RP # 3R-438

AGWMR

2018

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

Printed Name: Scott Drewry Title: Geologist

Signature: Scott Drewry Date: 3/18/21

OCD Only

Received by: _____ Date: _____

Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

April 21, 2020

Return Receipt Requested**
Submitted via email: Cory.Smith@state.nm.us

Mr. Cory Smith
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: 2018 *Annual Groundwater Monitoring Report* *(Ensolum, September 9, 2019)*
Enterprise Field Services, LLC
Trunk 6C Pipeline - Kutz Wash Release (09/22/11)
San Juan County, New Mexico [SW ¼, S26 T28N R11W (36.63202° N, 107.97400° W)]
OCD RP: 3R-438; OCD Abatement Plan No. 131

Dear Mr. Smith:

Enterprise Products Operating LLC (Enterprise), on behalf of Enterprise Field Services LLC, is pleased to submit one hard copy** (and one electronic copy/USB) of the above-referenced report prepared by Ensolum, LLC (Ensolum) dated September 9, 2019. The report is associated with the Enterprise Trunk 6C pipeline release of natural gas and associated pipeline liquids that occurred on September 22, 2011, near the Kutz Wash in San Juan County, New Mexico (the "Site"). The activities detailed in the attached report include two semi-annual groundwater monitoring and sampling (SA-GWM&S) events that occurred between January 1, 2018 and December 31, 2018 (the "reporting period").

Data presented in the attached report indicate that dissolved-phase hydrocarbon (DPH), or constituent of concern (COC), concentrations remain at the Site in excess of the applicable Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (*GQSs)*. Additionally, with the possible exception of downgradient well MW-15, the DPH plume (MW-1 and MW-17) is currently delineated by monitor wells MW-2, MW-4, MW 6 and MW-11.

Based on the information presented in the attached report, Enterprise plans to: 1) continue SA-GWM&S activities at the site in order to evaluate the stability of COC concentrations in subsurface groundwater, and 2) conduct additional site-specific aquifer testing and evaluate in-situ remediation options to address remaining hydrocarbon impacts in the source area at the Site. Additionally, due to levels of DPH (COC) concentrations remaining below detection limits since 2013 (or since 2015 in MW-3), Enterprise respectfully requests: 1) the plugging and abandonment of, or 2) the suspension of sampling of the following wells pending the reduction of COCs in the plume below the WQCC GQSs: MW-3, MW-5, MW-7, MW-9, MW-12 and MW-13.

Enterprise appreciates the OCD's continued assistance and guidance in bringing closure to this Site. Should you have any questions, comments or concerns, or require additional information, please feel free to contact me any time at 713-381-8780, or at gemiller@eprod.com.

Sincerely,

Gregory E. Miller, P.G.
Supervisor, Environmental

Rodney M. Sartor, REM
Sr. Director, Environmental

cc: Mr. Kenneth Christensen – BLM, Farmington, NM (landowner)
ec: Mr. Cory Smith – NMOCD, Aztec, NM
Mr. Jim Griswold – NMOCD, Santa Fe, NM
Ms. Liz Scaggs– Ensolum, Dallas, TX

*** Please note that due to the COVID-19 pandemic and the current "Stay Home, Work Safe" order issued for Harris County Texas, all hard copies (and associated electronic copies on CD or USB drives) of the Subject document(s) will be mailed to each recipient once Enterprise staff are allowed to return to work. In the interim, an electronic copy will be emailed as the official submittal.*

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

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

TRUNK 6C KUTZ WASH PIPELINE RELEASE
2018 ANNUAL GROUNDWATER MONITORING REPORT

Property:

Trunk 6C Kutz Wash Pipeline Release
SW ¼, S26 T28N R11W
San Juan County, New Mexico

New Mexico EMNRD OCD RP No. 3R-438

September 9, 2019
Ensolum Project No. 05A1226011

Prepared for:

Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attn: Mr. Gregory E. Miller, P.G.

Prepared by:

Ranee Deechilly
Staff Scientist

Liz Scaggs, P.G.
Principal

ENSOLUM

TRUNK 6C KUTZ WASH PIPELINE RELEASE
2018 ANNUAL GROUNDWATER MONITORING REPORT
EXECUTIVE SUMMARY

The Trunk 6C Kutz Wash pipeline release site, referred to hereinafter as the "Site", is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way in the southwest (SW) 1/4 of Section 26, Township 28 North, Range 11 West, in San Juan County, New Mexico (36.63202N, 107.97400W).

On September 22, 2011, a pipeline release of natural gas and associated pipeline liquids was discovered at the Site and the pipeline was subsequently repaired. A Site assessment conducted by Animas Environmental Services, LLC (AES) during October 2011 identified total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbon (TPH) concentrations in "test hole" excavation soil and groundwater that exceeded the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* (*RALs*) for soils and the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (*GQSs*) for groundwater.

During November 2011, AES advanced eight (8) soil borings at the Site to further delineate the extent of hydrocarbon affected soil and potentially impacted groundwater. Resulting soil and groundwater analytical data indicated constituent of concern (COC) concentrations above the New Mexico EMNRD OCD *RALs* and WQCC *GQSs*.

During September 2012, AES advanced nine (9) additional soil borings/monitoring wells on-Site, to further evaluate the extent of dissolved phase COCs in groundwater. Based on laboratory analytical results, COCs were not identified in soil above the New Mexico EMNRD OCD *RALs* at these soil boring/monitoring well locations. However, COCs were identified in groundwater above the WQCC *GQSs*. On October 16, 2013, four (4) soil borings/monitoring wells were advanced by AES. Soil and groundwater samples collected from soil boring/monitoring well MW-10 exhibited COC concentrations above the New Mexico EMNRD OCD *RALs* and WQCC *GQSs*.

On October 28, 2013, an additional leak was discovered in the vicinity of the original release and the pipeline was subsequently repaired and placed back in service. AES collected 20 discrete soils samples from the pipeline repair excavation and the resulting analytical data identified COC concentrations above the New Mexico EMNRD OCD *RALs*. In addition, aquifer pumping tests were conducted in four (4) wells by AES to estimate hydraulic conductivity. The reported estimate for hydraulic conductivity averaged 5.27E-03 centimeters per second (cm/sec) using drawdown analysis and 8.81E-03 cm/sec using recovery analysis.

During September 2016, Apex TITAN, Inc. (Apex) advanced five (5) soil borings at the Site. Three (3) of the five (5) soil borings were completed as groundwater monitoring wells. COCs were identified in soil above the New Mexico EMNRD OCD *RALS* at soil borings/monitoring wells MW-15, MW-17, and SB-18A. In addition, COC concentrations were identified in groundwater above the WQCC *GQSs* in monitoring well MW-17. Semi-annual groundwater monitoring events are ongoing at the Site.

The objectives of the 2018 groundwater monitoring events were to further evaluate the concentrations of COCs in groundwater over time at the Site.

Findings and recommendations based on the 2018 Site activities are as follows:

- The groundwater flow direction at the Site is generally towards the northwest, with an approximate average gradient of 0.008 feet per foot (ft/ft) across the Site.

- Based on analytical results for the groundwater samples collected from monitoring wells MW-1, MW-15 and MW-17 during the June and December 2018, BTEX constituent concentrations were identified

in groundwater above New Mexico WQCC standards. The analytical results for the groundwater samples collected from the remaining monitoring wells during the June and December 2018 did not identify BTEX constituent concentrations above the applicable WQCC *GQSs*.

- Except for monitoring well MW-1 and MW-17, which have exhibited relatively consistent COC concentrations, results from the sampling events at the Site demonstrate generally declining COC concentrations in groundwater.

Ensolum offers the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD;
- Continue semi-annual groundwater monitoring at the Site; and,
- Implement additional Site-specific aquifer testing.

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LIST OF APPENDICES

ENSOLUM

TRUNCK 6C KUTZ WASH PIPELINE RELASE
2018 ANNUAL GROUNDWATER MONITORING REPORT

New Mexico EMNRD OCD RP No. 3R-438

Ensolum Project No. 05A1226011

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Trunk 6C Kutz Wash Pipeline Release (Site)
Location:	36.63202° North, 107.97400° West Southwest (SW) ¼ of Sections 26, Township 28 North, Range 11 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On September 22, 2011, a pipeline release of an unknown volume of natural gas and associated liquids was discovered at the Site and the pipeline was subsequently repaired. Animas Environmental Services, LLC (AES) collected one (1) soil sample from the floor of the repair excavation. Based on field screening results, the soil sample exhibited elevated levels of volatile organic compounds (VOCs). A site assessment was conducted by AES on October 11, 2011, which included the collection of soil samples from four (4) test holes (TP-1 through TP-4) which were advanced near the release area, as well as groundwater samples from two (2) of the four (4) test holes. Based on laboratory analytical results, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons (TPH) were identified in soils from two (2) of the test holes (TP-1 and TP-2) at concentrations above the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* (*RALs*). The test hole water samples collected from TP-2 and TP-4 exhibited concentrations of benzene, toluene, and total xylenes above New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (*GQSs*). Additional detail regarding the initial site assessment activities are provided in the *Release Assessment Report, dated October 28, 2011- AES.*

During November 2011, AES advanced eight (8) soil borings (SB-1 through SB-8) at the Site to further delineate the extent of hydrocarbon affected soil and potentially impacted groundwater. Laboratory analytical results for the soil and groundwater samples collected from the soil borings identified constituent of concern (COC) concentrations in soil above the New Mexico EMNRD OCD *RALs* (SB-2, SB-7, and SB-8) and in groundwater above the WQCC *GQSs* (SB-2W, SB-3W, and SB-7W) *(Site Investigation Report, dated February 20, 2012 – AES)*.

During September 2012, nine (9) additional soil borings were advanced at the Site by AES to further evaluate the extent of dissolved phase COCs in groundwater. Subsequent to advancement, the soil borings were completed as groundwater monitoring wells (MW-1 through MW-9). Laboratory analytical results did not indicate COCs in soil above the New Mexico EMNRD OCD *RALs* at these soil boring/monitoring well locations. However, COCs were confirmed in groundwater above the WQCC *GQSs (Groundwater Investigation Report, dated October 31, 2012 – AES)*.

On October 16, 2013, AES advanced four (4) additional soil borings/monitoring wells (MW-10 through MW-13) in and around the release area to further evaluate the extent of COCs in groundwater. Laboratory analytical results indicated COC concentrations in soil and groundwater from soil boring/monitoring well MW-10 were present at levels above the New Mexico EMNRD OCD *RALs* and the WQCC *GQSs*. (*3rd Quarter 2013 Groundwater Monitoring and Well Installation Report, dated December 10, 2013 and 4th Quarter 2013 Groundwater Monitoring and Continued Investigation Report, dated July 23, 2014 – AES*).

In September 2016, Enterprise retained Apex TITAN, Inc. (Apex) to perform environmental site investigation activities at the Site to further evaluate and delineate the concentrations of COCs in soil and groundwater. Five (5) soil borings were advanced and three (3) of the soil borings were completed as groundwater monitoring wells MW-14, MW-15, and MW-17. Laboratory analytical results indicated COC concentrations in soil (MW-15 and MW-17) and groundwater (MW-17) were above the New Mexico EMNRD OCD *RALs* and the WQCC *GQSs* (*Supplemental Environmental Site Investigation (September 2016) and Annual Groundwater Monitoring Report (June and December 2016), dated February 13, 2017 – Apex*).

During February 2019, Enterprise reassigned management of the project to Ensolum.

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. In order to address activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action. Additionally, the New Mexico EMNRD OCD utilizes the New Mexico WQCC *GQS* (NMAC 20.6.2 *Groundwater and Surface Water Protection*) to evaluate groundwater conditions.

The Site location is depicted on **Figure 1** of **Appendix A** which was reproduced from a portion of a United States Geological Survey (USGS) 7.5-minute series topographic map. A **Site Vicinity Map**, created from an aerial photograph, is provided as **Figure 2**, and a **Site Map**, which indicates the approximate locations of the monitoring wells and previous soil boring locations in relation to pertinent structures and general Site boundaries, is included as **Figure 3** of **Appendix A**.

1.2 Project Objective

The objective of the groundwater monitoring events was to further evaluate the concentrations of COCs in groundwater over time at the Site.

2.0 GROUNDWATER MONITORING – JUNE AND DECEMBER 2018

2.1 Groundwater Sampling Program

Semi-annual groundwater sampling events were conducted during June and December 2018 by Apex.

Information, data, and conclusions provided in the following sections and attached figures are based on information provided by Apex to Enterprise, and eyewitness accounts.

Apex's groundwater sampling program consisted of the following:

Prior to sample collection, Apex gauged the depth to fluids in each monitoring well using an interface probe capable of detecting non-aqueous phase liquids (NAPL).

Each monitoring well was sampled utilizing micro-purge low-flow sampling techniques. Subsequent to the completion of the micro-purge process, one (1) groundwater sample was collected from each monitoring well.

Low-flow refers to the velocity with which groundwater enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system, to the extent practical, considering established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (L/min) are maintained during sampling activities, using dedicated or decontaminated sampling equipment.

The groundwater samples are collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are taken every three to five minutes while purging. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for three successive readings.

Monitoring well MW-12 was not sampled during the June and December sampling events due to an obstructed well screen/casing.

The casings of monitoring wells MW-10 through MW-13 are approximately one (1)-inch in diameter, which is smaller than the bladder pump diameter. As a result, these monitoring wells were purged until effectively dry, utilizing a disposable bailer. Subsequent to the completion of the purging process and the recovery of groundwater to static or near static levels, one (1) groundwater sample was collected from each monitoring well.

Groundwater samples were collected in laboratory supplied containers (pre-preserved with mercuric chloride ($HgCl_2$)), labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The groundwater samples were relinquished to the courier for Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico under proper chain-of-custody procedures.

2.2 Groundwater Laboratory Analytical Methods

The groundwater samples collected from the monitoring wells during the 2018 groundwater sampling events were analyzed for BTEX utilizing Environmental Protection Agency (EPA) Method SW-846 #8021/8260.

A summary of the per-event analytes, sample matrix, sample frequency and EPA-approved methods for the two (2) sampling events are presented on the following table.

Analytes	Sample Matrix	No. of Samples (per event)	EPA Method
BTEX	Groundwater	15	SW-846 8021/8260

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

2.3 Groundwater Flow Direction

Each of the monitoring wells was geospatially surveyed or re-surveyed to determine top-of-casing (TOC) elevations. Based on gauging data, the groundwater flow direction (gradient) at the Site is generally toward the northwest. The observed gradient during the June and December 2018 monitoring events averages approximately 0.008 feet per foot (ft/ft) across the Site.

Groundwater measurements collected during the June and December 2018 sampling events (as well as historical data) are presented with TOC elevations in **Table 2** (**Appendix B**). Groundwater gradient maps for the June and December 2018 gauging events are included as **Figure 4A** and **4B** (**Appendix A**).

2.4 Data Evaluation

Ensolum compared the BTEX laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with the groundwater samples collected from monitoring wells during the June and December 2018 sampling events to the New Mexico WQCC *GQSs* (effective 12/21/2018). The results of the groundwater sample analyses are summarized in **Table 1** of **Appendix B**. Groundwater Quality Standards Exceedance Zone maps are provided as **Figures 5A** and **5B** of **Appendix A**.

Monitoring well MW-12 was not sampled during the June and December sampling events due to an obstructed well screen/casing.

June 2018

The groundwater samples collected from monitoring wells MW-1, MW-15 and MW-17 exhibited benzene concentrations of 3,800 microgram per liter (µg/L), 6.5 µg/L and 29 µg/L, respectively, which exceed the WQCC *GQS* of 5 µg/L. The groundwater sample collected from monitoring well MW-10 exhibited a benzene concentration of 5.0 µg/L, which is below the WQCC *GQS* of 5 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit benzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 5 µg/L.

The groundwater sample collected from monitoring well MW-1 exhibited a toluene concentration of 2,400 µg/L, which exceeds the WQCC GQS of 700 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit toluene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 700 µg/L.

The groundwater samples collected from monitoring wells MW-1, MW-6, MW-15, and MW-17 exhibited ethylbenzene concentrations ranging from 2.1 µg/L (MW-6) to 140 µg/L (MW-1), which are below the WQCC *GQS* of 1,000 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit ethylbenzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 1,000 µg/L.

The groundwater sample collected from monitoring well MW-1 exhibited a total xylenes concentration of 740 µg/L, which exceeds the WQCC *GQS* of 620 µg/L. The groundwater samples collected from monitoring wells MW-6, MW-10, and MW-15 exhibited total xylenes concentrations ranging from 2.7 µg/L (MW-10) to 13 µg/L (MW-15), which are below the WQCC *GQS* of 620 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit total xylenes concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 620 µg/L.

No data qualifier flags were associated with the June 2018 analytical results.

December 2018

The groundwater samples collected from monitoring wells MW-1 and MW-17 exhibited benzene concentrations of 590 µg/L and 29 µg/L, respectively, which exceed the WQCC *GQS* of 5 µg/L. The groundwater samples collected from monitoring wells MW-14 and MW-15 exhibited benzene concentrations of 2.7 µg/L and 1.2 µg/L, respectively, which are below the WQCC *GQS* of 5 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit benzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 5 µg/L.

The groundwater sample collected from monitoring well MW-1 exhibited a toluene concentration of 400

µg/L, which is below the WQCC GQS of 700 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit toluene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 700 µg/L.

The groundwater samples collected from monitoring wells MW-1, MW-6, and MW-17 exhibited ethylbenzene concentrations ranging from 1.8 µg/L (MW-17) to 33 µg/L (MW-1), which are below the WQCC *GQS* of 1,000 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit ethylbenzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 1,000 µg/L.

The groundwater samples collected from monitoring wells MW-1, MW-6, and MW-14 exhibited total xylenes concentrations ranging from 6.1 µg/L (MW-14) to 99 µg/L (MW-1), which are below the WQCC *GQS* of 620 µg/L. The groundwater samples collected from the remaining monitoring wells did not exhibit total xylenes concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 620 µg/L.

No data qualifier flags were associated with the December 2018 analytical results.

3.0 FINDINGS AND RECOMMENDATION

Semi-annual groundwater monitoring events were conducted at the Trunk 6C Kutz Wash Pipeline Release Site during June and December 2018. The objective of the groundwater monitoring events was to further evaluate the concentrations of COCs in groundwater at the Site with respect to WQCC *GQSs*.

- The groundwater flow direction at the Site is generally towards the west-northwest, with an approximate gradient of 0.008 ft/ft across the Site.

- Based on analytical results for the groundwater samples collected from monitoring wells MW-1, MW-15 and MW-17 during the June and December 2018, BTEX constituent concentrations were identified in groundwater above New Mexico WQCC standards. The groundwater analytical results for the groundwater samples collected from the remaining monitoring wells during the June and December 2018 did not identify BTEX constituent concentrations above the applicable WQCC *GQSs*.

- Except for monitoring wells MW-1 and MW-17, which have exhibited relatively consistent COC concentrations, groundwater sampling data at the Site demonstrate generally declining COC concentrations.

Based on the results of groundwater monitoring activities, Ensolum has the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD;

- Continue semi-annual groundwater monitoring at the Site; and,

- Implement additional Site-specific aquifer testing.

4.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

4.1 Standard of Care

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

work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client, as detailed in our proposal.

4.2 Limitations

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

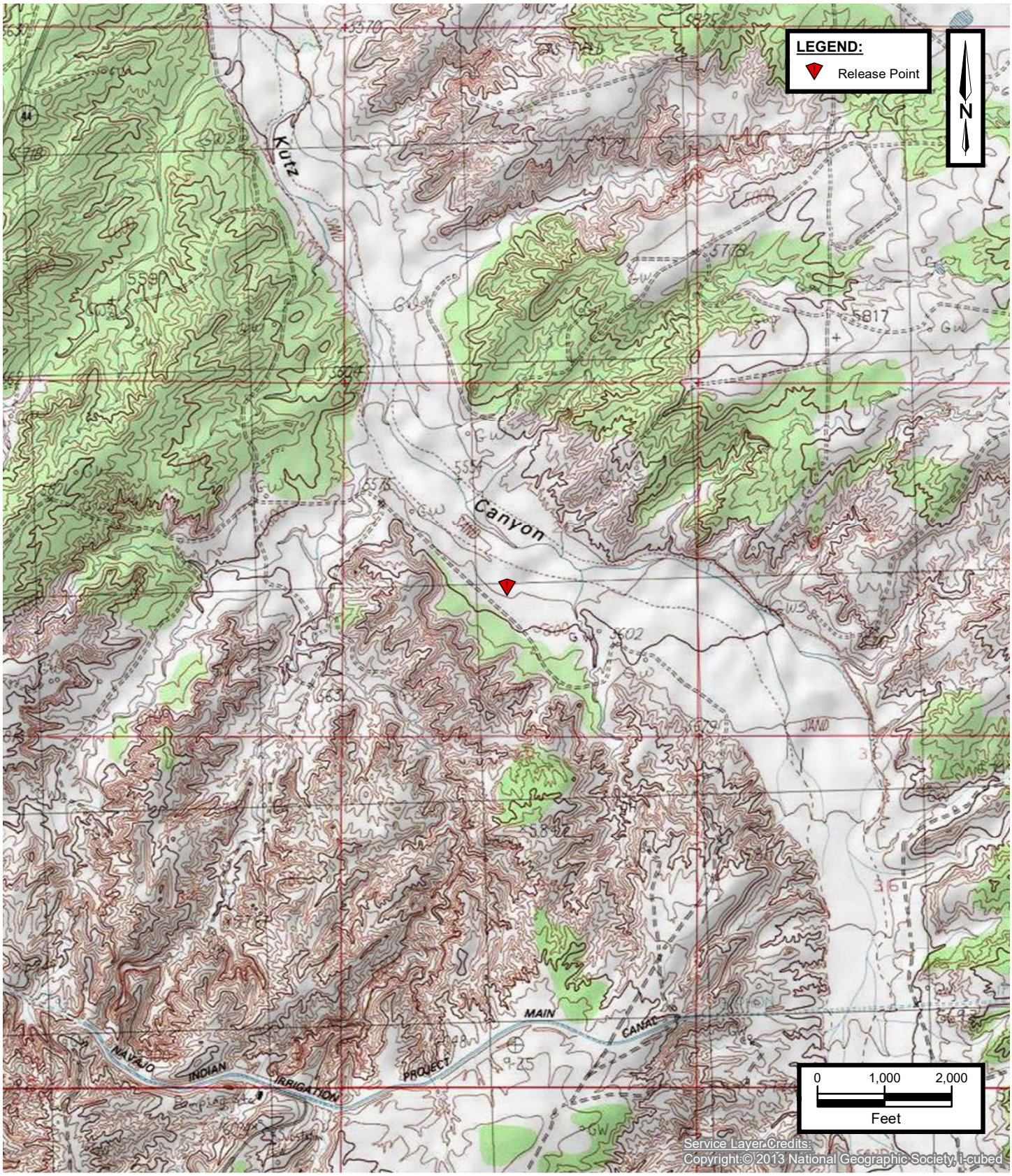
4.3 Reliance

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

ENSOLUM

APPENDIX A

Figures



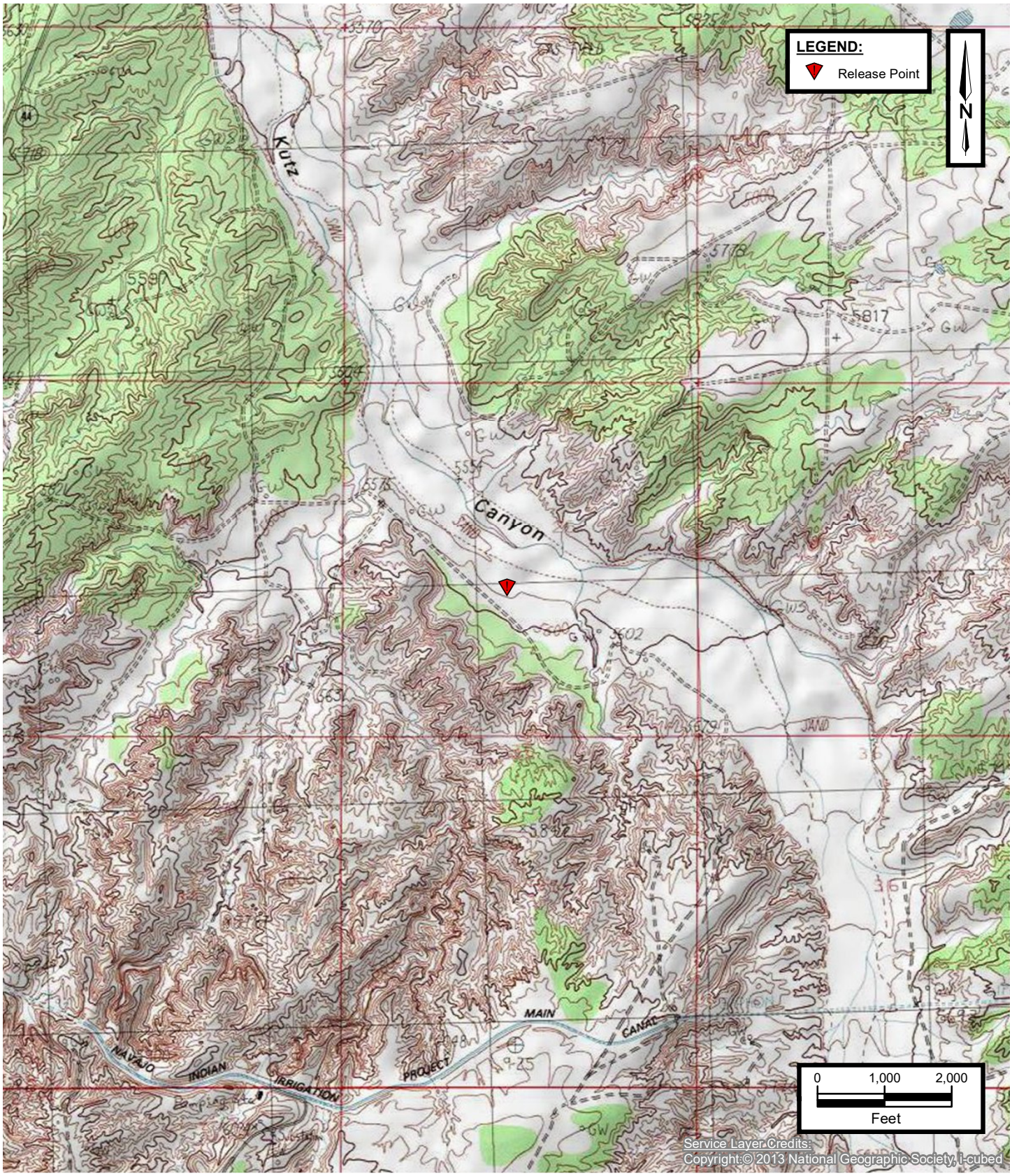
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE
1



ENSOLUM
Environmental & Hydrogeologic Consultants

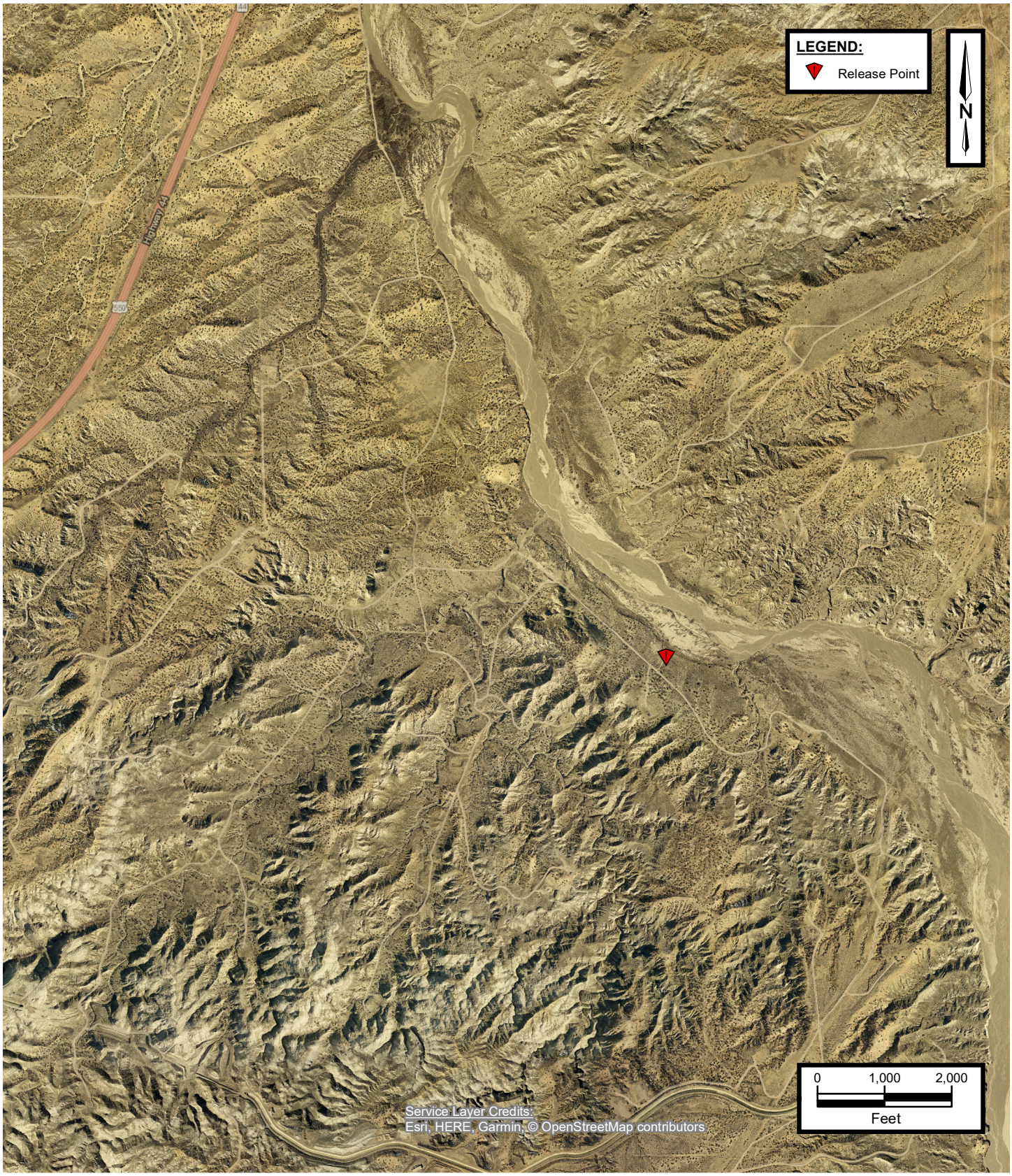
TOPGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE

1



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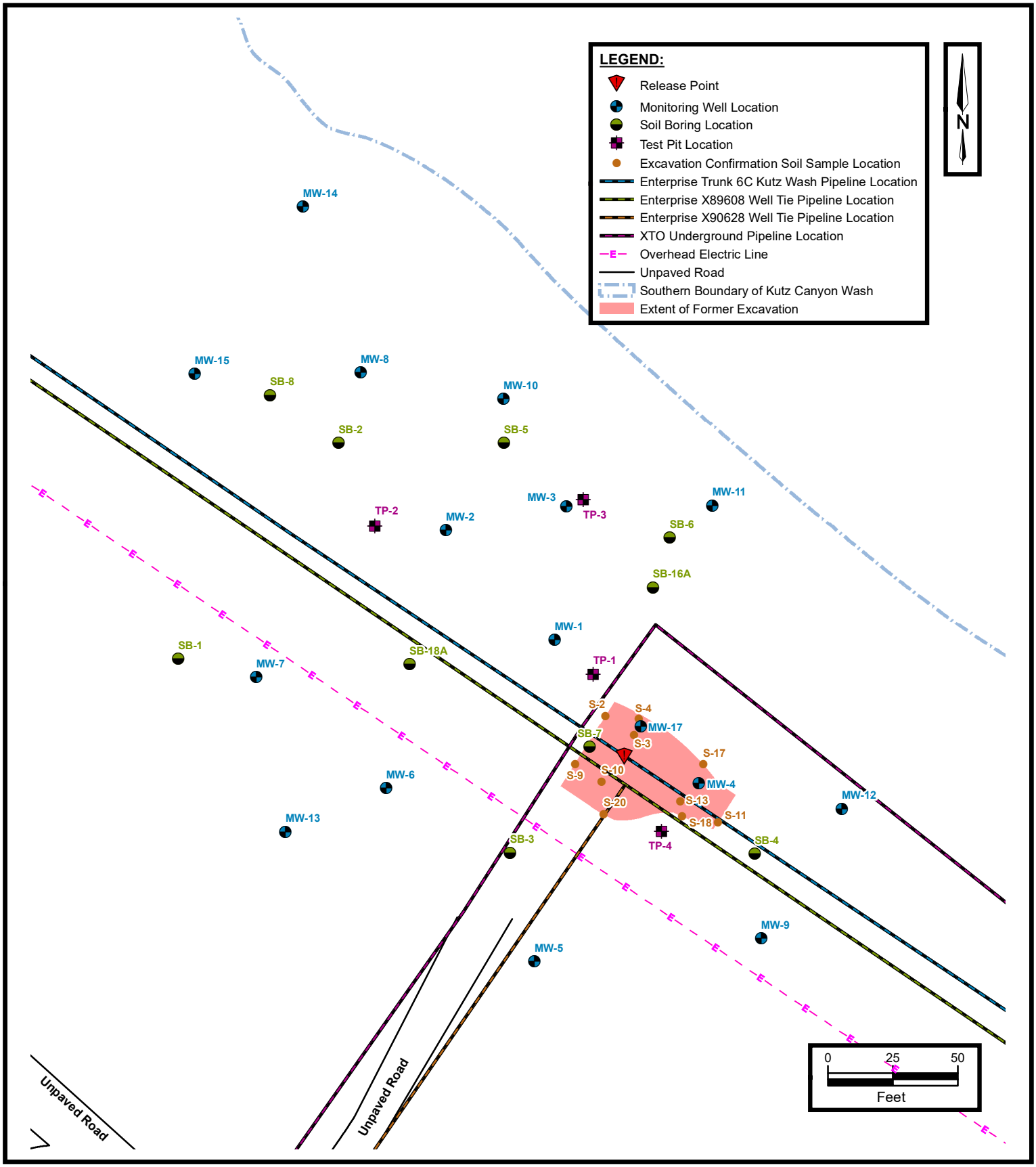
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE
2



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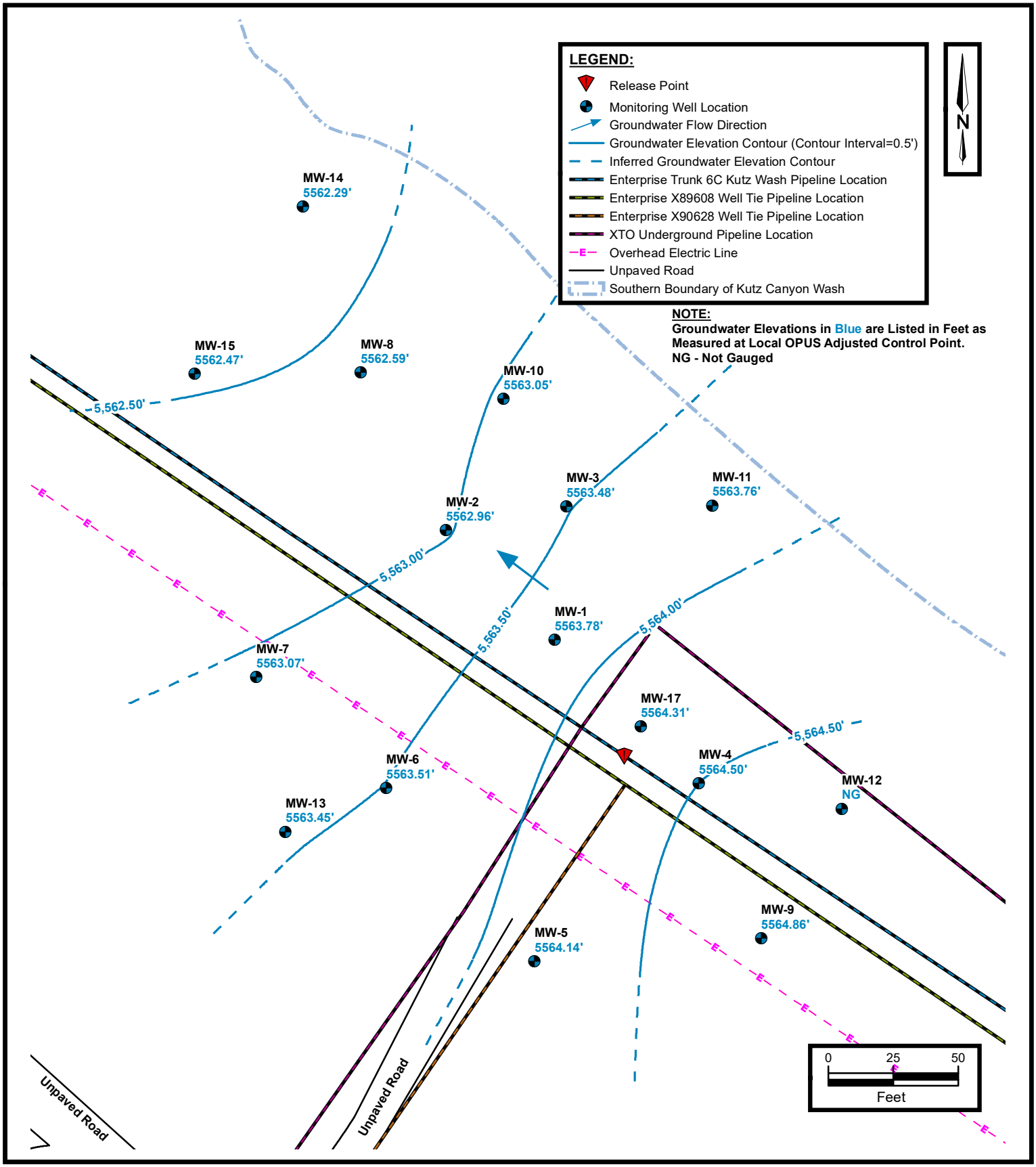
SITE MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE
3



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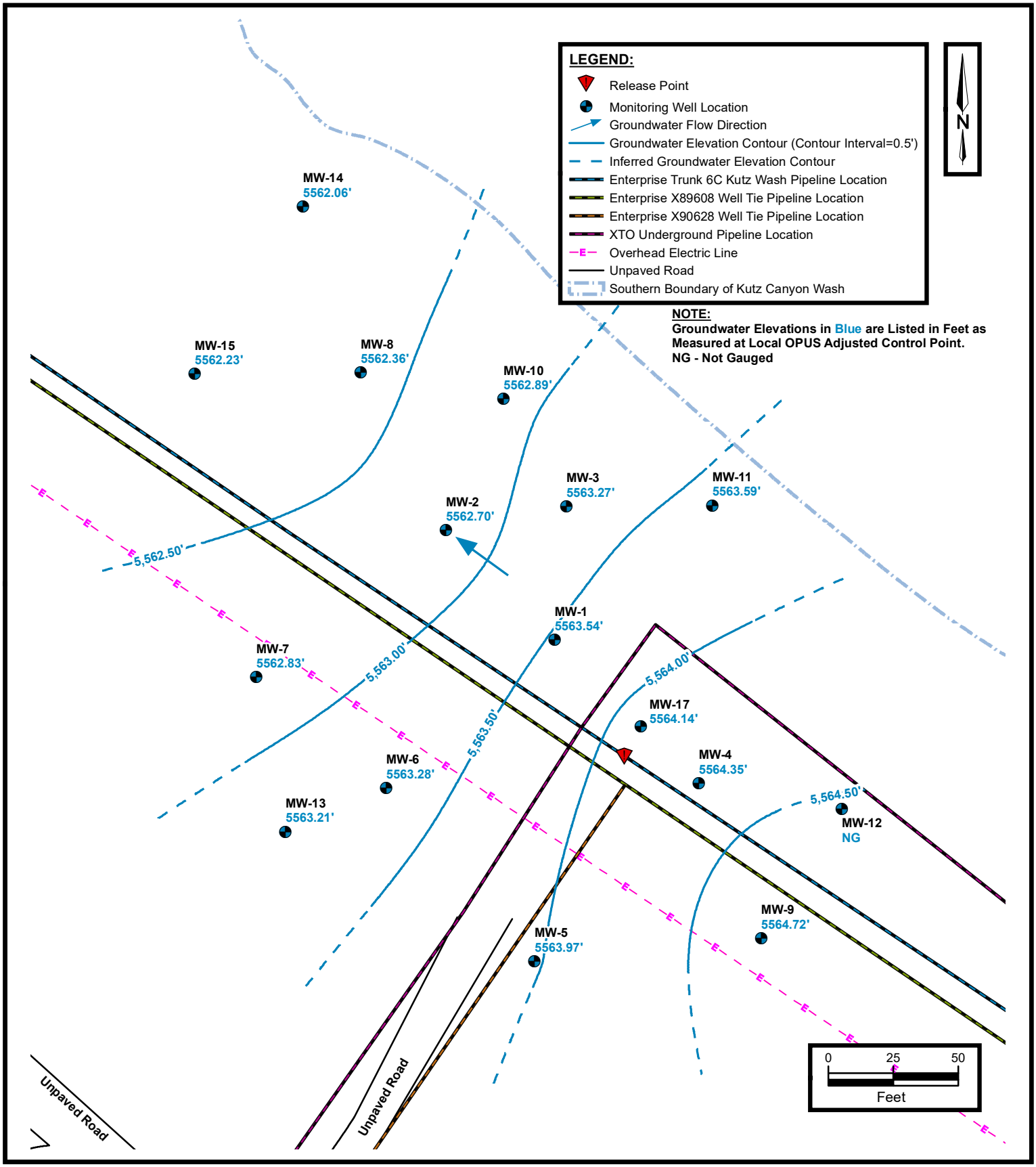
Environmental & Hydrogeologic Consultants

GROUNDWATER GRADIENT MAP
(JUNE 2018)

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE
4A



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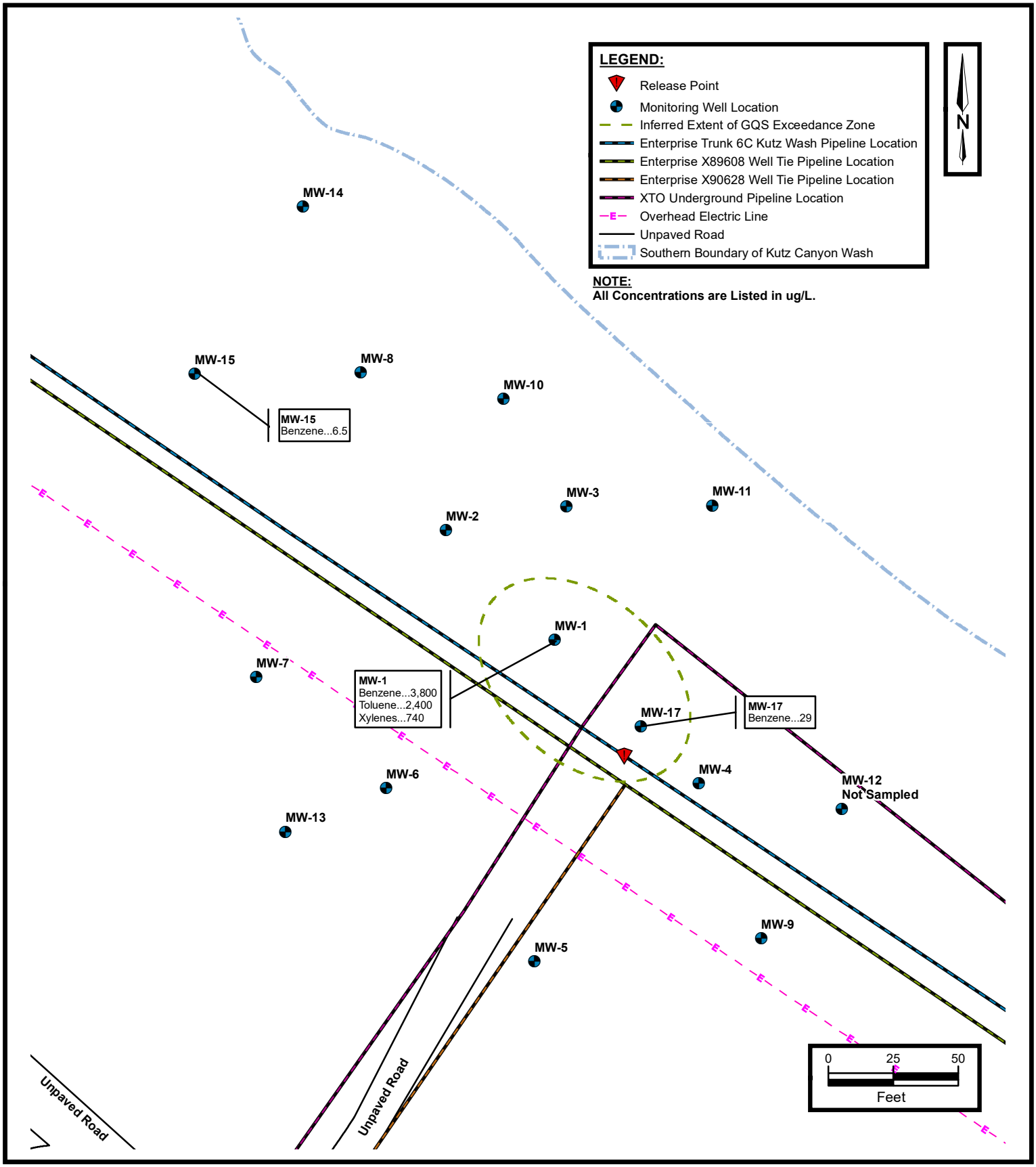
Environmental & Hydrogeologic Consultants

GROUNDWATER GRADIENT MAP (DECEMBER 2018)

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE 4B



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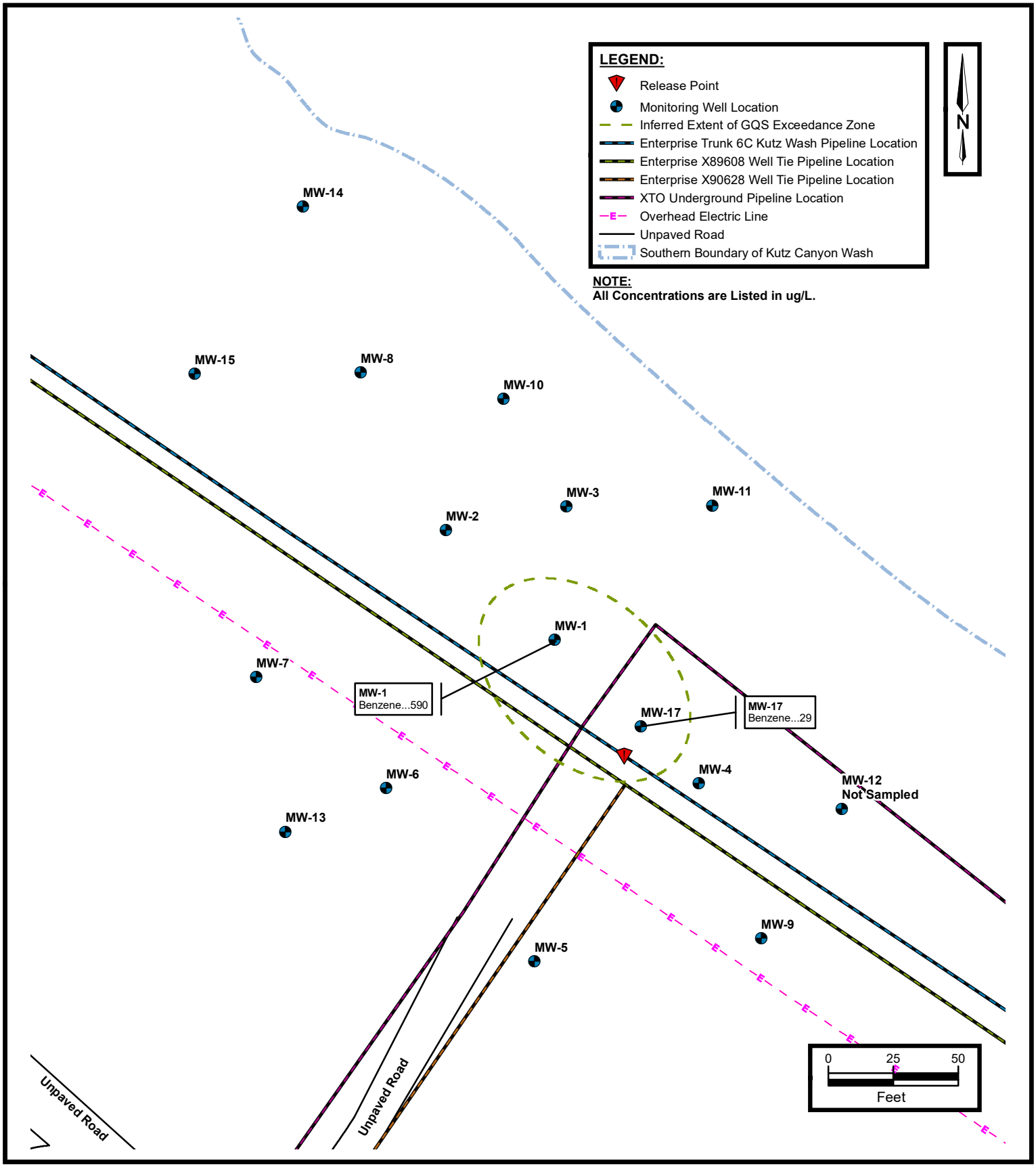
GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JUNE 2018)

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE

5A



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (DECEMBER 2018)

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W

PROJECT NUMBER: 05A1226011

FIGURE

5B

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APPENDIX B

Tables

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		5	700	1,000	620
Monitoring Wells Installed by AES					
MW-1	9.7.12	**2,200**	350	68	**650**
	12.20.12	**1,100**	250	37	180
	3.20.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	6.19.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	9.17.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	12.16.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	3.14.15	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	9.9.15	**1,900**	440	54	400
	6.15.15	**6,900**	**2,700**	170	**1,400**
	12.7.15	**3,900**	**1,400**	120	**870**
	6.02.16	**1,400**	**850**	41	330
	12.20.16	**76**	59	2.5	23
	6.28.17	**3,500**	**4,200**	180	**1,800**
	1.10.18	**1,300**	710	59	350
	6.22.18	**3,800**	**2,400**	140	**740**
	12.14.18	**590**	400	33	99
MW-2	9.7.12	**270**	**1,100**	66	**1,800**
	12.20.12	**26**	49	5.1	250
	3.20.13	<5.0	<5.0	<5.0	67
	6.19.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	9.17.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	12.16.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	3.14.14	**1,200**	**1,600**	74	**660**
	9.9.14	**78**	76	2.9	110
	6.15.15	<1.0	1.1	<1.0	44
	12.7.15	<1.0	<1.0	<1.0	13
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
MW-3	9.7.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	**780**	130	2.5	15
	9.18.13	**150**	28	<5.0	15
	12.16.13	**660**	340	16	130
	3.14.14	**200**	86	4.0	49
	9.9.14	2.5	1.7	<1.0	3.3
	6.12.15	1.3	<1.0	<1.0	2.2
	12.7.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.28.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		5	700	1,000	620
MW-4	9.7.12	**18**	5.1	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	**290**	110	<2.0	15
	6.19.13	**600**	45	<10	<20
	9.18.13	**830**	39	<20	<30
	12.16.13	**300**	110	10	63
	3.14.14	4.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.11.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.28.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
MW-5	9.7.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	<1.0	<1.0	<1.0	<2.0
	9.17.13	<1.0	<1.0	<1.0	<1.5
	12.16.13	2.1	4.7	4.0	17
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<1.0	<1.0	<1.0	<2.0
	6.12.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
MW-6	9.7.12	<5.0	<5.0	260	**2,200**
	12.20.12	<5.0	<5.0	180	**1,200**
	3.20.13	<5.0	<5.0	120	**800**
	6.19.13	**9.6**	6.2	150	**1,100**
	9.18.13	<5.0	<5.0	180	**1,200**
	12.16.13	<5.0	<5.0	140	**990**
	3.14.14	<1.0	<1.0	150	**990**
	9.9.14	<5.0	<5.0	49	400
	6.12.15	<5.0	<5.0	89	590
	12.4.15	<2.5	<5.0	41	210
	6.02.16	<1.0	<1.0	16	70
	12.19.16	<1.0	<1.0	26	80
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	3.6	12
	6.21.18	<1.0	<1.0	2.1	5.9
	12.13.18	<1.0	<1.0	2.7	9.8

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		5	700	1,000	620
MW-7	9.7.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	2.4
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	<1.0	<1.0	<1.0	<2.0
	9.17.13	<1.0	<1.0	<1.0	<1.5
	12.16.13	1.6	3.9	3.6	16
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<1.0	<1.0	<1.0	<2.0
	6.12.15	<1.0	<1.0	<1.0	<2.0
	12.7.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
MW-8	9.7.12	**41**	40	3.8	320
	12.20.12	<2.0	<2.0	<2.0	20
	3.20.13	**41**	36	<2.0	89
	6.19.13	**21**	12	<1.0	6.8
	9.18.13	<1.0	<1.0	3.4	27
	12.16.13	**18**	21	5.1	74
	3.14.14	**66**	190	10	210
	9.9.14	**NAPL****	**NAPL****	**NAPL****	**NAPL****
	6.15.15	<1.0	<1.0	<1.0	10
	12.7.15	1.3	<1.0	<1.0	53
	6.02.16	4.0	1.6	<1.0	5.1
	12.19.16	<1.0	<1.0	<1.0	2.1
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
MW-9	9.7.12	<2.0	2.4	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	<1.0	<1.0	<1.0	<2.0
	9.17.13	<1.0	<1.0	<1.0	<1.5
	12.16.13	1.5	3.5	2.9	12
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.11.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		5	700	1,000	620
MW-10	12.16.13	**950**	34	12	39
	3.14.14	**560**	4.0	16	27
	9.9.14	**580**	<10	34	<20
	6.15.15	**75**	<1.0	12	2.9
	12.7.15	**17**	<1.0	2.0	<2.0
	6.03.16	**16**	<1.0	<1.0	<2.0
	12.20.16	4.8	<1.0	<1.0	<1.5
	6.27.17	3.4	<1.0	<1.0	<2.0
	1.10.18	<1.0	<1.0	<1.0	<2.0
	6.22.18	5.0	<1.0	<1.0	2.7
	12.14.18	<1.0	<1.0	<1.0	<2.0
MW-11	12.16.13	2.6	3.5	<1.0	6
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.12.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.03.16	<1.0	<1.0	<1.0	<2.0
	12.20.16	<1.0	<1.0	<1.0	<1.5
	6.28.17	Insufficient volume of water to sample.			
	1.10.18	<1.0	<1.0	<1.0	<1.5
	6.22.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
MW-12	12.16.13	3.3	3.8	<1.0	6
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.12.15	Casing Obstruction			
	12.4.15	Casing Obstruction			
	6.02.16	Casing Obstruction			
	12.20.16	Casing Obstruction			
	6.27.17	Casing Obstruction			
	1.10.18	Casing Obstruction			
	6.21.18	Casing Obstruction			
	12.13.18	Casing Obstruction			
MW-13	12.16.13	4.4	5.1	1.2	8
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.15.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.03.16	<1.0	<1.0	<1.0	<2.0
	12.20.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.10.18	<1.0	<1.0	<1.0	<2.0
	6.22.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		5	700	1,000	620
Monitoring Wells Installed by APEX					
MW-14	9.16.16	<1.0	<1.0	<1.0	<2.0
	12.20.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.10.18	<1.0	<1.0	<1.0	<2.0
	6.22.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	2.7	<1.0	<1.0	6.1
MW-15	9.16.16	3.6	<1.0	4.1	43
	12.20.16	<1.0	<1.0	6.2	87
	6.27.17	4.1	<1.0	4.6	89
	1.10.18	4.7	<1.0	2.8	33
	6.21.18	**6.5**	<1.0	2.6	13
	12.13.18	1.2	<1.0	<1.0	<2.0
MW-17	9.16.16	**380**	**790**	33	**1,200**
	12.20.16	**200**	100	11	310
	6.28.17	**130**	<5.0	<5.0	**950**
	1.10.18	**5.2**	2.2	1.2	13
	6.22.18	**29**	<1.0	2.4	<1.5
	12.14.18	**29**	<1.0	1.8	<2.0

Note: Concentrations in **bold** and yellow exceed the applicable WQCC GQS

µg/L = micrograms per liter

NAPL = Non-aqueous phase liquid

** - Field personnel recorded the presence of NAPL utilizing an interface probe, but the product was not visually verified.

<1.0 = the numeral (in this case "1.0") identifies the laboratory RL or PQL

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TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-1*	9.7.12	ND	15.78	ND	5579.73	5563.95
	12.20.12	ND	15.69	ND		5564.04
	3.20.13	15.31	15.73	0.42		5564.31
	6.19.13	15.49	15.75	0.26		5564.17
	9.17.13	15.79	16.27	0.48		5563.81
	12.16.13	15.59	15.75	0.16		5564.10
	3.14.14	15.35	15.36	0.01		5564.38
	9.9.14	15.98	15.99	0.01		5563.75
	6.10.15	15.29	15.30	0.01		5564.44
	12.04.15	ND	15.81	ND		5563.92
	6.02.16	ND	15.41	ND		5564.32
	9.16.16	16.12	16.13	0.01	5579.43	5563.31
	12.19.16	ND	15.83	ND		5563.60
	6.27.17	ND	15.39	ND		5564.04
	1.09.18	ND	15.61	ND		5563.82
	6.21.18	ND	15.65	ND		5563.78
	12.13.18	ND	15.89	ND		5563.54
MW-2*	9.7.12	ND	16.29	ND	5579.39	5563.10
	12.20.12	ND	16.22	ND		5563.17
	3.20.13	ND	15.97	ND		5563.42
	6.19.13	15.96	16.40	0.44		5563.31
	9.17.13	16.40	16.54	0.14		5562.95
	12.16.13	16.14	16.22	0.08		5563.23
	3.14.14	ND	15.89	ND		5563.50
	9.9.14	ND	16.50	ND		5562.89
	6.10.15	ND	15.81	ND		5563.58
	12.04.15	ND	16.32	ND		5563.07
	6.02.16	ND	15.93	ND		5563.46
	9.16.16	ND	16.61	ND	5579.15	5562.54
	12.19.16	ND	16.35	ND		5562.80
	6.27.17	ND	15.95	ND		5563.20
	1.09.18	ND	16.13	ND		5563.02
	6.21.18	ND	16.19	ND		5562.96
	12.13.18	ND	16.45	ND		5562.70
MW-3*	9.7.12	ND	15.98	ND	5579.52	5563.54
	12.20.12	ND	15.79	ND		5563.73
	3.20.13	ND	15.50	ND		5564.02
	6.19.13	ND	15.66	ND		5563.86
	9.18.13	ND	15.96	ND		5563.56
	12.16.13	ND	15.70	ND		5563.82
	3.14.14	ND	15.39	ND		5564.13
	9.9.14	ND	16.10	ND		5563.42
	6.10.15	ND	15.28	ND		5564.24
	12.04.15	ND	15.87	ND		5563.65
	6.02.16	ND	15.47	ND		5564.05
	9.16.16	ND	16.24	ND	5579.24	5563.00
	12.19.16	ND	15.87	ND		5563.37
	6.27.17	ND	15.45	ND		5563.79
	1.09.18	ND	15.65	ND		5563.59
	6.21.18	ND	15.76	ND		5563.48
	12.13.18	ND	15.97	ND		5563.27

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TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-4*	9.7.12	ND	15.59	ND	5580.36	5564.77
	12.20.12	ND	15.51	ND		5564.85
	3.20.13	ND	15.25	ND		5565.11
	6.19.13	ND	15.41	ND		5564.95
	9.18.13	ND	15.74	ND		5564.62
	12.16.13	ND	15.45	ND		5564.91
	3.14.14	ND	15.14	ND		5565.22
	9.9.14	ND	15.80	ND		5564.56
	6.10.15	ND	15.06	ND		5565.30
	12.04.15	ND	15.56	ND		5564.80
	6.02.16	ND	15.22	ND		5565.14
	9.16.16	ND	15.92	ND	5579.95	5564.03
	12.19.16	ND	15.55	ND		5564.40
	6.27.17	ND	15.22	ND		5564.73
	1.09.18	ND	15.34	ND		5564.61
	6.21.18	ND	15.45	ND		5564.50
	12.13.18	ND	15.60	ND		5564.35
MW-5*	9.7.12	ND	19.35	ND	5583.53	5564.18
	12.20.12	ND	19.28	ND		5564.25
	3.20.13	ND	19.10	ND		5564.43
	6.19.13	ND	19.21	ND		5564.32
	9.17.13	ND	19.55	ND		5563.98
	12.16.13	ND	19.28	ND		5564.25
	3.14.14	ND	19.03	ND		5564.50
	9.9.14	ND	19.58	ND		5563.95
	6.10.15	ND	18.98	ND		5564.55
	12.04.15	ND	19.41	ND		5564.12
	6.02.16	ND	19.08	ND		5564.45
	9.16.16	ND	19.69	ND	5583.41	5563.72
	12.19.16	ND	19.42	ND		5563.99
	6.27.17	ND	19.12	ND		5564.29
	1.09.18	ND	19.22	ND		5564.19
	6.21.18	ND	19.27	ND		5564.14
	12.13.18	ND	19.44	ND		5563.97
MW-6*	9.7.12	ND	18.55	ND	5582.22	5563.67
	12.20.12	ND	18.49	ND		5563.73
	3.20.13	ND	18.27	ND		5563.95
	6.19.13	ND	18.38	ND		5563.84
	9.18.13	ND	18.74	ND		5563.48
	12.16.13	ND	18.46	ND		5563.76
	3.14.14	ND	18.21	ND		5564.01
	9.9.14	ND	18.75	ND		5563.47
	6.10.15	ND	18.16	ND		5564.06
	12.04.15	ND	18.60	ND		5563.62
	6.02.16	ND	18.25	ND		5563.97
	9.16.16	ND	18.86	ND	5581.98	5563.12
	12.19.16	ND	18.61	ND		5563.37
	6.27.17	ND	18.29	ND		5563.69
	1.09.18	ND	18.43	ND		5563.55
	6.21.18	ND	18.47	ND		5563.51
	12.13.18	ND	18.70	ND		5563.28

ENSOLUM

TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-7*	9.7.12	ND	19.03	ND	5582.24	5563.21
	12.20.12	ND	18.97	ND		5563.27
	3.20.13	ND	18.79	ND		5563.45
	6.19.13	ND	18.87	ND		5563.37
	9.17.13	ND	19.22	ND		5563.02
	12.16.13	ND	18.46	ND		5563.78
	3.14.14	ND	18.73	ND		5563.51
	9.9.14	ND	19.24	ND		5563.00
	6.10.15	ND	18.65	ND		5563.59
	12.04.15	ND	19.10	ND		5563.14
	6.02.16	ND	18.76	ND		5563.48
	9.16.16	ND	19.37	ND	5582.05	5562.68
	12.19.16	ND	19.13	ND		5562.92
	6.27.17	ND	18.80	ND		5563.25
	1.09.18	ND	18.95	ND		5563.10
	6.21.18	ND	18.98	ND		5563.07
	12.13.18	ND	19.22	ND		5562.83
MW-8*	9.7.12	ND	14.96	ND	5577.81	5562.85
	12.20.12	ND	14.87	ND		5562.94
	3.20.13	ND	14.63	ND		5563.18
	6.19.13	ND	14.74	ND		5563.07
	9.18.13	ND	15.08	ND		5562.73
	12.16.13	ND	14.81	ND		5563.00
	3.14.14	ND	14.53	ND		5563.28
	9.9.14**	15.12**	15.25	0.13**		5562.65
	6.10.15	ND	14.44	ND		5563.37
	12.04.15	ND	14.97	ND		5562.84
	6.02.16	ND	14.61	ND		5563.20
	9.16.16	ND	15.29	ND	5577.47	5562.18
	12.19.16	ND	15.00	ND		5562.47
	6.27.17	ND	14.62	ND		5562.85
	1.09.18	ND	14.80	ND		5562.67
	6.21.18	ND	14.88	ND		5562.59
	12.13.18	ND	15.11	ND		5562.36
MW-9*	9.7.12	ND	17.55	ND	5582.48	5564.93
	12.20.12	ND	17.47	ND		5565.01
	3.20.13	ND	17.28	ND		5565.20
	6.19.13	ND	17.42	ND		5565.06
	9.17.13	ND	17.74	ND		5564.74
	12.16.13	ND	17.48	ND		5565.00
	3.14.14	ND	17.21	ND		5565.27
	9.9.14	ND	17.83	ND		5564.65
	6.10.15	ND	17.18	ND		5565.30
	12.04.15	ND	17.61	ND		5564.87
	6.02.16	ND	17.30	ND		5565.18
	9.16.16	ND	17.94	ND	5582.35	5564.41
	12.19.16	ND	17.60	ND		5564.75
	6.27.17	ND	17.34	ND		5565.01
	1.09.18	ND	17.40	ND		5564.95
	6.21.18	ND	17.49	ND		5564.86
	12.13.18	ND	17.63	ND		5564.72

ENSOLUM

TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-10*	12.16.13	ND	16.93	ND	5577.80	5560.87
	3.14.14	ND	14.63	ND		5563.17
	9.9.14	ND	15.34	ND		5562.46
	6.10.15	ND	14.58	ND		5563.22
	12.04.15	ND	15.10	ND		5562.70
	6.02.16	ND	14.74	ND		5563.06
	9.16.16	ND	15.49	ND	5578.10	5562.61
	12.19.16	ND	15.12	ND		5562.98
	6.27.17	ND	14.73	ND		5563.37
	1.09.18	ND	14.90	ND		5563.20
	6.21.18	ND	15.05	ND		5563.05
	12.13.18	ND	15.21	ND		5562.89
MW-11*	12.16.13	ND	15.15	ND	5578.65	5563.50
	3.14.14	ND	14.82	ND		5563.83
	9.9.14	ND	15.63	ND		5563.02
	6.10.15	ND	14.76	ND		5563.89
	12.04.15	ND	15.35	ND		5563.30
	6.02.16	ND	14.98	ND		5563.67
	9.16.16	ND	15.74	ND	5579.04	5563.30
	12.19.16	ND	15.35	ND		5563.69
	6.27.17	ND	15.00	ND		5564.04
	1.09.18	ND	15.11	ND		5563.93
	6.21.18	ND	15.28	ND		5563.76
	12.13.18	ND	15.45	ND		5563.59
MW-12*	12.16.13	ND	15.54	ND	5579.99	5564.45
	3.14.14	ND	15.27	ND		5564.72
	9.9.14	ND	15.96	ND		5564.03
	6.10.15	ND	15.22	ND		5564.77
	12.04.15	NG	NG	NG		NG
	6.02.16	NG	NG	NG		NG
	9.16.16	NG	NG	NG	5580.28	NG
	12.19.16	NG	NG	NG		NG
	6.27.17	NG	NG	NG		NG
	1.09.18	NG	NG	NG		NG
	6.21.18	NG	NG	NG		NG
	12.13.18	NG	NG	NG		NG
MW-13*	12.16.13	ND	19.88	ND	5583.03	5563.15
	3.14.14	ND	19.63	ND		5563.40
	9.9.14	ND	20.18	ND		5562.85
	6.10.15	ND	19.57	ND		5563.46
	12.04.15	ND	20.01	ND		5563.02
	6.02.16	ND	19.67	ND		5563.36
	9.16.16	ND	20.27	ND	5583.34	5563.07
	12.19.16	ND	20.03	ND		5563.31
	6.27.17	ND	19.74	ND		5563.60
	1.09.18	ND	19.85	ND		5563.49
	6.21.18	ND	19.89	ND		5563.45
	12.13.18	ND	20.13	ND		5563.21

ENSOLUM

TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-14	9.16.16	ND	14.48	ND	5576.39	5561.91
	12.19.16	ND	14.18	ND		5562.21
	6.27.17	ND	13.83	ND		5562.56
	1.09.18	ND	13.99	ND		5562.40
	6.21.18	ND	14.10	ND		5562.29
	12.13.18	ND	14.33	ND		5562.06
MW-15	9.16.16	ND	16.75	ND	5578.83	5562.08
	12.19.16	ND	16.48	ND		5562.35
	6.27.17	ND	16.12	ND		5562.71
	1.09.18	ND	16.30	ND		5562.53
	6.21.18	ND	16.36	ND		5562.47
	12.13.18	ND	16.60	ND		5562.23
MW-17	9.16.16	ND	16.02	ND	5579.86	5563.84
	12.19.16	ND	15.68	ND		5564.18
	6.27.17	ND	15.30	ND		5564.56
	1.09.18	ND	15.45	ND		5564.41
	6.21.18	ND	15.55	ND		5564.31
	12.13.18	ND	15.72	ND		5564.14

BTOC - below top of casing

AMSL - above mean sea level

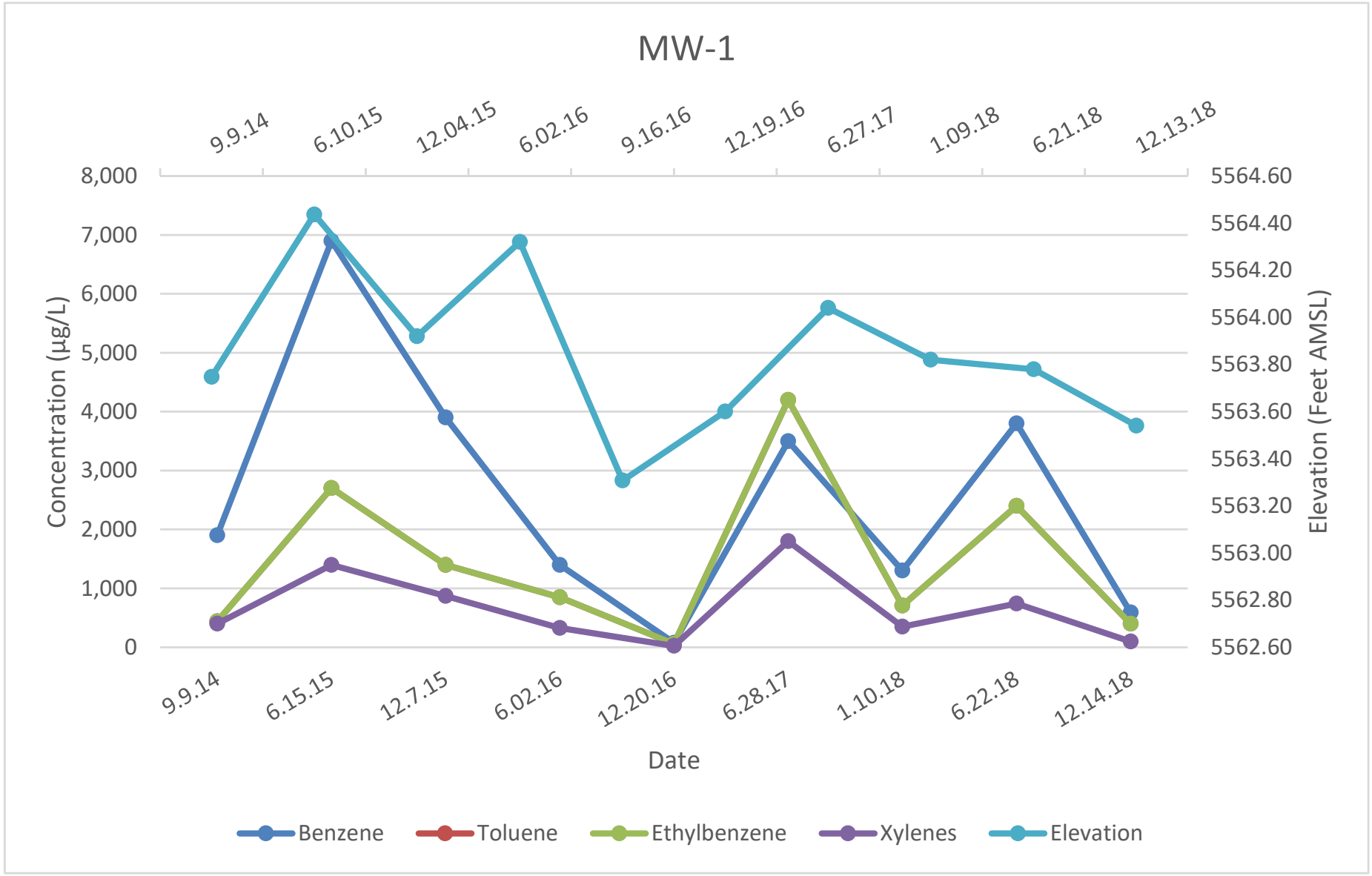
TOC - top of casing

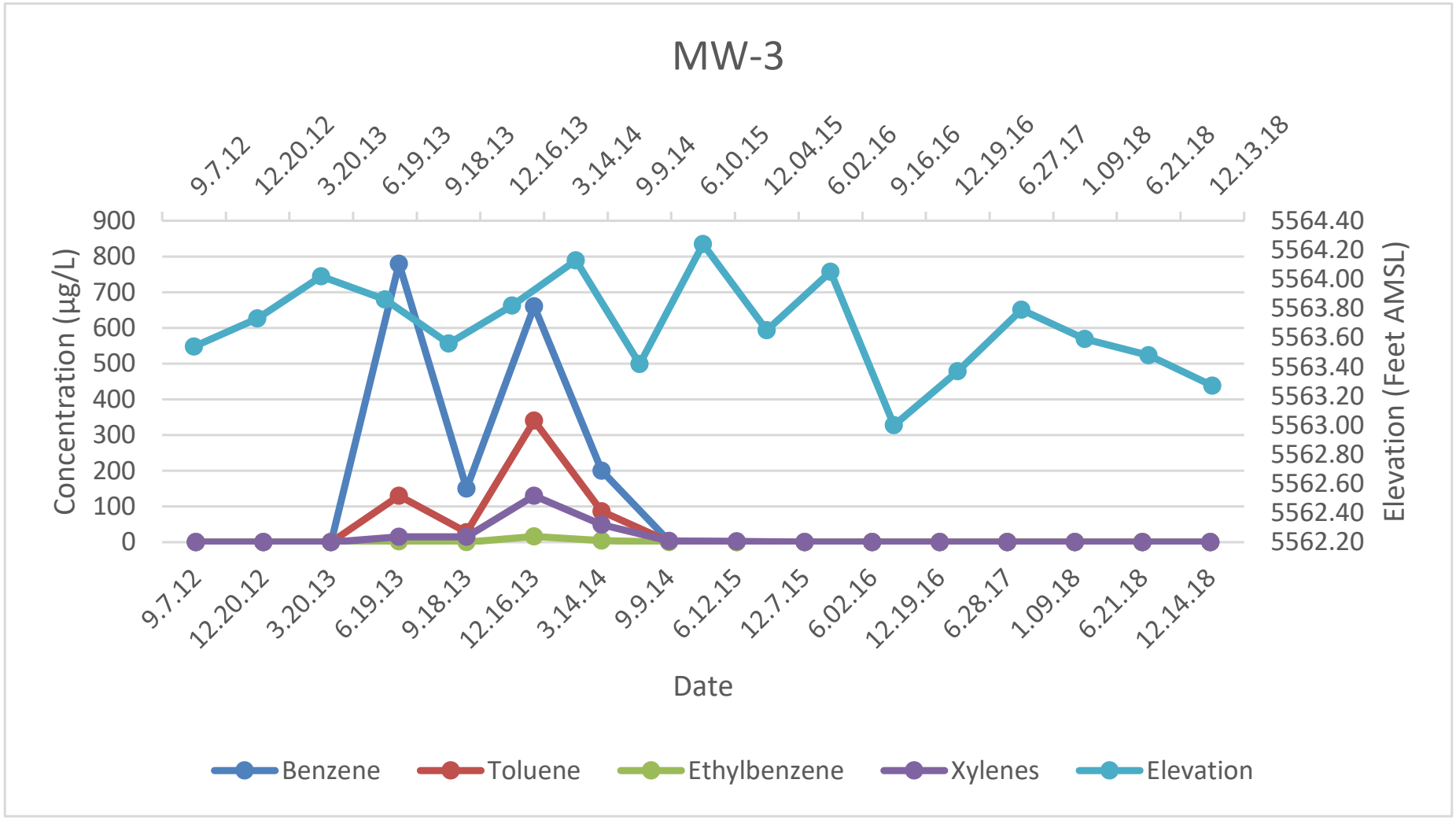
NG - Well not gauged, or Errant Gauge.

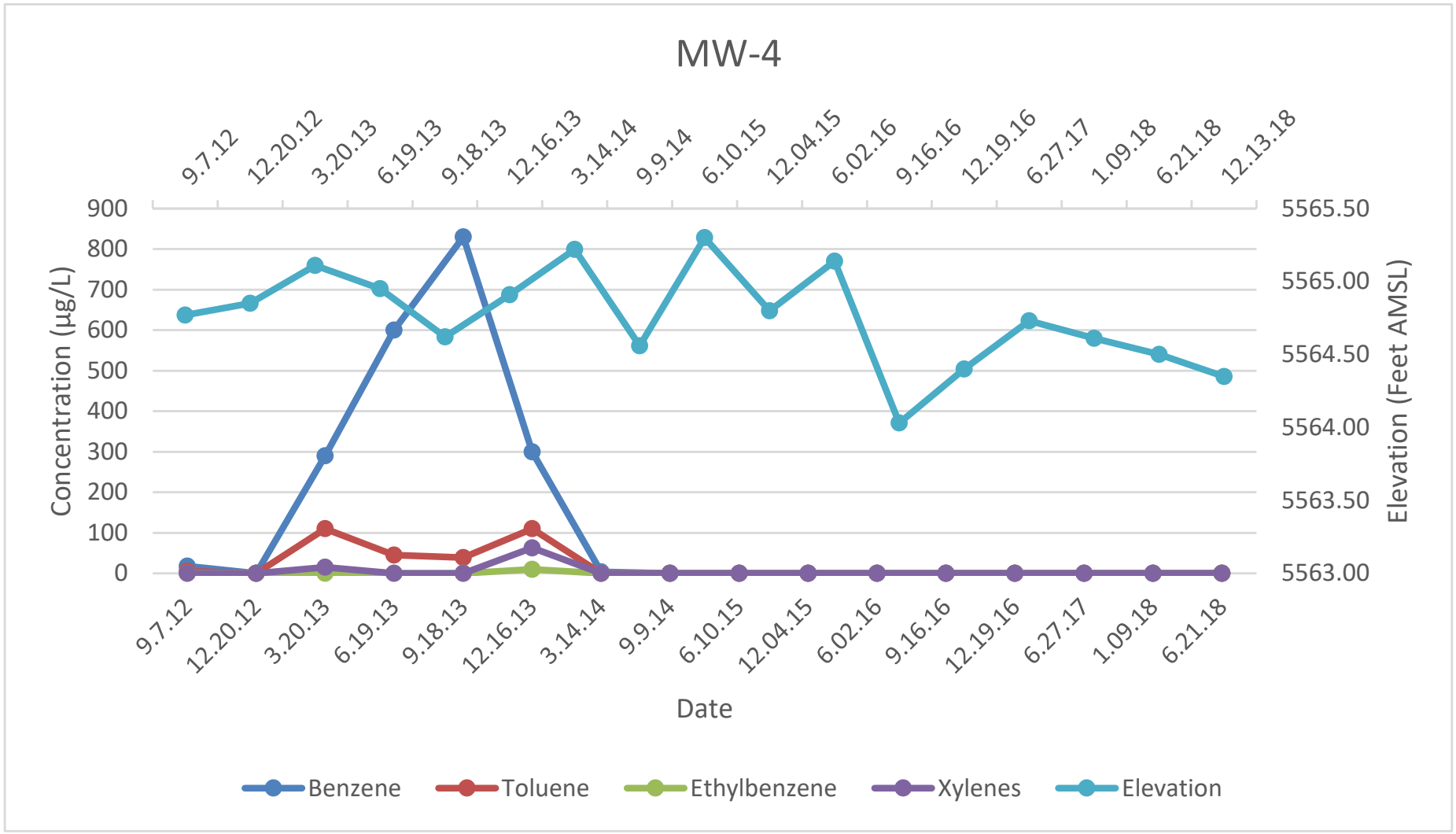
* - Monitoring wells resurveyed during September 2016

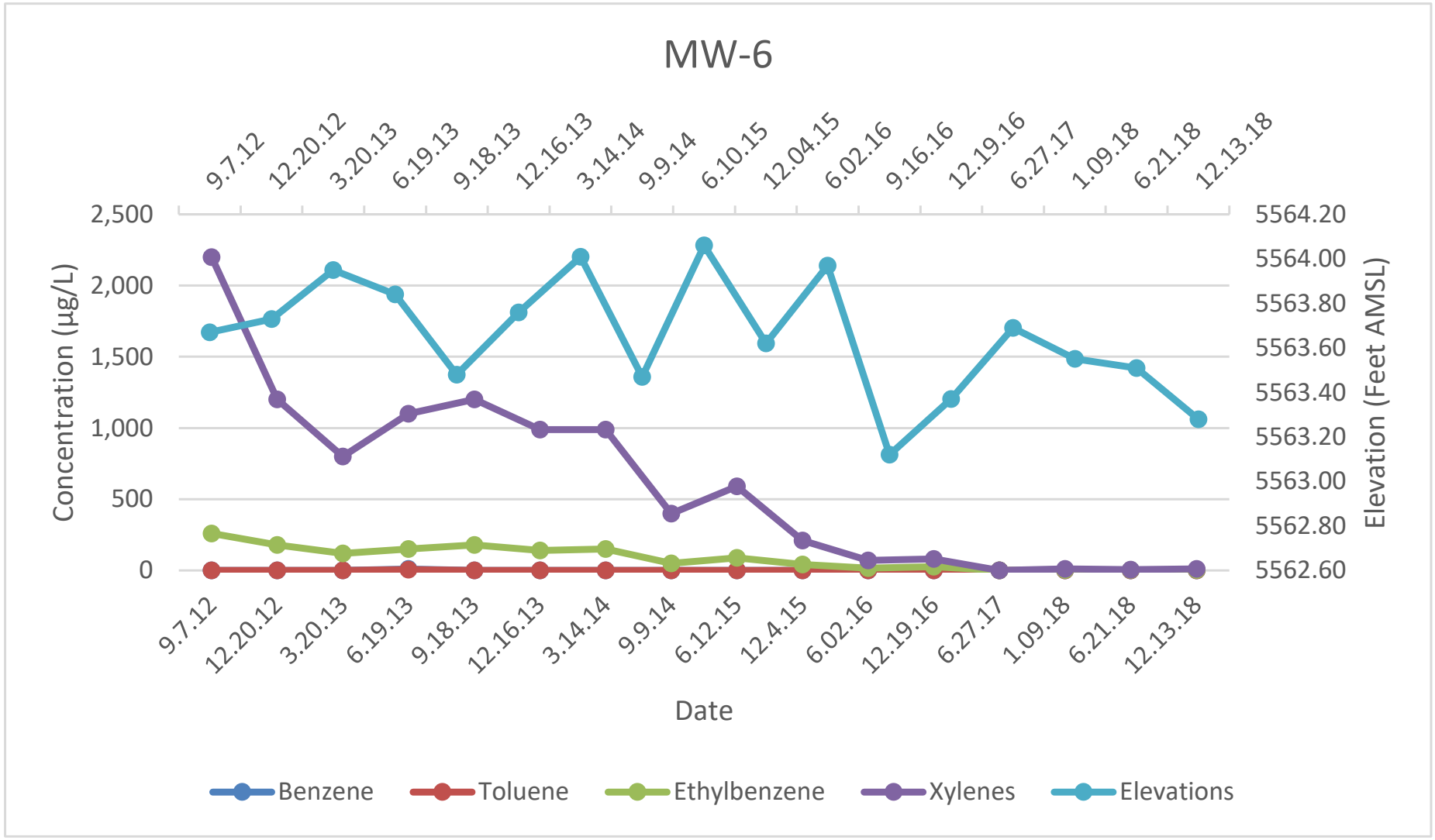
** - Field personnel recorded the presence of NAPL utilizing an interface probe, but the product was not visually verified.

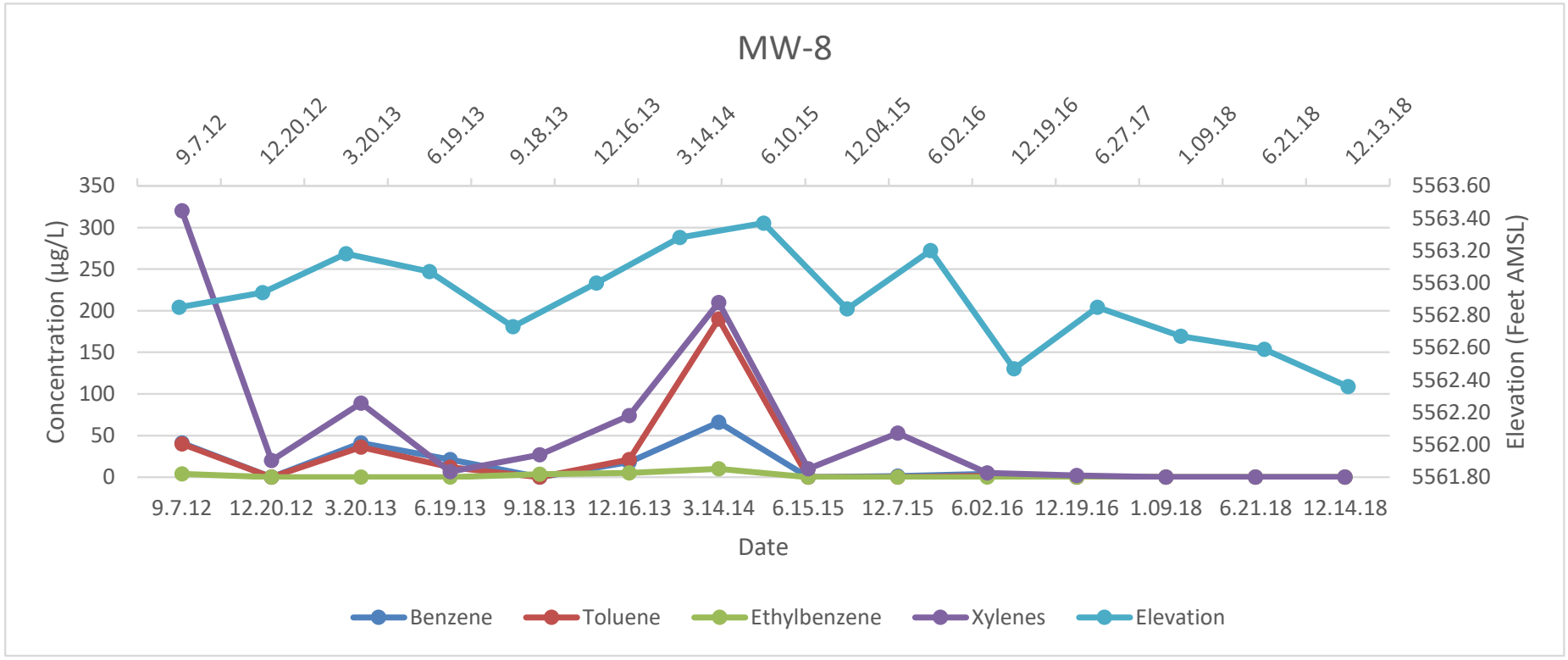
NA - not applicable

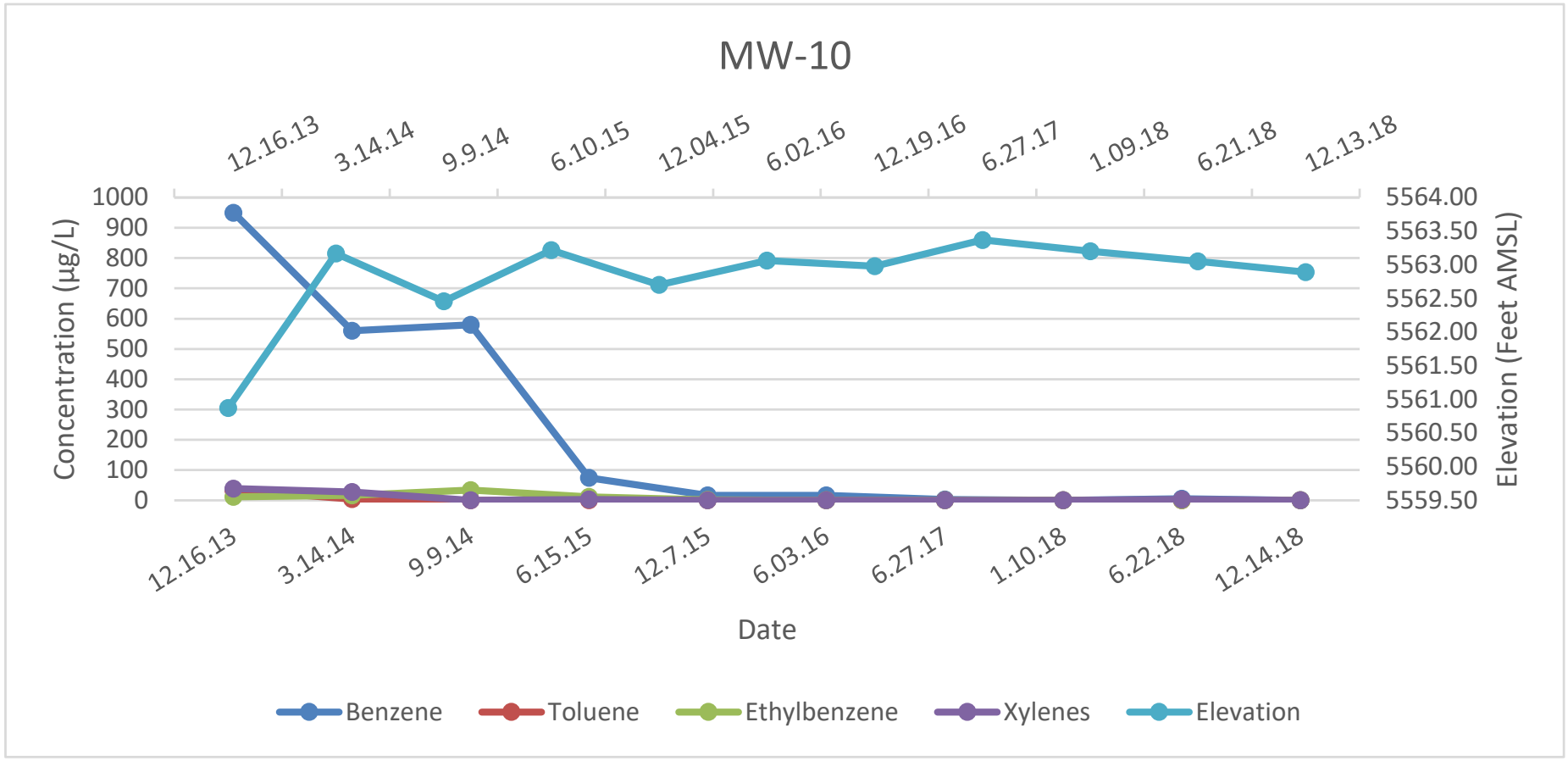

MW-1
9.9.14
6.10.15
12.04.15
6.02.16
9.16.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Concentration (µg/L)
5564.60
5564.40
5564.20
5564.00
5563.80
5563.60
5563.40
5563.20
5563.00
5562.80
5562.60
Elevation (Feet AMSL)
9.9.14
6.15.15
12.7.15
6.02.16
12.20.16
6.28.17
1.10.18
6.22.18
12.14.18
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevation

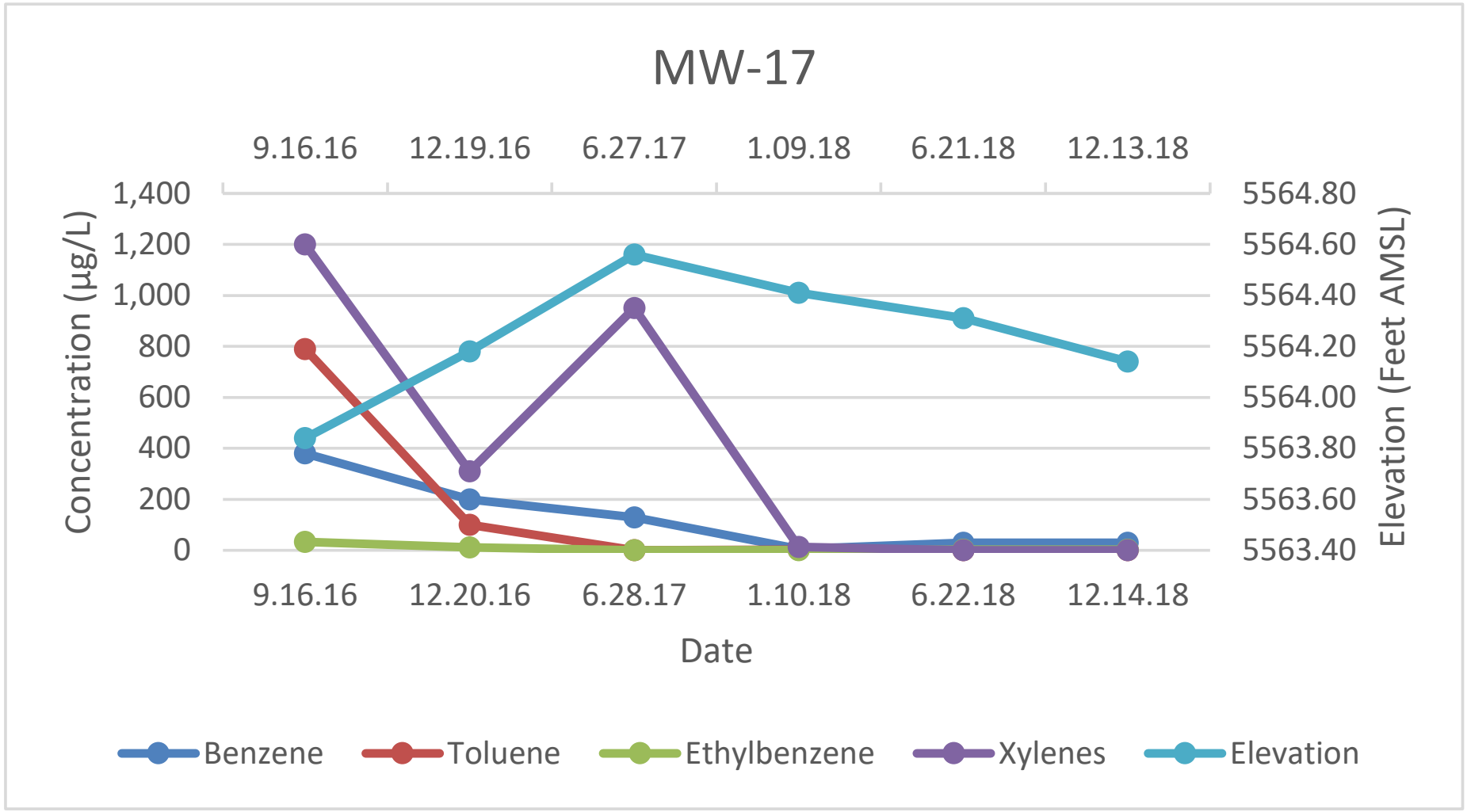

MW-3
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
9.9.14
6.10.15
12.04.15
6.02.16
9.16.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
900
800
700
600
500
400
300
200
100
0
Concentration (µg/L)
5564.40
5564.20
5564.00
5563.80
5563.60
5563.40
5563.20
5563.00
5562.80
5562.60
5562.40
5562.20
Elevation (Feet AMSL)
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
9.9.14
6.12.15
12.7.15
6.02.16
12.19.16
6.28.17
1.09.18
6.21.18
12.14.18
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevation


MW-4
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
9.9.14
6.10.15
12.04.15
6.02.16
9.16.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
900
800
700
600
500
400
300
200
100
0
Concentration (µg/L)
5565.50
5565.00
5564.50
5564.00
5563.50
5563.00
Elevation (Feet AMSL)
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevation


MW-6
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
9.9.14
6.10.15
12.04.15
6.02.16
9.16.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
2,500
2,000
1,500
1,000
500
0
Concentration (µg/L)
5564.20
5564.00
5563.80
5563.60
5563.40
5563.20
5563.00
5562.80
5562.60
Elevation (Feet AMSL)
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
9.9.14
6.12.15
12.4.15
6.02.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevations


MW-8
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
6.10.15
12.04.15
6.02.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
350
300
250
200
150
100
50
0
Concentration (µg/L)
5563.60
5563.40
5563.20
5563.00
5562.80
5562.60
5562.40
5562.20
5562.00
5561.80
Elevation (Feet AMSL)
9.7.12
12.20.12
3.20.13
6.19.13
9.18.13
12.16.13
3.14.14
6.15.15
12.7.15
6.02.16
12.19.16
1.09.18
6.21.18
12.14.18
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevation


MW-10
12.16.13
3.14.14
9.9.14
6.10.15
12.04.15
6.02.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
Concentration (µg/L)
1000
900
800
700
600
500
400
300
200
100
0
Elevation (Feet AMSL)
5564.00
5563.50
5563.00
5562.50
5562.00
5561.50
5561.00
5560.50
5560.00
5559.50
12.16.13
3.14.14
9.9.14
6.15.15
12.7.15
6.03.16
6.27.17
1.10.18
6.22.18
12.14.18
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevation


MW-17
9.16.16
12.19.16
6.27.17
1.09.18
6.21.18
12.13.18
1,400
1,200
1,000
800
600
400
200
0
Concentration (µg/L)
5564.80
5564.60
5564.40
5564.20
5564.00
5563.80
5563.60
5563.40
Elevation (Feet AMSL)
9.16.16
12.20.16
6.28.17
1.10.18
6.22.18
12.14.18
Date
Benzene
Toluene
Ethylbenzene
Xylenes
Elevation

ENSOLUM

APPENDIX C

Laboratory Data Sheets & Chain of Custody Documentation

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

June 27, 2018

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

RE: Trunk 6C OrderNo.: 1806D84

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/22/2018 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 **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Trunk 6C
Collection Date: 6/21/2018 9:00:00 AM
Lab ID: 1806D84-001
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/26/2018 12:01:06 PM	C52259
Toluene	ND	1.0		µg/L	1	6/26/2018 12:01:06 PM	C52259
Ethylbenzene	ND	1.0		µg/L	1	6/26/2018 12:01:06 PM	C52259
Xylenes, Total	ND	1.5		µg/L	1	6/26/2018 12:01:06 PM	C52259
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	6/26/2018 12:01:06 PM	C52259
Surr: Toluene-d8	111	70-130		%Rec	1	6/26/2018 12:01:06 PM	C52259

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-9
Project: Trunk 6C
Collection Date: 6/21/2018 9:55:00 AM
Lab ID: 1806D84-002
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 6:57:41 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 6:57:41 PM	B52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 6:57:41 PM	B52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 6:57:41 PM	B52231
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/25/2018 6:57:41 PM	B52231
Surr: Toluene-d8	107	70-130		%Rec	1	6/25/2018 6:57:41 PM	B52231

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Trunk 6C
Collection Date: 6/21/2018 10:45:00 AM
Lab ID: 1806D84-003
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 7:20:56 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 7:20:56 PM	B52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 7:20:56 PM	B52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 7:20:56 PM	B52231
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/25/2018 7:20:56 PM	B52231
Surr: Toluene-d8	105	70-130		%Rec	1	6/25/2018 7:20:56 PM	B52231

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-6
Project: Trunk 6C
Collection Date: 6/21/2018 11:40:00 AM
Lab ID: 1806D84-004
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 7:44:14 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 7:44:14 PM	B52231
Ethylbenzene	2.1	1.0		µg/L	1	6/25/2018 7:44:14 PM	B52231
Xylenes, Total	5.9	1.5		µg/L	1	6/25/2018 7:44:14 PM	B52231
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	6/25/2018 7:44:14 PM	B52231
Surr: Toluene-d8	109	70-130		%Rec	1	6/25/2018 7:44:14 PM	B52231

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-7
Project: Trunk 6C
Collection Date: 6/21/2018 12:20:00 PM
Lab ID: 1806D84-005
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 8:07:32 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 8:07:32 PM	B52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 8:07:32 PM	B52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 8:07:32 PM	B52231
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/25/2018 8:07:32 PM	B52231
Surr: Toluene-d8	109	70-130		%Rec	1	6/25/2018 8:07:32 PM	B52231

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Client Sample ID:** MW-3
Project: Trunk 6C **Collection Date:** 6/21/2018 1:15:00 PM
Lab ID: 1806D84-006 **Matrix:** AQUEOUS **Received Date:** 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 8:30:43 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 8:30:43 PM	B52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 8:30:43 PM	B52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 8:30:43 PM	B52231
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/25/2018 8:30:43 PM	B52231
Surr: Toluene-d8	108	70-130		%Rec	1	6/25/2018 8:30:43 PM	B52231

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Trunk 6C
Collection Date: 6/21/2018 2:00:00 PM
Lab ID: 1806D84-007
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 8:53:55 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 8:53:55 PM	B52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 8:53:55 PM	B52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 8:53:55 PM	B52231
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	6/25/2018 8:53:55 PM	B52231
Surr: Toluene-d8	108	70-130		%Rec	1	6/25/2018 8:53:55 PM	B52231

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

Qualifiers:

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-8
Project: Trunk 6C
Collection Date: 6/21/2018 2:45:00 PM
Lab ID: 1806D84-008
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 10:49:49 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 10:49:49 PM	B52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 10:49:49 PM	B52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 10:49:49 PM	B52231
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	6/25/2018 10:49:49 PM	B52231
Surr: Toluene-d8	104	70-130		%Rec	1	6/25/2018 10:49:49 PM	B52231

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

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

Analytical Report
Lab Order **1806D84**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-15
Project: Trunk 6C
Collection Date: 6/21/2018 3:30:00 PM
Lab ID: 1806D84-009
Matrix: AQUEOUS
Received Date: 6/22/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	6.5	1.0		µg/L	1	6/25/2018 11:13:01 PM	B52231
Toluene	ND	1.0		µg/L	1	6/25/2018 11:13:01 PM	B52231
Ethylbenzene	2.6	1.0		µg/L	1	6/25/2018 11:13:01 PM	B52231
Xylenes, Total	13	1.5		µg/L	1	6/25/2018 11:13:01 PM	B52231
Surr: 4-Bromofluorobenzene	85.7	70-130		%Rec	1	6/25/2018 11:13:01 PM	B52231
Surr: Toluene-d8	101	70-130		%Rec	1	6/25/2018 11:13:01 PM	B52231

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#: **1806D84**

27-Jun-18

Client: APEX TITAN

Project: Trunk 6C

Sample ID	**100ng btex lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**B52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711443**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	116	80	120			
Toluene	21	1.0	20.00	0	107	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	61	1.5	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.6	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID	**1806d84-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-5**	Batch ID:	**B52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711455**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	120	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	63	1.5	60.00	0.4676	104	80	120			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.9	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID	**1806d84-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-5**	Batch ID:	**B52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711456**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	119	80	120	1.07	20	
Toluene	22	1.0	20.00	0	108	80	120	0.498	20	
Ethylbenzene	21	1.0	20.00	0	107	80	120	1.17	20	
Xylenes, Total	62	1.5	60.00	0.4676	103	80	120	1.53	20	
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130	0	0	
Surr: Toluene-d8	11		10.00		114	70	130	0	0	

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**B52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711473**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1806D84**
27-Jun-18

Client: APEX TITAN
Project: Trunk 6C

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **B52231**	RunNo: **52231**
Prep Date:	Analysis Date: **6/25/2018**	SeqNo: **1711473** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **100ng btex lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **C52259**	RunNo: **52259**
Prep Date:	Analysis Date: **6/26/2018**	SeqNo: **1712316** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	62	1.5	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.6	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **C52259**	RunNo: **52259**
Prep Date:	Analysis Date: **6/26/2018**	SeqNo: **1712353** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		109	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: 1806D84 RcptNo: 1

Received By: **Ashley Gallegos** 6/22/2018 8:00:00 AM

Completed By: **Ashley Gallegos** 6/22/2018 9:26:51 AM

Reviewed By: MW 6/22/18 Labeled by: JAB 06/22/18

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? _____

Checked by: JAB 06/22/18

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Not Present			

CHAIN OF CUSTODY RECORD

APEX

Office Location: 606 S Rio Grande, suite A, Aztec, NM 87410

Project Manager: K. Summers

Laboratory: Hall Environmental Analysis Laboratory

Address: 4901 Hawkins NE, Albuquerque, NM 87109

Contact: D. Freeman

Phone: 505-345-3975

PO/SO #: 725040112183

Sampler's Name: Ranee Deechilly

Sampler's Signature:

Proj. No.: 725040112183

Project Name: Thunk 6C

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.6-0.4(CF), 1.2

1	2	3	4	5

Page 1 of 1

ANALYSIS REQUESTED: BTEX 8021

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	6/21/18	900			MW-5			3					1806D84-001
W	6/21/18	955			MW-9			3					-002
W	6/21/18	1045			MW-4			3					-003
W	6/21/18	1140			MW-6			3					-004
W	6/21/18	1220			MW-7			3					-005
W	6/21/18	1315			MW-3			3					-006
W	6/21/18	1400			MW-2			3					-007
W	6/21/18	1445			MW-8			3					-008
W	6/21/18	1530			MW-15			3					-009
					N/S								

Turn around time: [X] Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	6/21/18	1715		6/21/18	1715
	6/21/18	1847		06/22/18	0800

NOTES: Bill to Apex Corporate rate

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

June 26, 2018

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

RE: Trunk 6-C OrderNo.: 1806E53

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/23/2018 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: **1806E53**
Date Reported: **6/26/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1806E53
Project: Trunk 6-C

Lab ID: 1806E53-001 **Collection Date:** 6/22/2018 8:15:00 AM
Client Sample ID: MW-14 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/25/2018 11:36:12 PM	C52231
Toluene	ND	1.0		µg/L	1	6/25/2018 11:36:12 PM	C52231
Ethylbenzene	ND	1.0		µg/L	1	6/25/2018 11:36:12 PM	C52231
Xylenes, Total	ND	1.5		µg/L	1	6/25/2018 11:36:12 PM	C52231
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	6/25/2018 11:36:12 PM	C52231
Surr: Toluene-d8	106	70-130		%Rec	1	6/25/2018 11:36:12 PM	C52231

Lab ID: 1806E53-002 **Collection Date:** 6/22/2018 9:05:00 AM
Client Sample ID: MW-17 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	29	1.0		µg/L	1	6/26/2018 12:45:20 AM	C52231
Toluene	ND	1.0		µg/L	1	6/26/2018 12:45:20 AM	C52231
Ethylbenzene	2.4	1.0		µg/L	1	6/26/2018 12:45:20 AM	C52231
Xylenes, Total	ND	1.5		µg/L	1	6/26/2018 12:45:20 AM	C52231
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	6/26/2018 12:45:20 AM	C52231
Surr: Toluene-d8	102	70-130		%Rec	1	6/26/2018 12:45:20 AM	C52231

Lab ID: 1806E53-003 **Collection Date:** 6/22/2018 9:45:00 AM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	3800	50		µg/L	50	6/26/2018 1:08:17 AM	C52231
Toluene	2400	50		µg/L	50	6/26/2018 1:08:17 AM	C52231
Ethylbenzene	140	50		µg/L	50	6/26/2018 1:08:17 AM	C52231
Xylenes, Total	740	75		µg/L	50	6/26/2018 1:08:17 AM	C52231
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	50	6/26/2018 1:08:17 AM	C52231
Surr: Toluene-d8	104	70-130		%Rec	50	6/26/2018 1:08:17 AM	C52231

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

Analytical Report
Lab Order: **1806E53**
Date Reported: **6/26/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1806E53
Project: Trunk 6-C

Lab ID: 1806E53-004 **Collection Date:** 6/22/2018 10:15:00 AM
Client Sample ID: MW-10 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	5.0	1.0		µg/L	1	6/26/2018 1:31:26 AM	C52231
Toluene	ND	1.0		µg/L	1	6/26/2018 1:31:26 AM	C52231
Ethylbenzene	ND	1.0		µg/L	1	6/26/2018 1:31:26 AM	C52231
Xylenes, Total	2.7	1.5		µg/L	1	6/26/2018 1:31:26 AM	C52231
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/26/2018 1:31:26 AM	C52231
Surr: Toluene-d8	110	70-130		%Rec	1	6/26/2018 1:31:26 AM	C52231

Lab ID: 1806E53-005 **Collection Date:** 6/22/2018 10:50:00 AM
Client Sample ID: MW-11 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/26/2018 1:54:25 AM	C52231
Toluene	ND	1.0		µg/L	1	6/26/2018 1:54:25 AM	C52231
Ethylbenzene	ND	1.0		µg/L	1	6/26/2018 1:54:25 AM	C52231
Xylenes, Total	ND	1.5		µg/L	1	6/26/2018 1:54:25 AM	C52231
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	6/26/2018 1:54:25 AM	C52231
Surr: Toluene-d8	105	70-130		%Rec	1	6/26/2018 1:54:25 AM	C52231

Lab ID: 1806E53-006 **Collection Date:** 6/22/2018 11:25:00 AM
Client Sample ID: MW-13 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	6/26/2018 2:17:29 AM	C52231
Toluene	ND	1.0		µg/L	1	6/26/2018 2:17:29 AM	C52231
Ethylbenzene	ND	1.0		µg/L	1	6/26/2018 2:17:29 AM	C52231
Xylenes, Total	ND	1.5		µg/L	1	6/26/2018 2:17:29 AM	C52231
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	6/26/2018 2:17:29 AM	C52231
Surr: Toluene-d8	109	70-130		%Rec	1	6/26/2018 2:17:29 AM	C52231

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1806E53**
26-Jun-18

Client: APEX TITAN
Project: Trunk 6-C

Sample ID	**100ng btex lcs2**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**C52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711444**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	61	1.5	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID	**1806e53-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-14**	Batch ID:	**C52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711466**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	121	80	120			S
Toluene	22	1.0	20.00	0	111	80	120			
Ethylbenzene	22	1.0	20.00	0	111	80	120			
Xylenes, Total	64	1.5	60.00	0.5080	106	80	120			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID	**1806e53-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-14**	Batch ID:	**C52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/26/2018**	SeqNo:	**1711467**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	80	120	8.28	20	
Toluene	21	1.0	20.00	0	104	80	120	6.83	20	
Ethylbenzene	21	1.0	20.00	0	103	80	120	7.71	20	
Xylenes, Total	59	1.5	60.00	0.5080	97.3	80	120	8.88	20	
Surr: 4-Bromofluorobenzene	9.5		10.00		94.6	70	130	0	0	
Surr: Toluene-d8	11		10.00		108	70	130	0	0	

Sample ID	**rb3**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**C52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711474**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806E53**

26-Jun-18

Client: APEX TITAN

Project: Trunk 6-C

Sample ID	**rb3**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**C52231**	RunNo:	**52231**					
Prep Date:		Analysis Date:	**6/25/2018**	SeqNo:	**1711474**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene		11		10.00		107	70	130			
Surr: Toluene-d8		10		10.00		104	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: 1806E53 RcptNo: 1

Received By: Andy Freeman 6/23/2018 10:35:00 AM

Completed By: Anne Thorne 6/25/2018 9:24:11 AM

Reviewed By: ENM 6/25/18

LB: MW 6/25/18

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 6/25/18

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:

CUSTODY SEALS INTACT ON VOA VIALS/at 6/25/18

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, Suite A, Aztec, NM 87410

Project Manager: K. Summers

Laboratory: Hall Environmental Analysis Laboratory

Address: 4901 Hawkins NE, Albuquerque, NM 87109

Contact: A. Freeman

Phone: 505-345-3975

PO/SO #: 72504011283

Sampler's Name: Rance Deschilly

Sampler's Signature:

Proj. No.: 72504011283

Project Name: Trunk 6C

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.7°C

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)
W	6/20/18	815			MW-14			3					1806E53-001
W	6/22/18	905			MW-17			3					002
W	6/22/18	945			MW-1			3					003
W	6/22/18	1015			MW-10			3					004
W	6/22/18	1050			MW-11			3					005
W	6/22/18	1125			MW-13			3					006

MFS

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

	Date:	Time:		Date:	Time:
Relinquished by (Signature)	6/22/18	1401	Received by: (Signature)	6/22/18	1401
Relinquished by (Signature)	6/22/18	1716	Received by: (Signature)	6/23/18	1031
Relinquished by (Signature)			Received by: (Signature)		
Relinquished by (Signature)			Received by: (Signature)		

NOTES: Bill to Apex corporate rate

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

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

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

December 18, 2018

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

RE: Trunk 6C OrderNo.: 1812919

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 15 sample(s) on 12/15/2018 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: **1812919**
Date Reported: **12/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1812919
Project: Trunk 6C

Lab ID: 1812919-001 **Collection Date:** 12/13/2018 11:00:00 AM
Client Sample ID: MW-15 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.2	1.0		µg/L	1	12/17/2018 11:38:15 AM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 11:38:15 AM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 11:38:15 AM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 11:38:15 AM	R56381
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	12/17/2018 11:38:15 AM	R56381

Lab ID: 1812919-002 **Collection Date:** 12/13/2018 11:40:00 AM
Client Sample ID: MW-14 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2.7	1.0		µg/L	1	12/17/2018 12:01:05 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 12:01:05 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 12:01:05 PM	R56381
Xylenes, Total	6.1	2.0		µg/L	1	12/17/2018 12:01:05 PM	R56381
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	12/17/2018 12:01:05 PM	R56381

Lab ID: 1812919-003 **Collection Date:** 12/13/2018 12:20:00 PM
Client Sample ID: MW-7 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 12:23:53 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 12:23:53 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 12:23:53 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 12:23:53 PM	R56381
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	12/17/2018 12:23:53 PM	R56381

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

Analytical Report
Lab Order: **1812919**
Date Reported: **12/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1812919
Project: Trunk 6C

Lab ID: 1812919-004 **Collection Date:** 12/13/2018 1:00:00 PM
Client Sample ID: MW-5 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 12:46:44 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 12:46:44 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 12:46:44 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 12:46:44 PM	R56381
Surr: 4-Bromofluorobenzene	98.1	80-120		%Rec	1	12/17/2018 12:46:44 PM	R56381

Lab ID: 1812919-005 **Collection Date:** 12/13/2018 1:40:00 PM
Client Sample ID: MW-9 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 1:09:37 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 1:09:37 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 1:09:37 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 1:09:37 PM	R56381
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	12/17/2018 1:09:37 PM	R56381

Lab ID: 1812919-006 **Collection Date:** 12/13/2018 2:20:00 PM
Client Sample ID: MW-6 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 1:32:35 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 1:32:35 PM	R56381
Ethylbenzene	2.7	1.0		µg/L	1	12/17/2018 1:32:35 PM	R56381
Xylenes, Total	9.8	2.0		µg/L	1	12/17/2018 1:32:35 PM	R56381
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	12/17/2018 1:32:35 PM	R56381

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

Analytical Report
Lab Order: **1812919**
Date Reported: **12/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1812919
Project: Trunk 6C

Lab ID: 1812919-007 **Collection Date:** 12/13/2018 3:00:00 PM
Client Sample ID: MW-4 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 1:55:32 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 1:55:32 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 1:55:32 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 1:55:32 PM	R56381
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/17/2018 1:55:32 PM	R56381

Lab ID: 1812919-008 **Collection Date:** 12/14/2018 8:40:00 AM
Client Sample ID: MW-8 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 2:18:30 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 2:18:30 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 2:18:30 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 2:18:30 PM	R56381
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/17/2018 2:18:30 PM	R56381

Lab ID: 1812919-009 **Collection Date:** 12/14/2018 9:20:00 AM
Client Sample ID: MW-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 4:58:10 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 4:58:10 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 4:58:10 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 4:58:10 PM	R56381
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	12/17/2018 4:58:10 PM	R56381

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

Analytical Report
Lab Order: **1812919**
Date Reported: **12/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1812919
Project: Trunk 6C

Lab ID: 1812919-010 **Collection Date:** 12/14/2018 10:00:00 AM
Client Sample ID: MW-2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 5:20:59 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 5:20:59 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 5:20:59 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 5:20:59 PM	R56381
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	12/17/2018 5:20:59 PM	R56381

Lab ID: 1812919-011 **Collection Date:** 12/14/2018 10:40:00 AM
Client Sample ID: MW-17 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	29	1.0		µg/L	1	12/17/2018 5:43:36 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 5:43:36 PM	R56381
Ethylbenzene	1.8	1.0		µg/L	1	12/17/2018 5:43:36 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 5:43:36 PM	R56381
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	12/17/2018 5:43:36 PM	R56381

Lab ID: 1812919-012 **Collection Date:** 12/14/2018 11:20:00 AM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	590	50		µg/L	50	12/17/2018 6:06:14 PM	R56381
Toluene	400	50		µg/L	50	12/17/2018 6:06:14 PM	R56381
Ethylbenzene	33	25		µg/L	50	12/17/2018 6:06:14 PM	R56381
Xylenes, Total	99	50		µg/L	50	12/17/2018 6:06:14 PM	R56381
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	50	12/17/2018 6:06:14 PM	R56381

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

Analytical Report
Lab Order: **1812919**
Date Reported: **12/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1812919
Project: Trunk 6C

Lab ID: 1812919-013 **Collection Date:** 12/14/2018 12:00:00 PM
Client Sample ID: MW-13 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 6:29:01 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 6:29:01 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 6:29:01 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 6:29:01 PM	R56381
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/17/2018 6:29:01 PM	R56381

Lab ID: 1812919-014 **Collection Date:** 12/14/2018 12:20:00 PM
Client Sample ID: MW-11 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 6:51:54 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 6:51:54 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 6:51:54 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 6:51:54 PM	R56381
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/17/2018 6:51:54 PM	R56381

Lab ID: 1812919-015 **Collection Date:** 12/14/2018 12:40:00 PM
Client Sample ID: MW-10 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/17/2018 7:14:45 PM	R56381
Toluene	ND	1.0		µg/L	1	12/17/2018 7:14:45 PM	R56381
Ethylbenzene	ND	1.0		µg/L	1	12/17/2018 7:14:45 PM	R56381
Xylenes, Total	ND	2.0		µg/L	1	12/17/2018 7:14:45 PM	R56381
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	12/17/2018 7:14:45 PM	R56381

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812919**

18-Dec-18

Client: APEX TITAN

Project: Trunk 6C

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**R56381**	RunNo:	**56381**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885551**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		102	80	120			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**R56381**	RunNo:	**56381**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885552**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.7	80	120			
Toluene	19	1.0	20.00	0	92.8	80	120			
Ethylbenzene	19	1.0	20.00	0	94.8	80	120			
Xylenes, Total	58	2.0	60.00	0	95.9	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		107	80	120			

Sample ID	**1812919-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-15**	Batch ID:	**R56381**	RunNo:	**56381**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885556**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	1.188	87.5	80	120			
Toluene	19	1.0	20.00	0.3176	93.1	80	120			
Ethylbenzene	19	1.0	20.00	0.4096	93.5	80	120			
Xylenes, Total	61	2.0	60.00	1.645	98.4	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		119	80	120			

Sample ID	**1812919-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-15**	Batch ID:	**R56381**	RunNo:	**56381**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885557**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	1.188	83.8	80	120	3.97	20	
Toluene	18	1.0	20.00	0.3176	89.3	80	120	4.09	20	
Ethylbenzene	19	1.0	20.00	0.4096	91.3	80	120	2.30	20	
Xylenes, Total	57	2.0	60.00	1.645	92.6	80	120	5.92	20	
Surr: 4-Bromofluorobenzene	24		20.00		119	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **APEX AZTEC** Work Order Number: **1812919** RcptNo: **1**

Received By: **Andy Freeman** **12/15/2018 4:00:00 PM**

Completed By: **Erin Melendrez** **12/17/2018 9:23:11 AM**

Reviewed By: JO 12-17-18

LB: DAD 12/17/18

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? _____

Checked by: DAD 12/17/18

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

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

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suite A Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab

Address: Albuquerque NM 4901 Hawkins NE

Contact: A Freeman

Phone: 505-345-3975

PO/SO #: 725040112183

Sampler's Name: C D Aponti

Sampler's Signature:

Proj. No.: 725040112183

Project Name: Trunk 6C

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.7 C

1 | 2 | 3 | 4 | 5

Page 1 of 2

ANALYSIS REQUESTED: BTEX 8021

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)
W	12/13/18	1100			mw-15			3					1812919-001
W	12/13/18	1140			mw-14			3					-002
W	12/13/18	1220			mw-7			3					-003
W	12/13/18	1300			mw-5			3					-004
W	12/13/18	1340			mw-9			3					-005
W	12/13/18	1420			mw-6			3					-006
W	12/13/18	1500			mw-4			3					-007
W	12/14/18	840			mw-8			3					-008
W	12/14/18	920			mw-3			3					-009
W	12/14/18	1000			mw-2			3					-010

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	12-14-18	1415		12/14/18	1415
Cynthia Waeten	12/14/18	1810		12/15/18	1600

NOTES:
Bill to Apex Corporate

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other _____

CHAIN OF CUSTODY RECORD

APEX

Office Location: 606 S Rio Grande Suite A Aztec NM 87410

Project Manager: K Summers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87107

Contact: A Freeman

Phone: 505-345-3975

PO/SO #: 725040112183

ANALYSIS REQUESTED: BTEX 8021

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

Page 2 of 2

Sampler's Name: C DAponti

Sampler's Signature: [signature]

Proj. No.: 725040112183

Project Name: Trunk 6C

No/Type of Containers

Lab Sample ID (Lab Use Only): 1812919

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	BTEX 8021	Lab Sample ID (Lab Use Only)
w	12/14/18	1040			mw-17			3					X	-011
w	12/14/18	1120			mw-1			3					X	-012
w	12/14/18	1200			mw-13			3					X	-013
w	12/14/18	1220			mw-11			3					X	-014
w	12/14/18	1240			mw-10			3					X	-015

WPS

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

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	12-14-18	1415	Christie Walker	12/14/18	1415
Christie Walker	12/14/18	1810	[signature]	12/15/18	1600

NOTES: Bill to Apex Corp Rate

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

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

NV

RP # 3R-438

AGWMR

2019

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

Printed Name: Scott Drewry Title: Geologist

Signature: Scott Drewry Date: 3/18/21

OCD Only

Received by: _____ Date: _____

Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

December 17, 2020

Submitted via Email to:
Cory.Smith@State.nm.us

Mr. Cory Smith
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: 2019 *Groundwater Monitoring Report* *(Ensolum, August 10, 2020)*
Enterprise Field Services, LLC
Trunk 6C Pipeline - Kutz Wash Release (09/22/11)
San Juan County, New Mexico [SW ¼, S26 T28N R11W (36.63202° N, 107.97400° W)]
OCD RP: 3R-438; OCD Abatement Plan No. 131

Dear Mr. Smith:

Enterprise Products Operating LLC (Enterprise), on behalf of Enterprise Field Services LLC, is pleased to submit to the New Mexico (NM) Energy, Minerals & Natural Resources Department (EMNRD) – Oil Conservation Division (OCD) an electronic copy of the above-referenced document prepared by Ensolum, LLC (Ensolum) and dated August 10, 2020. The subject document is associated with the September 22, 2011 discovery of a release of natural gas condensate from the Enterprise Trunk 6C pipeline located near the Kutz Wash at the above-referenced location (the "Site"). The attached document summarizes ongoing semi-annual (SA) groundwater monitoring and sampling (GWM&S) activities that occurred at the Site between January 1, 2019 and January 10, 2020 (the "reporting period"). The GWM&S activities were performed to further evaluate dissolved-phased hydrocarbon (DPH), or constituents of concern (COC), concentrations in groundwater.

Data presented in the attached report indicate that COC concentrations in excess of the applicable Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (*GQSs)* remain at the Site in only one monitor well (MW-1). Additionally, with the possible exception of downgradient well MW-15, the DPH plume (MW-1 and MW-17) is currently delineated by monitor wells MW-2, MW-4, MW 6 and MW-11.

Based on the information presented in the attached report, Enterprise plans to: 1) continue SA-GWM&S activities to evaluate the stability of COC concentrations in subsurface groundwater, 2) conduct additional site-specific aquifer characterization, and testing to evaluate the options to remediate areas of GWQ exceedances, and 3) prepare a Stage 2 Abatement Plan (once the *Stage 1 Abatement Plan* has been fully approved and implemented). As previously requested in the cover letter for the *2018 Groundwater Monitoring Report*, **Enterprise respectfully requests the plugging and abandonment** of (or the suspension of monitoring and sampling activities of): MW-3, MW-5, MW-7, MW-9, MW-12 and MW-13 (and possibly MW-8, MW-10 and MW-14).

Enterprise appreciates the OCD's continued assistance and guidance in bringing closure to this Site. Should you have any questions, comments or concerns, or require additional information, please feel free to contact me any time at 713-381-8780, or at gemiller@eprod.com.

Sincerely,

Gregory E. Miller, P.G.
Supervisor, Environmental

Rodney M. Sartor, REM
Sr. Director, Environmental

cc: Ms. Katie White Bull – BLM, Farmington, NM (landowner)
ec: Mr. Cory Smith – NMOCD, Aztec, NM
Mr. Jim Griswold – NMOCD, Santa Fe, NM
Ms. Liz Scaggs– Ensolum, Dallas, TX

2019 GROUNDWATER MONITORING REPORT

Property:

Trunk 6C Kutz Wash Pipeline Release
SW ¼, S26 T28N R11W
San Juan County, New Mexico

New Mexico EMNRD OCD RP No. 3RP-438
Abatement Plan No. 131

August 10, 2020
Ensolum Project No. 05A1226011

Prepared for:

Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attn: Mr. Gregory E. Miller, P.G.

Prepared by:

Ranee Deechilly
Environmental Scientist

Landon Daniell
Staff Geologist

Kyle Summers
Senior Project Manager

ENSOLUM

2019 GROUNDWATER MONITORING REPORT
EXECUTIVE SUMMARY

This report documents the 2019 groundwater monitoring activities at the Trunk 6C Kutz Wash pipeline release site, referred to hereinafter as the "Site". The final event of 2019 was ultimately performed in January of 2020 due to Site access and weather conditions.

The Site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way in the southwest (SW) 1/4 of Section 26, Township 28 North, Range 11 West, in San Juan County, New Mexico.

On September 22, 2011, a pipeline release of natural gas and associated pipeline liquids was discovered at the Site and the pipeline was subsequently repaired. A Site assessment conducted by Animas Environmental Services, LLC (AES) during October 2011 identified benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbon (TPH) concentrations in "test hole" excavation soil and groundwater that exceeded the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) closure criteria for soils and above the New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQSs) for groundwater.

During November 2011, AES advanced eight (8) soil borings at the Site to further delineate the extent of hydrocarbon affected soil and potentially impacted groundwater. Resulting soil and groundwater analytical data indicated constituent of concern (COC) concentrations above the New Mexico EMNRD OCD closure criteria and WQCC GQSs.

During September 2012, AES advanced nine (9) additional soil borings/monitoring wells on-Site, to further evaluate the extent of dissolved phase COCs in groundwater. Based on laboratory analytical results, COCs were not identified in soil above the New Mexico EMNRD OCD closure criteria at these soil boring/monitoring well locations. However, COCs were identified in groundwater above the WQCC GQSs. On October 16, 2013, four (4) additional soil borings/monitoring wells were advanced by AES. Soil and groundwater samples collected from soil boring/monitoring well MW-10 exhibited COC concentrations above the New Mexico EMNRD OCD closure criteria and WQCC GQSs.

On October 28, 2013, an additional leak was discovered in the vicinity of the original release and the pipeline was subsequently repaired and placed back in service. AES collected 20 discrete soils samples from the pipeline repair excavation and the resulting analytical data identified COC concentrations above the New Mexico EMNRD OCD closure criteria. In addition, aquifer pumping tests were conducted in four (4) wells by AES to estimate hydraulic conductivity. The reported estimate for hydraulic conductivity averaged 5.27E-03 centimeters per second (cm/sec) using drawdown analysis and 8.81E-03 cm/sec using recovery analysis.

During September 2016, Apex TITAN, Inc. (Apex) advanced five (5) soil borings at the Site. Three (3) of the five (5) soil borings were completed as groundwater monitoring wells. COCs were identified in soil above the New Mexico EMNRD OCD closure criteria at soil borings/monitoring wells MW-15, MW-17, and SB-18A. In addition, COC concentrations were identified in groundwater above the WQCC GQSs in monitoring well MW-17.

On May 23, 2019, Enterprise submitted a Revised Stage 1 Abatement Plan for this Site to the New Mexico EMNRD OCD. The New Mexico EMNRD OCD has not responded to or approved the plan, and Enterprise has resumed Semi-annual groundwater monitoring of the Site.

In a letter to the New Mexico EMNRD OCD dated April 21, 2020, Enterprise requested the plugging and abandonment or the suspension of sampling for the following wells: MW-3, MW-5, MW-7, MW-9, MW-12, and MW-13.

Groundwater sampling events were conducted by Ensolum, LLC (Ensolum) during September 2019 and January/February 2020. These groundwater monitoring events were performed to further evaluate the concentrations of COCs in groundwater over time and to monitor the generally declining COC concentrations at the Site.

Findings and recommendations based on these activities are as follows:

- The groundwater flow direction at the Site is generally towards the northwest, with an approximate average gradient of 0.008 feet per foot (ft/ft) across the Site.
- The analytical results for the groundwater samples collected from monitoring well MW-1 during the August 2019 and January 2020 sampling events indicate that benzene concentrations are above the New Mexico WQCC GQSs (see footnote in report). The analytical results for the groundwater samples collected from the remaining monitoring wells during the August 2019 and January 2020 do not indicate BTEX constituent concentrations above the applicable WQCC GQSs (see footnote in report).
- The results from the sampling events at the Site generally demonstrate the continuation of declining or stable COC concentrations in groundwater.

Ensolum offers the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD.
- Continue semi-annual groundwater monitoring at the Site.
- Once approved by the New Mexico EMNRD OCD, implement additional Site-specific aquifer testing as described in the Stage 1 Abatement Plan.
- After the Stage 1 Abatement Plan has been fully implemented, prepare a Stage 2 Abatement Plan.
- Determine if the New Mexico EMNRD OCD will allow the suspension or reduction of sampling frequency for monitoring wells MW-3, MW-5, MW-7, MW-9, MW-12, and MW-13, due to the documented history of COC non-detections.

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LIST OF APPENDICES

ENSOLUM

2019 GROUNDWATER MONITORING REPORT

New Mexico EMNRD OCD RP No. 3RP-438
Abatement Plan No. 131

Ensolum Project No. 05A1226011

1.0 INTRODUCTION

This report documents the 2019 groundwater monitoring activities at the Trunk 6C Kutz Wash Pipeline Release site, referred to hereinafter as the "Site". The final sampling event of 2019 was ultimately performed in January of 2020 due to Site access and weather conditions.

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Trunk 6C Kutz Wash Pipeline Release
Location:	36.63202° North, 107.97400° West Southwest (SW) ¼ of Section 26, Township 28 North, Range 11 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On September 22, 2011, a pipeline release of an unknown volume of natural gas and associated liquids was discovered at the Site and the pipeline was subsequently repaired. Animas Environmental Services, LLC (AES) collected one (1) soil sample from the floor of the repair excavation. Based on field screening results, the soil sample exhibited elevated levels of volatile organic compounds (VOCs). A site assessment was conducted by AES on October 11, 2011, which included the collection of soil samples from four (4) test holes (TP-1 through TP-4) which were advanced near the release area, as well as groundwater samples from two (2) of the four (4) test holes. Based on laboratory analytical results, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons (TPH) were identified in soils from two (2) of the test holes (TP-1 and TP-2) at concentrations above the New Mexico EMNRD OCD closure criteria. The test hole water samples collected from TP-2 and TP-4 exhibited concentrations of BTEX above New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQSs). Additional detail regarding the initial site assessment activities are provided in the *Release Assessment Report, dated October 28, 2011- AES.*

During November 2011, AES advanced eight (8) soil borings (SB-1 through SB-8) at the Site to further delineate the extent of hydrocarbon affected soil and potentially impacted groundwater. Laboratory analytical results for the soil and groundwater samples collected from the soil borings identified constituent of concern (COC) concentrations in soil above the New Mexico EMNRD OCD closure criteria (SB-2, SB-7, and SB-8) and in groundwater above the WQCC GQSs (SB-2W, SB-3W, and SB-7W) *(Site Investigation Report, dated February 20, 2012 – AES)*.

During September 2012, nine (9) additional soil borings were advanced at the Site by AES to further evaluate the extent of dissolved phase COCs in groundwater. Subsequent to advancement, the soil borings were completed as groundwater monitoring wells (MW-1 through MW-9). Laboratory analytical results did not indicate COCs in soil above the New Mexico EMNRD OCD closure criteria at these soil boring/monitoring well locations. However, COCs were confirmed in groundwater above the WQCC GQSs

(Groundwater Investigation Report, dated October 31, 2012 – AES).

On October 16, 2013, AES advanced four (4) additional soil borings/monitoring wells (MW-10 through MW-13) in and around the release area to further evaluate the extent of COCs in groundwater. Laboratory analytical results indicated COC concentrations in soil and groundwater from soil boring/monitoring well MW-10 were present at levels above the New Mexico EMNRD OCD closure criteria and the WQCC GQSs (*3rd Quarter 2013 Groundwater Monitoring and Well Installation Report, dated December 10, 2013 and 4th Quarter 2013 Groundwater Monitoring and Continued Investigation Report, dated July 23, 2014 – AES*).

During September 2016, Enterprise retained Apex TITAN, Inc. (Apex) to perform environmental site investigation activities at the Site to further evaluate and delineate the concentrations of COCs in soil and groundwater. Five (5) soil borings were advanced and three (3) of the soil borings were completed as groundwater monitoring wells MW-14, MW-15, and MW-17. Laboratory analytical results indicated COC concentrations in soil (MW-15 and MW-17) and groundwater (MW-17) were above the New Mexico EMNRD OCD RALs and the WQCC GQSs (*Supplemental Environmental Site Investigation (September 2016) and Annual Groundwater Monitoring Report (June and December 2016), dated February 13, 2017 – Apex*).

During February 2019, Enterprise reassigned management of the project to Ensolum, LLC (Ensolum).

On May 23, 2019, Enterprise submitted a Revised Stage 1 Abatement Plan for this Site to the New Mexico EMNRD OCD. The plan proposes that semi-annual groundwater monitoring continue and that additional, Site-specific aquifer testing be performed. The New Mexico EMNRD OCD has not responded to or approved the plan, and Enterprise has resumed semi-annual groundwater monitoring of the Site.

In a letter to the New Mexico EMNRD OCD dated April 21, 2020, Enterprise requested the plugging and abandonment or the suspension of sampling for the following wells: MW-3, MW-5, MW-7, MW-9, MW-12, and MW-13 because COC concentrations have been below detection limits since 2013 (or since 2015 for MW-3) and the COC plume is currently delineated by monitoring wells MW-2, MW-4 MW-6, and MW-11 (*Supplemental 2018 Annual Groundwater Monitoring Report Cover Letter, dated April 21, 2020 – Enterprise)*.

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for sites that are subject to reporting and/or corrective action. Additionally, the New Mexico EMNRD OCD utilizes the New Mexico WQCC GQS (NMAC 20.6.2 *Groundwater and Surface Water Protection*) to evaluate groundwater conditions.[1]

The Site location is depicted on **Figure 1** of **Appendix A** which was reproduced from a portion of a United States Geological Survey (USGS) 7.5-minute series topographic map. A **Site Vicinity Map**, created from an aerial photograph, is provided as **Figure 2**, and a **Site Map**, which indicates the approximate locations of the monitoring wells and previous soil boring locations in relation to pertinent structures and general Site boundaries, is included as **Figure 3** of **Appendix A**.

1.2 Project Objective

The objectives of the groundwater monitoring events were to further evaluate the concentrations of COCs in groundwater over time and monitor the generally declining COC concentrations at the Site.

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD District 3 Office has indicated that the updated GQSs will not be enforced until sometime in 2020. Therefore, this document reflects the previous GQSs which were currently being enforced when the sampling events were performed.

2.0 GROUNDWATER MONITORING

2.1 Groundwater Sampling Program

Groundwater sampling events were conducted during August 2019 and January 2020 by Ensolum. Ensolum's groundwater sampling program consisted of the collection of one (1) groundwater sample from each of the 15 viable monitoring wells at the Site. Monitoring well MW-12 was not sampled during either sampling events due to an obstructed well screen/casing.

Ensolum's groundwater sampling program consisted of the following:

- Prior to sample collection, Ensolum gauged the depth to fluids in each monitoring well using an interface probe capable of detecting non-aqueous phase liquids (NAPL).
- Each monitoring well was sampled utilizing micro-purge low-flow sampling techniques. Following the completion of the micro-purge process, one (1) groundwater sample was collected from each monitoring well.
- Low-flow or low-stress sampling refer to sampling methods that are intended to minimize the stress that is imparted to the formation pore water in the vicinity of the well screen. Water level drawdown provides the best indication of the stress that is imparted by a given flow rate for a given hydrological situation. Pumping rates of 0.1 to 0.5 liters per minute (L/min) are typically maintained during the low-flow/low-stress sampling activities using dedicated or decontaminated sampling equipment.
- The groundwater samples are collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are typically observed every three to five minutes while purging. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for at least three successive readings.
- The casings of monitoring wells MW-10, MW-11, and MW-13 are approximately one (1) inch in diameter, which is smaller than the bladder pump diameter. As a result, these monitoring wells were purged utilizing a disposable bailer until effectively dry. Following the completion of the purging process and the recovery of groundwater to static or near static levels, one (1) groundwater sample was collected from each monitoring well.
- The groundwater samples were collected in laboratory-supplied containers (pre-preserved with mercuric chloride ($HgCl_2$)), labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The groundwater samples were relinquished to the courier for Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico under proper chain-of-custody procedures.

2.2 Groundwater Laboratory Analytical Methods

The groundwater samples collected from the monitoring wells during these groundwater sampling events were analyzed for BTEX utilizing Environmental Protection Agency (EPA) method SW-846 #8021.

A summary of the per-event analytes, sample matrix, sample frequency and EPA-approved methods for the two (2) sampling events are presented on the following table.

Analytes	Sample Matrix	No. of Samples (per event)	EPA Method
BTEX	Groundwater	15	SW-846 8021

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

2.3 Groundwater Flow Direction

Each monitoring well has been geospatially surveyed to determine the top-of-casing (TOC) elevation. Based on gauging data, the groundwater flow direction (gradient) at the Site is generally toward the northwest. The observed gradients during the August 2019 and January 2020 monitoring events averaged approximately 0.008 feet per foot (ft/ft) across the Site.

Groundwater elevation data collected during the August 2019 and January 2020 gauging events (as well as historical gauging data) are presented in **Table 2** (**Appendix B**). Groundwater gradient maps for the August 2019 and January 2020 gauging events are included as **Figure 4A** and **4B** (**Appendix A**).

2.4 Data Evaluation

Ensolum compared the BTEX laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the groundwater samples collected from monitoring wells during the August 2019 and January 2020 sampling events to the New Mexico WQCC GQSs.[1] The results of the groundwater sample analyses are summarized in **Table 1** of **Appendix B**. Groundwater Quality Standard Exceedance Zone maps are provided as **Figures 5A** and **5B** of **Appendix A**.

Monitoring well MW-12 was not sampled during these sampling events due to an obstructed well screen/casing.

August 2019

The August 2019 analytical result for monitoring well MW-1 indicates a benzene concentration of 800 micrograms per liter (µg/L), which exceeds the WQCC GQS of 10 µg/L.[1] The analytical result for monitoring well MW-17 indicates a benzene concentration of 4.1 µg/L, which is below the WQCC GQS of 10 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate benzene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 10 µg/L.[1]

The August 2019 analytical result for monitoring well MW-1 indicates a toluene concentration of 510 µg/L, which is below the WQCC GQS of 750 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate toluene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 750 µg/L.[1]

The August 2019 analytical result for monitoring well MW-1 indicates an ethylbenzene concentration of 46 µg/L, which is below the WQCC GQS of 750 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate ethylbenzene concentrations above the laboratory PQLs/RLs, which are below the WQCC

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD District 3 Office has indicated that the updated GQSs will not be enforced until sometime in 2020. Therefore, this document reflects the previous GQSs which were currently being enforced when the sampling events were performed.

GQS of 750 µg/L.[1]

The August 2019 analytical result for monitoring well MW-1 indicates a total xylenes concentration of 150 µg/L, which is below the WQCC GQS of 620 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate total xylenes concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 620 µg/L.[1]

No data qualifier flags are associated with the August 2019 analytical results.

January 2020

The January 2020 analytical result for monitoring well MW-1 indicates a benzene concentration of 940 µg/L, which exceeds the WQCC GQS of 10 µg/L.[1] The analytical result for monitoring well MW-17 indicates a benzene concentration of 2.2 µg/L, which is below the WQCC GQS of 10 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate benzene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 10 µg/L.[1]

The January 2020 analytical result for monitoring well MW-1 indicates a toluene concentration of 540 µg/L, which is below the WQCC GQS of 750 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate toluene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 750 µg/L.[1]

The January 2020 analytical results for monitoring wells MW-1 and MW-15 indicate ethylbenzene concentrations of 61 µg/L and 1.4 µg/L, respectively, which are below the WQCC GQS of 750 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate ethylbenzene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 750 µg/L.[1]

The January 2020 analytical results for monitoring wells MW-1 and MW-15 indicate total xylenes concentrations of 190 µg/L and 23 µg/L, respectively, which are below the WQCC GQS of 620 µg/L.[1] The analytical results for the remaining monitoring wells do not indicate total xylenes concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 620 µg/L.[1]

No data qualifier flags are associated with the January 2020 analytical results.

3.0 FINDINGS

Based on the evaluation of the analytical results from these groundwater monitoring events, Ensolum presents the following findings:

- The groundwater flow direction at the Site is generally towards the northwest, with an approximate gradient of 0.008 ft/ft across the Site.
- The analytical results for the groundwater samples collected from monitoring well MW-1 during the August 2019 and January 2020 sampling events indicate that benzene concentrations are above the New Mexico WQCC GQSs.[1] The analytical results for the remaining monitoring wells during these events do not indicate COC concentrations above the applicable WQCC GQSs.[1]
- The results from the sampling events at the Site generally continue to demonstrate declining or stable COC concentrations in groundwater.

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD District 3 Office has indicated that the updated GQSs will not be enforced until sometime in 2020. Therefore, this document reflects the previous GQSs which were currently being enforced when the sampling events were performed.

4.0 RECOMMENDATIONS

Based on these findings, Ensolum recommends the following:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD.
- Continue semi-annual groundwater monitoring at the Site.
- Once approved by the New Mexico EMNRD OCD, implement additional Site-specific aquifer testing as described in the Stage 1 Abatement Plan.
- After the Stage 1 Abatement Plan has been fully implemented, prepare a Stage 2 Abatement Plan.
- Determine if the New Mexico EMNRD OCD will allow the suspension or reduction of sampling frequency for monitoring wells MW-3, MW-5, MW-7, MW-9, MW-12, and MW-13 due to the documented history of COC non-detections.

5.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

5.1 Standard of Care

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

5.2 Limitations

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

5.3 Reliance

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 express written authorization of Enterprise and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

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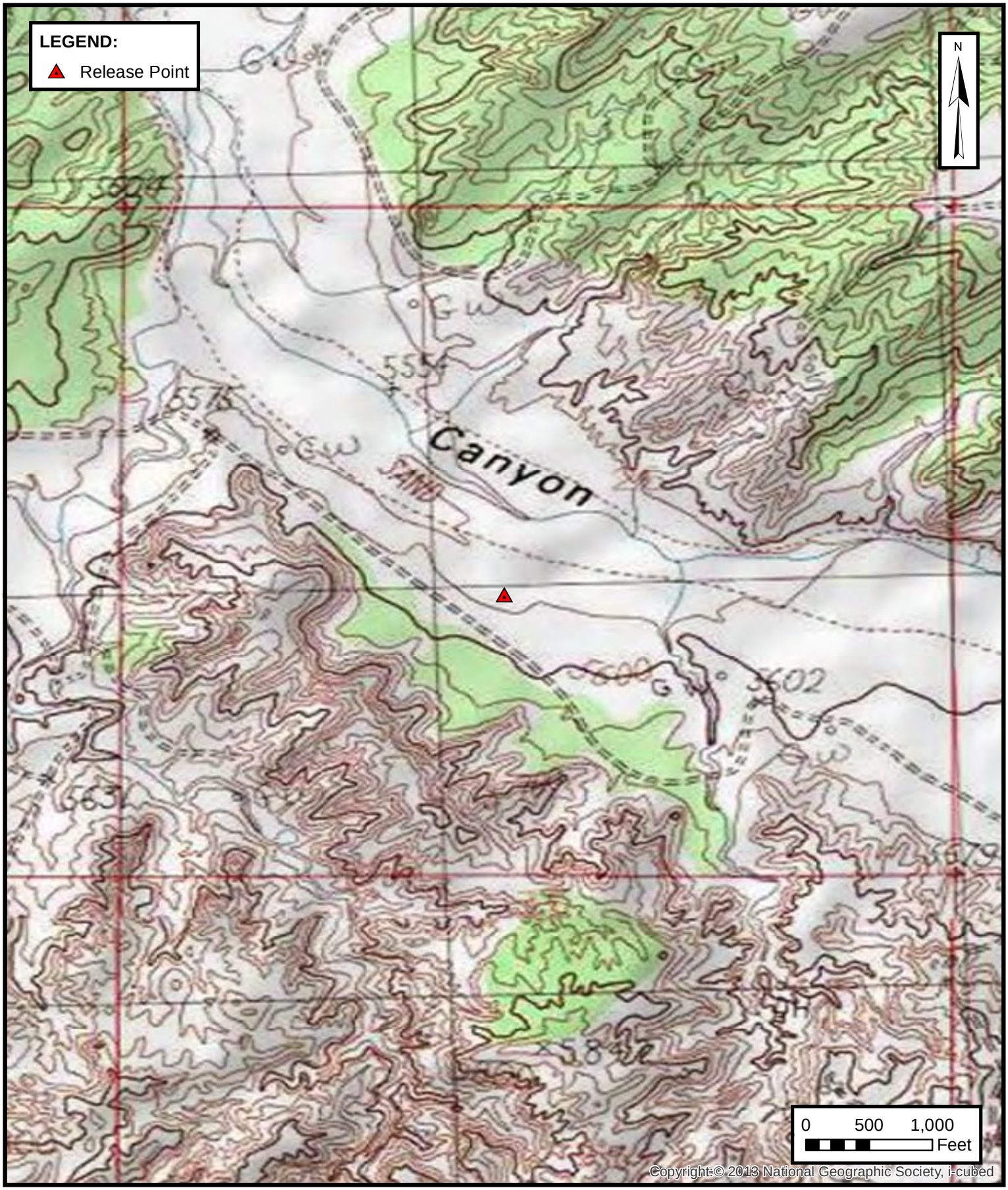
APPENDIX A

Figures



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TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW¼ S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W
Ensolum Project No.: 05A1226011

FIGURE
1

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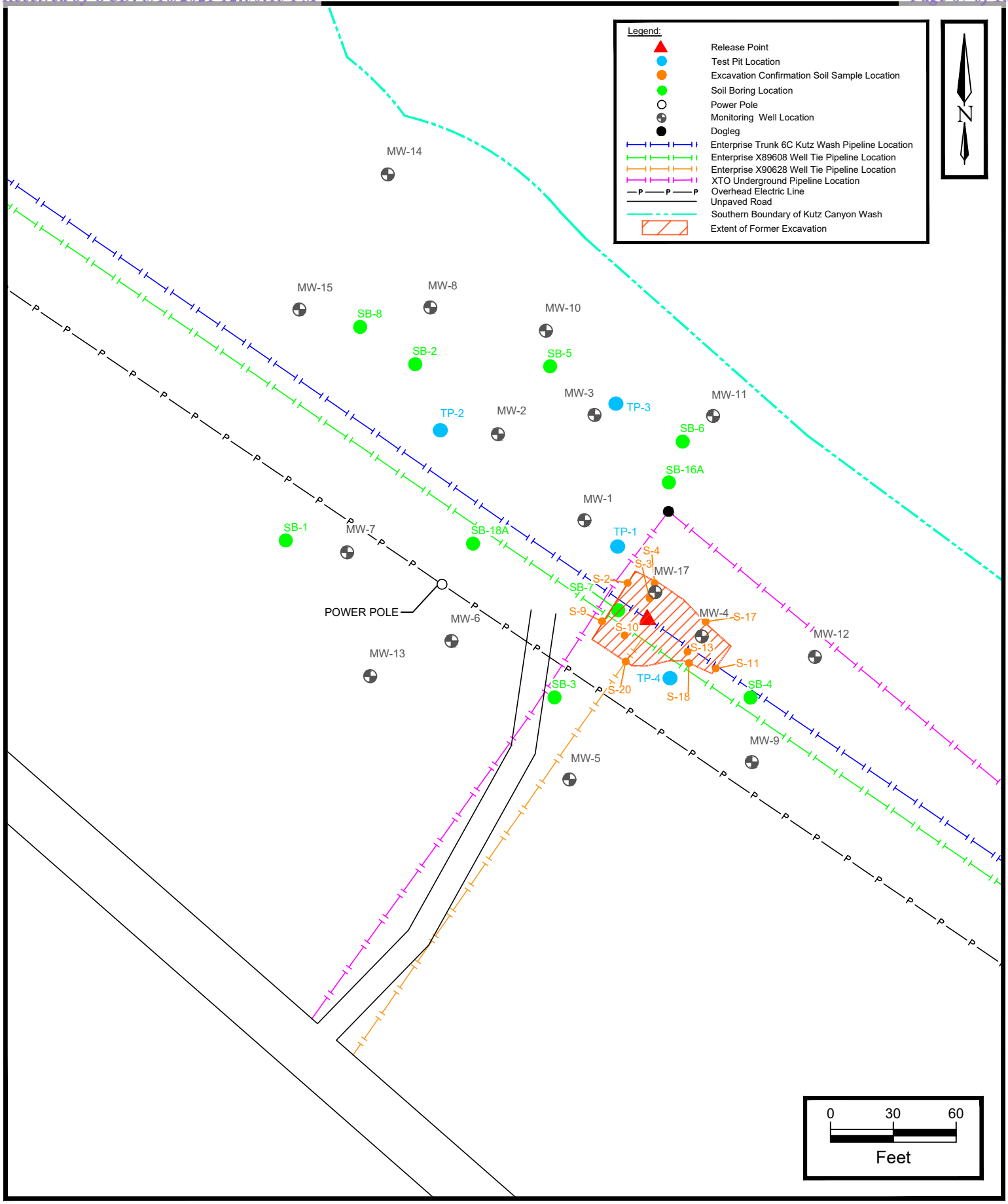
SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW¼ S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400° W
Ensolum Project No.: 05A1226011

FIGURE 2



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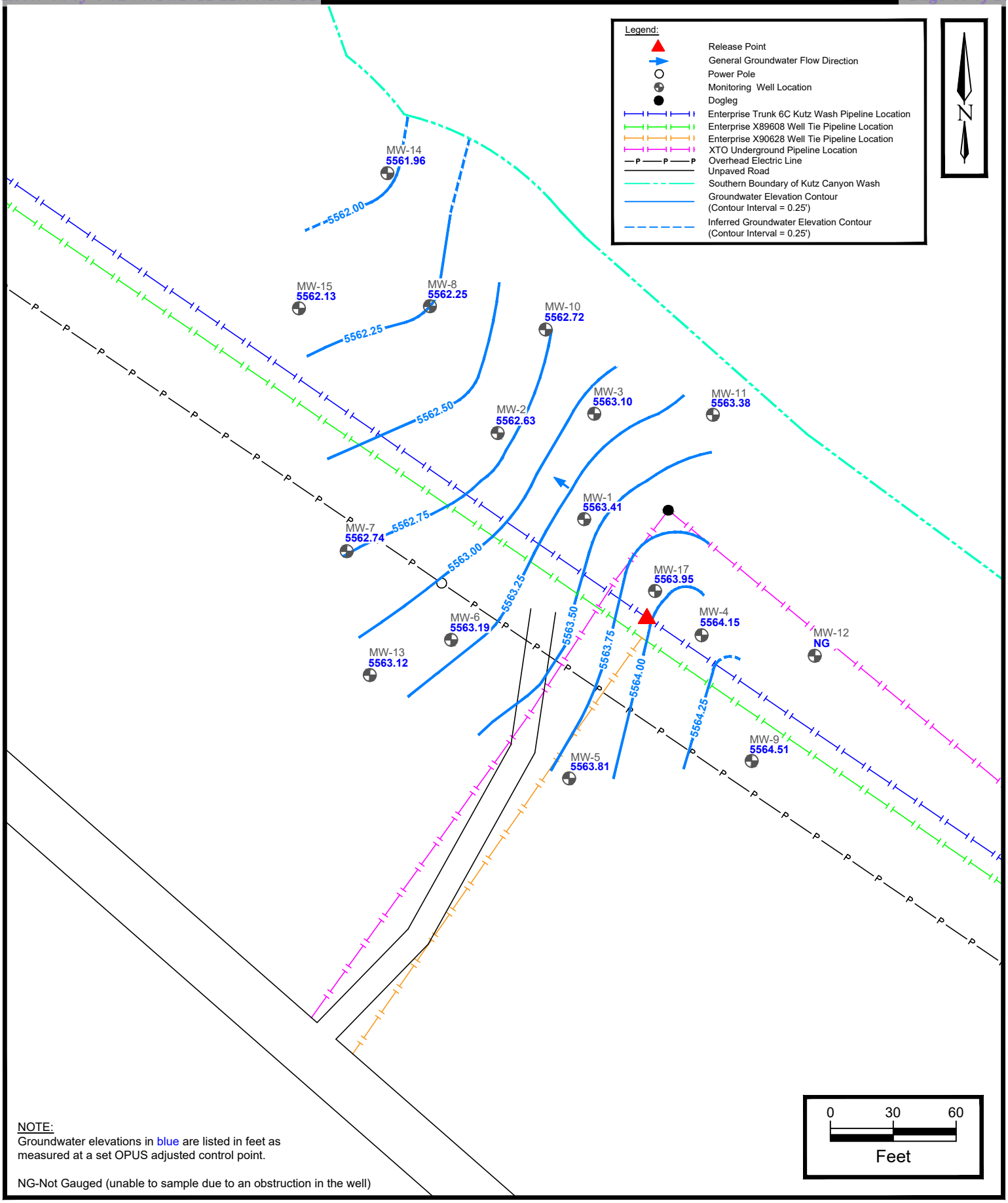
SITE MAP
ENTERPRISE FIELD SERVICES, LLC.
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW ¼, S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400°W
Ensolum Project No.: 05A1226011

FIGURE
3



NOTE:
Groundwater elevations in blue are listed in feet as measured at a set OPUS adjusted control point.

NG-Not Gauged (unable to sample due to an obstruction in the well)

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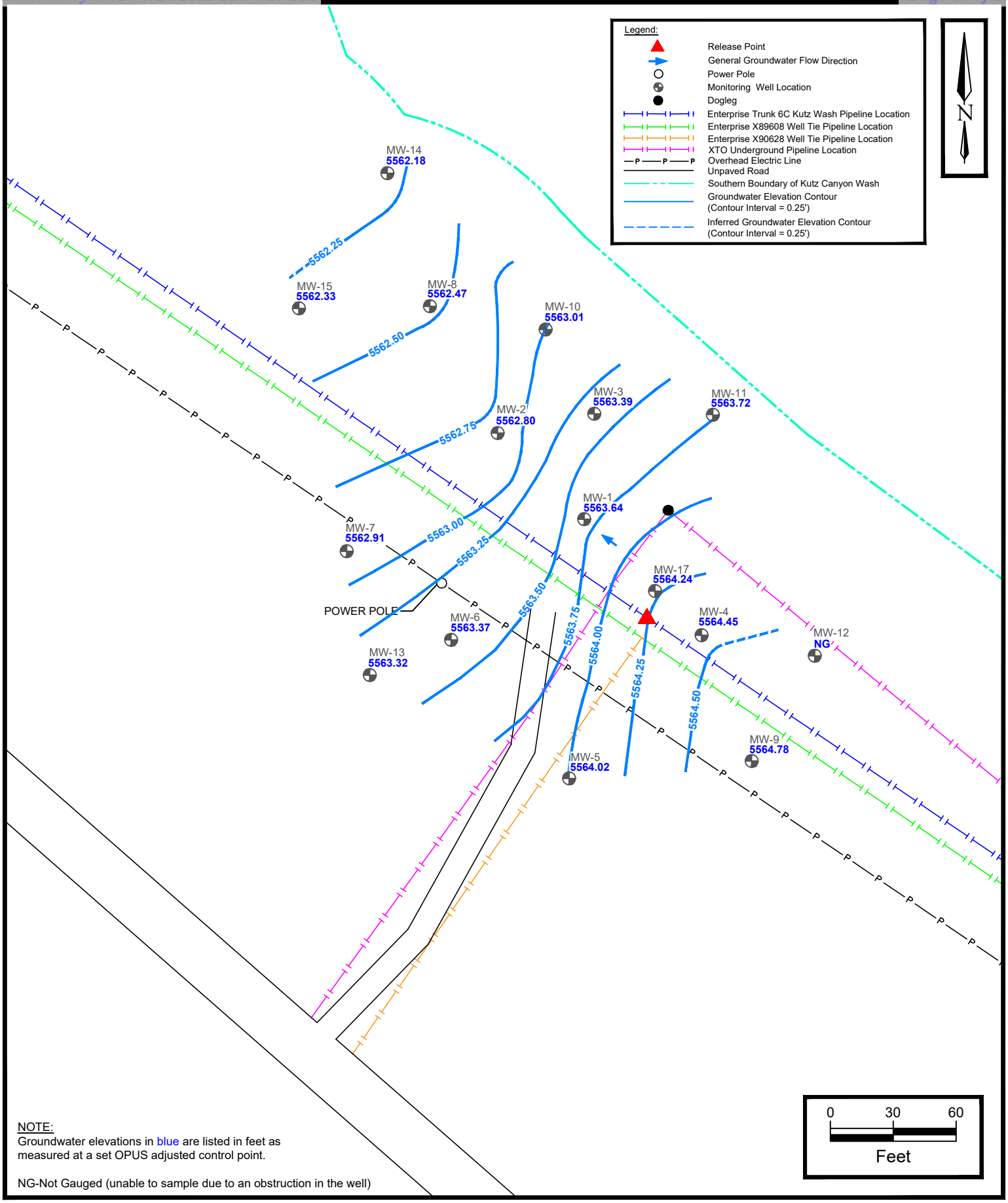
GROUNDWATER GRADIENT MAP (August 2019)

ENTERPRISE FIELD SERVICES, LLC.
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW¼ S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400°W
Ensolum Project No.: 05A1226011

FIGURE
4A



NOTE:
Groundwater elevations in blue are listed in feet as measured at a set OPUS adjusted control point.

NG-Not Gauged (unable to sample due to an obstruction in the well)

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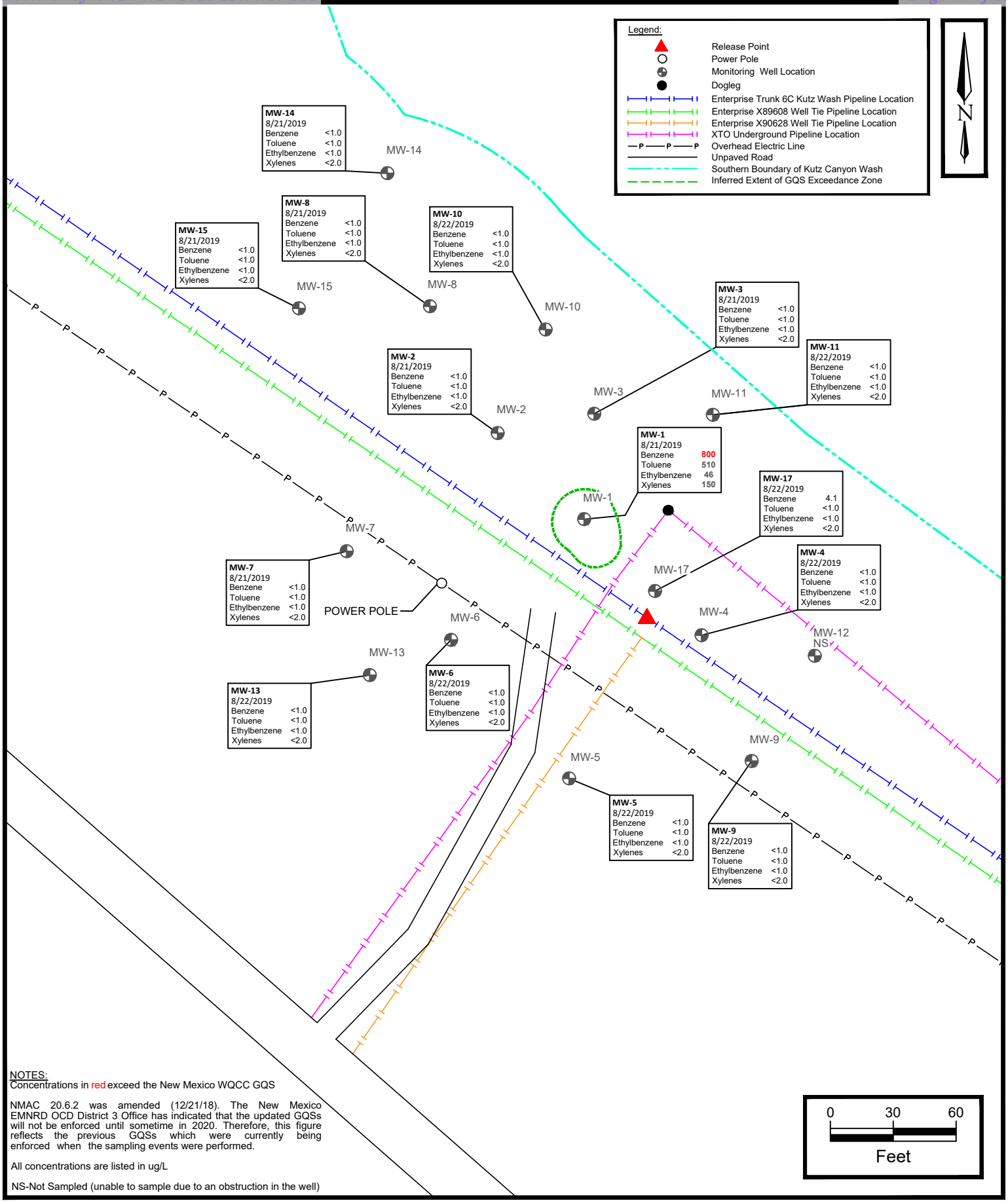
GROUNDWATER GRADIENT MAP (January 2020)

ENTERPRISE FIELD SERVICES, LLC.
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW¼ S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400°W
Ensolum Project No.: 05A1226011

FIGURE 4B



NOTES:
Concentrations in red exceed the New Mexico WQCC GQS

NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD District 3 Office has indicated that the updated GQSs will not be enforced until sometime in 2020. Therefore, this figure reflects the previous GQSs which were currently being enforced when the sampling events were performed.

All concentrations are listed in ug/L

NS-Not Sampled (unable to sample due to an obstruction in the well)

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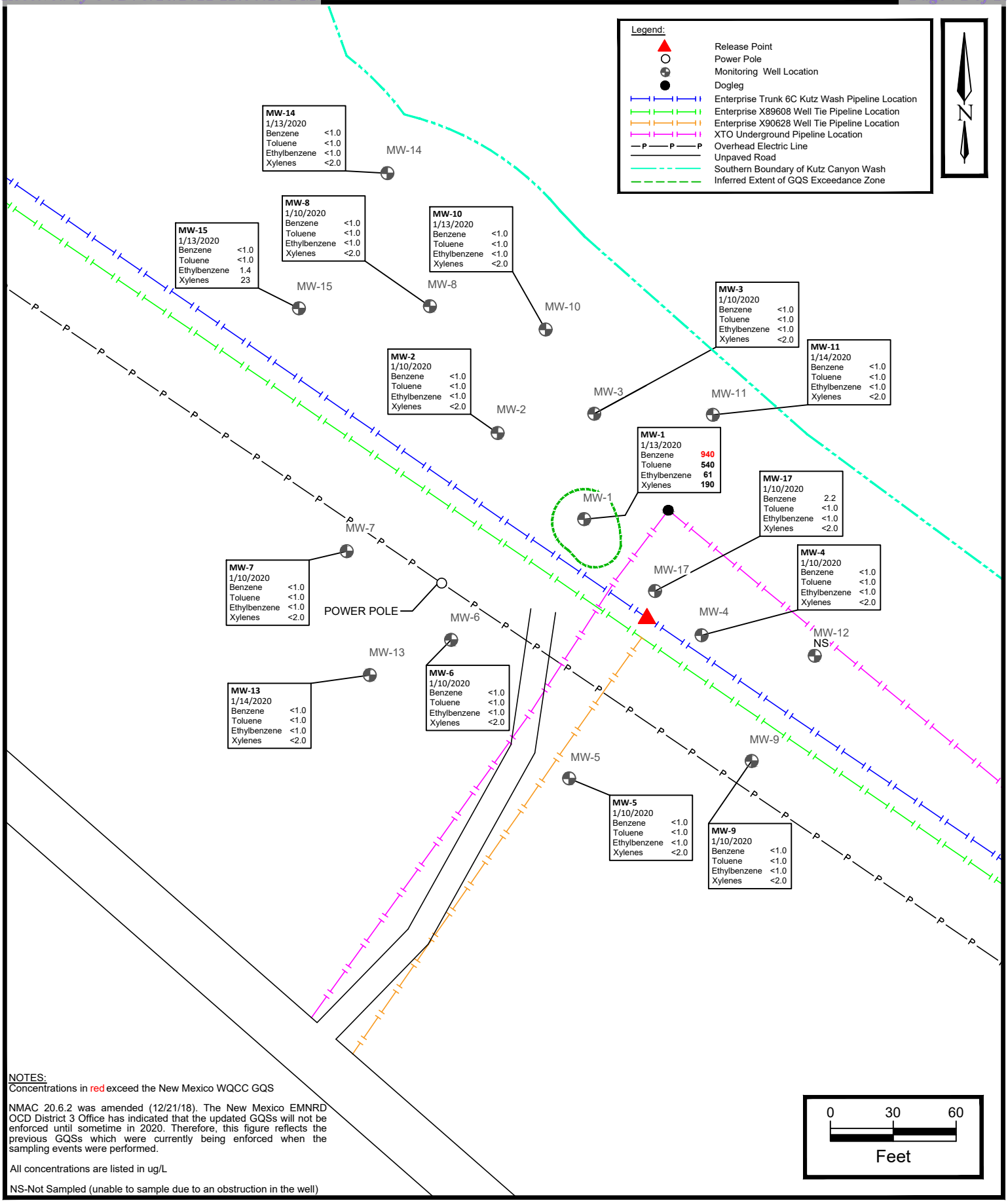
GROUNDWATER QUALITY STANDARD EXCEEDANCE ZONE MAP (August 2019)
ENTERPRISE FIELD SERVICES, LLC.
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW¼ S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400°W
Ensolum Project No.: 05A1226011

FIGURE 5A



NOTES:
Concentrations in red exceed the New Mexico WQCC GQS

NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD District 3 Office has indicated that the updated GQSs will not be enforced until sometime in 2020. Therefore, this figure reflects the previous GQSs which were currently being enforced when the sampling events were performed.

All concentrations are listed in ug/L

NS-Not Sampled (unable to sample due to an obstruction in the well)

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GROUNDWATER QUALITY STANDARD EXCEEDANCE ZONE MAP (January 2020)

ENTERPRISE FIELD SERVICES, LLC.
TRUNK 6C KUTZ WASH PIPELINE RELEASE
SW¼ S26 T28N R11W, San Juan County, New Mexico
36.63202° N, 107.97400°W
Ensolum Project No.: 05A1226011

FIGURE
5B

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APPENDIX B

Tables

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]
MW-1	9.7.12	**2,200**	350	68	**650**
	12.20.12	**1,100**	250	37	180
	3.20.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	6.19.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	9.17.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	12.16.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	3.14.15	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	9.9.15	**1,900**	440	54	400
	6.15.15	**6,900**	**2,700**	170	**1,400**
	12.7.15	**3,900**	**1,400**	120	**870**
	6.02.16	**1,400**	**850**	41	330
	12.20.16	**76**	59	2.5	23
	6.28.17	**3,500**	**4,200**	180	**1,800**
	1.10.18	**1,300**	710	59	350
	6.22.18	**3,800**	**2,400**	140	**740**
	12.14.18	**590**	400	33	99
	8.21.19	**800**	510	46	150
	1.13.20	**940**	540	61	190
MW-2	9.7.12	**270**	**1,100**	66	**1,800**
	12.20.12	**26**	49	5.1	250
	3.20.13	<5.0	<5.0	<5.0	67
	6.19.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	9.17.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	12.16.13	**NAPL**	**NAPL**	**NAPL**	**NAPL**
	3.14.14	**1,200**	**1,600**	74	**660**
	9.9.14	**78**	76	2.9	110
	6.15.15	<1.0	1.1	<1.0	44
	12.7.15	<1.0	<1.0	<1.0	13
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
	8.21.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0
MW-3	9.7.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	**780**	130	2.5	15
	9.18.13	**150**	28	<5.0	15
	12.16.13	**660**	340	16	130
	3.14.14	**200**	86	4.0	49
	9.9.14	2.5	1.7	<1.0	3.3
	6.12.15	1.3	<1.0	<1.0	2.2
	12.7.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.28.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
	8.21.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0

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TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]
MW-4	9.7.12	**18**	5.1	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	**290**	110	<2.0	15
	6.19.13	**600**	45	<10	<20
	9.18.13	**830**	39	<20	<30
	12.16.13	**300**	110	10	63
	3.14.14	4.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.11.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.28.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0
MW-5	9.7.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	<1.0	<1.0	<1.0	<2.0
	9.17.13	<1.0	<1.0	<1.0	<1.5
	12.16.13	2.1	4.7	4.0	17
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<1.0	<1.0	<1.0	<2.0
	6.12.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0
MW-6	9.7.12	<5.0	<5.0	260	**2,200**
	12.20.12	<5.0	<5.0	180	**1,200**
	3.20.13	<5.0	<5.0	120	**800**
	6.19.13	9.6	6.2	150	**1,100**
	9.18.13	<5.0	<5.0	180	**1,200**
	12.16.13	<5.0	<5.0	140	**990**
	3.14.14	<1.0	<1.0	150	**990**
	9.9.14	<5.0	<5.0	49	400
	6.12.15	<5.0	<5.0	89	590
	12.4.15	<2.5	<5.0	41	210
	6.02.16	<1.0	<1.0	16	70
	12.19.16	<1.0	<1.0	26	80
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	3.6	12
	6.21.18	<1.0	<1.0	2.1	5.9
	12.13.18	<1.0	<1.0	2.7	9.8
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0

ENSOLUM

TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]
MW-7	9.7.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	2.4
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	<1.0	<1.0	<1.0	<2.0
	9.17.13	<1.0	<1.0	<1.0	<1.5
	12.16.13	1.6	3.9	3.6	16
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<1.0	<1.0	<1.0	<2.0
	6.12.15	<1.0	<1.0	<1.0	<2.0
	12.7.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
	8.21.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0
MW-8	9.7.12	**41**	40	3.8	320
	12.20.12	<2.0	<2.0	<2.0	20
	3.20.13	**41**	36	<2.0	89
	6.19.13	**21**	12	<1.0	6.8
	9.18.13	<1.0	<1.0	3.4	27
	12.16.13	**18**	21	5.1	74
	3.14.14	**66**	190	10	210
	9.9.14	**NAPL****	**NAPL****	**NAPL****	**NAPL****
	6.15.15	<1.0	<1.0	<1.0	10
	12.7.15	1.3	<1.0	<1.0	53
	6.02.16	4.0	1.6	<1.0	5.1
	12.19.16	<1.0	<1.0	<1.0	2.1
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
	8.21.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0
MW-9	9.7.12	<2.0	2.4	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.20.13	<2.0	<2.0	<2.0	<4.0
	6.19.13	<1.0	<1.0	<1.0	<2.0
	9.17.13	<1.0	<1.0	<1.0	<1.5
	12.16.13	1.5	3.5	2.9	12
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.11.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.02.16	<1.0	<1.0	<1.0	<2.0
	12.19.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.09.18	<1.0	<1.0	<1.0	<2.0
	6.21.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	<1.0	<1.0	<1.0	<2.0
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.10.20	<1.0	<1.0	<1.0	<2.0

ENSOLUM

TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]
MW-10	12.16.13	**950**	34	12	39
	3.14.14	**560**	4.0	16	27
	9.9.14	**580**	<10	34	<20
	6.15.15	**75**	<1.0	12	2.9
	12.7.15	**17**	<1.0	2.0	<2.0
	6.03.16	**16**	<1.0	<1.0	<2.0
	12.20.16	4.8	<1.0	<1.0	<1.5
	6.27.17	3.4	<1.0	<1.0	<2.0
	1.10.18	<1.0	<1.0	<1.0	<2.0
	6.22.18	5.0	<1.0	<1.0	2.7
	12.14.18	<1.0	<1.0	<1.0	<2.0
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.13.20	<1.0	<1.0	<1.0	<2.0
MW-11	12.16.13	2.6	3.5	<1.0	6
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.12.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.03.16	<1.0	<1.0	<1.0	<2.0
	12.20.16	<1.0	<1.0	<1.0	<1.5
	6.28.17	Insufficient volume of water to sample.			
	1.10.18	<1.0	<1.0	<1.0	<1.5
	6.22.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.14.20	<1.0	<1.0	<1.0	<2.0
MW-12	12.16.13	3.3	3.8	<1.0	6
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.12.15	Casing Obstruction			
	12.4.15	Casing Obstruction			
	6.02.16	Casing Obstruction			
	12.20.16	Casing Obstruction			
	6.27.17	Casing Obstruction			
	1.10.18	Casing Obstruction			
	6.21.18	Casing Obstruction			
	12.13.18	Casing Obstruction			
	8.22.19	Casing Obstruction			
	1.10.20	Casing Obstruction			
MW-13	12.16.13	4.4	5.1	1.2	8
	3.14.14	<1.0	<1.0	<1.0	<3.0
	9.9.14	<2.0	<2.0	<2.0	<4.0
	6.15.15	<1.0	<1.0	<1.0	<2.0
	12.4.15	<1.0	<1.0	<1.0	<2.0
	6.03.16	<1.0	<1.0	<1.0	<2.0
	12.20.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.10.18	<1.0	<1.0	<1.0	<2.0
	6.22.18	<1.0	<1.0	<1.0	<1.5
	12.14.18	<1.0	<1.0	<1.0	<2.0
	8.22.19	<1.0	<1.0	<1.0	<2.0
	1.14.20	<1.0	<1.0	<1.0	<2.0

ENSOLUM

TABLE 1
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]
MW-14	9.16.16	<1.0	<1.0	<1.0	<2.0
	12.20.16	<1.0	<1.0	<1.0	<1.5
	6.27.17	<1.0	<1.0	<1.0	<2.0
	1.10.18	<1.0	<1.0	<1.0	<2.0
	6.22.18	<1.0	<1.0	<1.0	<1.5
	12.13.18	2.7	<1.0	<1.0	6.1
	8.21.19	<1.0	<1.0	<1.0	<2.0
	1.13.20	<1.0	<1.0	<1.0	<2.0
MW-15	9.16.16	3.6	<1.0	4.1	43
	12.20.16	<1.0	<1.0	6.2	87
	6.27.17	4.1	<1.0	4.6	89
	1.10.18	4.7	<1.0	2.8	33
	6.21.18	6.5	<1.0	2.6	13
	12.13.18	1.2	<1.0	<1.0	<2.0
	8.21.19	<1.0	<1.0	<1.0	<2.0
	1.13.20	<1.0	<1.0	1.4	23
MW-17	9.16.16	**380**	**790**	33	**1,200**
	12.20.16	**200**	100	11	310
	6.28.17	**130**	<5.0	<5.0	**950**
	1.10.18	5.2	2.2	1.2	13
	6.22.18	**29**	<1.0	2.4	<1.5
	12.14.18	**29**	<1.0	1.8	<2.0
	8.22.19	4.1	<1.0	<1.0	<2.0
	1.13.20	2.2	<1.0	<1.0	<2.0

Note: Concentrations in **bold** and yellow exceed the applicable WQCC GQS

[A] = NM EMNRD OCD District 3 has advised that the new 20.6.2 NMAC standards (12/21/18) will not be enforced by NM EMNRD OCD until sometime in 2020.

µg/L = micrograms per liter

NAPL = Non-aqueous phase liquid

** - Field personnel recorded the presence of NAPL utilizing an interface probe, but the product was not visually verified.

<1.0 = the numeral (in this case "1.0") identifies the laboratory RL or PQL

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TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-1*	9.7.12	ND	15.78	ND	5579.73	5563.95
	12.20.12	ND	15.69	ND		5564.04
	3.20.13	15.31	15.73	0.42		5564.31
	6.19.13	15.49	15.75	0.26		5564.17
	9.17.13	15.79	16.27	0.48		5563.81
	12.16.13	15.59	15.75	0.16		5564.10
	3.14.14	15.35	15.36	0.01		5564.38
	9.9.14	15.98	15.99	0.01		5563.75
	6.10.15	15.29	15.30	0.01		5564.44
	12.04.15	ND	15.81	ND		5563.92
	6.02.16	ND	15.41	ND		5564.32
	9.16.16	16.12	16.13	0.01	5579.43	5563.31
	12.19.16	ND	15.83	ND		5563.60
	6.27.17	ND	15.39	ND		5564.04
	1.09.18	ND	15.61	ND		5563.82
	6.21.18	ND	15.65	ND		5563.78
	12.13.18	ND	15.89	ND		5563.54
	8.20.19	ND	16.02	ND		5563.41
	1.07.20	ND	15.79	ND		5563.64
MW-2*	9.7.12	ND	16.29	ND	5579.39	5563.10
	12.20.12	ND	16.22	ND		5563.17
	3.20.13	ND	15.97	ND		5563.42
	6.19.13	15.96	16.40	0.44		5563.31
	9.17.13	16.40	16.54	0.14		5562.95
	12.16.13	16.14	16.22	0.08		5563.23
	3.14.14	ND	15.89	ND		5563.50
	9.9.14	ND	16.50	ND		5562.89
	6.10.15	ND	15.81	ND		5563.58
	12.04.15	ND	16.32	ND		5563.07
	6.02.16	ND	15.93	ND		5563.46
	9.16.16	ND	16.61	ND	5579.15	5562.54
	12.19.16	ND	16.35	ND		5562.80
	6.27.17	ND	15.95	ND		5563.20
	1.09.18	ND	16.13	ND		5563.02
	6.21.18	ND	16.19	ND		5562.96
	12.13.18	ND	16.45	ND		5562.70
	8.20.19	ND	16.52	ND		5562.63
	1.07.20	ND	16.35	ND		5562.80
MW-3*	9.7.12	ND	15.98	ND	5579.52	5563.54
	12.20.12	ND	15.79	ND		5563.73
	3.20.13	ND	15.50	ND		5564.02
	6.19.13	ND	15.66	ND		5563.86
	9.18.13	ND	15.96	ND		5563.56
	12.16.13	ND	15.70	ND		5563.82
	3.14.14	ND	15.39	ND		5564.13
	9.9.14	ND	16.10	ND		5563.42
	6.10.15	ND	15.28	ND		5564.24
	12.04.15	ND	15.87	ND		5563.65
	6.02.16	ND	15.47	ND		5564.05
	9.16.16	ND	16.24	ND	5579.24	5563.00
	12.19.16	ND	15.87	ND		5563.37
	6.27.17	ND	15.45	ND		5563.79
	1.09.18	ND	15.65	ND		5563.59
	6.21.18	ND	15.76	ND		5563.48
	12.13.18	ND	15.97	ND		5563.27
	8.20.19	ND	16.14	ND		5563.10
	1.07.20	ND	15.85	ND		5563.39

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TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-4*	9.7.12	ND	15.59	ND	5580.36	5564.77
	12.20.12	ND	15.51	ND		5564.85
	3.20.13	ND	15.25	ND		5565.11
	6.19.13	ND	15.41	ND		5564.95
	9.18.13	ND	15.74	ND		5564.62
	12.16.13	ND	15.45	ND		5564.91
	3.14.14	ND	15.14	ND		5565.22
	9.9.14	ND	15.80	ND		5564.56
	6.10.15	ND	15.06	ND		5565.30
	12.04.15	ND	15.56	ND		5564.80
	6.02.16	ND	15.22	ND		5565.14
	9.16.16	ND	15.92	ND	5579.95	5564.03
	12.19.16	ND	15.55	ND		5564.40
	6.27.17	ND	15.22	ND		5564.73
	1.09.18	ND	15.34	ND		5564.61
	6.21.18	ND	15.45	ND		5564.50
	12.13.18	ND	15.60	ND		5564.35
	8.20.19	ND	15.80	ND		5564.15
	1.07.20	ND	15.50	ND		5564.45
MW-5*	9.7.12	ND	19.35	ND	5583.53	5564.18
	12.20.12	ND	19.28	ND		5564.25
	3.20.13	ND	19.10	ND		5564.43
	6.19.13	ND	19.21	ND		5564.32
	9.17.13	ND	19.55	ND		5563.98
	12.16.13	ND	19.28	ND		5564.25
	3.14.14	ND	19.03	ND		5564.50
	9.9.14	ND	19.58	ND		5563.95
	6.10.15	ND	18.98	ND		5564.55
	12.04.15	ND	19.41	ND		5564.12
	6.02.16	ND	19.08	ND		5564.45
	9.16.16	ND	19.69	ND	5583.41	5563.72
	12.19.16	ND	19.42	ND		5563.99
	6.27.17	ND	19.12	ND		5564.29
	1.09.18	ND	19.22	ND		5564.19
	6.21.18	ND	19.27	ND		5564.14
	12.13.18	ND	19.44	ND		5563.97
	8.20.19	ND	19.60	ND		5563.81
	1.07.20	ND	19.39	ND		5564.02
MW-6*	9.7.12	ND	18.55	ND	5582.22	5563.67
	12.20.12	ND	18.49	ND		5563.73
	3.20.13	ND	18.27	ND		5563.95
	6.19.13	ND	18.38	ND		5563.84
	9.18.13	ND	18.74	ND		5563.48
	12.16.13	ND	18.46	ND		5563.76
	3.14.14	ND	18.21	ND		5564.01
	9.9.14	ND	18.75	ND		5563.47
	6.10.15	ND	18.16	ND		5564.06
	12.04.15	ND	18.60	ND		5563.62
	6.02.16	ND	18.25	ND		5563.97
	9.16.16	ND	18.86	ND	5581.98	5563.12
	12.19.16	ND	18.61	ND		5563.37
	6.27.17	ND	18.29	ND		5563.69
	1.09.18	ND	18.43	ND		5563.55
	6.21.18	ND	18.47	ND		5563.51
	12.13.18	ND	18.70	ND		5563.28
	8.20.19	ND	18.79	ND		5563.19
	1.07.20	ND	18.61	ND		5563.37

ENSOLUM

TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-7*	9.7.12	ND	19.03	ND	5582.24	5563.21
	12.20.12	ND	18.97	ND		5563.27
	3.20.13	ND	18.79	ND		5563.45
	6.19.13	ND	18.87	ND		5563.37
	9.17.13	ND	19.22	ND		5563.02
	12.16.13	ND	18.46	ND		5563.78
	3.14.14	ND	18.73	ND		5563.51
	9.9.14	ND	19.24	ND		5563.00
	6.10.15	ND	18.65	ND		5563.59
	12.04.15	ND	19.10	ND		5563.14
	6.02.16	ND	18.76	ND		5563.48
	9.16.16	ND	19.37	ND	5582.05	5562.68
	12.19.16	ND	19.13	ND		5562.92
	6.27.17	ND	18.80	ND		5563.25
	1.09.18	ND	18.95	ND		5563.10
	6.21.18	ND	18.98	ND		5563.07
	12.13.18	ND	19.22	ND		5562.83
	8.20.19	ND	19.31	ND		5562.74
	1.07.20	ND	19.14	ND		5562.91
MW-8*	9.7.12	ND	14.96	ND	5577.81	5562.85
	12.20.12	ND	14.87	ND		5562.94
	3.20.13	ND	14.63	ND		5563.18
	6.19.13	ND	14.74	ND		5563.07
	9.18.13	ND	15.08	ND		5562.73
	12.16.13	ND	14.81	ND		5563.00
	3.14.14	ND	14.53	ND		5563.28
	9.9.14**	15.12**	15.25	0.13**		5562.65
	6.10.15	ND	14.44	ND		5563.37
	12.04.15	ND	14.97	ND		5562.84
	6.02.16	ND	14.61	ND		5563.20
	9.16.16	ND	15.29	ND	5577.47	5562.18
	12.19.16	ND	15.00	ND		5562.47
	6.27.17	ND	14.62	ND		5562.85
	1.09.18	ND	14.80	ND		5562.67
	6.21.18	ND	14.88	ND		5562.59
	12.13.18	ND	15.11	ND		5562.36
	8.20.19	ND	15.22	ND		5562.25
	1.07.20	ND	15.00	ND		5562.47
MW-9*	9.7.12	ND	17.55	ND	5582.48	5564.93
	12.20.12	ND	17.47	ND		5565.01
	3.20.13	ND	17.28	ND		5565.20
	6.19.13	ND	17.42	ND		5565.06
	9.17.13	ND	17.74	ND		5564.74
	12.16.13	ND	17.48	ND		5565.00
	3.14.14	ND	17.21	ND		5565.27
	9.9.14	ND	17.83	ND		5564.65
	6.10.15	ND	17.18	ND		5565.30
	12.04.15	ND	17.61	ND		5564.87
	6.02.16	ND	17.30	ND		5565.18
	9.16.16	ND	17.94	ND	5582.35	5564.41
	12.19.16	ND	17.60	ND		5564.75
	6.27.17	ND	17.34	ND		5565.01
	1.09.18	ND	17.40	ND		5564.95
	6.21.18	ND	17.49	ND		5564.86
	12.13.18	ND	17.63	ND		5564.72
	8.20.19	ND	17.84	ND		5564.51
	1.07.20	ND	17.57	ND		5564.78

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TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-10*	12.16.13	ND	16.93	ND	5577.80	5560.87
	3.14.14	ND	14.63	ND		5563.17
	9.9.14	ND	15.34	ND		5562.46
	6.10.15	ND	14.58	ND		5563.22
	12.04.15	ND	15.10	ND		5562.70
	6.02.16	ND	14.74	ND		5563.06
	9.16.16	ND	15.49	ND	5578.10	5562.61
	12.19.16	ND	15.12	ND		5562.98
	6.27.17	ND	14.73	ND		5563.37
	1.09.18	ND	14.90	ND		5563.20
	6.21.18	ND	15.05	ND		5563.05
	12.13.18	ND	15.21	ND		5562.89
	8.20.19	ND	15.38	ND		5562.72
	1.07.20	ND	15.09	ND		5563.01
MW-11*	12.16.13	ND	15.15	ND	5578.65	5563.50
	3.14.14	ND	14.82	ND		5563.83
	9.9.14	ND	15.63	ND		5563.02
	6.10.15	ND	14.76	ND		5563.89
	12.04.15	ND	15.35	ND		5563.30
	6.02.16	ND	14.98	ND		5563.67
	9.16.16	ND	15.74	ND	5579.04	5563.30
	12.19.16	ND	15.35	ND		5563.69
	6.27.17	ND	15.00	ND		5564.04
	1.09.18	ND	15.11	ND		5563.93
	6.21.18	ND	15.28	ND		5563.76
	12.13.18	ND	15.45	ND		5563.59
	8.20.19	ND	15.66	ND		5563.38
	1.07.20	ND	15.32	ND		5563.72
MW-12*	12.16.13	ND	15.54	ND	5579.99	5564.45
	3.14.14	ND	15.27	ND		5564.72
	9.9.14	ND	15.96	ND		5564.03
	6.10.15	ND	15.22	ND		5564.77
	12.04.15	NG	NG	NG		NG
	6.02.16	NG	NG	NG		NG
	9.16.16	NG	NG	NG	5580.28	NG
	12.19.16	NG	NG	NG		NG
	6.27.17	NG	NG	NG		NG
	1.09.18	NG	NG	NG		NG
	6.21.18	NG	NG	NG		NG
	12.13.18	Obstructed well screen/casing				NG
	8.20.19	Obstructed well screen/casing				NG
	1.07.20	Obstructed well screen/casing				NG
MW-13*	12.16.13	ND	19.88	ND	5583.03	5563.15
	3.14.14	ND	19.63	ND		5563.40
	9.9.14	ND	20.18	ND		5562.85
	6.10.15	ND	19.57	ND		5563.46
	12.04.15	ND	20.01	ND		5563.02
	6.02.16	ND	19.67	ND		5563.36
	9.16.16	ND	20.27	ND	5583.34	5563.07
	12.19.16	ND	20.03	ND		5563.31
	6.27.17	ND	19.74	ND		5563.60
	1.09.18	ND	19.85	ND		5563.49
	6.21.18	ND	19.89	ND		5563.45
	12.13.18	ND	20.13	ND		5563.21
	8.20.19	ND	20.22	ND		5563.12
	1.07.20	ND	20.02	ND		5563.32

ENSOLUM

TABLE 2
Trunk 6C Kutz Wash Pipeline Release
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-14	9.16.16	ND	14.48	ND	5576.39	5561.91
	12.19.16	ND	14.18	ND		5562.21
	6.27.17	ND	13.83	ND		5562.56
	1.09.18	ND	13.99	ND		5562.40
	6.21.18	ND	14.10	ND		5562.29
	12.13.18	ND	14.33	ND		5562.06
	8.20.19	ND	14.43	ND		5561.96
	1.07.20	ND	14.21	ND		5562.18
MW-15	9.16.16	ND	16.75	ND	5578.83	5562.08
	12.19.16	ND	16.48	ND		5562.35
	6.27.17	ND	16.12	ND		5562.71
	1.09.18	ND	16.30	ND		5562.53
	6.21.18	ND	16.36	ND		5562.47
	12.13.18	ND	16.60	ND		5562.23
	8.20.19	ND	16.70	ND		5562.13
	1.07.20	ND	16.50	ND		5562.33
MW-17	9.16.16	ND	16.02	ND	5579.86	5563.84
	12.19.16	ND	15.68	ND		5564.18
	6.27.17	ND	15.30	ND		5564.56
	1.09.18	ND	15.45	ND		5564.41
	6.21.18	ND	15.55	ND		5564.31
	12.13.18	ND	15.72	ND		5564.14
	8.20.19	ND	15.91	ND		5563.95
	1.07.20	ND	15.62	ND		5564.24

BTOC - below top of casing
AMSL - above mean sea level
TOC - top of casing
NG - Well not gauged, or Errant Gauge.
ND - not detected
* - Monitoring wells resurveyed during September 2016
** - Field personnel recorded the presence of NAPL utilizing an interface probe, but the product was not visually verified.

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APPENDIX C

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 18, 2020

Kyle Summers

ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Trunk 6-C OrderNo.: 1908F66

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 15 sample(s) on 8/23/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-7
Project: Trunk 6-C
Collection Date: 8/21/2019 10:20:00 AM
Lab ID: 1908F66-001
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 4:56:38 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 4:56:38 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 4:56:38 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 4:56:38 PM	D62567
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	8/30/2019 4:56:38 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-15
Project: Trunk 6-C
Collection Date: 8/21/2019 10:50:00 AM
Lab ID: 1908F66-002
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 6:05:36 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 6:05:36 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 6:05:36 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 6:05:36 PM	D62567
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	8/30/2019 6:05:36 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-14
Project: Trunk 6-C
Collection Date: 8/21/2019 11:30:00 AM
Lab ID: 1908F66-003
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 7:14:22 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 7:14:22 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 7:14:22 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 7:14:22 PM	D62567
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	8/30/2019 7:14:22 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-8
Project: Trunk 6-C
Collection Date: 8/21/2019 12:10:00 PM
Lab ID: 1908F66-004
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 7:37:20 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 7:37:20 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 7:37:20 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 7:37:20 PM	D62567
Surr: 4-Bromofluorobenzene	98.2	80-120		%Rec	1	8/30/2019 7:37:20 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-2
Project: Trunk 6-C
Collection Date: 8/21/2019 12:50:00 PM
Lab ID: 1908F66-005
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 8:00:14 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 8:00:14 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 8:00:14 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 8:00:14 PM	D62567
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	8/30/2019 8:00:14 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-3
Project: Trunk 6-C
Collection Date: 8/21/2019 1:30:00 PM
Lab ID: 1908F66-006
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 8:23:09 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 8:23:09 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 8:23:09 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 8:23:09 PM	D62567
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	8/30/2019 8:23:09 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-1
Project: Trunk 6-C
Collection Date: 8/21/2019 2:20:00 PM
Lab ID: 1908F66-007
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	800	20		µg/L	20	9/3/2019 9:46:37 AM	B62609
Toluene	510	20		µg/L	20	9/3/2019 9:46:37 AM	B62609
Ethylbenzene	46	20		µg/L	20	9/3/2019 9:46:37 AM	B62609
Xylenes, Total	150	40		µg/L	20	9/3/2019 9:46:37 AM	B62609
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	20	9/3/2019 9:46:37 AM	B62609

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-9
Project: Trunk 6-C
Collection Date: 8/22/2019 9:40:00 AM
Lab ID: 1908F66-008
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 9:09:03 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 9:09:03 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 9:09:03 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 9:09:03 PM	D62567
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	8/30/2019 9:09:03 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-5
Project: Trunk 6-C
Collection Date: 8/22/2019 10:25:00 AM
Lab ID: 1908F66-009
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 9:31:59 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 9:31:59 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 9:31:59 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 9:31:59 PM	D62567
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	8/30/2019 9:31:59 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-6
Project: Trunk 6-C
Collection Date: 8/22/2019 11:00:00 AM
Lab ID: 1908F66-010
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 9:54:55 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 9:54:55 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 9:54:55 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 9:54:55 PM	D62567
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	8/30/2019 9:54:55 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-4
Project: Trunk 6-C
Collection Date: 8/22/2019 11:40:00 AM
Lab ID: 1908F66-011
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 10:17:51 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 10:17:51 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 10:17:51 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 10:17:51 PM	D62567
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	8/30/2019 10:17:51 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-17
Project: Trunk 6-C
Collection Date: 8/22/2019 12:20:00 PM
Lab ID: 1908F66-012
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	4.1	1.0		µg/L	1	9/3/2019 10:10:11 AM	B62609
Toluene	ND	1.0		µg/L	1	9/3/2019 10:10:11 AM	B62609
Ethylbenzene	ND	1.0		µg/L	1	9/3/2019 10:10:11 AM	B62609
Xylenes, Total	ND	2.0		µg/L	1	9/3/2019 10:10:11 AM	B62609
Surr: 4-Bromofluorobenzene	92.4	80-120		%Rec	1	9/3/2019 10:10:11 AM	B62609

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-13
Project: Trunk 6-C
Collection Date: 8/22/2019 12:45:00 PM
Lab ID: 1908F66-013
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/30/2019 11:49:35 PM	D62567
Toluene	ND	1.0		µg/L	1	8/30/2019 11:49:35 PM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/30/2019 11:49:35 PM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/30/2019 11:49:35 PM	D62567
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	8/30/2019 11:49:35 PM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-10
Project: Trunk 6-C
Collection Date: 8/22/2019 1:10:00 PM
Lab ID: 1908F66-014
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/31/2019 12:12:31 AM	D62567
Toluene	ND	1.0		µg/L	1	8/31/2019 12:12:31 AM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/31/2019 12:12:31 AM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/31/2019 12:12:31 AM	D62567
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	8/31/2019 12:12:31 AM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1908F66**
Date Reported: **6/18/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-11
Project: Trunk 6-C
Collection Date: 8/22/2019 1:30:00 PM
Lab ID: 1908F66-015
Matrix: AQUEOUS
Received Date: 8/23/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/31/2019 12:35:25 AM	D62567
Toluene	ND	1.0		µg/L	1	8/31/2019 12:35:25 AM	D62567
Ethylbenzene	ND	1.0		µg/L	1	8/31/2019 12:35:25 AM	D62567
Xylenes, Total	ND	2.0		µg/L	1	8/31/2019 12:35:25 AM	D62567
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	8/31/2019 12:35:25 AM	D62567

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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908F66**
18-Jun-20

Client: ENSOLUM
Project: Trunk 6-C

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **D62567** RunNo: **62567**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		89.9	80	120			

Sample ID: **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **D62567** RunNo: **62567**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128993** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.5	80	120			
Toluene	19	1.0	20.00	0	97.0	80	120			
Ethylbenzene	20	1.0	20.00	0	98.5	80	120			
Xylenes, Total	57	2.0	60.00	0	94.5	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		97.8	80	120			

Sample ID: **1908F66-001AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-7** Batch ID: **D62567** RunNo: **62567**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128995** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0.4710	101	80	120			
Toluene	20	1.0	20.00	0	99.6	75.5	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	59	2.0	60.00	0	98.4	77.3	119			
Surr: 4-Bromofluorobenzene	20		20.00		98.7	80	120			

Sample ID: **1908F66-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-7** Batch ID: **D62567** RunNo: **62567**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128996** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0.4710	92.6	80	120	8.45	20	
Toluene	19	1.0	20.00	0	92.9	75.5	120	6.93	20	
Ethylbenzene	19	1.0	20.00	0	93.8	80	120	6.97	20	
Xylenes, Total	55	2.0	60.00	0	92.0	77.3	119	6.69	20	
Surr: 4-Bromofluorobenzene	20		20.00		100	80	120	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908F66**
18-Jun-20

Client: ENSOLUM
Project: Trunk 6-C

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **B62609** RunNo: **62609**
Prep Date: Analysis Date: **9/3/2019** SeqNo: **2130677** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		92.3	80	120			

Sample ID: **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **B62609** RunNo: **62609**
Prep Date: Analysis Date: **9/3/2019** SeqNo: **2130678** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	80	120			
Toluene	21	1.0	20.00	0	103	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	64	2.0	60.00	0	106	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		105	80	120			

Qualifiers:

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

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: **ENSOLUM AZTEC** Work Order Number: **1908F66** RcptNo: **1**

Received By: Daniel Murguia **8/23/2019 8:00:00 AM**

Completed By: **Yazmine Garduno** **8/27/2019 2:57:35 PM** Yazmine Garduno

Reviewed By: YG 8/28/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☑ mp 9/5/19
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: DAD 8/28/19

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	2.0	Good				
2	1.1	Good				

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Suit A 87410

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Trunck 6C

Project #: 05A1226011

Project Manager: K. Summers

Sampler: C DAponti

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 2.3-0.3=2.0 | 1.4-0.3=1.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1908F160	BTEX / ~~MTBE~~ / ~~TMB~~'s (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/21/19	1030	W	MW-7	3 40mL vials	HgCl2	-001	X									
	1050	W	MW-15			-002	X									
	1130	W	MW-14			-003	X									
	1210	W	MW-8			-004	X									
	1250	W	MW-2			-005	X									
	1330	W	MW-3			-006	X									
	1420	W	MW-1			-007	X									
8/22/19	940	W	MW-9			-008	X									
	1025	W	MW-5			-009	X									
	1100	W	MW-6			-010	X									
	1140	W	MW-4			-011	X									
	1220	W	MW-17			-012	X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/22/19	1454				8/22/19	1454
8/22/19	1807			Courier	8/23/19	8:00

Remarks: Pm Kyle Summers
B:11 to Ensolum

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Suite A 87410

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Truck 6C

Project #: 05A1226011

Project Manager: K Summers

Sampler: C DiAnti

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 1.4-0.3/2.3-0.3=2.0°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/22/19	1245	W	MW-13	3 40mL Vials	HgCl2	-013	X									
"	1310	W	MW-10	"	"	-014	X									
"	1330	W	MW-11	"	"	-015	X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/22/19	1454				8/22/19	1454
8/22/19	1807			Courier	8/23/19	8:00

Remarks: See page 1

Page 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 17, 2020

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

RE: Trunk 6C Kutz Wash OrderNo.: 2001440

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 1/11/2020 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: **2001440**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Lab Order:** 2001440
Project: Trunk 6C Kutz Wash

Lab ID: 2001440-001 **Collection Date:** 1/10/2020 9:15:00 AM
Client Sample ID: MW-5 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/16/2020 9:43:21 PM	B65850
Toluene	ND	1.0		µg/L	1	1/16/2020 9:43:21 PM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/16/2020 9:43:21 PM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/16/2020 9:43:21 PM	B65850
Surr: 4-Bromofluorobenzene	90.6	80-120		%Rec	1	1/16/2020 9:43:21 PM	B65850

Lab ID: 2001440-002 **Collection Date:** 1/10/2020 9:50:00 AM
Client Sample ID: MW-9 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/16/2020 10:06:27 PM	B65850
Toluene	ND	1.0		µg/L	1	1/16/2020 10:06:27 PM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/16/2020 10:06:27 PM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/16/2020 10:06:27 PM	B65850
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	1/16/2020 10:06:27 PM	B65850

Lab ID: 2001440-003 **Collection Date:** 1/10/2020 10:35:00 AM
Client Sample ID: MW-4 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/16/2020 10:29:36 PM	B65850
Toluene	ND	1.0		µg/L	1	1/16/2020 10:29:36 PM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/16/2020 10:29:36 PM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/16/2020 10:29:36 PM	B65850
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	1/16/2020 10:29:36 PM	B65850

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

Qualifiers:

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

Analytical Report
Lab Order: **2001440**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Lab Order:** 2001440
Project: Trunk 6C Kutz Wash

Lab ID: 2001440-004 **Collection Date:** 1/10/2020 11:15:00 AM
Client Sample ID: MW-6 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/16/2020 10:52:46 PM	B65850
Toluene	ND	1.0		µg/L	1	1/16/2020 10:52:46 PM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/16/2020 10:52:46 PM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/16/2020 10:52:46 PM	B65850
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	1/16/2020 10:52:46 PM	B65850

Lab ID: 2001440-005 **Collection Date:** 1/10/2020 12:05:00 PM
Client Sample ID: MW-7 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/16/2020 11:15:52 PM	B65850
Toluene	ND	1.0		µg/L	1	1/16/2020 11:15:52 PM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/16/2020 11:15:52 PM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/16/2020 11:15:52 PM	B65850
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	1/16/2020 11:15:52 PM	B65850

Lab ID: 2001440-006 **Collection Date:** 1/10/2020 12:35:00 PM
Client Sample ID: MW-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/16/2020 11:38:57 PM	B65850
Toluene	ND	1.0		µg/L	1	1/16/2020 11:38:57 PM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/16/2020 11:38:57 PM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/16/2020 11:38:57 PM	B65850
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	1/16/2020 11:38:57 PM	B65850

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

Qualifiers:

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

Analytical Report
Lab Order: **2001440**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Lab Order:** 2001440
Project: Trunk 6C Kutz Wash

Lab ID: 2001440-007 **Collection Date:** 1/10/2020 1:30:00 PM
Client Sample ID: MW-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 12:02:04 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 12:02:04 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 12:02:04 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 12:02:04 AM	B65850
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	1/17/2020 12:02:04 AM	B65850

Lab ID: 2001440-008 **Collection Date:** 1/10/2020 2:15:00 PM
Client Sample ID: MW-8 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 12:25:10 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 12:25:10 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 12:25:10 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 12:25:10 AM	B65850
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	1/17/2020 12:25:10 AM	B65850

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001440**

17-Jan-20

Client: ENSOLUM

Project: Trunk 6C Kutz Wash

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBW** Batch ID: **B65850** RunNo: **65850**

Prep Date: Analysis Date: **1/16/2020** SeqNo: **2261681** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		93.6	80	120			

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSW** Batch ID: **B65850** RunNo: **65850**

Prep Date: Analysis Date: **1/16/2020** SeqNo: **2261682** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	80	120			
Toluene	20	1.0	20.00	0	99.4	80	120			
Ethylbenzene	20	1.0	20.00	0	98.5	80	120			
Xylenes, Total	59	2.0	60.00	0	97.9	80	119			
Surr: 4-Bromofluorobenzene	19		20.00		94.3	80	120			

Qualifiers:

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

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: **ENSOLUM AZTEC** Work Order Number: **2001440** RcptNo: **1**

Received By: **Daniel Marquez** **1/11/2020 9:30:00 AM**

Completed By: **Leah Baca** **1/13/2020 9:41:42 AM**

Reviewed By: LB 1/13/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Adjusted? _____

Checked by: DAD 1/13/20

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	1.6	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: ksummers@ensolum.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Trunk 6C Kutz Wash

Project #: 05A1226011

Project Manager: Ksummers

Sampler: RDeechilly
On Ice: ☐ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 1.6+0=1.6 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001440	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/10/20	915	W	MW-5	3x 40mL VOA	$HgCl_2$	-001	X									
1/10/20	950	W	MW-9	3x 40mL VOA	$HgCl_2$	-002	X									
1/10/20	1035	W	MW-4	3x 40mL VOA	$HgCl_2$	-003	X									
1/10/20	1115	W	MW-6	3x 40mL VOA	$HgCl_2$	-004	X									
1/10/20	1205	W	MW-7	3x 40mL VOA	$HgCl_2$	-005	X									
1/10/20	1235	W	MW-2	3x 40mL VOA	$HgCl_2$	-006	X									
1/10/20	1330	W	MW-3	3x 40mL VOA	$HgCl_2$	-007	X									
1/10/20	1415	W	MW-8	3x 40mL VOA	$HgCl_2$	-008	X									

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/10/20	1510		Christen Wade		1/10/20	1510
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/10/20	1814	Christen Wade		CARRIER	1/11/20	9:30

Remarks: Bill to Ensolum

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 17, 2020

Kyle Summers

ENSOLUM
606 S Rio Grande Ste A
Aztec, NM 87410
TEL:
FAX

RE: Trunk 6C Kutz Wash OrderNo.: 2001545

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 1/15/2020 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: **2001545**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Lab Order:** 2001545
Project: Trunk 6C Kutz Wash

Lab ID: 2001545-001 **Collection Date:** 1/13/2020 1:20:00 PM
Client Sample ID: MW-14 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 1:34:29 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 1:34:29 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 1:34:29 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 1:34:29 AM	B65850
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	1/17/2020 1:34:29 AM	B65850

Lab ID: 2001545-002 **Collection Date:** 1/13/2020 1:55:00 PM
Client Sample ID: MW-15 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 1:57:34 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 1:57:34 AM	B65850
Ethylbenzene	1.4	1.0		µg/L	1	1/17/2020 1:57:34 AM	B65850
Xylenes, Total	23	2.0		µg/L	1	1/17/2020 1:57:34 AM	B65850
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/17/2020 1:57:34 AM	B65850

Lab ID: 2001545-003 **Collection Date:** 1/13/2020 2:30:00 PM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	940	20		µg/L	20	1/17/2020 2:20:41 AM	B65850
Toluene	540	20		µg/L	20	1/17/2020 2:20:41 AM	B65850
Ethylbenzene	61	20		µg/L	20	1/17/2020 2:20:41 AM	B65850
Xylenes, Total	190	40		µg/L	20	1/17/2020 2:20:41 AM	B65850
Surr: 4-Bromofluorobenzene	94.3	80-120		%Rec	20	1/17/2020 2:20:41 AM	B65850

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

Qualifiers:

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

Analytical Report
Lab Order: **2001545**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Lab Order:** 2001545
Project: Trunk 6C Kutz Wash

Lab ID: 2001545-004 **Collection Date:** 1/13/2020 3:10:00 PM
Client Sample ID: MW-17 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2.2	1.0		µg/L	1	1/17/2020 3:29:55 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 3:29:55 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 3:29:55 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 3:29:55 AM	B65850
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	1/17/2020 3:29:55 AM	B65850

Lab ID: 2001545-005 **Collection Date:** 1/13/2020 4:15:00 PM
Client Sample ID: MW-10 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 3:52:59 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 3:52:59 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 3:52:59 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 3:52:59 AM	B65850
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	1/17/2020 3:52:59 AM	B65850

Lab ID: 2001545-006 **Collection Date:** 1/14/2020 8:30:00 AM
Client Sample ID: MW-11 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 4:16:01 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 4:16:01 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 4:16:01 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 4:16:01 AM	B65850
Surr: 4-Bromofluorobenzene	90.1	80-120		%Rec	1	1/17/2020 4:16:01 AM	B65850

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

Qualifiers:

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

Analytical Report
Lab Order: **2001545**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Lab Order:** 2001545
Project: Trunk 6C Kutz Wash

Lab ID: 2001545-007 **Collection Date:** 1/14/2020 9:35:00 AM
Client Sample ID: MW-13 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/17/2020 4:39:05 AM	B65850
Toluene	ND	1.0		µg/L	1	1/17/2020 4:39:05 AM	B65850
Ethylbenzene	ND	1.0		µg/L	1	1/17/2020 4:39:05 AM	B65850
Xylenes, Total	ND	2.0		µg/L	1	1/17/2020 4:39:05 AM	B65850
Surr: 4-Bromofluorobenzene	86.8	80-120		%Rec	1	1/17/2020 4:39:05 AM	B65850

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001545**

17-Jan-20

Client: ENSOLUM

Project: Trunk 6C Kutz Wash

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **B65850**	RunNo: **65850**
Prep Date:	Analysis Date: **1/16/2020**	SeqNo: **2261681** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		93.6	80	120			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **B65850**	RunNo: **65850**
Prep Date:	Analysis Date: **1/16/2020**	SeqNo: **2261682** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	80	120			
Toluene	20	1.0	20.00	0	99.4	80	120			
Ethylbenzene	20	1.0	20.00	0	98.5	80	120			
Xylenes, Total	59	2.0	60.00	0	97.9	80	119			
Surr: 4-Bromofluorobenzene	19		20.00		94.3	80	120			

Sample ID: **2001545-003ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-1**	Batch ID: **B65850**	RunNo: **65850**
Prep Date:	Analysis Date: **1/17/2020**	SeqNo: **2261694** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1400	20	400.0	944.1	112	80	120			
Toluene	940	20	400.0	535.1	102	80	120			
Ethylbenzene	440	20	400.0	60.64	94.5	80	120			
Xylenes, Total	1300	40	1200	192.5	93.5	68.3	130			
Surr: 4-Bromofluorobenzene	390		400.0		96.8	80	120			

Sample ID: **2001545-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-1**	Batch ID: **B65850**	RunNo: **65850**
Prep Date:	Analysis Date: **1/17/2020**	SeqNo: **2261695** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1300	20	400.0	944.1	101	80	120	3.14	20	
Toluene	920	20	400.0	535.1	95.7	80	120	2.54	20	
Ethylbenzene	430	20	400.0	60.64	92.2	80	120	2.14	20	
Xylenes, Total	1300	40	1200	192.5	90.9	68.3	130	2.33	20	
Surr: 4-Bromofluorobenzene	380		400.0		96.1	80	120	0	0	

Qualifiers:

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

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: ENSOLUM AZTEC | Work Order Number: 2001545 | RcptNo: 1

1.15.20 @0800 SV 1.15.20

Received By: Juan Rios ~~1/14/2020 2:00:00 PM~~

Completed By: **Daniel Marquez** 1/15/2020 9:10:00 AM

Reviewed By: YG 1/15/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	~~NA ☐~~ DM 1/15/20
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: JR 1/15/20

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	0.5	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: ksummers@ensolum.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Trunk 6C Kutz Wash

Project #: 05A1226011

Project Manager: KSummers

Sampler: RDuchilly

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.6-0.1=0.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 200145	BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/13/20	1320	W	MW-14	3x40mL VOA	$HgCl_2$	001	X									
1/13/20	1355	W	MW-15	3x40mL VOA	$HgCl_2$	002	X									
1/13/20	1430	W	MW-1	3x40mL VOA	$HgCl_2$	003	X									
1/13/20	1510	W	MW-17	3x40mL VOA	$HgCl_2$	004	X									
1/13/20	1615	W	MW-10	3x40mL VOA	$HgCl_2$	005	X									
1/14/20	830	W	MW-11	3x40mL VOA	$HgCl_2$	006	X									
1/14/20	935	W	MW-13	3x40mL VOA	$HgCl_2$	007	X									
		DM 1/15/20	Trip Blank	on cooler		008										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/14/20	1400	RDuchilly	Mark Weeks		1/14/20	1400
1/14/20	1753	Mark Weeks		courier	1/15/20	8:00

Remarks: Bill to Ensolum

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 21242

CONDITIONS

Operator:	OGRID:
Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	241602
	Action Number: 21242
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. Application contains 2018 & 2019 annual reports. See app ID 41349 for most updated status.	10/21/2022