Enterprise Products

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

ENTERPRISE PRODUCTS OPERATING LLC

April 8, 2020

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 6, 2019)
Enterprise Field Services, LLC
Lateral K-12 Y#3 Condensate Tank Release (3/19/12)
Rio Arriba Co., New Mexico
OCD RP: 3R-459

Review of 2019 Groundwater Monitoring Report:
Content satisfactory

Follow recommendations stated within 2018 Groundwater Monitoring Report.

Dear Mr. Smith:

Enterprise Products Operating LLC (Enterprise), on behalf of Enterprise Field Services, LLC, is submitting one electronic copy of the *2018 Annual Groundwater Monitoring Report* (Ensolum, September 6, 2019) that summarizes results of the semi-annual groundwater monitoring and sampling (SA-GWM&S) events conducted at the above-referenced location (Site). The report is associated with a release of condensate that occurred on March 19, 2012 due to the overfilling of a condensate tank. During initial response actions, a suspected earthen pit was discovered that appeared to have caused historical hydrocarbon impacts that are comingled with the Subject release. The attached report documents SA-GWM&S activities 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 New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQSs). Additionally, the DPH plume is not fully delineated to the north and northwest.

Based on the information presented in the attached report, Enterprise intends to 1) continue SA-GWM&S activities in order to evaluate the stability of COC concentrations in subsurface water and groundwater, 2) evaluate in-situ soil remediation options for the source area, and 3) further delineate the DPH plume to the north and northwest of the release point.

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
Sr. Director, Environmental

cc: Ms. Whitney Thomas – BLM, Farmington, NM (landowner)
ec: Mr. Cory Smith – NMOCD, Aztec, NM
Mr. Jim Griswold – NMOCD, Santa Fe, NM
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Mr. Marc E. Gentry – Ensolum, Houston, TX

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ENSOLUM

LATERAL K-12 Y#2 CONDENSATE TANK RELEASE (3/19/12)
2018 ANNUAL GROUNDWATER MONITORING REPORT

Property:

Lateral K-12 Y#3 Condensate Tank Release (3/19/12)
SW ¼, S23 T27N R7W
Rio Arriba County, New Mexico

New Mexico EMNRD OCD RP No. 3R-459

September 26, 2019
Ensolum Project No. 05B1226001

Prepared for:

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

Prepared by:

Marc E. Gentry
Principal

ENSOLUM

LATERAL K-12 CONDENSATE TANK RELEASE (3/19/12)
2018 ANNUAL GROUNDWATER MONITORING REPORT
EXECUTIVE SUMMARY

The Lateral K-12 Condensate Tank Release (3/19/12) 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 23, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico.

On March 19, 2012, a natural gas condensate release, estimated at less than one (1) barrel (bbl), occurred as a result of overfilling the condensate tank. During the corrective action that included the excavation of impacted soils (April 2012), a suspected historical earthen pit was discovered, and the excavation was expanded to remove historical hydrocarbon affected soils. Due to the increased area of disturbance and safety factors associated with the depth of the excavation, the excavation activities were suspended by the Bureau of Land Management (BLM). Groundwater was not identified in the 35-foot below grade surface (bgs) excavation. Subsequent site investigations by Animas Environmental Services, LLC (AES) included the advancement of nine (9) soil borings and the installation of three (3) soil vapor extraction (SVE) wells/monitoring wells to delineate the extent of hydrocarbon affected soil and/or groundwater and potentially provide subsurface access for "high-vacuum" remediation. Due to a change in the intended use, the SVE wells at this Site are now referred to as "monitoring wells". Samples collected from the soil borings and monitoring wells exhibited concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and total petroleum hydrocarbons (TPH) above New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) *Remediation Action Levels (RALs)* in soils and above the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs)* in groundwater. Additionally, non-aqueous phase liquid (NAPL) was identified in monitoring well SVE-1. NAPL was removed from SVE-1 by bailing and did not recharge. Additional delineation activities were performed by AES during 2013 and 2014, and by Apex TITAN, Inc. during 2016. Groundwater COC monitoring is ongoing at the Site.

Ensolum submitted a Stage 1 Abatement Plan to the EMNRD OCD on March 22, 2019.

Semi-annual groundwater monitoring events were conducted during June and December 2018 to further evaluate the concentrations of COCs in groundwater over time. Findings and recommendations based on these activities are as follows:

- Based on available information, the first apparent water-bearing unit at the Site (at least in the vicinity of the remediation excavation) appears very limited in thickness and volume and may be more accurately described as subsurface water (as defined in New Mexico Administrative Code 20.6.2.7 . It appears that water observed in the upgradient monitoring wells may be limited to a small volume of percolating water from precipitation events that periodically collects on or near the surface of the weathered subgrade bedrock and, depending on the significance of the precipitation events, subsequently drains into the monitoring wells and the associated well bore annuli. This speculation is further supported by the lack of groundwater encountered during prior excavation activities (reaching approximately 35 feet bgs) which exceeded the measured depth to groundwater at the Site of approximately 27 feet bgs near the source area. Additionally, bail-down tests performed on monitoring wells near the source area in 2013 demonstrated insignificant water recharge over the course of several days.

- The groundwater flow direction at the Site is generally towards the east and northeast, with an approximate average gradient of 0.01 feet per foot (ft/ft) across the Site.

- During the June 2018 sampling event, the groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited BTEX constituent concentrations above the applicable WQCC *GQSs.* The groundwater samples collected from monitoring wells SVE-1R, SVE-3, MW-1, MW-12, and MW-13 did not exhibit BTEX constituent concentrations above the applicable WQCC *GQSs*.

- During the December 2018 sampling event, the groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited BTEX constituent concentrations above the applicable WQCC *GQSs.* The groundwater samples collected from monitoring wells SVE-1R, SVE-3, MW-1, MW-12, and MW-13 did not exhibit BTEX constituent concentrations above the applicable WQCC *GQSs*.

Ensolum offers the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD;
- Additional site investigation activities will be initiated upon notification by the EMNRD OCD that the Stage 1 Abatement Plan dated March 22, 2019 has been determined to be administratively complete.

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ENSOLUM

LATERAL K-12 Y#3 CONDENSATE TANK RELASE (3/19/12)
2018 ANNUAL GROUNDWATER MONITORING REPORT

New Mexico EMNRD OCD RP No. 3R-459

Ensolum Project No. 05B1226001

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral K-12 Condensate Tank Release (3/19/12) (Site)
Location:	36.554120° North, 107.549350° West Southwest (SW) ¼ of Sections 23, Township 27 North, Range 7 West Rio Arriba 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 March 19, 2012, a natural gas condensate release estimated at less than one (1) barrel (bbl) occurred as a result of overfilling the condensate tank. Animas Environmnetal Services, LLC (AES) conducted an initial release assessment and subsequently recommended the removal of affected soils (*Release Mitigation and Investigation Report, dated July 18, 2012 – AES*).

During soil excavation in April 2012, a suspected historical earthen pit was discovered, and the excavation was expanded to remove the historical petroleum hydrocarbon affected soils. Due to the increased area of disturbance and safety factors associated with the depth of the excavation, the excavation activities were suspended by the BLM. AES collected confirmation soil samples (SC-1 through SC-9). Groundwater was not identified in the 35-foot deep excavation. Subsequent to backfilling the excavation with clean fill, AES conducted a site investigation that included the advancement of seven (7) soil borings (SB-1 through SB-7). Three (3) of the soil borings (SB-1/SVE-1, SB-3/SVE-2, SB-4/SVE-3), were completed as soil-vapor-extraction (SVE) monitoring wells in anticipation of potential future remedial activities. However, the SVE wells at this Site have not been used for remediation and are utilized for groundwater monitoring.

On July 19, 2013, AES monitored the SVE wells and identified the presence of water in each well and non-aqueous phase liquid (NAPL) in monitoring well SVE-1 (1.07 feet thick). This NAPL was removed by bailing and did not recharge. AES also advanced two (2) soil borings (SB-8 and SB-9) adjacent to the former excavation, which demonstrated minimal natural attenuation of constituent of concern (COC) concentrations since the backfilling of the excavation. On July 22, 2013, AES collected water samples from monitoring wells SVE-2 and SVE-3 for laboratory analysis of total dissolved solids (TDS) and chlorides. Laboratory analytical results indicated that TDS concentrations were 1,160 milligrams per liter (mg/L) and 740 mg/L in SVE-2 and SVE-3, respectively, and chloride concentrations were 110 mg/L and 23 mg/L in SVE-2 and SVE-3, respectively (*Continued Site Investigation Report, dated October 4, 2013 – AES*).

Based on available information, the first apparent water-bearing unit at the Site appears very limited in thickness and extent and may be more accurately described as subsurface water (as defined in New Mexico Administrative Code 20.6.2.7. It appears that water observed in the monitoring wells (at least in the vicinity of the remediation excavation) may be limited to percolating water from precipitation events that periodically collects on or near the surface of the weathered bedrock and, depending on the significance of the

precipitation events, subsequently drains into the monitoring wells and the associated well bore annuli. This speculation is further supported by the lack of water encountered during prior excavation activities (reaching 35 feet bgs) which exceeded the measured depth to groundwater at the Site of approximately 27 feet bgs near the source area. Additionally, bail-down tests performed on monitoring wells near the source area in 2013 demonstrated insignificant water recharge over several days.

A groundwater monitoring and sampling event was conducted by AES on October 8, 2013. NAPL was not observed in monitoring well SVE-1 during this monitoring and sampling event. However, presumably due to settling associated with the backfilled excavation, the screened portion of monitoring well SVE-1 was damaged and collection of a water sample was not possible. Water samples were collected from monitoring wells SVE-2 and SVE-3 for laboratory analysis of BTEX, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) (*Groundwater Monitoring Report and Continued Site Investigation Workplan, dated November 15, 2013 – AES*).

During January 2014, AES advanced six (6) soil borings, five (5) of which were completed as groundwater monitoring wells MW-1 through MW-5, and one (1) of which was utilized to replace monitoring well SVE-1 with SVE-1R. Monitoring well SVE-1 was apparently plugged and abandoned at that time.

During August and September 2016, Apex TITAN, Inc., (Apex) conducted supplemental Site Investigation activities at the Site by advancing seven (7) soil borings to further evaluate the extent of hydrocarbon affected soil and potentially impacted groundwater. Laboratory analytical results identified TPH GRO/DRO concentrations that exceeded applicable New Mexico EMNRD OCD *RALs* in monitoring well borings MW-11 and MW-13. Three (3) soil borings were completed as groundwater monitoring wells MW-11 through MW-13. The groundwater analytical results for the groundwater samples collected from these wells indicated benzene, toluene, and total xylenes in excess of the WQCC *Groundwater Quality Standards* (*GQSs)* (*Supplemental Environmental Site Investigation and Annual Subsurface Water Monitoring Report*, dated February 24, 2017 - Apex).

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Initial Site activities were performed in accordance with the New Mexico ENMRD OCD *Guidelines for Remediation of Leaks, Spills and Releases*, in addition to the New Mexico EMNRD OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.29 *Release Notification.* This guidance established investigation and abatement action requirements for sites subject to reporting and/or corrective action prior to the update of the rule finalized August 14, 2018. 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. 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 are currently being enforced.

A **Topographic Map** is provided as **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 locations of the monitoring wells and recent soil borings in relation to pertinent structures and general Site boundaries, is provided 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 at the Site over time.

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.

Based on information provided by Enterprise, Apex's groundwater sampling program consisted of the following:

Apex gauged the depth to fluids in each monitoring well using an interface probe capable of detecting non-aqueous phase liquids (NAPL). Due to an interface probe malfunction during the December 2018 sampling event, the monitoring wells at the Site were gauged on January 21, 2019.

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, taking into account established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (L/min) were maintained during sampling activities, using dedicated or decontaminated sampling equipment.

The groundwater samples were 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 wells MW-3 through MW-5 were dry or did not produce a sufficient volume of water to allow for the collection of samples during the June and December 2018 sampling events.

Groundwater samples were collected in laboratory supplied containers, 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) in 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 groundwater sampling events were analyzed for BTEX utilizing Environmental Protection Agency (EPA) method SW-846 #8021/8260. The containers were pre-preserved with mercuric chloride ($HgCl_2$).

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	8	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 east and north. The observed gradient during the two (2) monitoring events averaged approximately 0.01 feet per foot (ft/ft) across the Site.

Groundwater measurements collected during June 2018 and January 2019 (as well as historical data) are presented with TOC elevations in **Table 2** (**Appendix B**). Groundwater gradient maps for the June 2018 and January 2019 gradient maps are included as **Figure 4A** and **Figure 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 2018 sampling events to the New Mexico WQCC *GQSs*. 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 are currently being enforced.

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 wells MW-3 through MW-5 were dry or did not produce a sufficient volume of water to allow for the collection of samples during the June and December sampling event.

June 2018 Sampling Event:

The groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited benzene concentrations ranging from 590 micrograms per liter (µg/L) (MW-11) to 1,700 µg/L (MW-2), which are above the WQCC *GQS* of 10 µg/L. The groundwater samples collected from monitoring wells SVE-1R, SVE-3, and MW-13 exhibited benzene concentrations ranging from 3.7 µg/L (SVE-3) to 8.5 µg/L (MW-13), which are below the WQCC GQS of 10 µg/L. The groundwater samples collected from monitoring wells MW-1 and MW-12 did not exhibit benzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 10 µg/L.

The groundwater samples collected from monitoring wells MW-11 and MW-13 exhibited toluene concentrations of 320 µg/L and 7.5 µg/L, respectively, which are below the WQCC *GQS* of 750 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 750 µg/L.

The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, MW-2, MW-11, and

MW-13 exhibited ethylbenzene concentrations ranging from 5.9 µg/L (MW-13) to 350 µg/L (MW-11), which are below the WQCC *GQS* of 750 µg/L. The groundwater samples collected from monitoring wells MW-1 and MW-12 did not exhibit ethylbenzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 750 µg/L.

The groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited total xylenes concentrations ranging from 2,100 µg/L (SVE-2) to 3,400 µg/L (MW-11), which are above the WQCC *GQS* of 620 µg/L. The groundwater samples collected from monitoring wells SVE-1R, SVE-3, and MW-13 exhibited total xylenes concentrations ranging from 8.8 µg/L (SVE-1R) to 36 µg/L (MW-13), which are below the WQCC *GQS* of 620 µg/L. The groundwater samples collected from monitoring wells MW-1 and MW-12 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 Sampling Event:

The groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited benzene concentrations ranging from 590 µg/L (MW-11) to 2,100 µg/L (MW-2), which are above the WQCC *GQS* of 10 µg/L. The groundwater samples collected from monitoring wells SVE-1R and SVE-3 exhibited benzene concentrations of 5.6 µg/L and 9.3 µg/L, respectively, which are below the WQCC GQS of 10 µg/L. The groundwater samples collected from monitoring wells MW-1, MW-12, and MW-13 did not exhibit benzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 10 µg/L.

The groundwater samples collected from monitoring wells SVE-1R and SVE-3 exhibited toluene concentrations of 1.9 µg/L and 5.6 µg/L, respectively, which are below the WQCC *GQS* of 750 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 750 µg/L.

The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, MW-2, and MW-11 exhibited ethylbenzene concentrations ranging from 12 µg/L (SVE-1R) to 280 µg/L (MW-11), which are below the WQCC *GQS* of 750 µg/L. The groundwater samples collected from monitoring wells MW-1, MW-12, and MW-13 did not exhibit ethylbenzene concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 750 µg/L.

The groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited total xylenes concentrations ranging from 1,400 µg/L (SVE-2) to 3,000 µg/L (MW-11), which are above the WQCC *GQS* of 620 µg/L. The groundwater samples collected from monitoring wells SVE-1R and SVE-3 exhibited total xylenes concentrations of 38 µg/L and 150 µg/L, respectively, which are below the WQCC *GQS* of 620 µg/L. The groundwater samples collected from monitoring wells MW-1, MW-12, and MW-13 did not exhibit total xylenes concentrations above the laboratory PQLs, which are below the WQCC *GQS* of 620 µg/L. Due to failure of the water level indicator during the December 2018 groundwater sampling the site was gauged in January 2019.

Data Qualifier Flags

Sample ID	Data Qualifier Flag	Comments/Reactions
SVE-3 (collected 12/18/2018)	SW-846 Method 8021 BTEX Surrogate Recovery was outside the accepted recover limits.	The BTEX data is suitable for use as an estimated value. The surrogate recovery was outside the accepted “high” limit of 120% with a recovery of 185% due to matrix interference.

3.0 FINDINGS AND RECOMMENDATION

Semi-annual groundwater monitoring events were conducted at the Lateral K-12 Y#3 Condensate Tank Release (3/19/12) 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 east and north-northeast, with an approximate gradient of 0.01 ft/ft across the Site.

- During the June 2018 sampling event, the groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited BTEX constituent concentrations above the applicable WQCC *GQSs.* The groundwater samples collected from monitoring wells SVE-1R, SVE-3, MW-1 MW-12, and MW-13 did not exhibit BTEX constituent concentrations above the applicable WQCC *GQSs*.

- During the December 2018 sampling event, the groundwater samples collected from monitoring wells SVE-2, MW-2, and MW-11 exhibited BTEX constituent concentrations above the applicable WQCC *GQSs.* The groundwater samples collected from monitoring wells SVE-1R, SVE-3, MW-1 MW-12, and MW-13 did not exhibit BTEX constituent concentrations above the applicable WQCC *GQSs*.

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;

- Further delineate the dissolved-phase groundwater plume; and,

- Evaluate in situ remediation options for source area soils.

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.

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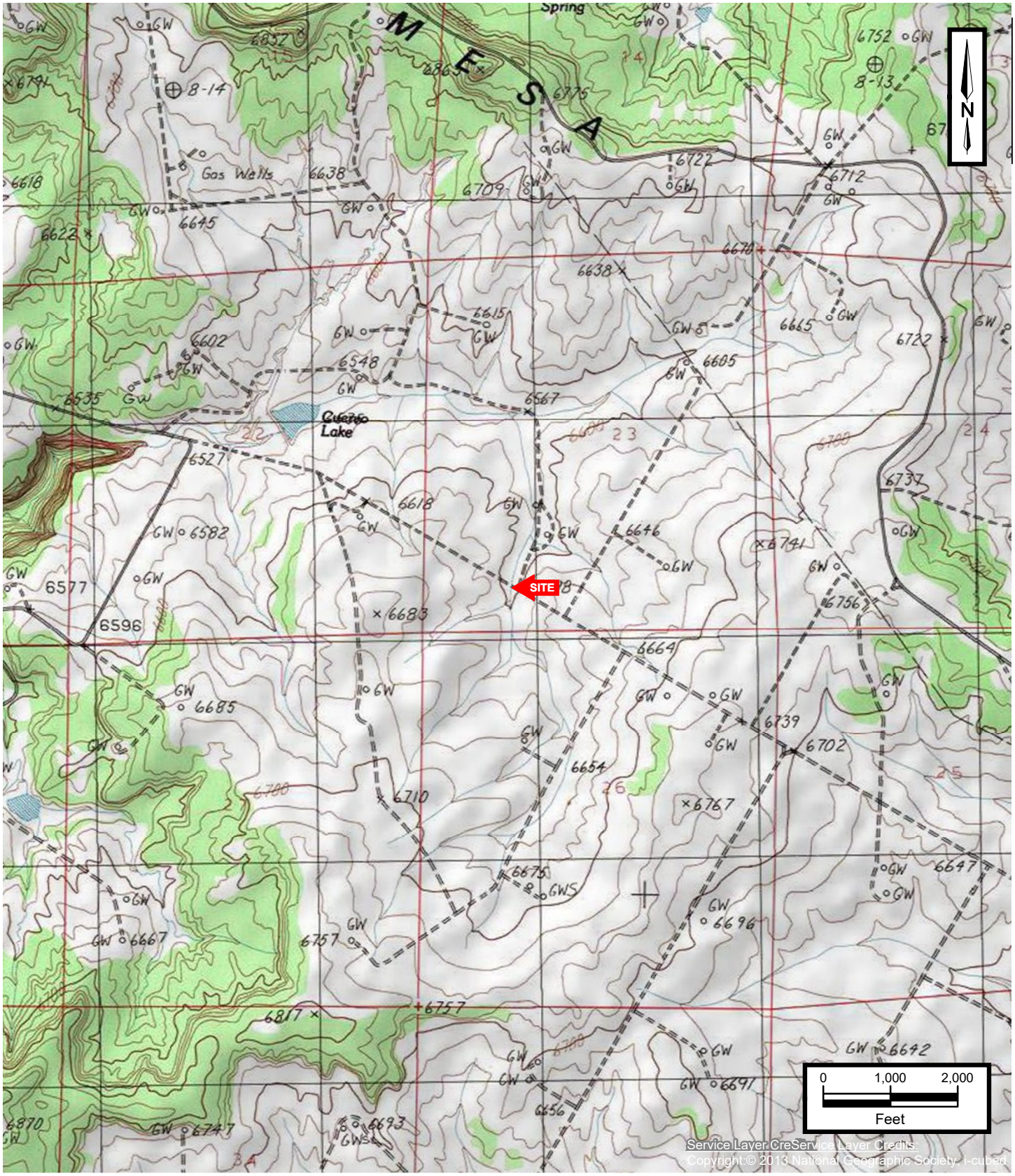
4.3 Reliance

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 Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

ENSOLUM

APPENDIX A

Figures



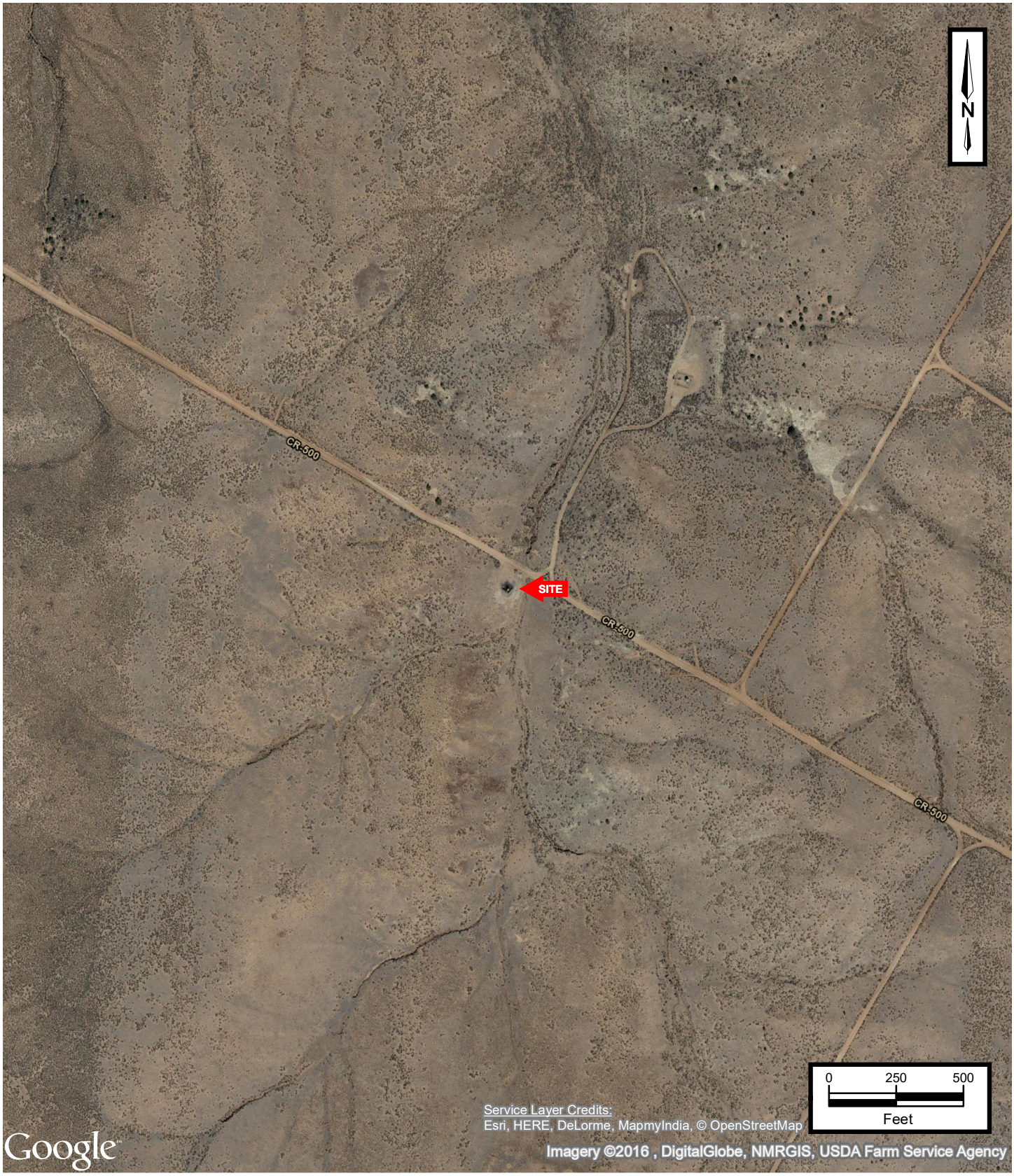
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
1



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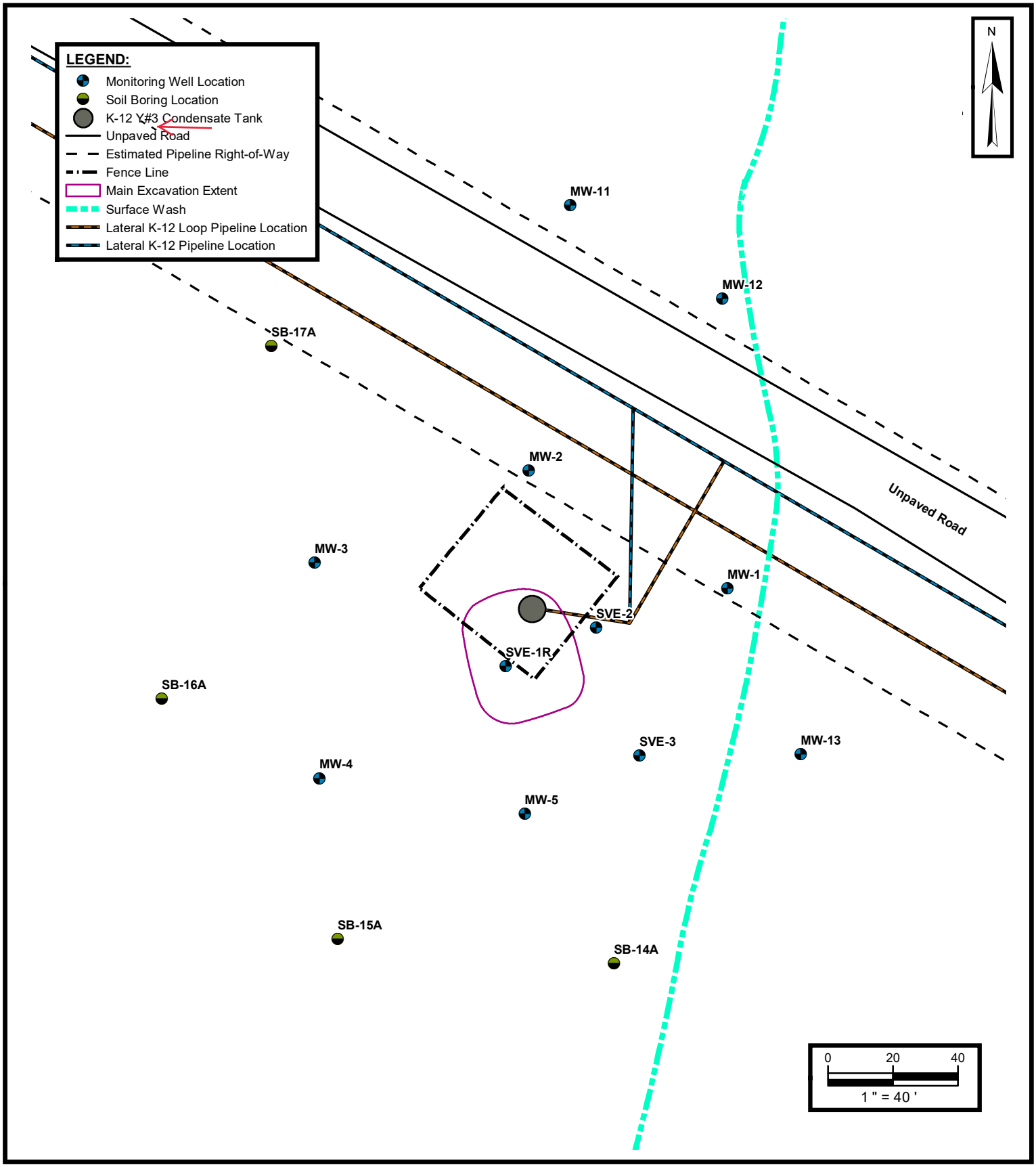
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
2



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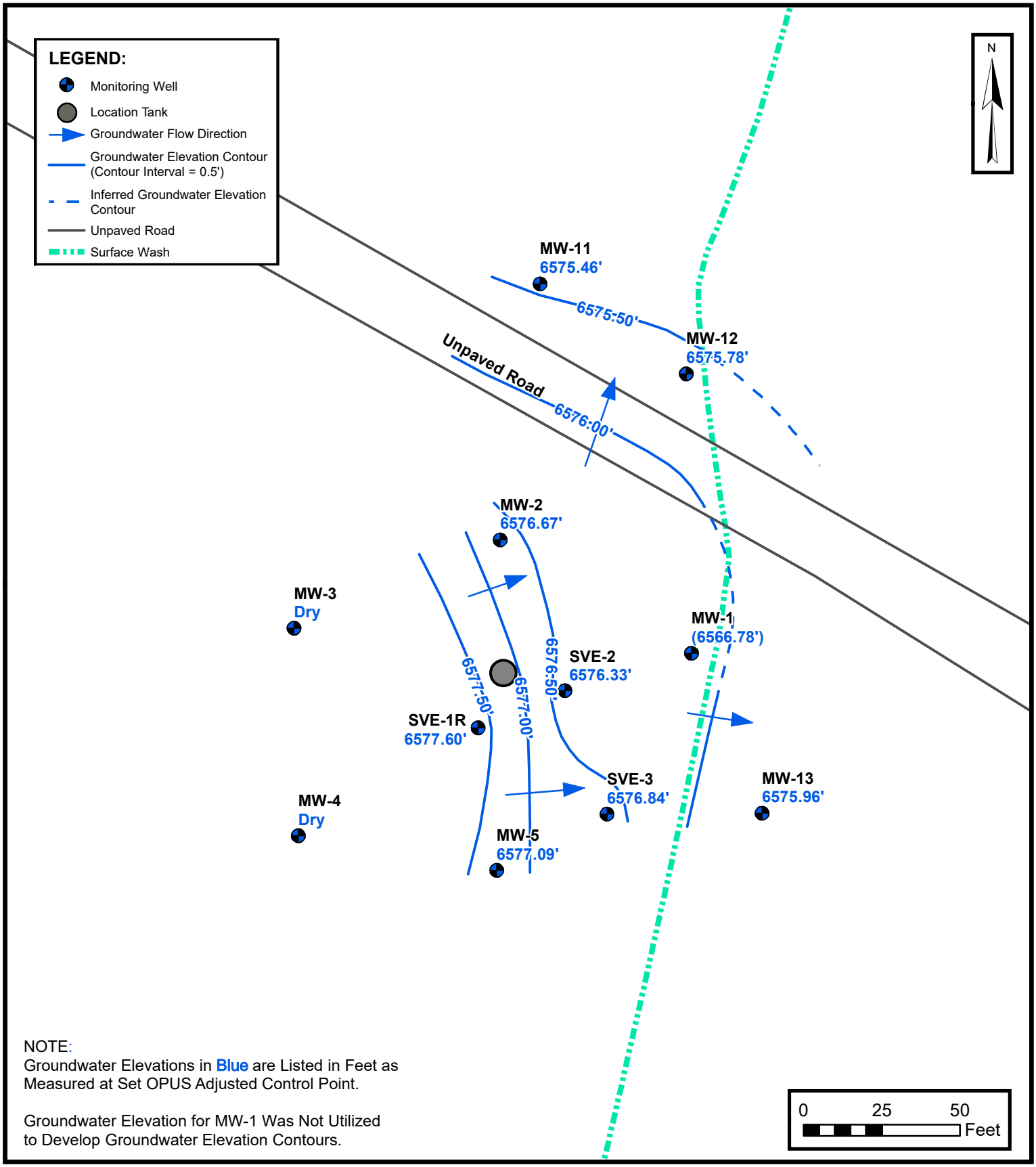
Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
3



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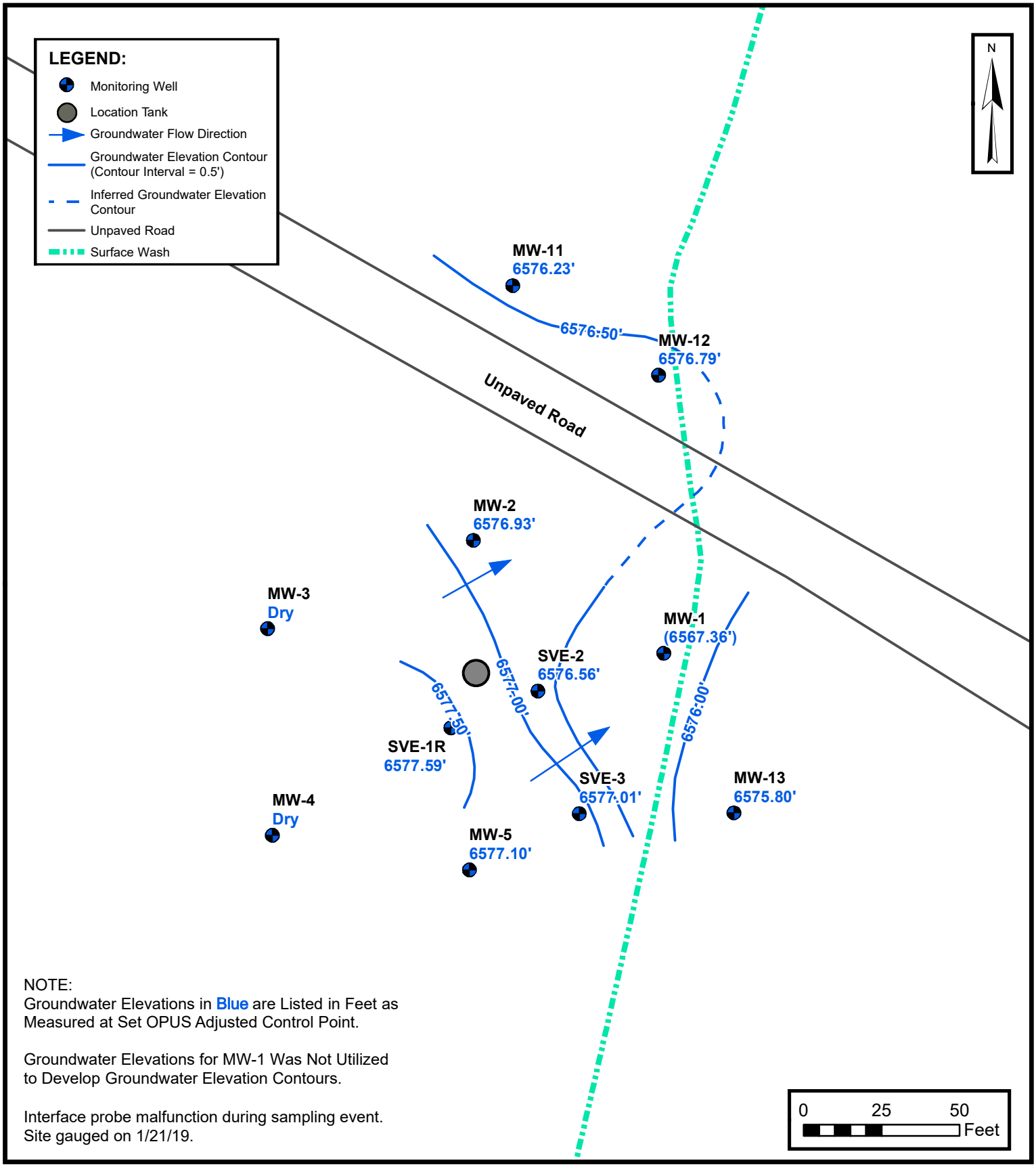
Environmental & Hydrogeologic Consultants

Groundwater Gradient Map
June 2018

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
4a



NOTE:
Groundwater Elevations in Blue are Listed in Feet as Measured at Set OPUS Adjusted Control Point.

Groundwater Elevations for MW-1 Was Not Utilized to Develop Groundwater Elevation Contours.

Interface probe malfunction during sampling event. Site gauged on 1/21/19.

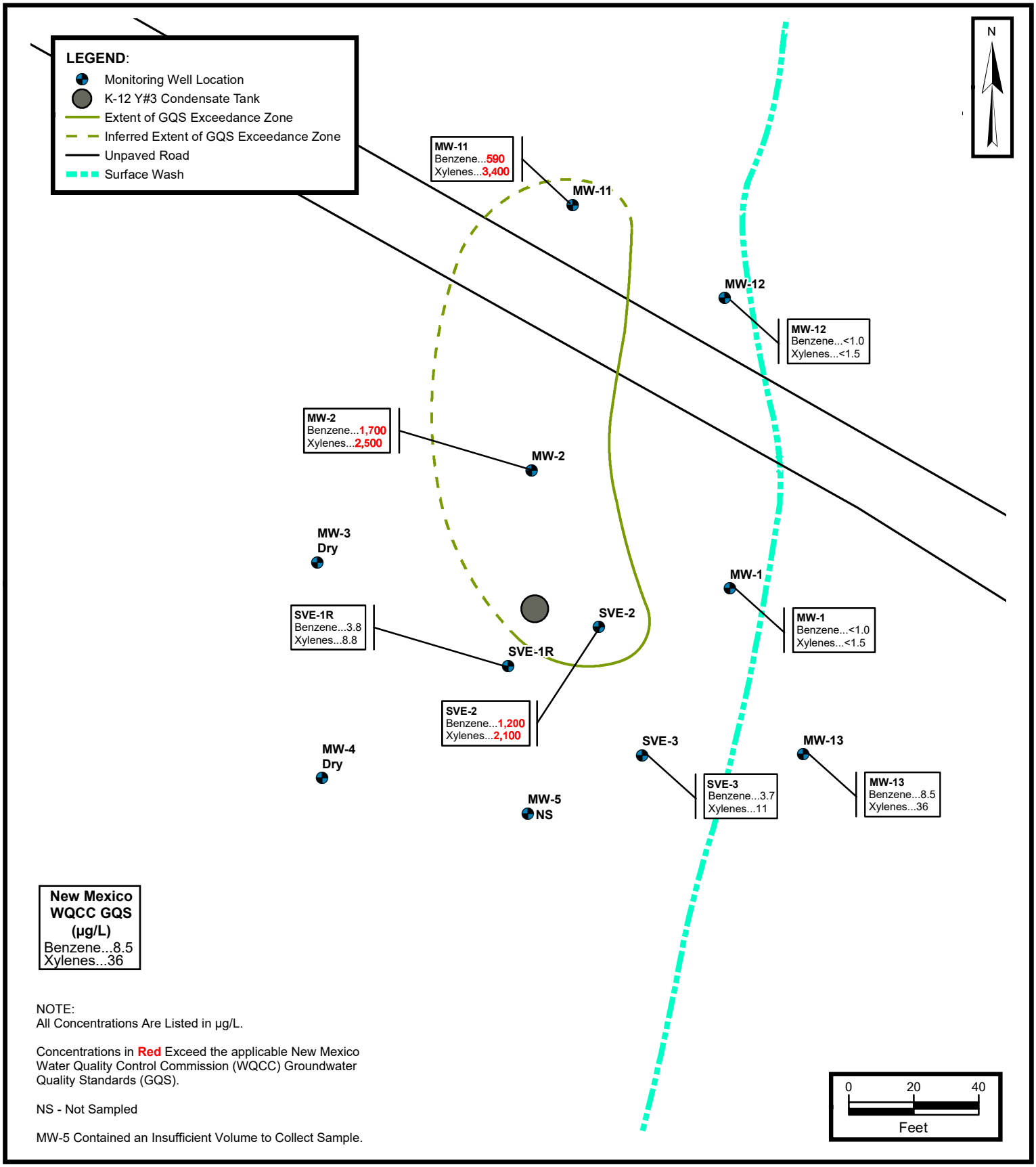
ENSOLUM
Environmental & Hydrogeologic Consultants

Groundwater Gradient Map
January 2019

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
4b



NOTE:
All Concentrations Are Listed in µg/L.

Concentrations in **Red** Exceed the applicable New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQS).

NS - Not Sampled

MW-5 Contained an Insufficient Volume to Collect Sample.

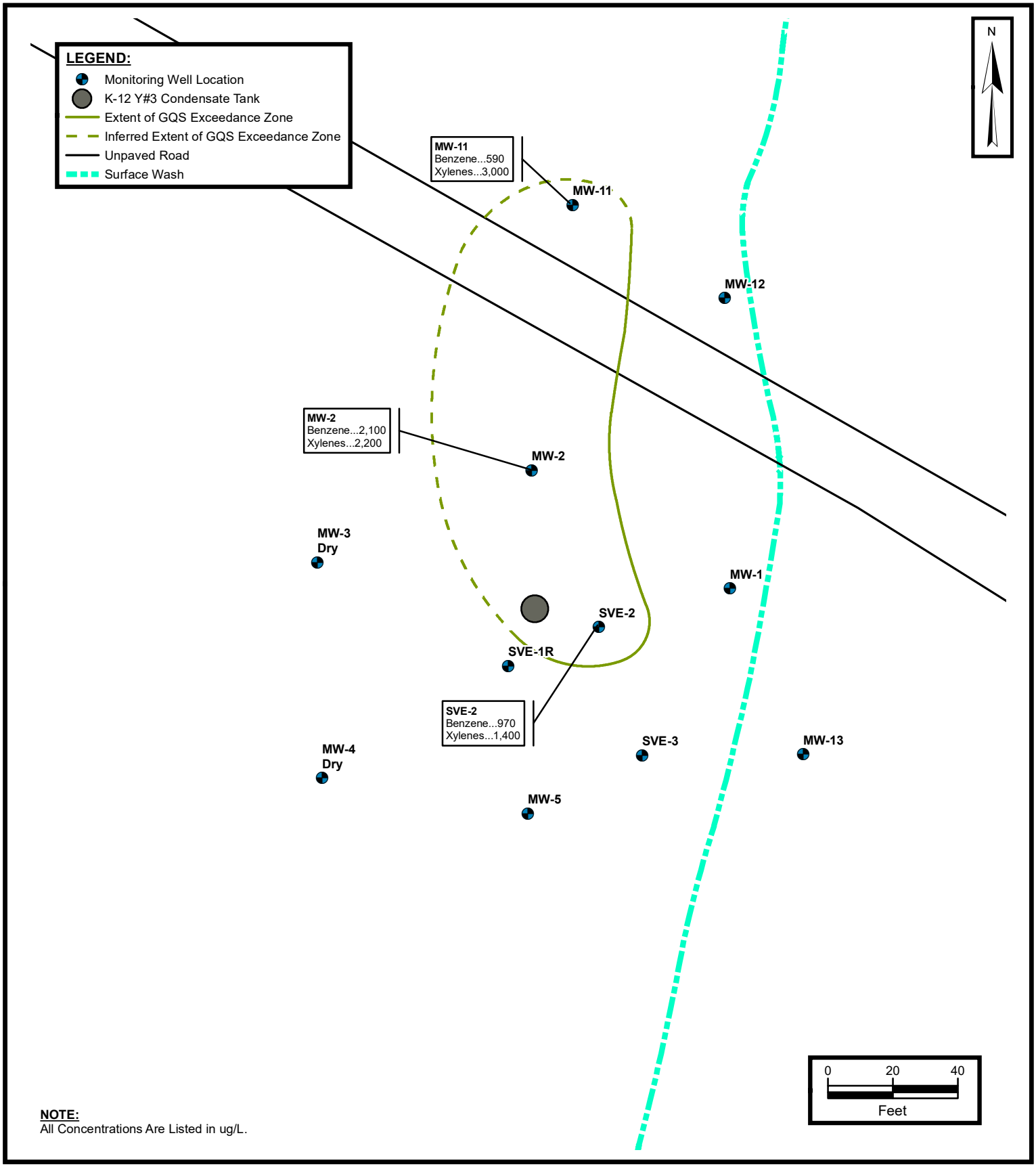
ENSOLUM
Environmental & Hydrogeologic Consultants

Groundwater Quality Standard (GQS) Exceedance Zone Map
June 2018

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
5a



ENSOLUM
Environmental & Hydrogeologic Consultants

Groundwater Quality Standard (GQS) Exceedance Zone Map
December 2018

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
5b

ENSOLUM

APPENDIX B

Tables

ENSOLUM

TABLE 1
Lateral K-12 Y#3 Condensate Tank Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620	NE	NE	NE
MW-2	2.12.14	**2,300**	**1,500**	350	**3,600**	NA	NA	NA
	11.13.14	**1,600**	520	220	**2,500**	NA	NA	NA
	5.27.15	**2,600**	530	370	**3,600**	NA	NA	NA
	12.2.15	**980**	<50	240	**2,600**	NA	NA	NA
	6.14.16	**1,800**	<50	380	**4,500**	NA	NA	NA
	12.12.16	**2,800**	<50	390	**4,700**	26	7.1	<5.0
	7.06.17	**2,100**	<50	410	**4,800**	NA	NA	NA
	12.13.17	**1,300**	<50	160	**1,800**	NA	NA	NA
	6.28.18	**1,700**	<50	240	**2,500**	NA	NA	NA
	12.18.18*	**2,100**	<50	210	**2,200**	NA	NA	NA
MW-3	2.12.14	Not Sampled - Well Dry						
	11.13.14							
	5.26.15							
	12.2.15							
	6.14.16							
	12.12.16							
	7.06.17							
	12.12.17							
	6.28.18							
	12.18.18*							
	8.29.19							
MW-4	2.12.14	Not Sampled - Well Dry						
	11.13.14							
	5.26.15							
	12.2.15							
	6.14.16							
	12.12.16							
	7.06.17							
	12.12.17							
	6.28.18							
	12.18.18*							
MW-5	2.12.14	**1,100**	**2,900**	220	**1,900**	NA	NA	NA
	11.13.14	Not Sampled - Insufficient volume to collect sample						
	5.26.15							
	12.2.15							
	6.14.16							
	12.12.16							
	7.06.17							
	12.13.17							
	6.28.18							
	12.18.18*							

ENSOLUM

TABLE 1
Lateral K-12 Y#3 Condensate Tank Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620	NE	NE	NE
Monitoring Wells Installed by APEX								
MW-11	9.22.16	**320**	240	300	**3,700**	NA	NA	NA
	12.12.16	**430**	140	450	**5,000**	23	1.4	<5.0
	7.06.17	**390**	110	390	**4,200**	NA	NA	NA
	12.12.17	**520**	170	310	**3,100**	NA	NA	NA
	6.28.18	**590**	320	350	**3,400**	NA	NA	NA
	12.18.18*	**590**	<50	280	**3,000**	NA	NA	NA
MW-12	9.22.16	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.12.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	7.06.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.12.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.28.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.18.18*	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
MW-13	9.22.16	**150**	**1,600**	270	**2,400**	NA	NA	NA
	01.06.17	**120**	660	53	**880**	NA	NA	NA
	7.06.17	**55**	290	46	470	NA	NA	NA
	12.12.17	**58**	110	19	150	NA	NA	NA
	6.28.18	8.5	7.5	5.9	36	NA	NA	NA
	12.18.18*	<1.0	<1.0	<1.0	<2.0	NA	NA	NA

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

* Interface probe malfunction during sampling event. Site gauged on 1/21/19

µg/L = microgram per liter

mg/L = milligram per liter

NA = Not Analyzed

NE = Not Established

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

<1.0= the numeral (in this case "1.0") identifies the laboratory reporting or practical quantitation limit

ENSOLUM

TABLE 2
Lateral K-12 Y#3 Condensate Tank 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)
SVE-1	10.08.13	ND	27.46	ND	NA	NA
SVE-1R*	02.12.14	ND	29.06	ND	6606.09	6577.03
	11.13.14	ND	30.05	ND		6576.04
	5.26.15	ND	29.27	ND		6576.82
	12.02.15	ND	28.06	ND		6578.03
	6.14.16	ND	28.05	ND		6578.04
	9.22.16	ND	28.10	ND	6606.40	6578.30
	12.12.16	ND	28.15	ND		6578.25
	7.06.17	ND	28.24	ND		6578.16
	12.12.17	ND	28.35	ND		6578.05
	6.28.18	ND	28.80	ND		6577.60
	1.21.19**	ND	28.81	ND		6577.59
SVE-2*	10.08.13	ND	28.00	ND	6605.82	6577.82
	02.12.14	ND	29.39	ND		6576.43
	11.13.14	ND	29.42	ND		6576.40
	5.26.15	ND	29.86	ND		6575.96
	12.02.15	ND	28.74	ND		6577.08
	6.14.16	ND	28.58	ND		6577.24
	9.22.16	ND	28.77	ND	6606.38	6577.61
	12.12.16	ND	28.74	ND		6577.64
	7.06.17	ND	29.26	ND		6577.12
	12.12.17	ND	29.50	ND		6576.88
	6.28.18	ND	30.05	ND		6576.33
	1.21.19**	ND	29.82	ND		6576.56
SVE-3*	10.08.13	ND	31.85	ND	6607.46	6575.61
	02.12.14	ND	29.98	ND		6577.48
	11.13.14	ND	29.54	ND		6577.92
	5.26.15	ND	30.93	ND		6576.53
	12.02.15	ND	30.49	ND		6576.97
	6.14.16	ND	30.37	ND		6577.09
	9.22.16	ND	30.50	ND	6607.92	6577.42
	12.12.16	ND	30.28	ND		6577.64
	7.06.17	ND	31.77	ND		6576.15
	12.12.17	ND	30.79	ND		6577.13
	6.28.18	ND	31.08	ND		6576.84
	1.21.19**	ND	30.91	ND		6577.01
MW-1*	02.12.14	ND	40.95	ND	6606.53	6565.58
	11.13.14	ND	38.45	ND		6568.08
	5.26.15	ND	38.78	ND		6567.75
	12.02.15	ND	39.53	ND		6567.00
	6.14.16	ND	39.97	ND		6566.56
	9.22.16	ND	39.91	ND	6607.05	6567.14
	12.12.16	ND	39.58	ND		6567.47
	7.06.17	ND	40.28	ND		6566.77
	12.12.17	ND	40.21	ND		6566.84
	6.28.18	ND	40.27	ND		6566.78
	1.21.19**	ND	39.69	ND		6567.36

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TABLE 2
Lateral K-12 Y#3 Condensate Tank 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-2*	02.12.14	ND	28.79	ND	6605.80	6577.01
	11.13.14	ND	29.27	ND		6576.53
	5.26.15	ND	29.45	ND		6576.35
	12.02.15	ND	28.28	ND		6577.52
	6.14.16	ND	28.37	ND		6577.43
	9.22.16	ND	28.62	ND	6606.28	6577.66
	12.12.16	ND	28.70	ND		6577.58
	7.06.17	ND	29.00	ND		6577.28
	12.12.17	ND	29.22	ND		6577.06
	6.28.18	ND	29.61	ND		6576.67
	1.21.19**	ND	29.35	ND		6576.93
MW-3*	02.12.14	ND	DRY	ND	6607.53	DRY
	11.13.14	ND	DRY	ND		DRY
	5.26.15	ND	DRY	ND		DRY
	12.02.15	ND	DRY	ND		DRY
	6.14.16	ND	DRY	ND		DRY
	9.22.16	ND	DRY	ND	6608.04	DRY
	12.12.16	ND	DRY	ND		DRY
	7.06.17	ND	DRY	ND		DRY
	12.12.17	ND	DRY	ND		DRY
	6.28.18	ND	DRY	ND		DRY
	1.21.19**	ND	DRY	ND		DRY
MW-4*	02.12.14	ND	DRY	ND	6609.20	DRY
	11.13.14	ND	DRY	ND		DRY
	5.26.15	ND	DRY	ND		DRY
	12.02.15	ND	DRY	ND		DRY
	6.14.16	ND	DRY	ND		DRY
	9.22.16	ND	DRY	ND	6609.66	DRY
	12.12.16	ND	DRY	ND		DRY
	7.06.17	ND	DRY	ND		DRY
	12.12.17	ND	DRY	ND		DRY
	6.28.18	ND	DRY	ND		DRY
	1.21.19**	ND	DRY	ND		DRY
MW-5*	02.12.14	ND	29.87	ND	6607.11	6577.24
	11.13.14	ND	30.04	ND		6577.07
	5.26.15	ND	DRY	ND		DRY
	12.02.15	ND	DRY	ND		DRY
	6.14.16	ND	DRY	ND		DRY
	9.22.16	ND	30.04	ND	6607.59	6577.55
	12.12.16	ND	30.50	ND		6577.09
	7.06.17	ND	30.05	ND		6577.54
	12.12.17	ND	30.06	ND		6577.53
	6.28.18	ND	30.50	ND		6577.09
	1.21.19**	ND	30.49	ND		6577.10

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TABLE 2
Lateral K-12 Y#3 Condensate Tank 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-11	9.22.16	ND	27.71	ND	6604.64	6576.93
	12.12.16	ND	27.65	ND		6576.99
	7.06.17	ND	28.25	ND		6576.39
	12.12.17	ND	28.75	ND		6575.89
	6.28.18	ND	29.18	ND		6575.46
	1.21.19**	ND	28.41	ND		6576.23
MW-12	9.22.16	ND	27.71	ND	6605.01	6577.30
	12.12.16	ND	27.60	ND		6577.41
	7.06.17	ND	28.32	ND		6576.69
	12.12.17	ND	28.82	ND		6576.19
	6.28.18	ND	29.23	ND		6575.78
	1.21.19**	ND	28.22	ND		6576.79
MW-13	9.22.16	ND	33.60	ND	6607.61	6574.01
	12.12.16	ND	35.10	ND		6572.51
	7.06.17	ND	31.47	ND		6576.14
	12.12.17	ND	31.42	ND		6576.19
	6.28.18	ND	31.65	ND		6575.96
	1.21.19**	ND	31.81	ND		6575.80

*Monitoring well resurveyed on 9/27/16.

** Interface probe malfunction during sampling event. Site gauged on 1/21/19

BTOC - below top of casing

AMSL - above mean sea level

TOC - top of casing

ND - Not detected

NA - Not applicable

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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

July 05, 2018

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

RE: K 12 Y 3 OrderNo.: 1806I52

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/30/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1806I52**
Date Reported: **7/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1806I52
Project: K 12 Y 3

Lab ID: 1806I52-001 **Collection Date:** 6/28/2018 10:00:00 AM
Client Sample ID: MW-12 **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	7/3/2018 2:17:24 AM	D52411
Toluene	ND	1.0		µg/L	1	7/3/2018 2:17:24 AM	D52411
Ethylbenzene	ND	1.0		µg/L	1	7/3/2018 2:17:24 AM	D52411
Xylenes, Total	ND	1.5		µg/L	1	7/3/2018 2:17:24 AM	D52411
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	7/3/2018 2:17:24 AM	D52411
Surr: Toluene-d8	99.1	70-130		%Rec	1	7/3/2018 2:17:24 AM	D52411

Lab ID: 1806I52-002 **Collection Date:** 6/28/2018 11:00:00 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	ND	1.0		µg/L	1	7/3/2018 2:40:33 AM	D52411
Toluene	ND	1.0		µg/L	1	7/3/2018 2:40:33 AM	D52411
Ethylbenzene	ND	1.0		µg/L	1	7/3/2018 2:40:33 AM	D52411
Xylenes, Total	ND	1.5		µg/L	1	7/3/2018 2:40:33 AM	D52411
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	7/3/2018 2:40:33 AM	D52411
Surr: Toluene-d8	102	70-130		%Rec	1	7/3/2018 2:40:33 AM	D52411

Lab ID: 1806I52-003 **Collection Date:** 6/28/2018 11:50:00 AM
Client Sample ID: SVE-3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	3.7	2.5		µg/L	5	7/3/2018 3:03:45 AM	D52411
Toluene	ND	5.0		µg/L	5	7/3/2018 3:03:45 AM	D52411
Ethylbenzene	60	5.0		µg/L	5	7/3/2018 3:03:45 AM	D52411
Xylenes, Total	11	7.5		µg/L	5	7/3/2018 3:03:45 AM	D52411
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	5	7/3/2018 3:03:45 AM	D52411
Surr: Toluene-d8	104	70-130		%Rec	5	7/3/2018 3:03:45 AM	D52411

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: **1806I52**
Date Reported: **7/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1806I52
Project: K 12 Y 3

Lab ID: 1806I52-004 **Collection Date:** 6/28/2018 12:45:00 PM
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	8.5	5.0		µg/L	5	7/3/2018 3:26:47 AM	D52411
Toluene	7.5	5.0		µg/L	5	7/3/2018 3:26:47 AM	D52411
Ethylbenzene	5.9	5.0		µg/L	5	7/3/2018 3:26:47 AM	D52411
Xylenes, Total	36	7.5		µg/L	5	7/3/2018 3:26:47 AM	D52411
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	5	7/3/2018 3:26:47 AM	D52411
Surr: Toluene-d8	102	70-130		%Rec	5	7/3/2018 3:26:47 AM	D52411

Lab ID: 1806I52-005 **Collection Date:** 6/28/2018 1:30:00 PM
Client Sample ID: SVE-1R **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	3.8	2.5		µg/L	5	7/3/2018 3:49:49 AM	D52411
Toluene	ND	5.0		µg/L	5	7/3/2018 3:49:49 AM	D52411
Ethylbenzene	12	5.0		µg/L	5	7/3/2018 3:49:49 AM	D52411
Xylenes, Total	8.8	7.5		µg/L	5	7/3/2018 3:49:49 AM	D52411
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	5	7/3/2018 3:49:49 AM	D52411
Surr: Toluene-d8	104	70-130		%Rec	5	7/3/2018 3:49:49 AM	D52411

Lab ID: 1806I52-006 **Collection Date:** 6/28/2018 2:15:00 PM
Client Sample ID: SVE-2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	1200	50		µg/L	50	7/3/2018 4:13:01 AM	D52411
Toluene	ND	50		µg/L	50	7/3/2018 4:13:01 AM	D52411
Ethylbenzene	250	50		µg/L	50	7/3/2018 4:13:01 AM	D52411
Xylenes, Total	2100	75		µg/L	50	7/3/2018 4:13:01 AM	D52411
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	50	7/3/2018 4:13:01 AM	D52411
Surr: Toluene-d8	104	70-130		%Rec	50	7/3/2018 4:13:01 AM	D52411

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: **1806I52**
Date Reported: **7/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Lab Order:** 1806I52
Project: K 12 Y 3

Lab ID: 1806I52-007 **Collection Date:** 6/28/2018 3:05:00 PM
Client Sample ID: MW-2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	1700	50		µg/L	50	7/3/2018 4:36:07 AM	D52411
Toluene	ND	50		µg/L	50	7/3/2018 4:36:07 AM	D52411
Ethylbenzene	240	50		µg/L	50	7/3/2018 4:36:07 AM	D52411
Xylenes, Total	2500	75		µg/L	50	7/3/2018 4:36:07 AM	D52411
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	50	7/3/2018 4:36:07 AM	D52411
Surr: Toluene-d8	101	70-130		%Rec	50	7/3/2018 4:36:07 AM	D52411

Lab ID: 1806I52-008 **Collection Date:** 6/28/2018 3:55:00 PM
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	590	50		µg/L	50	7/3/2018 4:59:09 AM	D52411
Toluene	320	50		µg/L	50	7/3/2018 4:59:09 AM	D52411
Ethylbenzene	350	50		µg/L	50	7/3/2018 4:59:09 AM	D52411
Xylenes, Total	3400	75		µg/L	50	7/3/2018 4:59:09 AM	D52411
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	50	7/3/2018 4:59:09 AM	D52411
Surr: Toluene-d8	100	70-130		%Rec	50	7/3/2018 4:59:09 AM	D52411

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#: **1806I52**

05-Jul-18

Client: APEX TITAN

Project: K 12 Y 3

Sample ID	**100ng btex lcs2**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**D52411**	RunNo:	**52411**					
Prep Date:		Analysis Date:	**7/2/2018**	SeqNo:	**1719585**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.7	80	120			
Toluene	20	1.0	20.00	0	99.9	80	120			
Ethylbenzene	20	1.0	20.00	0	100	80	120			
Xylenes, Total	59	1.5	60.00	0	98.8	80	120			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID	**rb2**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**D52411**	RunNo:	**52411**					
Prep Date:		Analysis Date:	**7/2/2018**	SeqNo:	**1719610**	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		112	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID	**100ng btex lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**D52450**	RunNo:	**52450**					
Prep Date:		Analysis Date:	**7/3/2018**	SeqNo:	**1720496**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**D52450**	RunNo:	**52450**					
Prep Date:		Analysis Date:	**7/3/2018**	SeqNo:	**1720510**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	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: 1806I52 RcptNo: 1

Received By: **Erin Melendrez** 6/30/2018 10:15:00 AM

Completed By: **Erin Melendrez** 6/30/2018 12:54:22 PM

Reviewed By: ENM 7/2/18

LB: 07/02/18

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: 07/02/18

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	3.9	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 #: 725040112191

Lab use only
Due Date:

Temp. of coolers when received (C°): 3.9

1	2	3	4	5

Page 1 of 1

Sampler's Name: Ranee Deechilly

Sampler's Signature:

Proj. No.: 725040112191

Project Name: K-124 #3

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	6/28/18	1000			MW-12			3					1806I52-001
W	6/28/18	1100			MW-1			3					-002
W	6/28/18	1150			SVE-3			3					-003
W	6/28/18	1245			MW-13			3					-004
W	6/28/18	1330			SVE-1R			3					-005
W	6/28/18	1415			SVE-2			3					-006
W	6/28/18	1505			MW-2			3					-007
W	6/28/18	1555			MW-11			3					-008
													~~0~~
													ENM 6/13/18

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6/29/18	1740		6/29/18	1740
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6/29/18	1852		6/30/18	1015
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

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

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

December 27, 2018

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

RE: K 12 Y 3 OrderNo.: 1812C65

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/20/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-12
Project: K 12 Y 3
Collection Date: 12/18/2018 10:40:00 AM
Lab ID: 1812C65-001
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/21/2018 8:08:07 PM	D56527
Toluene	ND	1.0		µg/L	1	12/21/2018 8:08:07 PM	D56527
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 8:08:07 PM	D56527
Xylenes, Total	ND	2.0		µg/L	1	12/21/2018 8:08:07 PM	D56527
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	12/21/2018 8:08:07 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: K 12 Y 3
Collection Date: 12/18/2018 11:20:00 AM
Lab ID: 1812C65-002
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/21/2018 8:30:57 PM	D56527
Toluene	ND	1.0		µg/L	1	12/21/2018 8:30:57 PM	D56527
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 8:30:57 PM	D56527
Xylenes, Total	ND	2.0		µg/L	1	12/21/2018 8:30:57 PM	D56527
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	12/21/2018 8:30:57 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: SVE-3
Project: K 12 Y 3
Collection Date: 12/18/2018 12:00:00 PM
Lab ID: 1812C65-003
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	9.3	1.0		µg/L	1	12/21/2018 8:53:44 PM	D56527
Toluene	5.6	1.0		µg/L	1	12/21/2018 8:53:44 PM	D56527
Ethylbenzene	110	10		µg/L	10	12/26/2018 12:42:33 PM	D56527
Xylenes, Total	150	2.0		µg/L	1	12/21/2018 8:53:44 PM	D56527
Surr: 4-Bromofluorobenzene	185	80-120	S	%Rec	1	12/21/2018 8:53:44 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-13
Project: K 12 Y 3
Collection Date: 12/18/2018 12:40:00 PM
Lab ID: 1812C65-004
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/21/2018 9:39:11 PM	D56527
Toluene	ND	1.0		µg/L	1	12/21/2018 9:39:11 PM	D56527
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 9:39:11 PM	D56527
Xylenes, Total	ND	2.0		µg/L	1	12/21/2018 9:39:11 PM	D56527
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/21/2018 9:39:11 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: SVE-1R
Project: K 12 Y 3
Collection Date: 12/18/2018 1:00:00 PM
Lab ID: 1812C65-005
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	5.6	1.0		µg/L	1	12/21/2018 10:01:45 PM	D56527
Toluene	1.9	1.0		µg/L	1	12/21/2018 10:01:45 PM	D56527
Ethylbenzene	12	1.0		µg/L	1	12/21/2018 10:01:45 PM	D56527
Xylenes, Total	38	2.0		µg/L	1	12/21/2018 10:01:45 PM	D56527
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	1	12/21/2018 10:01:45 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: SVE-2
Project: K 12 Y 3
Collection Date: 12/18/2018 2:00:00 PM
Lab ID: 1812C65-006
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	970	50		µg/L	50	12/21/2018 10:24:24 PM	D56527
Toluene	ND	50		µg/L	50	12/21/2018 10:24:24 PM	D56527
Ethylbenzene	170	50		µg/L	50	12/21/2018 10:24:24 PM	D56527
Xylenes, Total	1400	100		µg/L	50	12/21/2018 10:24:24 PM	D56527
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	50	12/21/2018 10:24:24 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: K 12 Y 3
Collection Date: 12/18/2018 2:40:00 PM
Lab ID: 1812C65-007
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2100	50		µg/L	50	12/21/2018 10:47:12 PM	D56527
Toluene	ND	50		µg/L	50	12/21/2018 10:47:12 PM	D56527
Ethylbenzene	210	50		µg/L	50	12/21/2018 10:47:12 PM	D56527
Xylenes, Total	2200	100		µg/L	50	12/21/2018 10:47:12 PM	D56527
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	50	12/21/2018 10:47:12 PM	D56527

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 **1812C65**
Date Reported: **12/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-11
Project: K 12 Y 3
Collection Date: 12/18/2018 3:20:00 PM
Lab ID: 1812C65-008
Matrix: AQUEOUS
Received Date: 12/20/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	590	50		µg/L	50	12/22/2018 12:18:07 AM	D56527
Toluene	ND	50		µg/L	50	12/22/2018 12:18:07 AM	D56527
Ethylbenzene	280	50		µg/L	50	12/22/2018 12:18:07 AM	D56527
Xylenes, Total	3000	100		µg/L	50	12/22/2018 12:18:07 AM	D56527
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	50	12/22/2018 12:18:07 AM	D56527

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	Page 8 of 9
	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#: **1812C65**

27-Dec-18

Client: APEX TITAN

Project: K 12 Y 3

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **D56527**	RunNo: **56527**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1892690** 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	21		20.00		106	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **D56527**	RunNo: **56527**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1892691** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	85.7	80	120			
Toluene	17	1.0	20.00	0	87.5	80	120			
Ethylbenzene	18	1.0	20.00	0	89.7	80	120			
Xylenes, Total	55	2.0	60.00	0	92.2	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		111	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1812C65 RcptNo: 1

Received By: Anne Thorne 12/20/2018 8:00:00 AM Anne Thorne

Completed By: Anne Thorne 12/21/2018 9:38:00 AM Anne Thorne

Reviewed By: VV2 12/21/18

Labeled by: JAB 12/21/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 12/21/18
(<2 or >12 unless noted)
Adjusted? JAB
Checked by:

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 ☐

Special Handling (if applicable)

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

Person Notified: Kyle Summers Date: 12/21/18
By Whom: Jazzmine Burkhead Via: ☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: Sample 005 Fine reads 13:00 on COC and 13:20 on bottle
Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON VOA VIALS/at 12/21/18

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			
5	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A Aztec NM 87410

Project Manager K. Summers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87107

Contact: A Freeman

Phone: 505 345 3975

PO/SO #: 725040112191

Sampler's Name: CD Apont.

Sampler's Signature:

Proj. No. 725040112191

Project Name: K-12 4 #3

Nc/Type of Containers

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:

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

1.4	2.6	3.0	4.0	5.0

Page 1 of 1

#6 1.0C

6 coolers total

Matrix	Date	Time	Composite	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	12/18/18	1040			MW-12			3					12126500 1
W	12/18/18	1120			MW-1			3					002
W	12/18/18	1200			SVE-3			3					003
W	12/18/18	1240			MW-13			3					004
W	12/18/18	1300			SVE-1R			3					005
W	12/18/18	1400			SVE-2			3					006
W	12/18/18	1440			MW-2			3					007
W	12/18/18	1520			MW-11			3					008

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/19/18	1050	Matt Walt	12/19/18	1050
Matt Walt	12/19/18	1907		12/20/18	0800

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

Enterprise Products

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

ENTERPRISE PRODUCTS OPERATING LLC

June 16, 2021

Submitted online via OCD E-Permitting:
https://wwwapps.emnrd.state.nm.us/OCD/OCDPermitting/default.aspx

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

Review of 2019 Groundwater Monitoring Report: **Content satisfactory**

Follow recommendations stated within 2019 Groundwater Monitoring Report.

Submittal: ***2019 Groundwater Monitoring Report*** (Ensolum, November 16, 2020)
RE: Enterprise Field Services, LLC
Lateral K-12 Y#3 Condensate Tank Release (3/19/2012)
Unpaved Road, Rio Arriba Co., NM [S23, T27N R7W (36.554120° N, 107.549350° W)]
OCD RP: 3R-459; Stage 1 AP-132

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) dated November 16, 2020. The Subject document is associated with the Enterprise Lateral K-12 Y#3 condensate tank release (overfill) that was discovered on March 19, 2012 in Rio Arriba County, New Mexico (the "Site"). During excavation of the release, a former earthen pit was discovered, along with historical hydrocarbon impacts now comingled with the release. The activities detailed in the attached report include two (2) semi-annual groundwater monitoring and sampling (SA-GWM&S) events that occurred between July 1, 2019 and December 31, 2019 (the "reporting period").

Based on data contained in the attached document, the first apparent water-bearing unit at the Site (at least in the vicinity of the remediation excavation) appears very limited in thickness and volume and may be more accurately described as subsurface water (as defined in New Mexico Administrative Code 20.6.2.7 (UU)). Additionally, 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) in four (4) monitor wells, SVE-1R, SVE-2, MW-2, and MW-11. No phase-separated hydrocarbon (PSH) has been observed at the Site since the release occurred.

Based on the results presented in the attached document, Enterprise plans to: 1) continue SA-GWM&S activities in order to evaluate natural attenuation and the stability of COC concentrations in groundwater, 2) conduct additional site-specific aquifer characterization, 3) install additional delineation wells and 4) prepare a *Stage 2 Abatement Plan* (following full delineation).

Enterprise appreciates the Oil Conservation Division's (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: BLM, Farmington, NM – Ms. Katie White Bull <6251 College Blvd., Suite A, Farmington, NM 87402>
ec: NMOCD, Santa Fe, NM – Mr. Jim Griswold <Jim.Griswold@state.nm.us>
NMOCD, Santa Fe, NM – Mr. Brad Billings <Bradford.Billings@state.nm.us>
Ensolum, Houston, TX – Mr. Marc E. Gentry <MGentry@ensolum.com>

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

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

2019 GROUNDWATER MONITORING REPORT

Property:

Lateral K-12 Y#3 Condensate Tank Release (3/19/12)
SW ¼, S23 T27N R7W
Rio Arriba County, New Mexico

New Mexico EMNRD OCD RP No. 3R-459

November 16, 2020
Ensolum Project No. 05B1226001

Prepared for:

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

Prepared by:

Kallen M. Kauk, G.I.T.
Senior Project Geoscientist

Marc E. Gentry
Principal

ENSOLUM

2019 GROUNDWATER MONITORING REPORT
EXECUTIVE SUMMARY

The Lateral K-12 Condensate Tank Release (3/19/12) 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 23, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico.

On March 19, 2012, a natural gas condensate release, estimated at less than one (1) barrel (bbl), occurred as a result of overfilling the condensate tank. During the corrective action excavation of impacted soils (April 2012), a suspected historical earthen pit was discovered, and the excavation was expanded to remove historical hydrocarbon affected soils. Due to the increased area of disturbance and safety factors associated with the depth of the excavation, the excavation activities were suspended by the Bureau of Land Management (BLM). Groundwater was not identified in the 35-foot below ground surface (bgs) excavation. Subsequent site investigations by Animas Environmental Services, LLC (AES) included the advancement of nine (9) soil borings and the installation of three (3) soil vapor extraction (SVE) wells/monitoring wells to delineate the extent of hydrocarbon affected soil and/or groundwater and potentially provide subsurface access for "high-vacuum" remediation. Due to a change in the intended use, the SVE wells at this Site are now referred to as "monitoring wells". Samples collected from the soil borings and monitoring wells exhibited concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and total petroleum hydrocarbons (TPH) above New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) closure criteria in soils and above the New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQSs) in groundwater. Additionally, non-aqueous phase liquid (NAPL) was identified in monitoring well SVE-1. NAPL was removed from SVE-1 by bailing and did not recharge. Additional delineation activities were performed by AES during 2013 and 2014, and by Apex TITAN, Inc. (Apex) during 2016. Enterprise retained Apex to perform environmental Site investigation activities between 2016 and 2018. Following a staffing change at Apex in December 2018, Enterprise reassigned management of the project to Ensolum. Ensolum, LLC (Ensolum) continues the groundwater monitoring for constituents of concern (COCs) at the Site.

Groundwater monitoring events were conducted during August and December 2019 to further evaluate the concentrations of chemicals-of-concern (COCs) in groundwater over time and to monitor the generally declining COC concentrations at the Site. Herein, the 2019 Groundwater Monitoring Report documents and describes these groundwater monitoring events and presents the resulting data in written and tabulated format.

Findings and recommendations based on these activities are as follows:

- Based on available information, the first apparent water-bearing unit at the Site (at least in the vicinity of the remediation excavation) appears very limited in thickness and volume and may be more accurately described as subsurface water (as defined in New Mexico Administrative Code 20.6.2.7 (UU)). The water observed in the upgradient monitoring wells (SVE-1R, SVE-2, SVE-3 and MW-5) may be limited to a small volume of percolating water from precipitation events that periodically collect on or near the surface of the weathered subgrade bedrock and, depending on the significance of the precipitation events, subsequently drains into the monitoring wells and the associated well bore annuli. This speculation is supported by the lack of groundwater encountered during prior excavation activities (reaching approximately 35 feet bgs), which exceeded the measured apparent depth to groundwater at the Site of approximately 27 feet bgs near the source area. Furthermore, bail-down tests performed on monitoring wells SVE-2 and SVE-3 in 2013 demonstrated stagnant or near-stagnant water recharge over the course of several days.

- The groundwater flow direction at the Site is generally towards the east, with an approximate average gradient of 0.02 feet per foot (ft/ft) across the Site.

- During the August and December 2019 sampling events, the analytical results for monitoring wells SVE-1R, SVE-2, MW-2, and MW-11 indicate BTEX constituent concentrations above the applicable WQCC *GQSs.* The analytical results for monitoring wells SVE-3, MW-1, MW-12, and MW-13 did not indicate BTEX constituent concentrations above the applicable WQCC *GQSs*.

Ensolum offers the following recommendations:

- Report the groundwater monitoring results to the New Mexico EMNRD OCD.
- Continue semi-annual groundwater monitoring at the Site to monitor natural attenuation of COCs in groundwater.
- Upon approval by the New Mexico EMNRD OCD, further delineate the dissolved-phase groundwater plume, and evaluate in-situ remediation options for source area soils, as described in the Stage 1 Abatement Plan.
- After the Stage 1 Abatement Plan has been fully implemented, prepare a Stage 2 Abatement Plan.

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ENSOLUM

2019 GROUNDWATER MONITORING REPORT

New Mexico EMNRD OCD RP No. 3R-459

Ensolum Project No. 05B1226001

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral K-12 Condensate Tank Release (3/19/12) (Site)
Location:	36.554120° North, 107.549350° West Southwest (SW) ¼ of Sections 23, Township 27 North, Range 7 West Rio Arriba 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 March 19, 2012, a natural gas condensate release estimated at less than one (1) barrel (bbl) occurred as a result of overfilling the condensate tank. Animas Environmnetal Services, LLC (AES) conducted an initial release assessment and subsequently recommended the removal of affected soils (*Release Mitigation and Investigation Report, dated July 18, 2012 – AES*).

During corrective action excavation in April 2012, a suspected historical earthen pit was discovered, and the excavation was expanded to remove the historical petroleum hydrocarbon affected soils. Due to the increased area of disturbance and safety factors associated with the depth of the excavation, the excavation activities were suspended by the BLM, and confirmation soil samples (SC-1 through SC-9) were collected by AES. Groundwater was not identified in the 35-foot deep excavation. Subsequent to backfilling the excavation with clean fill, AES conducted a site investigation that included the advancement of seven (7) soil borings (SB-1 through SB-7). Three (3) of the soil borings (SB-1/SVE-1, SB-3/SVE-2, SB-4/SVE-3), were completed as soil-vapor-extraction (SVE) monitoring wells in anticipation of potential future remedial activities. Due to a change in the intended use, the SVE wells at this Site are now referred to as “monitoring wells”.

On July 19, 2013, AES conducted a monitoring event of the SVE wells which identified the presence of water in the three (3) SVE wells as well as the presence of non-aqueous phase liquid (NAPL) in monitoring well SVE-1 (1.07 feet thick). This NAPL was removed by bailing and did not recharge. AES also advanced two (2) soil borings (SB-8 and SB-9) adjacent to the former excavation, which demonstrated minimal natural attenuation of constituent of concern (COC) concentrations since the backfilling of the excavation. On July 22, 2013, AES collected water samples from monitoring wells SVE-2 and SVE-3 for laboratory analysis of total dissolved solids (TDS) and chlorides. Laboratory analytical results indicated that TDS concentrations were 1,160 milligrams per liter (mg/L) and 740 mg/L in SVE-2 and SVE-3, respectively, and chloride concentrations were 110 mg/L and 23 mg/L in SVE-2 and SVE-3, respectively (*Continued Site Investigation Report, dated October 4, 2013 – AES*).

Based on available information, the first apparent water-bearing unit at the Site (at least in the vicinity of the remediation excavation) appears very limited in thickness and volume and may be more accurately described as subsurface water (as defined in New Mexico Administrative Code 20.6.2.7 (UU)). The water observed in the upgradient monitoring wells (SVE-1R, SVE-2, SVE-3 and MW-5) may

be limited to a small volume of percolating water from precipitation events that periodically collect on or near the surface of the weathered subgrade bedrock and, depending on the significance of the precipitation events, subsequently drains into the monitoring wells and the associated well bore annuli. This speculation is supported by the lack of groundwater encountered during prior excavation activities (reaching approximately 35 feet bgs), which exceeded the measured apparent depth to groundwater at the Site of approximately 27 feet bgs near the source area. Furthermore, bail-down tests performed on monitoring wells SVE-2 and SVE-3 in 2013 demonstrated stagnant or near-stagnant water recharge over the course of several days.

A groundwater monitoring and sampling event was conducted by AES on October 8, 2013. NAPL was not observed in monitoring well SVE-1 during this monitoring and sampling event. However, presumably due to settling associated with the backfilled excavation, the screened portion of monitoring well SVE-1 was damaged, so the collection of a water sample was not possible. Water samples were collected from monitoring wells SVE-2 and SVE-3 for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) (*Groundwater Monitoring Report and Continued Site Investigation Workplan, dated November 15, 2013 – AES*).

During January 2014, AES advanced six (6) soil borings, five (5) of which were completed as groundwater monitoring wells MW-1 through MW-5, and one (1) of which was utilized to replace monitoring well SVE-1 with SVE-1R. Monitoring well SVE-1 was apparently plugged and abandoned at that time.

During August and September 2016, Apex TITAN, Inc., (Apex) conducted supplemental Site Investigation activities at the Site by advancing seven (7) soil borings to further evaluate the extent of hydrocarbon affected soil and potentially impacted groundwater. Laboratory analytical results identified TPH GRO/DRO concentrations that exceeded applicable New Mexico EMNRD OCD closure criteria in monitoring well borings MW-11 and MW-13. Three (3) soil borings were completed as groundwater monitoring wells MW-11 through MW-13. The groundwater analytical results for the analytical results for these wells indicated benzene, toluene, and total xylenes in excess of the WQCC Groundwater Quality Standards (GQSs) (*Supplemental Environmental Site Investigation and Annual Subsurface Water Monitoring Report*, dated February 24, 2017 - Apex).

Semi annual groundwater sampling was conducted in 2017 and 2018 by Apex and Ensolum, respectively. (*Supplemental Annual Groundwater Monitoring Report,* dated May 24, 2018 - Apex and June 9, 2019 - Ensolum).

Ensolum submitted a Stage 1 Abatement Plan to the New Mexico EMNRD OCD on March 21, 2019; however, the New Mexico EMNRD OCD have yet to respond (*Supplemental Stage 1 Abatement Plan,* dated March 21, 2019).

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Initial Site activities were performed in accordance with the New Mexico ENMRD OCD *Guidelines for Remediation of Leaks, Spills and Releases*, in addition to the New Mexico EMNRD OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.29 *Release Notification.* This guidance established investigation and abatement action requirements for sites subject to reporting and/or corrective action prior to the update of the rule finalized August 14, 2019. 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]

[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 being enforced when the sampling events were performed.

A **Topographic Map** is provided as **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 locations of the monitoring wells and recent soil borings in relation to pertinent structures and general Site boundaries, is provided as **Figure 3** of **Appendix A**.

1.2 Project Objective

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

2.0 GROUNDWATER MONITORING – AUGUST AND DECEMBER 2019

2.1 Groundwater Sampling Program

Groundwater sampling events were conducted during August and December 2019 by Ensolum. Ensolum's groundwater sampling program consisted of the collection of one (1) groundwater sample from each of the (8) viable monitor wells at the Site. Monitoring wells MW-3 and MW-4 were dry, and MW-5 had an insufficient volume of water; therefore, these wells were not sampled during these sampling events.

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 refers to sampling methods that are intended to minimize stress 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. Pumping rates on the order 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 the produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are typically taken 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.
- Groundwater samples were collected in laboratory-supplied containers (pre-preserved with mercuric chloride ($HgCl_2$)), labeled and 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) in 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 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	8	SW-846 8021

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 or re-surveyed to determine the top-of-casing (TOC) elevation. Based on gauging data from the August 2019 and December 2019 sampling events, the groundwater flow direction (gradient) at the Site is generally toward the east and north. The observed gradient during the two (2) monitoring events averages approximately 0.02 feet per foot (ft/ft) across the Site.

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

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 wells MW-3 and MW-4 were dry and MW-5 did not produce a sufficient volume of water to allow for the collection of these samples during the August and December 2019 sampling events.

August 2019 Sampling Event:

The analytical results for monitoring wells SVE-1R, SVE-2, MW-2, and MW-11 indicate benzene concentrations ranging from 26 micrograms per liter (µg/L) (SVE-1R) to 1,500 µg/L (MW-2), which are above the WQCC GQS of 10 µg/L.[1] The analytical results for monitoring wells SVE-3 and MW-13 indicate benzene concentrations of 4.4 µg/L and 1.6 µg/L, respectively, which are below the WQCC GQS of 10 µg/L.[1] The analytical results for monitoring wells MW-1 and MW-12 do not indicate benzene

[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 being enforced when the sampling events were performed.

concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 10 µg/L.[1]

The analytical result for monitoring well SVE-1R indicates a toluene concentration of 2.2 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 analytical results for monitoring wells SVE-1R, SVE-2, SVE-3, MW-2, MW-11, and MW-13 indicate ethylbenzene concentrations ranging from 1.1 µg/L (MW-13) to 230 µg/L (MW-11), which are below the WQCC GQS of 750 µg/L.[1] The analytical results for monitoring wells MW-1 and MW-12 do not indicate ethylbenzene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 750 µg/L.[1]

The analytical results for monitoring wells SVE-2, MW-2, and MW-11 indicate total xylenes concentrations ranging from 2,100 µg/L (SVE-2) to 2,800 µg/L (MW-11), which are above the WQCC GQS of 620 µg/L.[1] The analytical results for monitoring wells SVE-1R and SVE-3 indicate total xylenes concentrations of 20 µg/L and 170 µg/L, respectively, which are below the WQCC GQS of 620 µg/L.[1] The analytical results for monitoring wells MW-1, MW-12, and MW-13 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 were associated with the August 2019 analytical results.

December 2019 Sampling Event:

The analytical results for monitoring wells SVE-1R, SVE-2, MW-2, and MW-11 indicate benzene concentrations ranging from 45 µg/L (SVE-1R) to 2,600 µg/L (MW-2), which are above the WQCC GQS of 10 µg/L.[1] The analytical results for monitoring wells SVE-3 and MW-13 indicate benzene concentrations of 9.4 µg/L and 1.5 µg/L, respectively, which are below the WQCC GQS of 10 µg/L.[1] The analytical results for monitoring wells MW-1 and MW-12 do not indicate benzene concentrations above the laboratory PQLs/RLs, which are below the WQCC GQS of 10 µg/L.[1]

The analytical result for monitoring well MW-13 indicates a toluene concentration of 1.0 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 analytical results for monitoring wells SVE-1R, SVE-2, SVE-3, MW-2, MW-11, MW-12, and MW-13 indicate ethylbenzene concentrations ranging from 1.2 µg/L (MW-13) to 300 µg/L (MW-2 and MW-11), which are below the WQCC GQS of 750 µg/L.[1] The analytical result for monitoring well MW-1 does not indicate an ethylbenzene concentration above the laboratory PQLs/RLs, which are below the WQCC GQS of 750 µg/L.[1]

The analytical results for monitoring wells SVE-2, MW-2, and MW-11 indicate total xylenes concentrations ranging from 2,000 µg/L (SVE-2) to 3,200 µg/L (MW-11), which are above the WQCC GQS of 620 µg/L.[1] The analytical results for monitoring wells SVE-1R, SVE-3, MW-12, and MW-13 indicate total xylenes concentrations ranging from 3.0 (MW-13) µg/L to 220 µg/L (SVE-3), which are below the WQCC GQS of 620 µg/L.[1] The analytical result for monitoring well MW-1 does not indicate a total xylenes concentration above the laboratory PQLs/RLs, which are below the WQCC GQS of 620 µg/L.[1]

[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 being enforced when the sampling events were performed.

There are no data qualifier flags associated with the December 2019 analytical results.

3.0 FINDINGS

Semi-annual groundwater monitoring events were conducted at the Lateral K-12 Y#3 Condensate Tank Release (3/19/12) Site during August and December 2019. The objective of these groundwater monitoring events was to further evaluate the concentrations of COCs in groundwater at the Site with respect to WQCC GQSs.[1]

- The groundwater flow direction at the Site is generally towards the east, with an approximate gradient of 0.02 ft/ft across the Site.
- During the August 2019 sampling event, the analytical results for monitoring wells SVE-1R, SVE-2, MW-2, and MW-11 indicate BTEX constituent concentrations above the applicable WQCC GQSs.[1] The analytical results for monitoring wells SVE-3, MW-1, MW-12, and MW-13 did not indicate BTEX constituent concentrations above the applicable WQCC GQSs.[1]
- During the December 2019 sampling event, the analytical results for monitoring wells SVE-1R, SVE-2, MW-2, and MW-11 indicate BTEX constituent concentrations above the applicable WQCC GQSs.[1] The analytical results for the remaining monitoring wells do not indicate BTEX constituent concentrations above the applicable WQCC GQSs.[1]

4.0 RECOMMENDATIONS

Based on the results from the 2019 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 to monitor natural attenuation of COCs in groundwater.
- Upon approval by the New Mexico EMNRD OCD, further delineate the dissolved-phase groundwater plume, and evaluate in-situ remediation options for source area soils, as described in the Stage 1 Abatement Plan.
- After the Stage 1 Abatement Plan has been fully implemented, prepare a Stage 2 Abatement Plan.

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.

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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 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 Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

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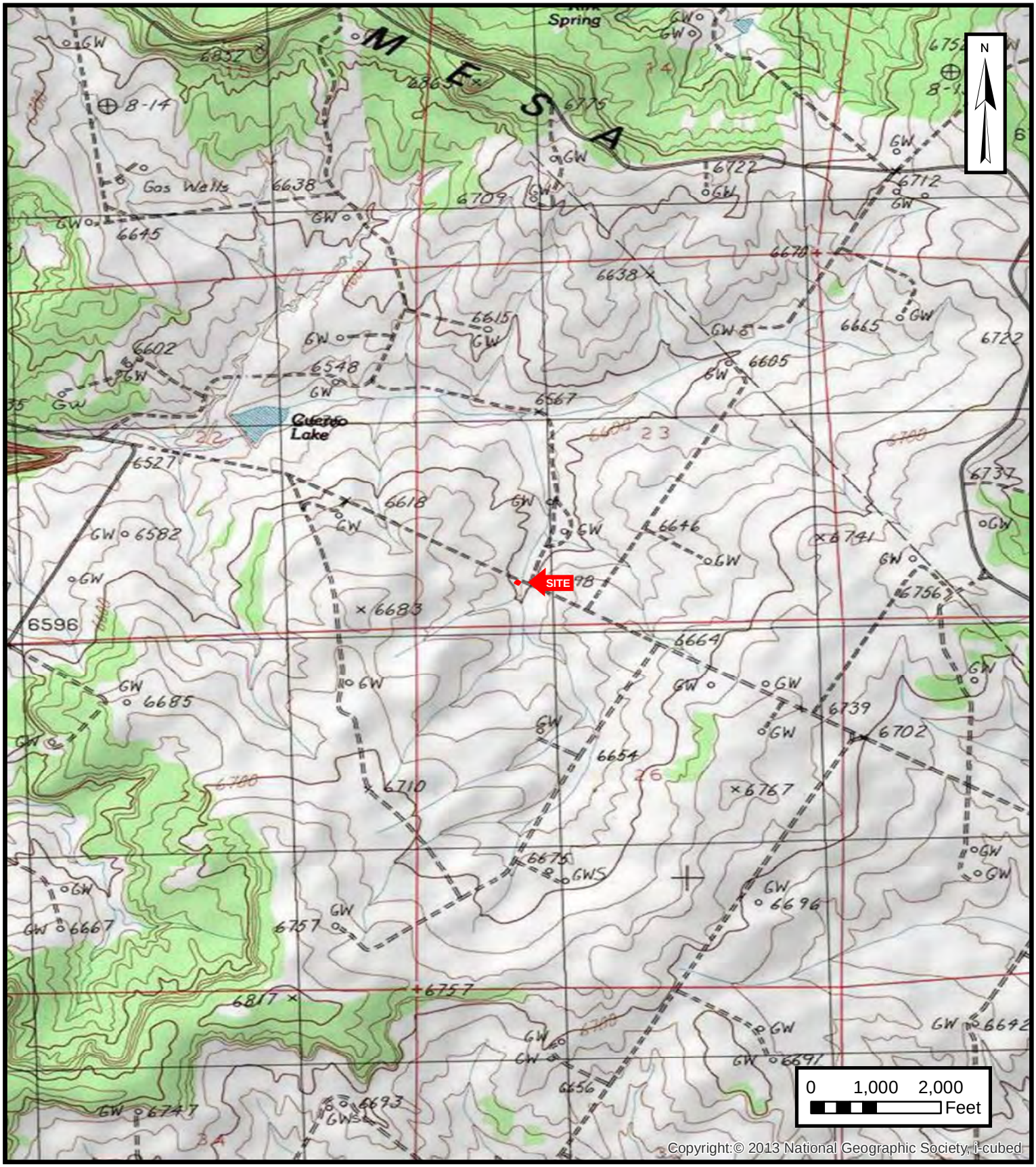
APPENDIX A

Figures



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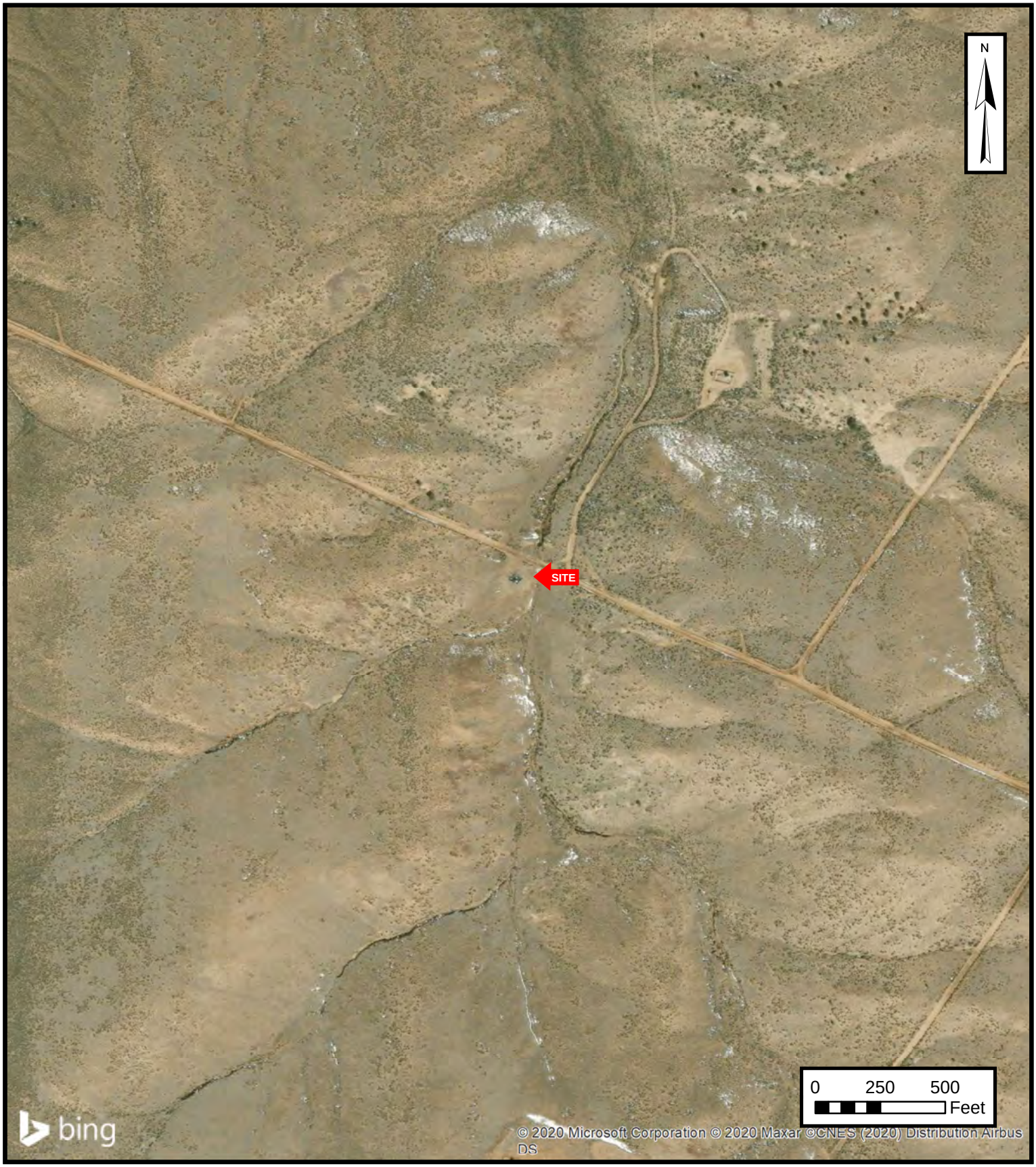
TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
1



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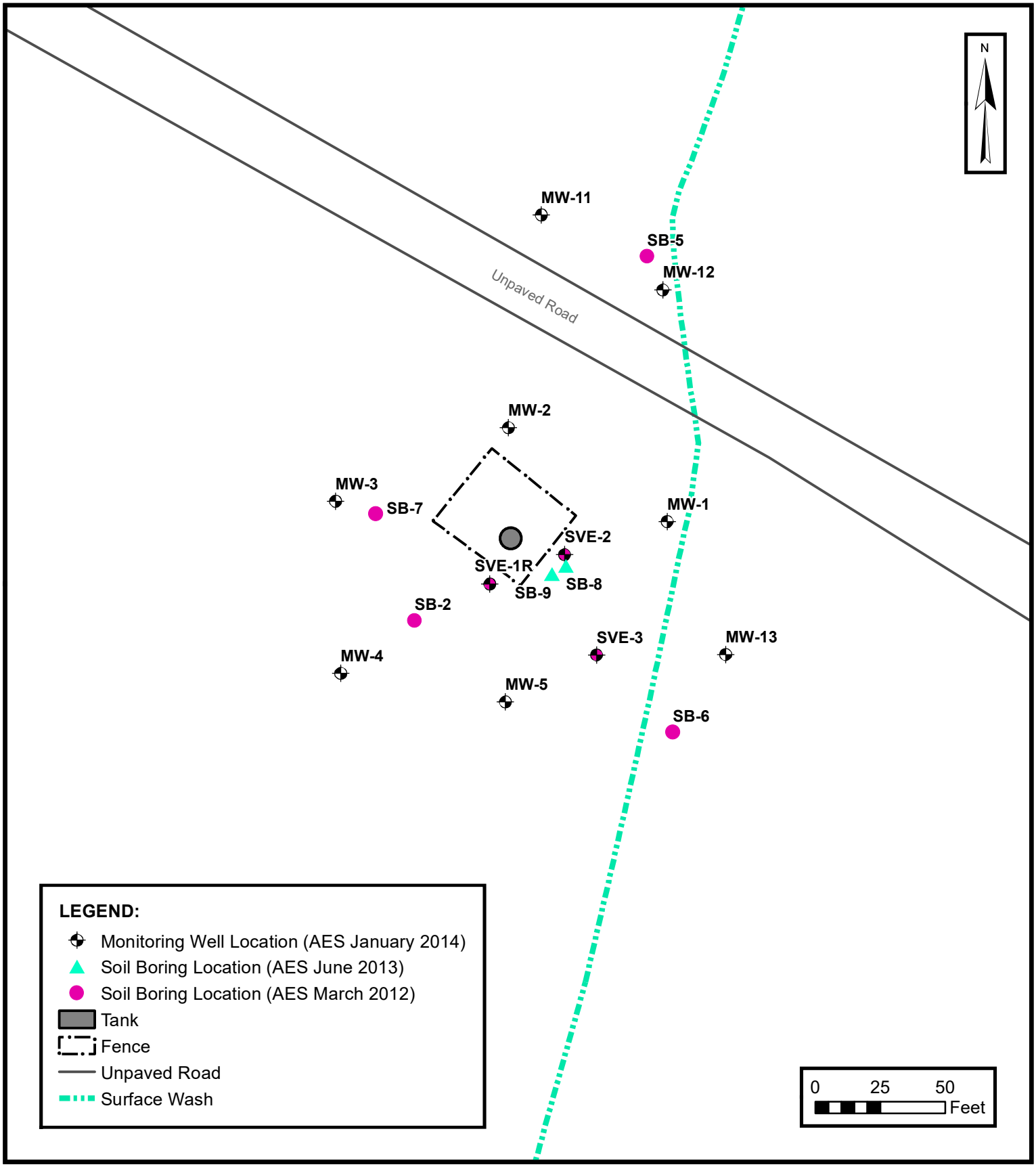
SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
2



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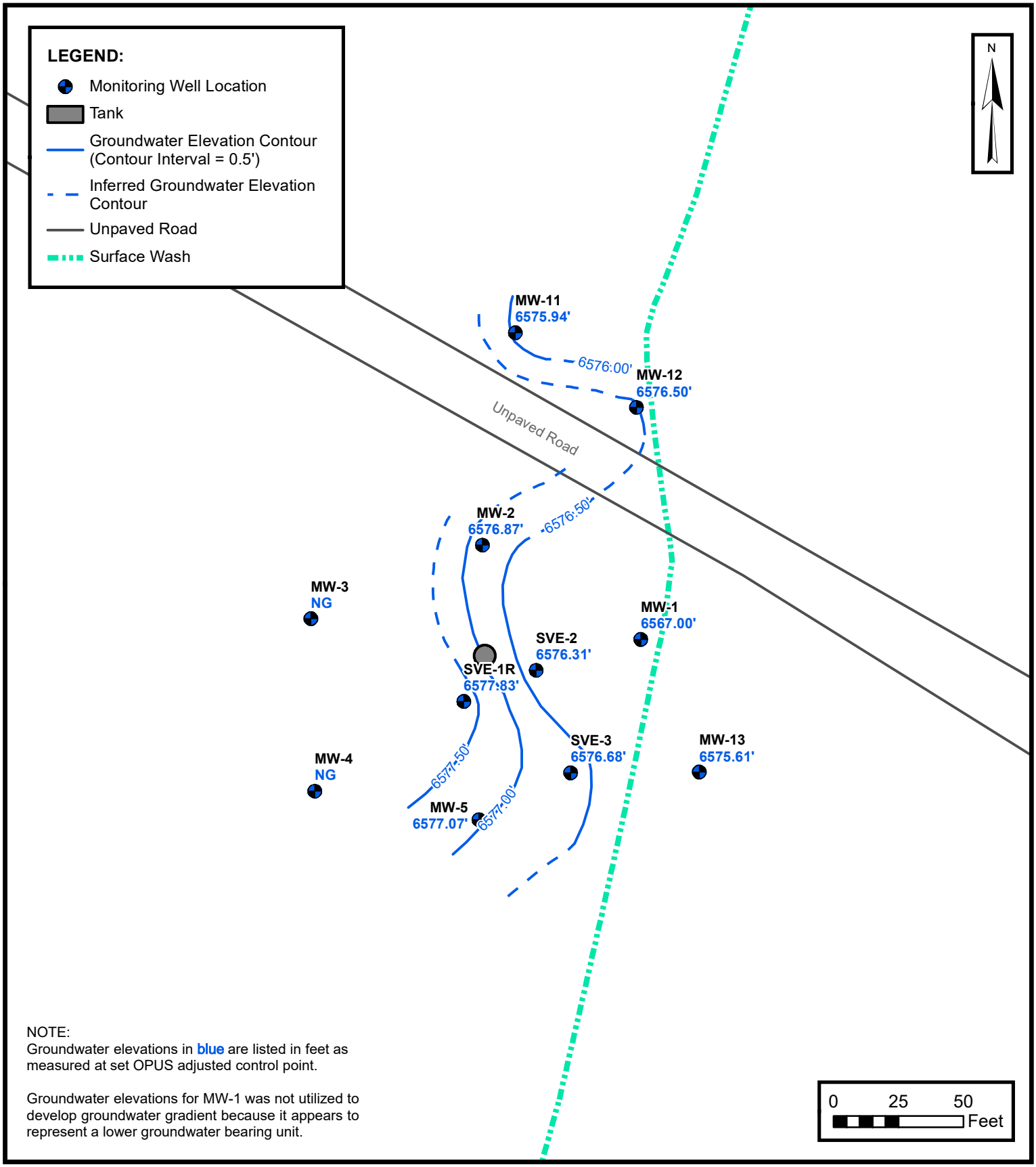
SITE MAP

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
3



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

Groundwater elevations for MW-1 was not utilized to develop groundwater gradient because it appears to represent a lower groundwater bearing unit.

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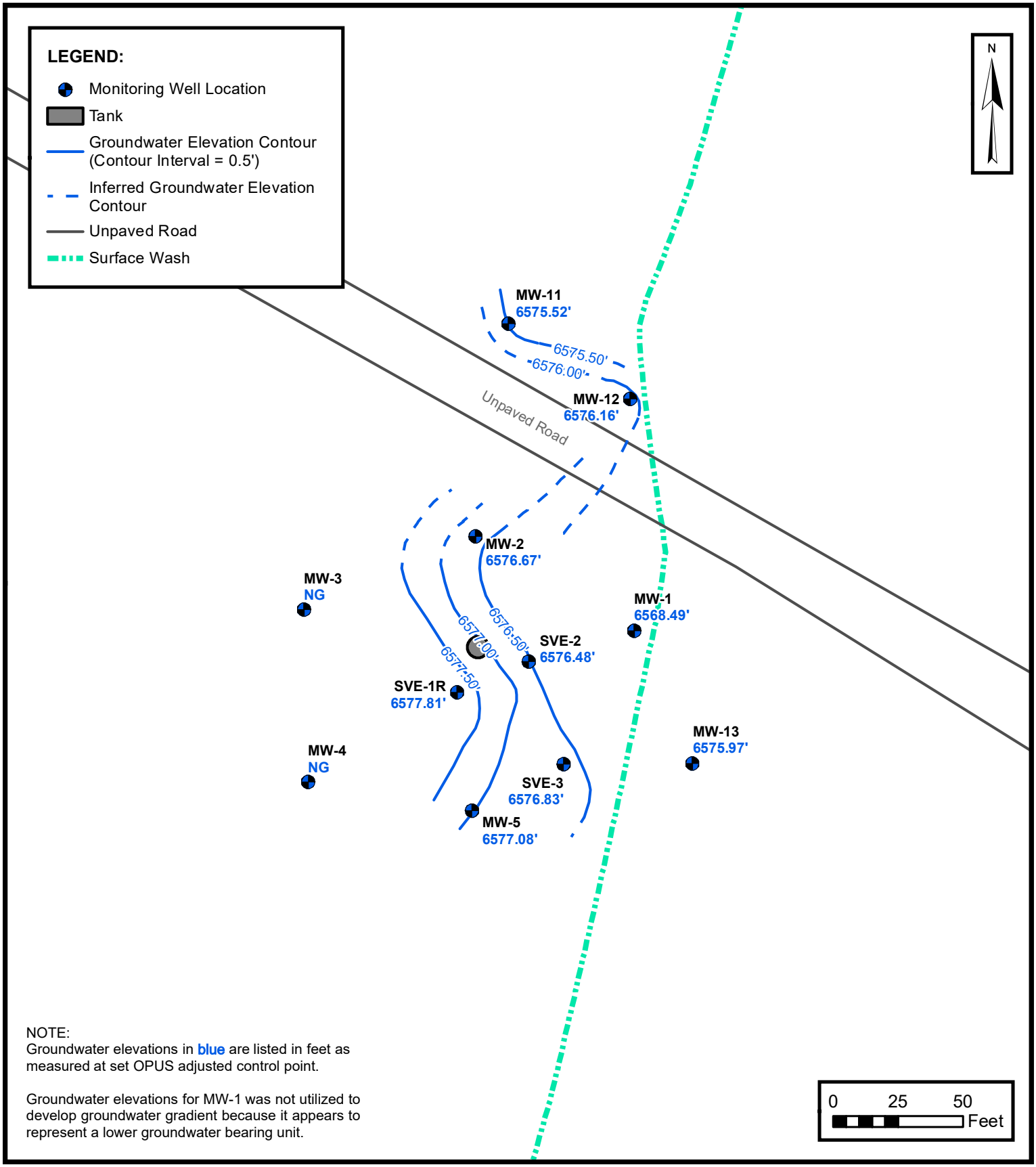
Groundwater Gradient Map
August 2019

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
4A



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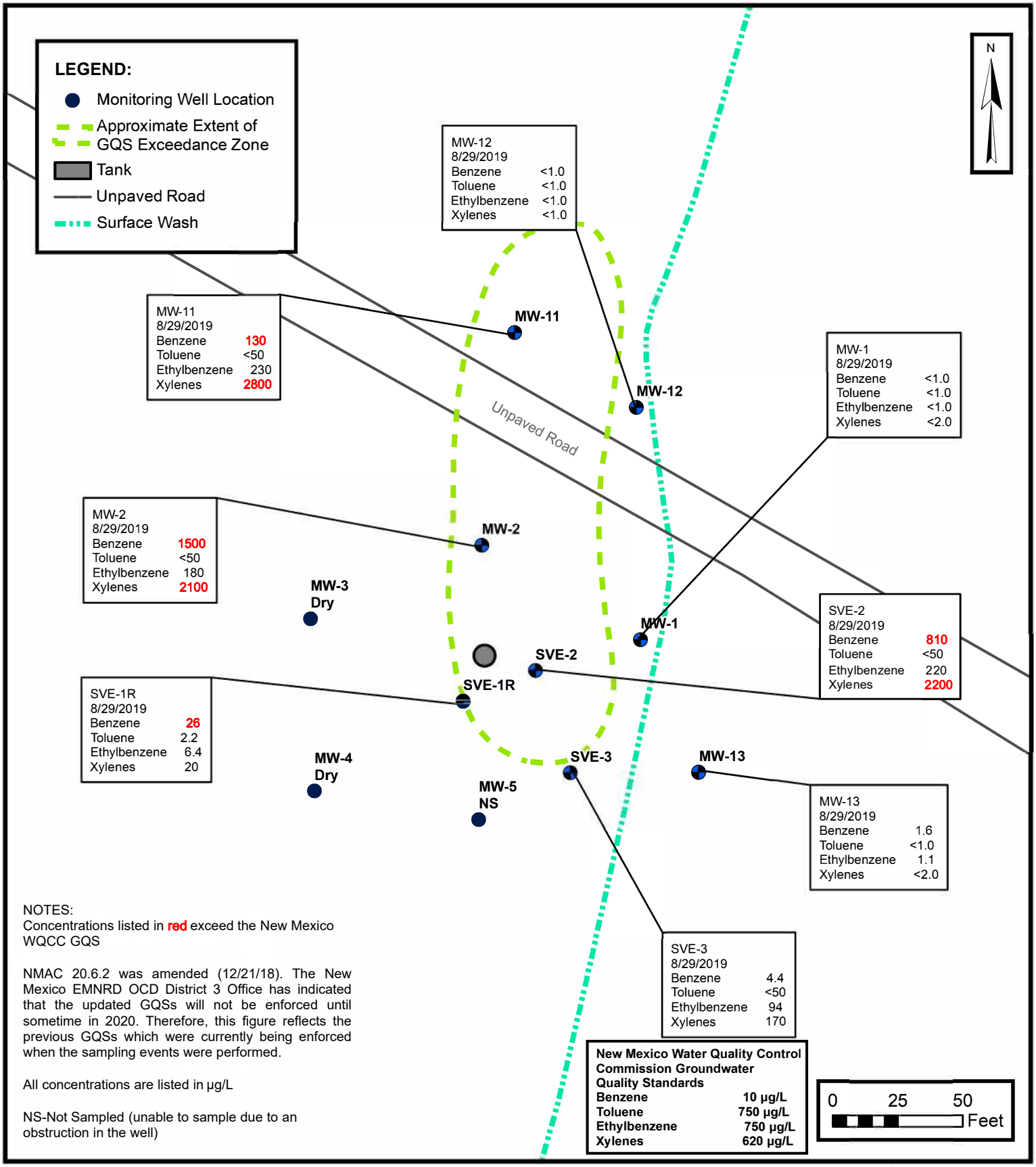
GROUNDWATER GRADIENT MAP
DECEMBER 2019

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
4B



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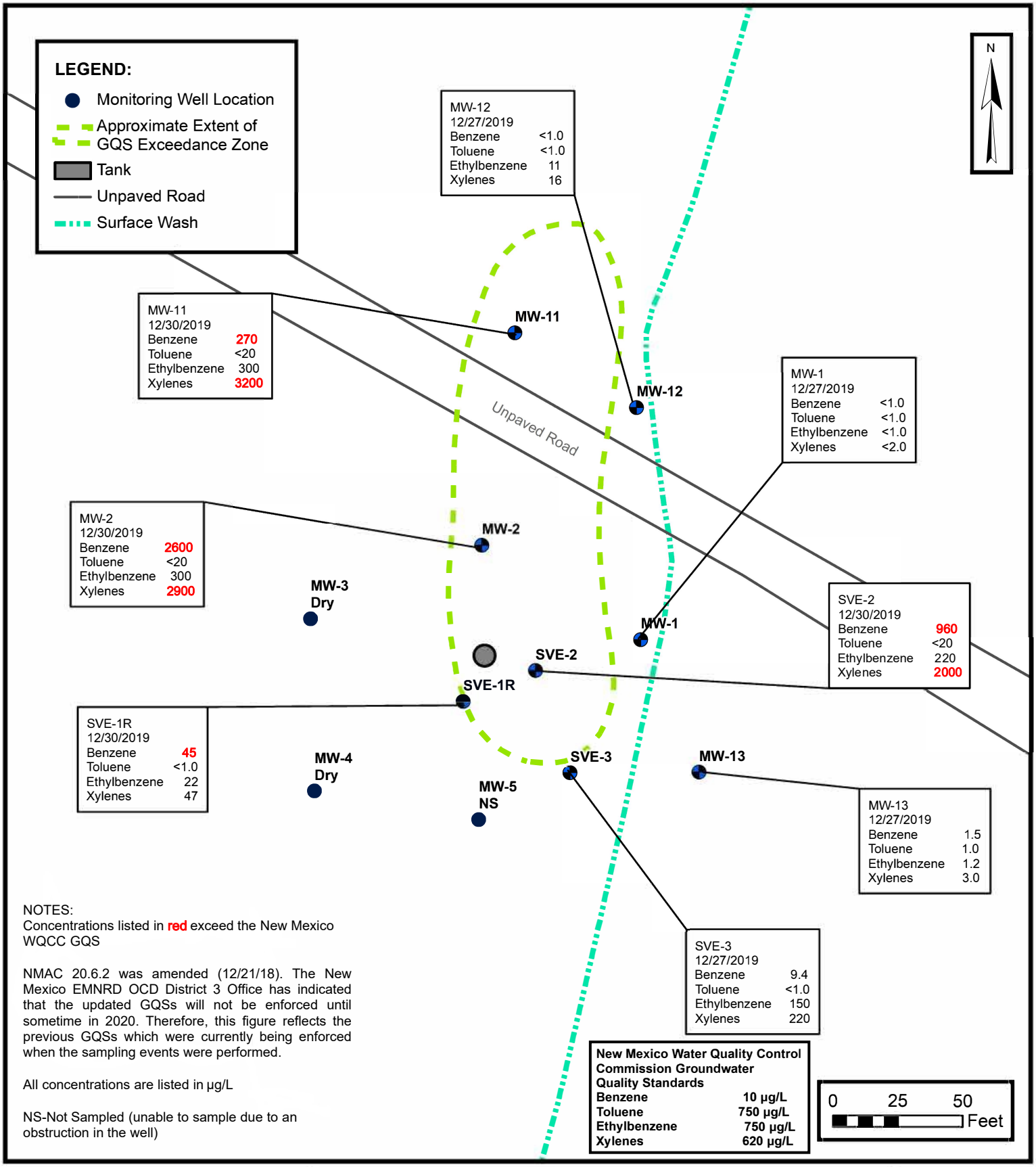
Groundwater Quality Standard (GQS) Exceedance Map
August 2019

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
5A



NOTES:
Concentrations listed 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 µg/L

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

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Groundwater Quality Standard (GQS) Exceedance Map
December 2019

ENTERPRISE FIELD SERVICES, LLC
K-12 Y#3 CONDENSATE TANK RELEASE
SW ¼, S23 T27N R7W, Rio Arriba County, New Mexico
36.55412° N, 107.54935° W

PROJECT NUMBER: 05B1226001

FIGURE
5B

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APPENDIX B

Tables

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TABLE 1
Lateral K-12 Y#3 Condensate Tank Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]	NE	NE	NE
Monitoring Wells Installed by AES								
SVE-1	10.8.13	Not Sampled - Damaged well screen						
SVE-1R	2.12.14	**610**	**1,500**	100	**2,400**	NA	NA	NA
	11.13.14	**170**	3.4	93	190	NA	NA	NA
	5.26.15	**32**	<5.0	93	59	NA	NA	NA
	12.2.15	**220**	69	57	180	NA	NA	NA
	6.14.16	**150**	<5.0	28	57	NA	NA	NA
	12.12.16	**150**	<5.0	64	190	3.5	1.6	<5.0
	7.06.17	**63**	<5.0	33	90	NA	NA	NA
	12.12.17	**72**	<5.0	26	72	NA	NA	NA
	6.28.18	3.8	<5.0	12	8.8	NA	NA	NA
	12.18.18*	5.6	1.9	12	38	NA	NA	NA
	8.29.19	**26**	2.2	6.4	20	NA	NA	NA
	12.27.19	**45**	<1.0	22	47	NA	NA	NA
SVE-2	10.8.13	**1,600**	180	270	**4,200**	18	15	<5.0
	2.12.14	**1,500**	100	360	**3,100**	NA	NA	NA
	11.13.14	**1,300**	110	270	**1,900**	NA	NA	NA
	5.27.15	**1,600**	<50	340	**2,300**	NA	NA	NA
	12.2.15	**1,200**	<50	280	**2,400**	NA	NA	NA
	6.14.16	**1,200**	<50	250	**2,500**	NA	NA	NA
	12.12.16	**1,100**	<50	330	**3,200**	16	13	<5.0
	7.06.17	**810**	<50	190	**1,900**	NA	NA	NA
	12.13.17	**1,100**	<50	200	**1,800**	NA	NA	NA
	6.28.18	**1,200**	<50	250	**2,100**	NA	NA	NA
	12.18.18*	**970**	<50	170	**1,400**	NA	NA	NA
	8.29.19	**810**	<50	220	**2,200**	NA	NA	NA
	12.30.19	**960**	<20	220	**2,000**	NA	NA	NA
SVE-3	10.8.13	**110**	450	210	**2,000**	20	9.3	<5.0
	2.12.14	**78**	170	160	**1,500**	NA	NA	NA
	11.13.14	**12**	6.5	68	140	NA	NA	NA
	5.26.15	3.2	<5.0	100	<10	NA	NA	NA
	12.2.15	<5.0	<5.0	91	<10	NA	NA	NA
	6.14.16	<5.0	<5.0	78	57	NA	NA	NA
	12.12.16	**14**	<5.0	95	140	8.1	5.5	<5.0
	7.06.17	6.7	<5.0	110	170	NA	NA	NA
	12.12.17	3.8	<2.5	42	11	NA	NA	NA
	6.28.18	3.7	<5.0	60	11	NA	NA	NA
	12.18.18*	9.3	5.6	110	150	NA	NA	NA
	8.29.19	4.4	<5.0	94	170	NA	NA	NA
	12.27.19	9.4	<1.0	150	220	NA	NA	NA
MW-1	2.12.14	<1	<1	<1	<3	NA	NA	NA
	11.13.14	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	5.26.15	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.2.15	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	6.14.16	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.12.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	7.06.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.12.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.28.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.18.18*	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	8.29.19	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.27.19	<1.0	<1.0	<1.0	<2.0	NA	NA	NA

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TABLE 1
Lateral K-12 Y#3 Condensate Tank Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]	NE	NE	NE
MW-2	2.12.14	**2,300**	**1,500**	350	**3,600**	NA	NA	NA
	11.13.14	**1,600**	520	220	**2,500**	NA	NA	NA
	5.27.15	**2,600**	530	370	**3,600**	NA	NA	NA
	12.2.15	**980**	<50	240	**2,600**	NA	NA	NA
	6.14.16	**1,800**	<50	380	**4,500**	NA	NA	NA
	12.12.16	**2,800**	<50	390	**4,700**	26	7.1	<5.0
	7.06.17	**2,100**	<50	410	**4,800**	NA	NA	NA
	12.13.17	**1,300**	<50	160	**1,800**	NA	NA	NA
	6.28.18	**1,700**	<50	240	**2,500**	NA	NA	NA
	12.18.18*	**2,100**	<50	210	**2,200**	NA	NA	NA
	8.29.19	**1,500**	<50	180	**2,100**	NA	NA	NA
	12.30.19	**2,600**	<20	300	**2,900**	NA	NA	NA
MW-3	2.12.14	Not Sampled - Well Dry						
	11.13.14							
	5.26.15							
	12.2.15							
	6.14.16							
	12.12.16							
	7.06.17							
	12.12.17							
	6.28.18							
	12.18.18*							
	8.29.19							
	12.30.19							
MW-4	2.12.14	Not Sampled - Well Dry						
	11.13.14							
	5.26.15							
	12.2.15							
	6.14.16							
	12.12.16							
	7.06.17							
	12.12.17							
	6.28.18							
	12.18.18*							
	8.29.19							
	12.30.19							
MW-5	2.12.14	**1,100**	**2,900**	220	**1,900**	NA	NA	NA
	11.13.14	Not Sampled - Insufficient volume to collect sample						
	5.26.15							
	12.2.15							
	6.14.16							
	12.12.16							
	7.06.17							
	12.13.17							
	6.28.18							
	12.18.18*							
	8.29.19							
	12.30.19							

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TABLE 1
Lateral K-12 Y#3 Condensate Tank Release
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]	NE	NE	NE
Monitoring Wells Installed by APEX								
MW-11	9.22.16	**320**	240	300	**3,700**	NA	NA	NA
	12.12.16	**430**	140	450	**5,000**	23	1.4	<5.0
	7.06.17	**390**	110	390	**4,200**	NA	NA	NA
	12.12.17	**520**	170	310	**3,100**	NA	NA	NA
	6.28.18	**590**	320	350	**3,400**	NA	NA	NA
	12.18.18*	**590**	<50	280	**3,000**	NA	NA	NA
	8.29.19	**130**	<50	230	**2,800**	NA	NA	NA
	12.30.19	**270**	<20	300	**3,200**	NA	NA	NA
MW-12	9.22.16	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.12.16	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
	7.06.17	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.12.17	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	6.28.18	<1.0	<1.0	<1.0	<1.5	NA	NA	NA
	12.18.18*	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	8.29.19	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	12.27.19	<1.0	<1.0	11	16	NA	NA	NA
MW-13	9.22.16	**150**	**1,600**	270	**2,400**	NA	NA	NA
	01.06.17	**120**	660	53	**880**	NA	NA	NA
	7.06.17	**55**	290	46	470	NA	NA	NA
	12.12.17	**58**	110	19	150	NA	NA	NA
	6.28.18	8.5	7.5	5.9	36	NA	NA	NA
	12.18.18*	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
	8.29.19	1.6	<1.0	1.1	<2.0	NA	NA	NA
	12.27.19	1.5	1.0	1.2	3.0	NA	NA	NA

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.

* Interface probe malfunction during sampling event. Site gauged on 1/21/19

µg/L = microgram per liter

mg/L = milligram per liter

NA = Not Analyzed

NE = Not Established

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

<1.0= the numeral (in this case "1.0") identifies the laboratory reporting or practical quantitation limit

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TABLE 2
Lateral K-12 Y#3 Condensate Tank 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)
SVE-1	10.08.13	ND	27.46	ND	NA	NA
SVE-1R*	02.12.14	ND	29.06	ND	6606.09	6577.03
	11.13.14	ND	30.05	ND		6576.04
	5.26.15	ND	29.27	ND		6576.82
	12.02.15	ND	28.06	ND		6578.03
	6.14.16	ND	28.05	ND		6578.04
	9.22.16	ND	28.10	ND	6606.40	6578.30
	12.12.16	ND	28.15	ND		6578.25
	7.06.17	ND	28.24	ND		6578.16
	12.12.17	ND	28.35	ND		6578.05
	6.28.18	ND	28.80	ND		6577.60
	1.21.19**	ND	28.81	ND		6577.59
	8.29.19	ND	28.57	ND		6577.83
	12.27.19	ND	28.59	ND		6577.81
SVE-2*	10.08.13	ND	28.00	ND	6605.82	6577.82
	02.12.14	ND	29.39	ND		6576.43
	11.13.14	ND	29.42	ND		6576.40
	5.26.15	ND	29.86	ND		6575.96
	12.02.15	ND	28.74	ND		6577.08
	6.14.16	ND	28.58	ND		6577.24
	9.22.16	ND	28.77	ND	6606.38	6577.61
	12.12.16	ND	28.74	ND		6577.64
	7.06.17	ND	29.26	ND		6577.12
	12.12.17	ND	29.50	ND		6576.88
	6.28.18	ND	30.05	ND		6576.33
	1.21.19**	ND	29.82	ND		6576.56
	8.29.19	ND	30.07	ND		6576.31
	12.27.19	ND	29.90	ND		6576.48
SVE-3*	10.08.13	ND	31.85	ND	6607.46	6575.61
	02.12.14	ND	29.98	ND		6577.48
	11.13.14	ND	29.54	ND		6577.92
	5.26.15	ND	30.93	ND		6576.53
	12.02.15	ND	30.49	ND		6576.97
	6.14.16	ND	30.37	ND		6577.09
	9.22.16	ND	30.50	ND	6607.92	6577.42
	12.12.16	ND	30.28	ND		6577.64
	7.06.17	ND	31.77	ND		6576.15
	12.12.17	ND	30.79	ND		6577.13
	6.28.18	ND	31.08	ND		6576.84
	1.21.19**	ND	30.91	ND		6577.01
	8.29.19	ND	31.24	ND		6576.68
	12.27.19	ND	31.09	ND		6576.83
MW-1*	02.12.14	ND	40.95	ND	6606.53	6565.58
	11.13.14	ND	38.45	ND		6568.08
	5.26.15	ND	38.78	ND		6567.75
	12.02.15	ND	39.53	ND		6567.00
	6.14.16	ND	39.97	ND		6566.56
	9.22.16	ND	39.91	ND	6607.05	6567.14
	12.12.16	ND	39.58	ND		6567.47
	7.06.17	ND	40.28	ND		6566.77
	12.12.17	ND	40.21	ND		6566.84
	6.28.18	ND	40.27	ND		6566.78
	1.21.19**	ND	39.69	ND		6567.36
	8.29.19	ND	40.05	ND		6567.00
	12.27.19	ND	38.56	ND		6568.49

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TABLE 2
Lateral K-12 Y#3 Condensate Tank 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-2*	02.12.14	ND	28.79	ND	6605.80	6577.01
	11.13.14	ND	29.27	ND		6576.53
	5.26.15	ND	29.45	ND		6576.35
	12.02.15	ND	28.28	ND		6577.52
	6.14.16	ND	28.37	ND		6577.43
	9.22.16	ND	28.62	ND	6606.28	6577.66
	12.12.16	ND	28.70	ND		6577.58
	7.06.17	ND	29.00	ND		6577.28
	12.12.17	ND	29.22	ND		6577.06
	6.28.18	ND	29.61	ND		6576.67
	1.21.19**	ND	29.35	ND		6576.93
	8.29.19	ND	29.41	ND		6576.87
	12.27.19	ND	29.61	ND		6576.67
MW-3*	02.12.14	ND	DRY	ND	6607.53	DRY
	11.13.14	ND	DRY	ND		DRY
	5.26.15	ND	DRY	ND		DRY
	12.02.15	ND	DRY	ND		DRY
	6.14.16	ND	DRY	ND		DRY
	9.22.16	ND	DRY	ND	6608.04	DRY
	12.12.16	ND	DRY	ND		DRY
	7.06.17	ND	DRY	ND		DRY
	12.12.17	ND	DRY	ND		DRY
	6.28.18	ND	DRY	ND		DRY
	1.21.19**	ND	DRY	ND		DRY
	8.29.19	ND	DRY	ND		DRY
	12.27.19	ND	DRY	ND		DRY
MW-4*	02.12.14	ND	DRY	ND	6609.20	DRY
	11.13.14	ND	DRY	ND		DRY
	5.26.15	ND	DRY	ND		DRY
	12.02.15	ND	DRY	ND		DRY
	6.14.16	ND	DRY	ND		DRY
	9.22.16	ND	DRY	ND	6609.66	DRY
	12.12.16	ND	DRY	ND		DRY
	7.06.17	ND	DRY	ND		DRY
	12.12.17	ND	DRY	ND		DRY
	6.28.18	ND	DRY	ND		DRY
	1.21.19**	ND	DRY	ND		DRY
	8.29.19	ND	DRY	ND		DRY
	12.27.19	ND	DRY	ND		DRY
MW-5*	02.12.14	ND	29.87	ND	6607.11	6577.24
	11.13.14	ND	30.04	ND		6577.07
	5.26.15	ND	DRY	ND		DRY
	12.02.15	ND	DRY	ND		DRY
	6.14.16	ND	DRY	ND		DRY
	9.22.16	ND	30.04	ND	6607.59	6577.55
	12.12.16	ND	30.50	ND		6577.09
	7.06.17	ND	30.05	ND		6577.54
	12.12.17	ND	30.06	ND		6577.53
	6.28.18	ND	30.50	ND		6577.09
	1.21.19**	ND	30.49	ND		6577.10
	8.29.19	ND	30.52	ND		6577.07
	12.27.19	ND	30.51	ND		6577.08

ENSOLUM

TABLE 2
Lateral K-12 Y#3 Condensate Tank 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-11	9.22.16	ND	27.71	ND	6604.64	6576.93
	12.12.16	ND	27.65	ND		6576.99
	7.06.17	ND	28.25	ND		6576.39
	12.12.17	ND	28.75	ND		6575.89
	6.28.18	ND	29.18	ND		6575.46
	1.21.19**	ND	28.41	ND		6576.23
	8.29.19	ND	28.70	ND		6575.94
	12.27.19	ND	29.12	ND		6575.52
MW-12	9.22.16	ND	27.71	ND	6605.01	6577.30
	12.12.16	ND	27.60	ND		6577.41
	7.06.17	ND	28.32	ND		6576.69
	12.12.17	ND	28.82	ND		6576.19
	6.28.18	ND	29.23	ND		6575.78
	1.21.19**	ND	28.22	ND		6576.79
	8.29.19	ND	28.51	ND		6576.50
	12.27.19	ND	28.85	ND		6576.16
MW-13	9.22.16	ND	33.60	ND	6607.61	6574.01
	12.12.16	ND	35.10	ND		6572.51
	7.06.17	ND	31.47	ND		6576.14
	12.12.17	ND	31.42	ND		6576.19
	6.28.18	ND	31.65	ND		6575.96
	1.21.19**	ND	31.81	ND		6575.80
	8.29.19	ND	32.00	ND		6575.61
	12.27.19	ND	31.64	ND		6575.97

*Monitoring well resurveyed on 9/27/16.

** Interface probe malfunction during sampling event. Site gauged on 1/21/19

BTOC - below top of casing

AMSL - above mean sea level

TOC - top of casing

ND - Not detected

NA - Not applicable

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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

September 06, 2019

Kyle Summers

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

RE: Lateral K-12 Y #3 OrderNo.: 1908I79

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/30/2019 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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-1
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 9:25:00 AM
Lab ID: 1908I79-001
Matrix: AQUEOUS
Received Date: 8/30/2019 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	9/3/2019 3:28:41 PM	B62609
Toluene	ND	1.0		µg/L	1	9/3/2019 3:28:41 PM	B62609
Ethylbenzene	ND	1.0		µg/L	1	9/3/2019 3:28:41 PM	B62609
Xylenes, Total	ND	2.0		µg/L	1	9/3/2019 3:28:41 PM	B62609
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	9/3/2019 3:28:41 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-13
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 10:05:00 AM
Lab ID: 1908I79-002
Matrix: AQUEOUS
Received Date: 8/30/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.6	1.0		µg/L	1	9/4/2019 4:02:35 PM	B62609
Toluene	ND	1.0		µg/L	1	9/4/2019 4:02:35 PM	B62609
Ethylbenzene	1.1	1.0		µg/L	1	9/4/2019 4:02:35 PM	B62609
Xylenes, Total	ND	2.0		µg/L	1	9/4/2019 4:02:35 PM	B62609
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	9/4/2019 4:02:35 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: SVE-3
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 10:40:00 AM
Lab ID: 1908I79-003
Matrix: AQUEOUS
Received Date: 8/30/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	4.4	2.5		µg/L	5	9/3/2019 4:15:57 PM	B62609
Toluene	ND	5.0		µg/L	5	9/3/2019 4:15:57 PM	B62609
Ethylbenzene	94	5.0		µg/L	5	9/3/2019 4:15:57 PM	B62609
Xylenes, Total	170	10		µg/L	5	9/3/2019 4:15:57 PM	B62609
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	5	9/3/2019 4:15:57 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: SVE-1R
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 11:25:00 AM
Lab ID: 1908I79-004
Matrix: AQUEOUS
Received Date: 8/30/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	26	1.0		µg/L	1	9/3/2019 4:39:36 PM	B62609
Toluene	2.2	1.0		µg/L	1	9/3/2019 4:39:36 PM	B62609
Ethylbenzene	6.4	1.0		µg/L	1	9/3/2019 4:39:36 PM	B62609
Xylenes, Total	20	2.0		µg/L	1	9/3/2019 4:39:36 PM	B62609
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	9/3/2019 4:39:36 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SVE-2
Project: Lateral K-12 Y #3 **Collection Date:** 8/29/2019 1:25:00 PM
Lab ID: 1908I79-005 **Matrix:** AQUEOUS **Received Date:** 8/30/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	810	50		µg/L	50	9/3/2019 6:13:59 PM	B62609
Toluene	ND	50		µg/L	50	9/3/2019 6:13:59 PM	B62609
Ethylbenzene	220	50		µg/L	50	9/3/2019 6:13:59 PM	B62609
Xylenes, Total	2200	100		µg/L	50	9/3/2019 6:13:59 PM	B62609
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	50	9/3/2019 6:13:59 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-12
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 11:55:00 AM
Lab ID: 1908I79-006
Matrix: AQUEOUS
Received Date: 8/30/2019 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	9/3/2019 6:37:26 PM	B62609
Toluene	ND	1.0		µg/L	1	9/3/2019 6:37:26 PM	B62609
Ethylbenzene	ND	1.0		µg/L	1	9/3/2019 6:37:26 PM	B62609
Xylenes, Total	ND	2.0		µg/L	1	9/3/2019 6:37:26 PM	B62609
Surr: 4-Bromofluorobenzene	97.4	80-120		%Rec	1	9/3/2019 6:37:26 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-11
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 12:30:00 PM
Lab ID: 1908I79-007
Matrix: AQUEOUS
Received Date: 8/30/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	130	50		µg/L	50	9/3/2019 7:00:55 PM	B62609
Toluene	ND	50		µg/L	50	9/3/2019 7:00:55 PM	B62609
Ethylbenzene	230	50		µg/L	50	9/3/2019 7:00:55 PM	B62609
Xylenes, Total	2800	100		µg/L	50	9/3/2019 7:00:55 PM	B62609
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	50	9/3/2019 7:00:55 PM	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 **1908I79**
Date Reported: **9/6/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-2
Project: Lateral K-12 Y #3
Collection Date: 8/29/2019 2:05:00 PM
Lab ID: 1908I79-008 **Matrix:** AQUEOUS **Received Date:** 8/30/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1500	50		µg/L	50	9/3/2019 7:24:21 PM	B62609
Toluene	ND	50		µg/L	50	9/3/2019 7:24:21 PM	B62609
Ethylbenzene	180	50		µg/L	50	9/3/2019 7:24:21 PM	B62609
Xylenes, Total	2100	100		µg/L	50	9/3/2019 7:24:21 PM	B62609
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	50	9/3/2019 7:24:21 PM	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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908I79**

06-Sep-19

Client: ENSOLUM

Project: Lateral K-12 Y #3

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: 1908I79 RcptNo: 1

Received By: Anne Thorne 8/30/2019 8:00:00 AM

Completed By: Anne Thorne 8/30/2019 3:10:31 PM

Reviewed By: IO 8/30/19

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: 8/30/19

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:

CUSTODY SEALS INTACT ON VOA VIALS/at 8/30/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 6606 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: Lateral K-12 Y #3

Project #: 05B1226001

Project Manager: KSummers

Sampler: RDeechilly

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.6-0.5(F)=4.1

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. 1908I79	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)
8/29/19	925	W	MW-1	3 x 40mL VOA	$HgCl_2$	001	X									
8/29/19	1005	W	MW-13	3x 40mL VOA	$HgCl_2$	002	X									
8/29/19	1040	W	SVE-3	3x 40mL VOA	$HgCl_2$	003	X									
8/29/19	1125	W	SVE-1R	3x 40mL VOA	$HgCl_2$	004	X									
8/29/19	1325	W	SVE-2	3x 40mL VOA	$HgCl_2$	005	X									
8/29/19	1155	W	MW-12	3x 40mL VOA	$HgCl_2$	006	X									
8/29/19	1230	W	MW-11	3x 40mL VOA	$HgCl_2$	007	X									
8/29/19	1405	W	MW-2	3x 40mL VOA	$HgCl_2$	008	X									

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/29/19	1720				8/29/19	1720
8/29/19	1752				08/30/19	0800

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 02, 2020

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

RE: K 12 Y 3 OrderNo.: 1912D37

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/28/2019 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 **1912D37**
Date Reported: **1/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: K 12 Y 3
Collection Date: 12/27/2019 9:50:00 AM
Lab ID: 1912D37-001
Matrix: AQUEOUS
Received Date: 12/28/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/30/2019 11:37:37 AM	R65463
Toluene	ND	1.0		µg/L	1	12/30/2019 11:37:37 AM	R65463
Ethylbenzene	ND	1.0		µg/L	1	12/30/2019 11:37:37 AM	R65463
Xylenes, Total	ND	2.0		µg/L	1	12/30/2019 11:37:37 AM	R65463
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	12/30/2019 11:37:37 AM	R65463

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 **1912D37**
Date Reported: **1/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-13
Project: K 12 Y 3
Collection Date: 12/27/2019 10:30:00 AM
Lab ID: 1912D37-002
Matrix: AQUEOUS
Received Date: 12/28/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.5	1.0		µg/L	1	12/30/2019 12:00:47 PM	R65463
Toluene	1.0	1.0		µg/L	1	12/30/2019 12:00:47 PM	R65463
Ethylbenzene	1.2	1.0		µg/L	1	12/30/2019 12:00:47 PM	R65463
Xylenes, Total	3.0	2.0		µg/L	1	12/30/2019 12:00:47 PM	R65463
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	1	12/30/2019 12:00:47 PM	R65463

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 **1912D37**
Date Reported: **1/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: SVE-3
Project: K 12 Y 3
Collection Date: 12/27/2019 11:05:00 AM
Lab ID: 1912D37-003
Matrix: AQUEOUS
Received Date: 12/28/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	9.4	1.0		µg/L	1	12/30/2019 10:51:32 AM	R65463
Toluene	ND	1.0		µg/L	1	12/30/2019 10:51:32 AM	R65463
Ethylbenzene	150	5.0		µg/L	5	12/30/2019 12:23:38 PM	R65463
Xylenes, Total	220	10		µg/L	5	12/30/2019 12:23:38 PM	R65463
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	5	12/30/2019 12:23:38 PM	R65463

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 **1912D37**
Date Reported: **1/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-12
Project: K 12 Y 3
Collection Date: 12/27/2019 11:40:00 AM
Lab ID: 1912D37-004
Matrix: AQUEOUS
Received Date: 12/28/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	12/30/2019 12:46:36 PM	R65463
Toluene	ND	1.0		µg/L	1	12/30/2019 12:46:36 PM	R65463
Ethylbenzene	11	1.0		µg/L	1	12/30/2019 12:46:36 PM	R65463
Xylenes, Total	16	2.0		µg/L	1	12/30/2019 12:46:36 PM	R65463
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	1	12/30/2019 12:46:36 PM	R65463

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 **1912D37**
Date Reported: **1/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: SVE-1R
Project: K 12 Y 3
Collection Date: 12/27/2019 12:20:00 PM
Lab ID: 1912D37-005
Matrix: AQUEOUS
Received Date: 12/28/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	45	1.0		µg/L	1	12/30/2019 1:09:29 PM	R65463
Toluene	ND	1.0		µg/L	1	12/30/2019 1:09:29 PM	R65463
Ethylbenzene	22	1.0		µg/L	1	12/30/2019 1:09:29 PM	R65463
Xylenes, Total	47	2.0		µg/L	1	12/30/2019 1:09:29 PM	R65463
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	1	12/30/2019 1:09:29 PM	R65463

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#: **1912D37**

02-Jan-20

Client: APEX TITAN

Project: K 12 Y 3

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

Client ID: **PBW** Batch ID: **R65463** RunNo: **65463**

Prep Date: Analysis Date: **12/30/2019** SeqNo: **2249442** 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	23		20.00		115	80	120			

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

Client ID: **LCSW** Batch ID: **R65463** RunNo: **65463**

Prep Date: Analysis Date: **12/30/2019** SeqNo: **2249443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.6	80	120			
Toluene	18	1.0	20.00	0	87.6	80	120			
Ethylbenzene	18	1.0	20.00	0	87.6	80	120			
Xylenes, Total	53	2.0	60.00	0	88.0	80	119			
Surr: 4-Bromofluorobenzene	24		20.00		119	80	120			

Sample ID: **1912d37-001ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MW-1** Batch ID: **R65463** RunNo: **65463**

Prep Date: Analysis Date: **12/30/2019** SeqNo: **2249445** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.9	80	120			
Toluene	19	1.0	20.00	0	92.7	75.5	120			
Ethylbenzene	19	1.0	20.00	0	92.5	80	120			
Xylenes, Total	56	2.0	60.00	0	93.1	77.3	119			
Surr: 4-Bromofluorobenzene	23		20.00		115	80	120			

Sample ID: **1912d37-001amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MW-1** Batch ID: **R65463** RunNo: **65463**

Prep Date: Analysis Date: **12/30/2019** SeqNo: **2249446** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.1	80	120	7.62	20	
Toluene	17	1.0	20.00	0	84.9	75.5	120	8.82	20	
Ethylbenzene	17	1.0	20.00	0	86.6	80	120	6.63	20	
Xylenes, Total	52	2.0	60.00	0	86.7	77.3	119	7.20	20	
Surr: 4-Bromofluorobenzene	23		20.00		113	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: **1912D37** RcptNo: 1

Received By: **Yazmine Garduno** **12/28/2019 9:40:00 AM**

Completed By: **Yazmine Garduno** **12/28/2019 10:00:29 AM**

Reviewed By: YG 12/30/19

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: ENM 12/30/19

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	~~0.7~~ 0.1 YG 12/30/19	Good				

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: K-12 Y#3

Project #: 05B1226001

Project Manager: M. Gantry

Sampler: CDApanti

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.4 -0.3 =0.1 0.7

HEAL No. 1912D37

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)
12/27	950	W	MW-1	3 VOA's	HgCl2	-001	X									
12/27	1030	W	MW-13			-002	X									
12/27	1105	W	SVE-3			-003	X									
12/27	1210	W	MW-12			-004	X									
12/27	1220	W	SVE-1R			-005	X									
		~~W~~	~~MW-11~~													
		~~W~~	~~SVE-2~~													
		~~W~~	~~MW-2~~													

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/27/19	1420		Chantal Walter		12/27/19	1420
12/27/19	1716	Chantal Walters		courier	12/28/19	0940

Remarks: 3:11 to Ensolum

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

Analysis Request

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 03, 2020

Kyle Summers

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

RE: K-12 Y 3 OrderNo.: 1912D70

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/31/2019 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 **1912D70**
Date Reported: **1/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-11
Project: K-12 Y 3
Collection Date: 12/30/2019 10:50:00 AM
Lab ID: 1912D70-001
Matrix: AQUEOUS
Received Date: 12/31/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	270	20		µg/L	20	1/2/2020 10:08:54 AM	R65535
Toluene	ND	20		µg/L	20	1/2/2020 10:08:54 AM	R65535
Ethylbenzene	300	20		µg/L	20	1/2/2020 10:08:54 AM	R65535
Xylenes, Total	3200	40		µg/L	20	1/2/2020 10:08:54 AM	R65535
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	20	1/2/2020 10:08:54 AM	R65535

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 **1912D70**
Date Reported: **1/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: SVE-2
Project: K-12 Y 3
Collection Date: 12/30/2019 11:40:00 AM
Lab ID: 1912D70-002 **Matrix:** AQUEOUS **Received Date:** 12/31/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	960	20		µg/L	20	1/2/2020 10:32:00 AM	R65535
Toluene	ND	20		µg/L	20	1/2/2020 10:32:00 AM	R65535
Ethylbenzene	220	20		µg/L	20	1/2/2020 10:32:00 AM	R65535
Xylenes, Total	2000	40		µg/L	20	1/2/2020 10:32:00 AM	R65535
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	20	1/2/2020 10:32:00 AM	R65535

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 **1912D70**
Date Reported: **1/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-2
Project: K-12 Y 3
Collection Date: 12/30/2019 12:30:00 PM
Lab ID: 1912D70-003 **Matrix:** AQUEOUS **Received Date:** 12/31/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2600	50		µg/L	50	1/2/2020 3:53:52 PM	R65535
Toluene	ND	20		µg/L	20	1/2/2020 10:54:57 AM	R65535
Ethylbenzene	300	20		µg/L	20	1/2/2020 10:54:57 AM	R65535
Xylenes, Total	2900	40		µg/L	20	1/2/2020 10:54:57 AM	R65535
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	20	1/2/2020 10:54:57 AM	R65535

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#: **1912D70**

03-Jan-20

Client: ENSOLUM

Project: K-12 Y 3

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R65535**	RunNo: **65535**
Prep Date:	Analysis Date: **1/2/2020**	SeqNo: **2251308** 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		99.4	80	120			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R65535**	RunNo: **65535**
Prep Date:	Analysis Date: **1/2/2020**	SeqNo: **2251309** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.2	80	120			
Toluene	19	1.0	20.00	0	96.0	80	120			
Ethylbenzene	19	1.0	20.00	0	97.0	80	120			
Xylenes, Total	57	2.0	60.00	0	94.9	80	119			
Surr: 4-Bromofluorobenzene	21		20.00		103	80	120			

Sample ID: **1912d70-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-11**	Batch ID: **R65535**	RunNo: **65535**
Prep Date:	Analysis Date: **1/2/2020**	SeqNo: **2251311** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	670	20	400.0	273.0	100	80	120			
Toluene	400	20	400.0	13.27	97.2	80	120			
Ethylbenzene	690	20	400.0	302.9	97.7	80	120			
Xylenes, Total	4200	40	1200	3166	89.8	68.3	130			
Surr: 4-Bromofluorobenzene	390		400.0		98.6	80	120			

Sample ID: **1912d70-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-11**	Batch ID: **R65535**	RunNo: **65535**
Prep Date:	Analysis Date: **1/2/2020**	SeqNo: **2251312** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	640	20	400.0	273.0	92.6	80	120	4.66	20	
Toluene	390	20	400.0	13.27	93.6	80	120	3.64	20	
Ethylbenzene	680	20	400.0	302.9	93.6	80	120	2.42	20	
Xylenes, Total	4100	40	1200	3166	80.0	68.3	130	2.79	20	
Surr: 4-Bromofluorobenzene	410		400.0		103	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: 1912D70 RcptNo: 1

Received By: Juan Rojas 12/31/2019 8:15:00 AM

Completed By: Desiree Dominguez 12/31/2019 8:23:23 AM

Reviewed By: DAD 12/31/19

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: JR 12/31/19

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	0.2	Good	Not Present			

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: K-12 Pit #3

Project #: 05B1226004

Project Manager: M Gentry

Sampler: C DAponti

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.2-0.1=0.2

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. 19LD70	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)
12/30/19	1050	W	MW-11	3 VOA's	HCl	-001	X									
12/30/19	1140	W	SVE-2	1	1	-002	X									
12/30/19	1230	W	MW-2	1	1	-003	X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/30	1432		Christin Wall		12/30/19	1432
12/30/19	1720	Christin Wall		Courier	12/31/19	8:15

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 32633

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 32633
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2018 Groundwater Monitoring Report: Content satisfactory 1. Follow recommendations stated within 2018 Groundwater Monitoring Report. a. Submit groundwater monitoring results b. Continue semi-annual groundwater monitoring c. Further delineate the dissolved-phase groundwater plume d. Evaluate in situ remediation options for source area soils Review of 2019 Groundwater Monitoring Report: Content satisfactory 2. Follow recommendations stated within 2019 Groundwater Monitoring Report. a. Continue SA-GWM&S activities b. Complete additional site-specific aquifer characterization c. Install additional delineation wells d. Prepare a Stage 2 Abatement Plan (following full delineation) e. Submit annual report to OCD no later than March 31, 2022.	1/26/2022