-1 Aliquot	100	0.0 0.0 0.7 0.0 0.0			SILTY SAND, Moderate Yellowish Brown, Dry, No Odor -Transition to Compacted Silty Sand at 3-Feet BGS Slightly Moist, No Odor	Backfilled with Soil Cuttings
5							Bottom of Boring at 5-Feet BGS	-5'

Boring subsequently excavated during remediation

Q:\Projects\725040112418\Boring Logs.dwg Modified 9/13/2018 by JC Simpson

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Earthen Pit
NW1/4 S7 T28N R8W
San Juan County, New Mexico
36.67341 N, 107.72313 W

Project No. 725040112418

Soil Boring/Monitoring Well

BH-5

Date Sampled:	4/13/2018	Ground Surface Elevation:	N/A	Borehole Diameter:	2"
Drilled by:	N/A	Top of Casing Elevation:	N/A	Casing Diameter:	N/A
Driller:	N/A	North Coordinate:	N/A	Well Materials:	N/A
Logged by:	C. D'Aponti	West Coordinate:	N/A	Surface Completion:	Excavated
Sampler:	C. D'Aponti	Bench Mark Elevation:	N/A	Boring Method:	Hand Auger
Project Manager:	K. Summers	Groundwater Depth Observed During Drilling:	▽		

Depth (Feet BGS)	Sample Interval	Sample ID	Recovery (%)	PID Value (ppm)	Groundwater Elevation	Geologic Symbol	Geologic Description	Boring/Well Completion (Graphic Depiction)
0								
1				0.0			SILTY SAND, Moderate Yellowish Brown, Dry, No Odor	Backfilled with Soil Cuttings
2				0.0				
3	X	EP-1 Aliquot	100	0.5			-Transition to Compacted Silty Sand at 3-Feet BGS Slightly Moist, No Odor	
4				0.0				
5				0.0			Bottom of Boring at 5-Feet BGS	-5'
6							Boring subsequently excavated during remediation	
7								
8								
9								
10								

Appendix E

Table

TABLE 1
Earthen Pit
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Soil Boring Composite Soil Sample Removed by Excavation													
EP-1	04.13.18	C	0 to 10	<0.024	<0.048	<0.048	<0.096	ND	<4.8	76	100	**176**	<30
Excavation Composite Soil Samples													
S-1	8.08.18	C	0 to 10	<0.017	<0.034	<0.034	<0.069	ND	<3.4	<10	<50	ND	51
S-2	8.08.18	C	0 to 10	<0.020	<0.039	<0.039	<0.079	ND	<3.9	<9.9	<49	ND	57
S-3	8.08.18	C	0 to 10	<0.018	<0.036	<0.036	<0.072	ND	<3.6	<9.8	<49	ND	59
S-4	8.08.18	C	0 to 10	<0.018	<0.035	<0.035	<0.071	ND	<3.5	<9.8	<49	ND	<30
S-5	8.08.18	C	10	<0.016	<0.033	<0.033	<0.066	ND	<3.3	<9.8	<49	ND	<30

Note: Concentration in **bold** and yellow exceed the applicable NM EMNRD OCD 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 F

Laboratory Analytical Reports & 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

April 23, 2018

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

RE: Earthen Pit OrderNo.: 1804748

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/14/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1804748**
Date Reported: **4/23/2018**

CLIENT: APEX TITAN
Project: Earthen Pit
Lab ID: 1804748-001 **Matrix:** SOIL

Client Sample ID: EP-1
Collection Date: 4/13/2018 9:30:00 AM
Received Date: 4/14/2018 11:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	4/18/2018 3:12:17 AM	37668
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2018 12:15:31 AM	37609
Surr: BFB	114	70-130		%Rec	1	4/18/2018 12:15:31 AM	37609
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	76	9.5		mg/Kg	1	4/20/2018 11:48:08 AM	37671
Motor Oil Range Organics (MRO)	100	48		mg/Kg	1	4/20/2018 11:48:08 AM	37671
Surr: DNOP	93.5	70-130		%Rec	1	4/20/2018 11:48:08 AM	37671
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/18/2018 12:15:31 AM	37609
Toluene	ND	0.048		mg/Kg	1	4/18/2018 12:15:31 AM	37609
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2018 12:15:31 AM	37609
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2018 12:15:31 AM	37609
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	4/18/2018 12:15:31 AM	37609
Surr: Toluene-d8	88.0	70-130		%Rec	1	4/18/2018 12:15:31 AM	37609

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804748**

23-Apr-18

Client: APEX TITAN

Project: Earthen Pit

Sample ID	**MB-37668**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37668**	RunNo:	**50646**					
Prep Date:	**4/18/2018**	Analysis Date:	**4/17/2018**	SeqNo:	**1643067**	Units:	**mg/Kg**			

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

Sample ID	**LCS-37668**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37668**	RunNo:	**50646**					
Prep Date:	**4/18/2018**	Analysis Date:	**4/17/2018**	SeqNo:	**1643068**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804748**

23-Apr-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID **LCS-37671**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37671**	RunNo: **50692**
Prep Date: **4/18/2018**	Analysis Date: **4/19/2018**	SeqNo: **1644679** 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	4.6		5.000		91.1	70	130			

Sample ID **MB-37671**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37671**	RunNo: **50692**
Prep Date: **4/18/2018**	Analysis Date: **4/19/2018**	SeqNo: **1644680** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		105	70	130			

Sample ID **LCS-37708**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37708**	RunNo: **50717**
Prep Date: **4/20/2018**	Analysis Date: **4/20/2018**	SeqNo: **1645291** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		80.9	70	130			

Sample ID **MB-37708**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37708**	RunNo: **50717**
Prep Date: **4/20/2018**	Analysis Date: **4/20/2018**	SeqNo: **1645292** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804748**

23-Apr-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID **mb-37609**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **37609**	RunNo: **50621**
Prep Date: **4/16/2018**	Analysis Date: **4/17/2018**	SeqNo: **1642161** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.62		0.5000		124	70	130			
Surr: Toluene-d8	0.47		0.5000		93.2	70	130			

Sample ID **lcs-37609**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **37609**	RunNo: **50621**
Prep Date: **4/16/2018**	Analysis Date: **4/17/2018**	SeqNo: **1642551** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.2	80	120			
Toluene	0.96	0.050	1.000	0	96.1	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.8	80	120			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Toluene-d8	0.48		0.5000		96.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804748**

23-Apr-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID	lcs-37609	SampType:	LCS		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	LCSS	Batch ID:	37609		RunNo:	50621				
Prep Date:	4/16/2018	Analysis Date:	4/17/2018		SeqNo:	1642144	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.7	70	130			
Surr: BFB	530		500.0		106	70	130			

Sample ID	mb-37609	SampType:	MBLK		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS	Batch ID:	37609		RunNo:	50621				
Prep Date:	4/16/2018	Analysis Date:	4/17/2018		SeqNo:	1642145	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	570		500.0		114	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: **1804748** | RcptNo: 1

Received By: **Ashley Gallegos** **4/14/2018 11:30:00 AM** AG

Completed By: **Ashley Gallegos** **4/14/2018 12:39:27 PM** AG

Reviewed By: DDS 4/16/18 Labeled by: MW 4/16/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
MW 4/16/18
Checked by: _____

Special Handling (if applicable)

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

Person Notified:		Date	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande
Suit A
Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab
Address: 4901 Hawkins NE
Albuquerque NM 87109
Contact: A. Freeman
Phone: 505 345 3975
PO/SO #:

Lab use only
Due Date:
1.4 1.3 (CF)
Temp. of coolers when received (C°): 1.7
1 | 2 | 3 | 4 | 5
Page 1 of 1

Sampler's Name: Chad D'Apert
Sampler's Signature:

Proj. No.: 725041011 2418
Project Name: Earthen Pit

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	ANALYSIS REQUESTED: BTEX	TPH/GRO/DRO 8015	Chlorides 300.0	Lab Sample ID (Lab Use Only)
S	4/13/18	930	X		EP-1	1	5				1		X	X	X	1804748-001

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	4/13/18	1449	Mat Walk	4/13/18	1449
Martin Wells	4/13/18	1909		04/14/18	130

NOTES:
Pay Key # 22355
Supervisor - Dewayne Dixon
PM - Tom Long

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 13, 2018

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

RE: Earthen Pit OrderNo.: 1808514

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/9/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808514**
Date Reported: **8/13/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Earthen Pit
Lab ID: 1808514-001 **Matrix:** SOIL

Client Sample ID: S-1
Collection Date: 8/8/2018 9:00:00 AM
Received Date: 8/9/2018 6:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	51	30		mg/Kg	20	8/9/2018 10:07:14 AM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/9/2018 1:14:28 PM	A53327
Surr: BFB	113	70-130		%Rec	1	8/9/2018 1:14:28 PM	A53327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/9/2018 12:01:57 PM	39684
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/9/2018 12:01:57 PM	39684
Surr: DNOP	92.7	50.6-138		%Rec	1	8/9/2018 12:01:57 PM	39684
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.017		mg/Kg	1	8/9/2018 1:14:28 PM	B53327
Toluene	ND	0.034		mg/Kg	1	8/9/2018 1:14:28 PM	B53327
Ethylbenzene	ND	0.034		mg/Kg	1	8/9/2018 1:14:28 PM	B53327
Xylenes, Total	ND	0.069		mg/Kg	1	8/9/2018 1:14:28 PM	B53327
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	1	8/9/2018 1:14:28 PM	B53327
Surr: Toluene-d8	94.0	70-130		%Rec	1	8/9/2018 1:14:28 PM	B53327

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Earthen Pit
Lab ID: 1808514-002 **Matrix:** SOIL

Client Sample ID: S-2
Collection Date: 8/8/2018 9:05:00 AM
Received Date: 8/9/2018 6:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	57	30		mg/Kg	20	8/9/2018 10:19:39 AM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/9/2018 1:37:41 PM	A53327
Surr: BFB	121	70-130		%Rec	1	8/9/2018 1:37:41 PM	A53327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/9/2018 12:24:06 PM	39684
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/9/2018 12:24:06 PM	39684
Surr: DNOP	86.6	50.6-138		%Rec	1	8/9/2018 12:24:06 PM	39684
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	8/9/2018 1:37:41 PM	B53327
Toluene	ND	0.039		mg/Kg	1	8/9/2018 1:37:41 PM	B53327
Ethylbenzene	ND	0.039		mg/Kg	1	8/9/2018 1:37:41 PM	B53327
Xylenes, Total	ND	0.079		mg/Kg	1	8/9/2018 1:37:41 PM	B53327
Surr: 4-Bromofluorobenzene	134	70-130	S	%Rec	1	8/9/2018 1:37:41 PM	B53327
Surr: Toluene-d8	95.8	70-130		%Rec	1	8/9/2018 1:37:41 PM	B53327

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Earthen Pit
Lab ID: 1808514-003 **Matrix:** SOIL

Client Sample ID: S-3
Collection Date: 8/8/2018 9:10:00 AM
Received Date: 8/9/2018 6:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	59	30		mg/Kg	20	8/9/2018 10:32:03 AM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/9/2018 2:00:55 PM	A53327
Surr: BFB	112	70-130		%Rec	1	8/9/2018 2:00:55 PM	A53327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/9/2018 12:46:09 PM	39684
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/9/2018 12:46:09 PM	39684
Surr: DNOP	84.1	50.6-138		%Rec	1	8/9/2018 12:46:09 PM	39684
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.018		mg/Kg	1	8/9/2018 2:00:55 PM	B53327
Toluene	ND	0.036		mg/Kg	1	8/9/2018 2:00:55 PM	B53327
Ethylbenzene	ND	0.036		mg/Kg	1	8/9/2018 2:00:55 PM	B53327
Xylenes, Total	ND	0.072		mg/Kg	1	8/9/2018 2:00:55 PM	B53327
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	8/9/2018 2:00:55 PM	B53327
Surr: Toluene-d8	93.1	70-130		%Rec	1	8/9/2018 2:00:55 PM	B53327

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Earthen Pit
Lab ID: 1808514-004 **Matrix:** SOIL

Client Sample ID: S-4
Collection Date: 8/8/2018 9:15:00 AM
Received Date: 8/9/2018 6:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	8/9/2018 10:44:27 AM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/9/2018 2:24:00 PM	A53327
Surr: BFB	114	70-130		%Rec	1	8/9/2018 2:24:00 PM	A53327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/9/2018 1:08:23 PM	39684
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/9/2018 1:08:23 PM	39684
Surr: DNOP	82.2	50.6-138		%Rec	1	8/9/2018 1:08:23 PM	39684
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.018		mg/Kg	1	8/9/2018 2:24:00 PM	B53327
Toluene	ND	0.035		mg/Kg	1	8/9/2018 2:24:00 PM	B53327
Ethylbenzene	ND	0.035		mg/Kg	1	8/9/2018 2:24:00 PM	B53327
Xylenes, Total	ND	0.071		mg/Kg	1	8/9/2018 2:24:00 PM	B53327
Surr: 4-Bromofluorobenzene	129	70-130		%Rec	1	8/9/2018 2:24:00 PM	B53327
Surr: Toluene-d8	96.6	70-130		%Rec	1	8/9/2018 2:24:00 PM	B53327

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Earthen Pit
Lab ID: 1808514-005 **Matrix:** SOIL

Client Sample ID: S-5
Collection Date: 8/8/2018 9:20:00 AM
Received Date: 8/9/2018 6:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	8/9/2018 10:56:51 AM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/9/2018 2:47:15 PM	A53327
Surr: BFB	109	70-130		%Rec	1	8/9/2018 2:47:15 PM	A53327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/9/2018 1:30:25 PM	39684
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/9/2018 1:30:25 PM	39684
Surr: DNOP	87.3	50.6-138		%Rec	1	8/9/2018 1:30:25 PM	39684
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.016		mg/Kg	1	8/9/2018 2:47:15 PM	B53327
Toluene	ND	0.033		mg/Kg	1	8/9/2018 2:47:15 PM	B53327
Ethylbenzene	ND	0.033		mg/Kg	1	8/9/2018 2:47:15 PM	B53327
Xylenes, Total	ND	0.066		mg/Kg	1	8/9/2018 2:47:15 PM	B53327
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	8/9/2018 2:47:15 PM	B53327
Surr: Toluene-d8	93.8	70-130		%Rec	1	8/9/2018 2:47:15 PM	B53327

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808514**

13-Aug-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID **MB-39689**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **39689**	RunNo: **53322**
Prep Date: **8/9/2018**	Analysis Date: **8/9/2018**	SeqNo: **1756389** Units: **mg/Kg**

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

Sample ID **LCS-39689**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **39689**	RunNo: **53322**
Prep Date: **8/9/2018**	Analysis Date: **8/9/2018**	SeqNo: **1756390** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808514**

13-Aug-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID **MB-39645** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **39645** RunNo: **53283**
Prep Date: **8/7/2018** Analysis Date: **8/8/2018** SeqNo: **1753765** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.2	50.6	138			

Sample ID **LCS-39645** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **39645** RunNo: **53283**
Prep Date: **8/7/2018** Analysis Date: **8/8/2018** SeqNo: **1753983** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		78.8	50.6	138			

Sample ID **MB-39684** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **39684** RunNo: **53283**
Prep Date: **8/9/2018** Analysis Date: **8/9/2018** SeqNo: **1755103** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.2	50.6	138			

Sample ID **LCS-39684** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **39684** RunNo: **53283**
Prep Date: **8/9/2018** Analysis Date: **8/9/2018** SeqNo: **1755104** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.0	70	130			
Surr: DNOP	4.3		5.000		85.6	50.6	138			

Sample ID **1808514-005AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-5** Batch ID: **39684** RunNo: **53283**
Prep Date: **8/9/2018** Analysis Date: **8/9/2018** SeqNo: **1755631** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.6	48.12	0	101	53.5	126			
Surr: DNOP	3.9		4.812		80.9	50.6	138			

Sample ID **1808514-005AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-5** Batch ID: **39684** RunNo: **53283**
Prep Date: **8/9/2018** Analysis Date: **8/9/2018** SeqNo: **1755632** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.8	49.12	0	104	53.5	126	4.57	21.7	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808514**

13-Aug-18

Client: APEX TITAN

Project: Earthen Pit

Sample ID **1808514-005AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-5**	Batch ID: **39684**	RunNo: **53283**
Prep Date: **8/9/2018**	Analysis Date: **8/9/2018**	SeqNo: **1755632** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		4.912		75.4	50.6	138	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808514**

13-Aug-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID **100ng lcs**	SampType: **LCS4**			TestCode: **EPA Method 8260B: Volatiles Short List**					
Client ID: **BatchQC**	Batch ID: **B53327**			RunNo: **53327**					
Prep Date:	Analysis Date: **8/9/2018**			SeqNo: **1755662**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.0	80	120			
Toluene	0.99	0.050	1.000	0	99.3	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.3	80	120			
Surr: 4-Bromofluorobenzene	0.54		0.5000		107	70	130			
Surr: Toluene-d8	0.50		0.5000		99.3	70	130			

Sample ID **RB**	SampType: **MBLK**			TestCode: **EPA Method 8260B: Volatiles Short List**					
Client ID: **PBS**	Batch ID: **B53327**			RunNo: **53327**					
Prep Date:	Analysis Date: **8/9/2018**			SeqNo: **1755674**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.59		0.5000		117	70	130			
Surr: Toluene-d8	0.50		0.5000		101	70	130			

Sample ID **lcs-39659**	SampType: **LCS4**			TestCode: **EPA Method 8260B: Volatiles Short List**					
Client ID: **BatchQC**	Batch ID: **39659**			RunNo: **53327**					
Prep Date: **8/8/2018**	Analysis Date: **8/10/2018**			SeqNo: **1756110**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.58		0.5000		117	70	130			
Surr: Toluene-d8	0.48		0.5000		95.8	70	130			

Sample ID **mb-39659**	SampType: **MBLK**			TestCode: **EPA Method 8260B: Volatiles Short List**					
Client ID: **PBS**	Batch ID: **39659**			RunNo: **53327**					
Prep Date: **8/8/2018**	Analysis Date: **8/10/2018**			SeqNo: **1756111**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.65		0.5000		130	70	130			
Surr: Toluene-d8	0.47		0.5000		93.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808514**

13-Aug-18

Client: APEX TITAN
Project: Earthen Pit

Sample ID **2.5ug gro lcs**	SampType: **LCS**			TestCode: **EPA Method 8015D Mod: Gasoline Range**					
Client ID: **LCSS**	Batch ID: **A53327**			RunNo: **53327**					
Prep Date:	Analysis Date: **8/9/2018**			SeqNo: **1755649**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	70	130			
Surr: BFB	490		500.0		97.6	70	130			

Sample ID **rb**	SampType: **MBLK**			TestCode: **EPA Method 8015D Mod: Gasoline Range**					
Client ID: **PBS**	Batch ID: **A53327**			RunNo: **53327**					
Prep Date:	Analysis Date: **8/9/2018**			SeqNo: **1755650**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	520		500.0		105	70	130			

Sample ID **lcs-39659**	SampType: **LCS**			TestCode: **EPA Method 8015D Mod: Gasoline Range**					
Client ID: **LCSS**	Batch ID: **39659**			RunNo: **53327**					
Prep Date: **8/8/2018**	Analysis Date: **8/10/2018**			SeqNo: **1756042**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	540		500.0		108	70	130			

Sample ID **mb-39659**	SampType: **MBLK**			TestCode: **EPA Method 8015D Mod: Gasoline Range**					
Client ID: **PBS**	Batch ID: **39659**			RunNo: **53327**					
Prep Date: **8/8/2018**	Analysis Date: **8/10/2018**			SeqNo: **1756043**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	580		500.0		115	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1808514 | RcptNo: 1

Received By: Anne Thome 8/9/2018 6:50:00 AM Anne Thome

Completed By: Anne Thome 8/9/2018 7:05:58 AM Anne Thome

Reviewed By: JO 8/9/18

Labeled by AT 08/09/17

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: custody seals intact on sal Jars/ AT 08/09/17

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
3	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: Lab S Rio Grande Suit A Aztec NM 87410

Project Manager: K Sommers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87107

Contact: A Fireman

Phone: 505-345-3975

PO/SO #:

Sampler's Name: C DAponti

Sampler's Signature:

Proj. No.: 725040112 4118

Project Name: Earthen Pit

ANALYSIS REQUESTED: BTEX 8021 / TPH / CRO / DRO / MRO 8015 / Chloride 300.0

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.0

1 | 2 | (3) | 4 | 5

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
S	8/8/18	900	X		S-1	0	10				1		1808514-001
S	8/8/18	905	X		S-2	0	10				1		-002
S	8/8/18	910	X		S-3	0	10				1		-003
S	8/8/18	915	X		S-4	0	10				1		-004
S	8/8/18	920	X		S-5	-	10				1		-005

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/8/18	1036		8/8/18	1030
Christi Walters	8/8/18	1840		08/09/18	0650

NOTES: Pay Key # 22355
PM: Tom Long
AFE # N37596

Same Day 8-9-18

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

APPENDIX G

Cathodic Well and Points of Diversion Documentation

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance
SJ 04069	SJ	MON	0	EL PASO CGP COMPANY	SJ	SJ 04069 POD6				1 4 3	36	29N	09W	255453	4062703	1348
					SJ	SJ 04069 POD2				1 4 3	36	29N	09W	255452	4062710	1351
					SJ	SJ 04069 POD7				1 4 3	36	29N	09W	255456	4062722	1353
					SJ	SJ 04069 POD1				1 4 3	36	29N	09W	255450	4062721	1358
					SJ	SJ 04069 POD8				1 4 3	36	29N	09W	255435	4062711	1367
					SJ	SJ 04069 POD5				1 4 3	36	29N	09W	255446	4062735	1369
					SJ	SJ 04069 POD9				1 4 3	36	29N	09W	255435	4062723	1373
					SJ	SJ 04069 POD10				1 4 3	36	29N	09W	255419	4062712	1382
					SJ	SJ 04069 POD3				1 4 3	36	29N	09W	255420	4062724	1387
					SJ	SJ 04069 POD4				1 4 3	36	29N	09W	255419	4062736	1393
					SJ	SJ 04069 POD11				1 4 3	36	29N	09W	255407	4062726	1399

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 256654.21 Northing (Y): 4062090.38 Radius: 1609.3

Sorted by: Distance

#1 30-045-07542
#2 30-045-21155

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO
(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL Location: Unit SE Sec. 7 Twp 28 Rng 8

Name of Well/Wells or Pipeline Serviced RIDDLE G #1, #2

cps 469w

Elevation 5753' Completion Date 10/8/73 Total Depth 300' Land Type* N/A

Casing, Sizes, Types & Depths N/A

If Casing is cemented, show amounts & types used N/A

If Cement or Bentonite Plugs have been placed, show depths & amounts used

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 60'

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST. 3

Depths gas encountered: N/A

Type & amount of coke breeze used: 5100 lbs.

Depths anodes placed: 275', 240', 220', 210', 195', 185', 170', 160', 140', 120'

Depths vent pipes placed: N/A

Vent pipe perforations: 237'

Remarks: c.gb. #2

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.
If Federal or Indian, add Lease Number.

El Paso Natural Gas Company
Form 7-238 (Rev. 1-69)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐

Completion Date 10-8-73

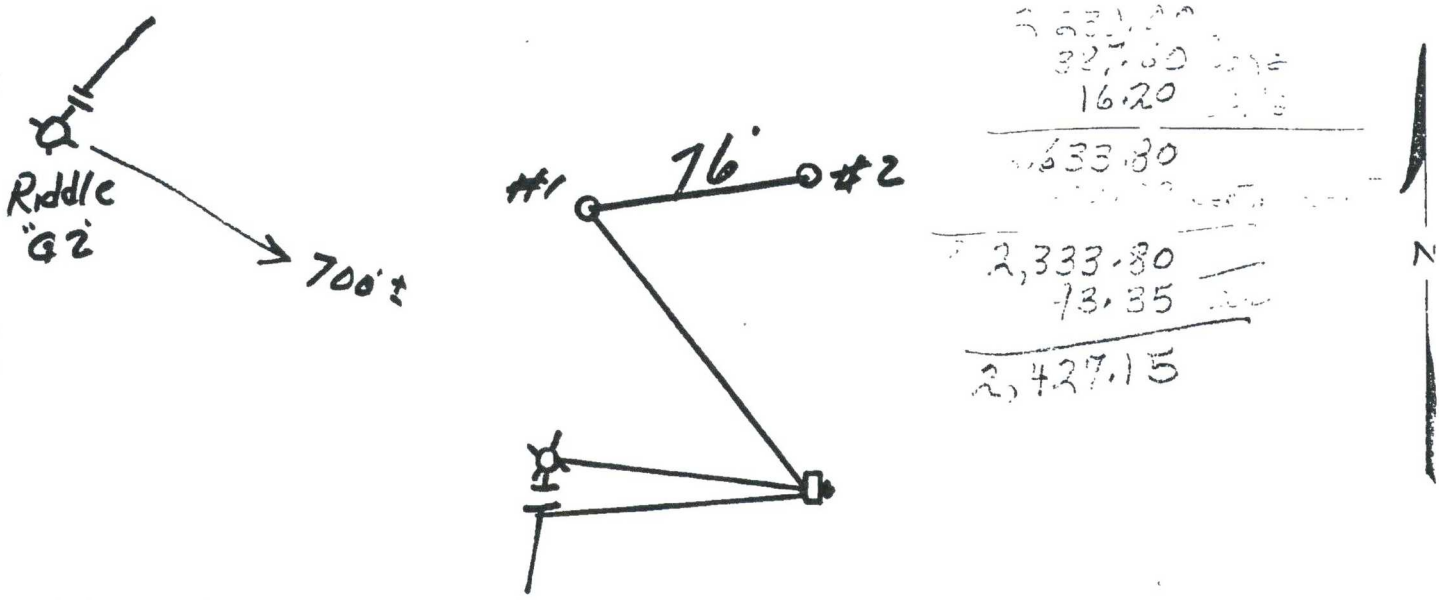
Well Name: Riddle "G" #1			Location: SE 7-28-8					CPS No.: 469w	
Type & Size Bit Used: 6 3/4								Work Order No.: 90108	
Anode Hole Depth: 300		Total Drilling Rig Time:		Total Lbs. Coke Used: 5,100		Lost Circulation Mat'l Used:		No. Sacks Mud Used:	
Anode Depth									
# 1: 275	# 2: 240	# 3: 220	# 4: 210	# 5: 195	# 6: 185	# 7: 170	# 8: 160	# 9: 140	# 10: 12[illegible]
Anode Output (Amps)									
# 1: 3.7	# 2: 4.7	# 3: 4.8	# 4: 5.2	# 5: 4.5	# 6: 4.7	# 7: 4.9	# 8: 4.8	# 9: 4.8	# 10: 4.[illegible]
Anode Depth									
# 11	# 12	# 13	# 14	# 15	# 16	# 17	# 18	# 19	# 20
Anode Output (Amps)									
# 11: [illegible]	# 12	# 13	# 14	# 15	# 16	# 17	# 18	# 19	# 20
Total Circuit Resistance					No. 8 C.P. Cable Used: 86'			No. 2 C.P. Cable Used:	
Volts: 11.9	Amps: 17.0	Ohms: 0.70							

Remarks: Driller Said Blew water out of hole at 60'
Water Standing Next Morning at 20'
Vent Perforated 237'
Pump 51 Sacks Coke

All Construction Completed

Darrels
(Signature)

GROUND BED LAYOUT SKETCH



32.50
16.20
633.80
2,333.80
13.35
2,427.15

Original & 1 Copy All Reports

-2 (Rev. 1-61)

C.F.S.#469

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE Riddle WELL NO. C#1 CONTRACTOR Morrow RIG NO. 1 REPORT NO. DATE 10-8 1973

MORNING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	40	dry sand		
40	60	wet sand water		
60	100	sand		
100	280	shale		

BIT NO. NO. DC ___ SIZE ___ LENG. ___

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS - blew water out of hole @ 60 ft.

DAYLIGHT

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
280	300	sand		

BIT NO. NO. DC ___ SIZE ___ LENG. ___

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS -

EVENING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.

BIT NO. NO. DC ___ SIZE ___ LENG. ___

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS -

SIGNED: Toolpusher Joe Morrow Company Supervisor

Form 7-1 (Rev. 5-67)

EL PASO NATURAL GAS COMPANY

ENGINEERING DEPARTMENT

Sheet ____ of ____

Date: ____

By: ____

CPS 469W

[illegible]	17	205	34	
	16	10	32	
40	24		33	
	17	20	29	
50	11		25	
	10	30	26	
60	11		27	
	11	40	29	
70	12		25	
	16	50	24	
80	15		20	
	13	60	15	
90	13		17	
	17	70	15	
100	16		24	
	27	80	15	
10	36		11	
	27	90	13	
20	29		13	
	32	300	13	TD
30	33			
	30			
40	31			
	36			
50	35			
	33			
60	36			
	27			
70	33			
	34			
80	30			
	30			
90	29			
	31			
200	34			

Water Standing @ 20
Blew water out at 60
Vent Perf 237

Pump 51 Bags

		log	wtr	coke
1	275	2.4	2.7	3.7
2	240	29	34	47
3	220	29	35	48
4	210	32	37	52
5	195	31	33	45
6	185	30	34	47
7	170	33	36	49
8	160	30	36	48
9	140	31	35	48
10	120	29	35	45

11.9V 17.0A = 0.7

170) 119.0 = .7
119.0

30-045-22776

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO
(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL Location: Unit SW Sec. 7 Twp 28 Rng 8

Name of Well/Wells or Pipeline Serviced RIDDLE G #1A

cps 1359w

Elevation 5687' Completion Date 6/6/79 Total Depth 380' Land Type* N/A

Casing, Sizes, Types & Depths 50' OF 8" CASING

If Casing is cemented, show amounts & types used 10'

If Cement or Bentonite Plugs have been placed, show depths & amounts used

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 20' WATER FLOWING OUT OF HOLE

NEXT A.M.

Depths gas encountered: N/A

Type & amount of coke breeze used: 60 SACKS

Depths anodes placed: 355', 315', 305', 265', 235', 225', 180', 160', 110', 90'

Depths vent pipes placed: 370' of 1" PIPE

Vent pipe perforations: 300'

Remarks: gb #1

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST. 3

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.
If Federal or Indian, add Lease Number.

Natural Gas Company
-238 (Rev.-11-71)

WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

CONTRACT #1

ng Log (Attach Hereto). ☐ 2 x 60 ANODES Completion Date 6-6-79

lame	Location	CRS No.
Riddle G #1A	SW 7-28-8	1359 W

Size Bit Used	Work Order No.
6 3/4"	57264-21

Hole Depth	Total Drilling Rig Time	Total ~~Lbs.~~ Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
380'	See Below	60 Sacks		

e Depth									
355	#2 315	#3 305	#4 265	#5 235	#6 225	#7 180	#8 160	#9 110	#10 80
e Output (Amps)									
5.1	#2 4.3	#3 5.0	#4 5.2	#5 5.3	#6 4.7	#7 4.9	#8 4.5	#9 4.3	#10 5.5
e Depth									
	#12	#13	#14	#15	#16	#17	#18	#19	#20
e Output (Amps)									
	#12	#13	#14	#15	#16	#17	#18	#19	#20

l Circuit Resistance			No. 1 C.P. Cable Used	No. 2 C.P. Cable Used
ts 102	Amps 23.3	Ohms 4.4		

arks: DRILLER Said HIT WATER AT 20' DRILLED TO 380' NEED AM that WTR Flowing. SET 50' of 8" CASING INSTALLED 320' of 4" VENT PIPE PERFORATED 300' of VENT PIPE SLURRYED 60 SACKS of COKE LEFT APPROX. 10' OPEN HOLE IN case hole NEEDS TO be CEMENTED TO STOP WATER FLOW. STATIC - 600' S = .65

40V 16A RECT

20' METER POLE

TCH + 1 cable - 160'

EXTRA cable - 137'

Hole - ~~120'~~ 95'

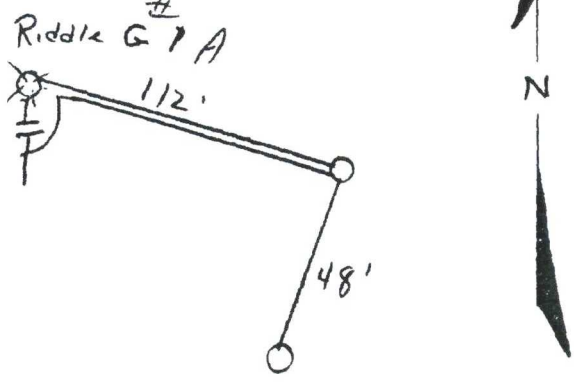
Pay for CEMENTING Hole

Pay 405' Hole

All Construction Completed

Willis Dwight Jr.
(Signature)

GROUND BED LAYOUT SKETCH



DISTRIBUTION:
WHITE – Division Corrosion Office
YELLOW – Area Corrosion Office
PINK – Originator File

file

Form 7-1 (Rev 9-77)

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ___ of ___
Date: 6-6-79
By:
File:

Riddle G #1A WIO-57264-21
SW 7-28-8
1359 W
STATIC 600' S .65

10 2x60 ANODES
1 20' METER POLE
DITCH + 1 CABLE 160'
EXTRA CABLE 137'
HOLE - 120'

DRILLER SAID HIT WATER @ 20' DRILLED TO 380', NEXT MORNING WATER FLOWING OUT OF HOLE
INSTALLED 370' 1" VENT PIPE
PERFORATED 300' OF VENT PIPE
INSTALLED 50' 8" CASING 3 HR
SLURRYED 60 SACKS COKE
LOST APPROX 20' OPEN HOLE
IN BASE WE NEED TO CEMENT

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	IC_4	12.38
58.12	nC_4	11.93
72.15	IC_5	13.85
72.15	nC_5	13.71
86.18	IC_6	15.50
86.18	C_6	15.57
100.21	IC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.87

MISC. MW		gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.18
2.02	H_2	3.38

20			70	4.1		20	2.9				
25			75	4.2		25	2.0				
30			80	3.6	(7)	30	1.4				
35			85	3.7		35	1.2				
40			90	2.8		40	1.2				
45			95	1.5		45	1.6			~~4:57 PM~~	
50	3.4		200	1.6		50	3.3			6-6-79 12h	
55	3.9		05	2.9		55	3.8	(1)			
60	4.0		10	2.8		60	4.4				
65	3.5		15	1.4		65	3.7				
70	2.8		20	2.7		70	3.5				
75	2.6		25	3.6	(6)	75	3.2				
80	2.6		30	3.9		80	3.0	T.D.			
85	3.0		35	3.6	(5)						
90	3.6	(10)	40	4.1							
95	3.9		45	4.2							
100	4.2		50	4.2							
05	4.2		55	4.3							
10	3.5	(9)	60	4.3							
15	2.6		65	3.8	(4)						
20	2.0		70	3.4							
25	2.1		75	2.9							
30	2.4		80	1.6							
35	2.1		85	1.4							
40	2.5		90	1.6							
45	4.0		95	1.8							
50	4.1		300	3.4							
55	3.5		05	4.1	(3)						
60	3.5	(8)	10	3.8							
65	3.8		15	3.5	(2)						

(1)	355 - 3.8	5.1
(2)	315 - 3.4	4.3
(3)	305 - 3.8	5.0
(4)	265 - 4.3	5.2
(5)	235 - 4.0	5.3
(6)	225 - 3.5	4.7
(7)	180 - 4.1	4.9
(8)	160 - 3.5	4.5
(9)	110 - 3.5	4.3
(10)	90 - 3.6	5.3

10.2 V 23.3 A .44 Ω

EL PASO NATURAL GAS COMPANY
SAN JUAN DIVISION
FARMINGTON, NEW MEXICO
PRODUCTION DEPARTMENT WATER ANALYSIS

Analysis No. 1-9563 Date 6-13-79

Operator EPNG Well Name Riddle G # 1A

Location SW 7-28-8 County San Juan State NM

Field Formation

Sampled From GPS [redacted]

Date Sampled By

Tbg. Press. Csg. Press. Surface Csg. Press.

	ppm	epm		ppm	epm
Sodium	1288	56	Chloride	20	1
Calcium	456	23	Bicarbonate	98	2
Magnesium	59	5	Sulfate	3875	81
Iron	Present		Carbonate	0	0
H_2S	Absent		Hydroxide	0	0

Total Solids Dissolved 7038

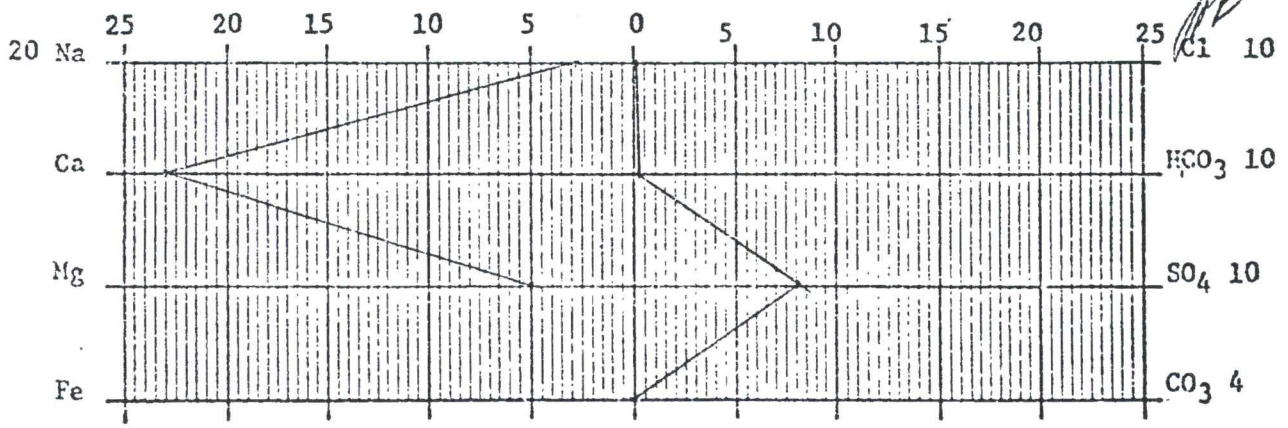
pH 7.8

Sp. Gr. 1.0071 at 60°F

Resistivity 170 ohm-cm at 73 °F

cc: D.C.Adams
R.A.Ullrich
E.R.Paulek
J.W.McCarthy
W.M.Smith
W.B.Shropshire
File

Chemist



Scale: epm

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY
DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE Riddle C #1A WELL NO. 1359W CONTRACTOR WOLVERINE RIG NO. W2 REPORT NO. DATE 6-6 1977

MORNING

Driller ROD FRYE Total Men In Crew 3

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	50	Blow Sand		
50	200	Shale + Sand		
200	380	Sand & Shale Strks		

BIT NO.
SERIAL NO.
SIZE 1-5⅞ 1-6¼
TYPE
MAKE

NO. DC ____ SIZE ____ LENG. ____
NO. DC ____ SIZE ____ LENG. ____
STANDS
SINGLES
DOWN ON KELLY
TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED
			8 sacks Gel
			3 " Hulls
			1 " Cedar Fiber

FROM	TO	TIME BREAKDOWN
		2 hrs water time.
		3 hrs set Surface Casing.

REMARKS –
Drilled 380'
Logged 380.

DAYLIGHT

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.

BIT NO.
SERIAL NO.
SIZE
TYPE
MAKE

NO. DC ____ SIZE ____ LENG. ____
NO. DC ____ SIZE ____ LENG. ____
STANDS
SINGLES
DOWN ON KELLY
TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS –

EVENING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.

BIT NO.
SERIAL NO.
SIZE
TYPE
MAKE

NO. DC ____ SIZE ____ LENG. ____
NO. DC ____ SIZE ____ LENG. ____
STANDS
SINGLES
DOWN ON KELLY
TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS –

SIGNED: Toolpusher _____ Company Supervisor _____

APPENDIX H

Executed C-138 Solid Waste Acceptance Form

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

State of New Mexico
Energy Minerals and Natural Resources

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

97057-0938

Form C-138
Revised August 1, 2011

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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

Invoice Information: PM: Richard Moore
Non AFE: N37596
Pay Key: CM22355

2. Originating Site:
Non Permitted Earthen Pit

August 2018

3. Location of Material (Street Address, City, State or ULSTR):
UL K Township 28 North Rage 8 West; 36.673407, -107.723131

4. Source and Description of Waste: Hydrocarbon impacted soils associated with the remediation of a blow down pit.

Estimated Volume 50 (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 202 (yd³) / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

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

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, (Thomas Long) 8-6-18, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete the required
Generator Signature
testing/sign the Generator Waste Testing Certification.

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

5. Transporter: West States Energy Contractors of Subcontractors / Prado Farms,

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**

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

Waste Acceptance Status:

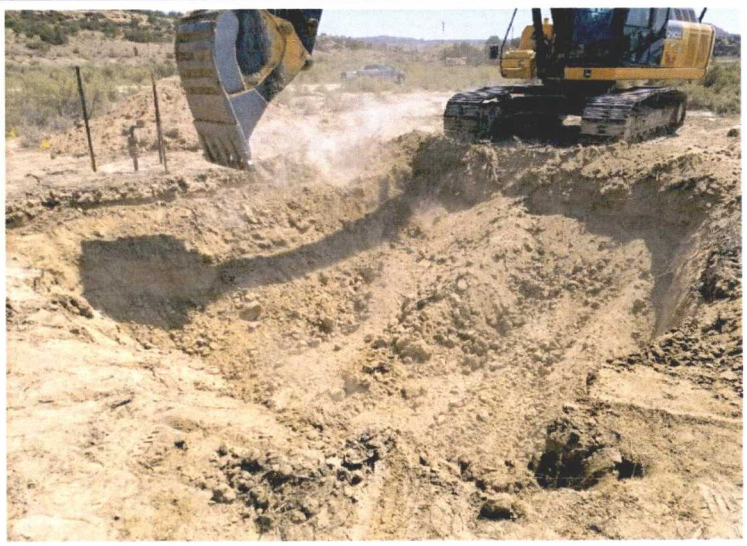
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Environmental Manager DATE: 8/7/18

SIGNATURE: [signature] TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

APPENDIX I

Photographic Documentation

Photograph 1 View of the earthen pit after fence was removed.	
Photograph 2 View of in-process excavation activities, facing northeast.	
Photograph 3 View of in-process excavation activities, facing east.	

Photograph 4 View of the final excavation, facing south.	
Photograph 5 View of the final excavation, facing northeast.	
Photograph 5 View of the final excavation after initial restoration, facing north.	

Photograph 5 View of the final excavation after initial restoration, facing northwest.