3R – 459

2014 GWMR

06 / 11 / 2015

Enterprise Products

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

ENTERPRISE PRODUCTS OPERATING LLC

June 11, 2015

Submitted via email to the NMOCD FTP Website

Mr. Glenn von Gonten
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: ***Annual Groundwater Monitoring Report (February and November 2014 Sampling Events)***
Enterprise Field Services, LLC – Lateral K-12 Y#3 Condensate Tank Release (3/19/2012)
Rio Arriba County, New Mexico
OCD RP: (Not assigned)

Dear Mr. von Gonten:

Please find attached, the above-referenced report prepared by Apex TITAN, Inc. (Apex). The report is associated with the Enterprise Field Services, LLC (Enterprise) Lateral K-12 Y#3 condensate tank release of natural gas condensate that occurred on March 19, 2012.

The activities detailed in the attached *Annual Groundwater Monitoring Report* (AGMR) document the semi-annual groundwater monitoring activities completed at the site during February and November 2014. The monitoring activities were performed to further evaluate the concentrations of constituents of concern (COCs) in groundwater at the site. Groundwater samples collected from monitoring wells exhibited COC concentrations above the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (GQSs) during the February and/or November 2014 sampling events. Based on the information presented in the attached report, Enterprise recommends: completing the delineation of impacted soil and groundwater; continuing semi-annual groundwater monitoring; and, evaluating corrective action alternatives for the remediation of impacted soil and groundwater.

Enterprise appreciates the OCD's continued assistance and guidance with this project. 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

/dep
Attachments

cc: Ms. Shari Ketcham – BLM, Farmington, NM

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HOUSTON, TX 77002-5227
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ANNUAL GROUNDWATER MONITORING REPORT
(February and November 2014 Sampling Events)

Property:

Lateral K-12 Y#3 Condensate Tank Release (3/19/2012)
SW 1/4, S23 T27N R7W
Rio Arriba County, New Mexico

June 9, 2015
Apex Project No. 7030414G015

Prepared for:

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

Prepared by:

Heather M. Woods, P.G.
Senior Project Manager

Elizabeth Scaggs, P.G.
Division Manager

Annual Groundwater Monitoring Report
(February and November 2014 Sampling Events)
Lateral K-12 Y#3 Condensate Tank Release (3/19/2012)
Executive Summary

The Lateral K-12 Y#3 condensate tank release site is located in the southwest (SW) 1/4, of Section 23, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico (36.55412N, 107.54935W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to an unpaved road, on public land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities. Two natural gas pipelines operated by Enterprise Field Services, LLC (Enterprise) traverse the northwest portion of the Site, parallel to the road, and a condensate tank is present in the central portion of the Site, which overlies a backfilled remediation excavation. On March 19, 2012, a natural gas condensate release, estimated at less than one barrel, occurred as a result of overfilling the condensate tank.

During corrective action excavation of impacted soils, a suspected historical earthen pit was discovered and the excavation was expanded to remove affected material. 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. Groundwater was not identified in the 35-foot deep excavation. Subsequent site investigations included the advancement of soil borings and the installation of monitoring wells to delineate the extent of hydrocarbon affected soil and groundwater. Samples collected from the soil borings and monitoring wells exhibited concentrations of constituents of concern (COCs) 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.

Semi-annual groundwater monitoring events were conducted on February 12, 2014, by Animas Environmental Services, LLC, and on November 13. 2014, by Apex TITAN, Inc. (Apex) to further evaluate groundwater COC concentrations over time. Findings based on these activities are as follows:

- Based on available information, the first groundwater bearing unit at the Site is very limited in thickness and may be more accurately described as subsurface water. It appears that it is limited to percolating water from precipitation events that collects on or near the surface of the weathered bedrock (perches) and subsequently fills or partially fills the monitoring wells and the associated well bore annulus. 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 suspected source.

- Monitoring wells MW-3 and MW-4 were reported to be dry during the February 2014 sampling event. Monitoring wells MW-3, MW-4 and MW-5 were found to be dry or did not recharge a sufficient volume of water to allow for the collection of samples during the November 2014 sampling event.

- A sheen of non-aqueous phase liquid (NAPL) in monitoring well MW-3 was noted during the February 2014 sampling event; however, no other evidence has been identified to indicate hydrocarbon impact at monitoring well MW-3.

- **The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, MW-2 and MW-5 during the February 2014 sampling event exhibited benzene and xylenes concentrations in exceedance of the WQCC GQSs. The groundwater samples collected from monitoring wells SVE-1R, MW-2 and MW-5 during the February 2014 sampling event exhibited toluene concentrations in exceedance of the WQCC GQS.**

- **The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, and MW-2 during the November 2014 sampling event exhibited benzene concentrations in exceedance of the WQCC GQSs. The groundwater samples collected from monitoring wells SVE-2 and MW-2 exhibited xylenes concentrations in exceedance of the WQCC GQS.**

Recommendations based on these activities are as follows:

- **Continue semi-annual groundwater monitoring at the Site;**

- **Install additional soil borings/monitoring wells to further delineate the COCs in soil and groundwater; and**

- **Evaluate active corrective action alternatives for the remediation of residual impacted soils and/or groundwater.**

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ANNUAL GROUNDWATER MONITORING REPORT
(February and November 2014 Sampling Events)

Lateral K-12 Y#3 Condensate Tank Release (3/19/2012)
SW 1/4, S23 T27N R7W
Rio Arriba County, New Mexico

Apex Project No. 7030414G015

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral K-12 Y#3 condensate tank release site is located in the southwest (SW) 1/4, of Section 23, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico (36.55412N, 107.54935W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to an unpaved road, on public land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities. Two natural gas pipelines operated by Enterprise Field Services, LLC (Enterprise) traverse the northwest portion of the Site, parallel to the road, and a condensate tank is present in the central portion of the Site, which overlies a backfilled remediation excavation.

On March 19, 2012, a natural gas condensate release estimated at less than one barrel occurred as a result of overfilling the condensate tank. Animas Environmental 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 affected material. 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 the backfilling of the excavation with clean, imported soil, AES conducted a site investigation that included the advancement of seven (7) soil borings. Three (3) of the soil borings were completed as soil-vapor-extraction (SVE) monitoring wells in anticipation of potential future remedial activities.

On July 19, 2013, AES conducted monitoring of the SVE wells which indicated the presence of groundwater in the three (3) SVE wells as well as the presence of non-aqueous phase liquid (NAPL) in monitoring well SVE-1. AES also advanced two (2) soil borings (SB-8 and SB-9) to evaluate the degree of natural attenuation that might have occurred since the backfilling of the excavation. On July 22, 2013, AES collected groundwater samples from monitoring wells SVE-2 and SVE-3 for laboratory analysis of total dissolved solids (TDS) and chlorides, and conducted an informal bail down test in each of the wells. 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*).

A groundwater monitoring and sampling event was conducted by AES on October 8, 2013. No NAPL was observed in monitoring well SVE-1 during this monitoring and sampling event. However, due to settling associated with the backfilled excavation, the screened portion of monitoring well

SVE-1 was damaged and collection of a groundwater sample was not possible. Groundwater samples were collected from monitoring wells SVE-2 and SVE-3 for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO).

During January 2014, AES advanced six (6) soil borings, completed as groundwater monitoring wells MW-1 through MW-5, and replaced monitoring well SVE-1 with SVE-1R. Monitoring well SVE-1 was plugged and abandoned during these drilling activities.

The Site is subject to regulatory oversight by the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Oil Conservation Division (OCD). To address activities related to crude oil/condensate releases, the EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the EMNRD OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.29 *Release Notification*. These guidance documents establish investigation and abatement action requirements for release sites subject to reporting and/or corrective action.

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

1.2 Scope of Work

The objective of the groundwater monitoring events was to further evaluate the concentrations of chemicals of concern (COCs) in groundwater at the Site.

1.3 Standard of Care, Limitations & Reliance

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

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

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the

report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

2.0 SAMPLING PROGRAM

Semi-annual groundwater sampling events were conducted on February 12, 2014, by AES, and on November 13, 2014, by Aaron Bryant and Ranee Deechilly, Apex environmental professionals.

Apex's groundwater sampling program consisted of the following:

Prior to sample collection, Apex gauged the depth to fluids in each monitoring well using an interface probe capable of detecting NAPL. AES reported a possible sheen of product at monitoring well MW-3 during the February 2014 sampling event.

Each monitoring well was micro-purged utilizing low-flow sampling techniques. 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. It does not necessarily refer to the flow rate of water discharged at the surface which can be affected by flow regulators or restrictions. 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) are maintained during sampling activities, using dedicated sampling equipment.

The utilization of low-flow minimal drawdown techniques enables the isolation of the screened interval groundwater from the overlying stagnant casing water. The pump intake is placed within the screened interval such that the groundwater recovered is drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

Subsequent to the completion of the micro-purge process, one (1) groundwater sample was collected from each monitoring well. The groundwater samples were collected from each monitoring well once produced groundwater was consistent in color, clarity, pH, temperature and conductivity.

Monitoring wells MW-3 and MW-4 were reported to be dry during the February 2014 sampling event. Monitoring wells MW-3, MW-4 and MW-5 were found to be dry or did not recharge a sufficient volume of water to allow for the collection of samples during the November 2014 sampling event.

Groundwater samples were collected in laboratory supplied containers and placed on ice in a cooler secured with a custody seal. The samples collected during February 2014 were shipped under proper chain-of-custody to ALS Environmental in Houston, Texas (ALS did not provide custody seals for the sample containers), while the samples collected during November 2014 were relinquished to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico.

3.0 LABORATORY ANALYTICAL PROGRAM

The groundwater samples collected from the monitoring wells were analyzed for BTEX utilizing EPA SW-846 Method #8021. The sample containers for organic analyses were pre-preserved with hydrogen chloride (HCl) for the February sampling event and mercuric chloride ($HgCl_2$) for the November sampling event.

A summary of the analysis, sample media, and EPA-approved methods are presented in the following table.

Analysis	Sample Media	No. of Samples (February/November)	EPA Method
BTEX	Groundwater	6/5	SW-846 8021

Laboratory results are summarized in Table 1 (Appendix B). The executed chain-of-custody form and laboratory data sheets are provided in Appendix C.

4.0 GROUNDWATER FLOW DIRECTION

Each of the monitoring wells was surveyed to establish relative top-of-casing (TOC) elevations. Prior to sample collection, Apex gauged the depth to fluids in each monitoring well. The apparent groundwater flow direction (gradient) at the Site is generally toward the northeast. The calculated gradient during the February and November 2014 monitoring events averaged approximately 0.002 feet per feet (ft/ft) across the Site.

Based on available information, the first groundwater bearing unit at the Site is very limited in quantity. It appears that it is limited to percolating water from precipitation events that collects on or near the surface of the weathered bedrock (perches) and subsequently fills or partially fills the monitoring wells and the associated well bore annulus. This speculation is further supported by the lack of water encountered during prior excavation activities (reaching 35 feet below grade surface (bgs)) which exceeded the measured depth to groundwater at the Site of approximately 27 feet bgs near the suspected source.

Groundwater elevations derived from the February and November 2014 gauging events are presented with TOC elevations in Table 2 (Appendix B). Groundwater gradient maps for the February and November 2014 events are included as Figure 4A and 4B, respectively (Appendix A).

5.0 DATA EVALUATION

The Site is subject to regulatory oversight by the EMNRD OCD. To address activities related to crude oil/condensate related releases, the EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the EMNRD/OCD rules, specifically NMAC 19.15.29 *Release Notification*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

5.1 Groundwater Samples

Apex compared BTEX concentrations or laboratory reporting limits (RLs) associated with the groundwater samples collected from the monitoring wells during the February and November 2014 sampling events to the New Mexico WQCC GQSs. 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.

February 2014:

Monitoring wells MW-3 and MW-4 were noted to be dry during the February 2014 sampling event; therefore groundwater samples were not able to be collected. However, AES notes indicate a sheen of NAPL was observed in monitoring well MW-3 during the February 2014 sampling event. No other evidence has been identified to indicate hydrocarbon impact at monitoring well MW-3.

Benzene, Toluene, Ethylbenzene, and Xylenes

The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, MW-2, and MW-5 exhibited benzene concentrations ranging from 78 micrograms per liter (µg/L) (SVE-3) to 2,300 µg/L (MW-2), which exceed the WQCC GQS of 10 µg/L. The groundwater sample collected from monitoring well MW-1 exhibited a benzene concentration below the laboratory RL, which is below the WQCC GQS of 10 µg/L.

The groundwater samples collected from monitoring wells SVE-1R, MW-2 and MW-5 exhibited toluene concentrations ranging from 1,500 µg/L (SVE-1R and MW-2) to 2,900 µg/L (MW-5), which exceed the WQCC GQS of 750 µg/L. The groundwater samples collected from monitoring wells SVE-2, SVE-3, and MW-1 exhibited toluene concentrations ranging from below the laboratory RLs to 170 µg/L (SVE-3), which are below the WQCC GQS of 750 µg/L.

The groundwater samples collected from the monitoring wells exhibited ethylbenzene concentrations ranging from below laboratory RLs to 360 µg/L (SVE-2), 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-5 exhibited xylenes concentrations ranging from 1,500 µg/L (SVE-3) to 3,600 µg/L (MW-2), which exceed the WQCC GQS of 620 µg/L. The groundwater sample collected from monitoring well MW-1 exhibited xylenes concentrations below the laboratory RL, which is below the WQCC GQS of 620 µg/L.

No data qualifier flags were associated with the February 2014 analytical results.

November 2014:

Monitoring wells MW-3 and MW-4 were observed to be dry during the November 2014 sampling event, and monitoring well MW-5 did not recharge a sufficient volume of water to permit viable sample collection. Therefore groundwater samples were not collected from monitoring wells MW-3, MW-4 and MW-5.

Benzene, Toluene, Ethylbenzene, and Xylenes

The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, and MW-2 exhibited benzene concentrations ranging from 12 µg/L (SVE-3) to 1,600 µg/L (MW-2), which exceed the WQCC GQS of 10 µg/L. The groundwater sample collected from monitoring well MW-1 exhibited a benzene concentration below the laboratory RL, which is below the WQCC GQS of 10 µg/L.

The groundwater samples collected from monitoring wells exhibited toluene concentrations ranging from below the laboratory RLs to 520 µg/L (MW-2), which are below the WQCC GQS of 750 µg/L.

The groundwater samples collected from the monitoring wells exhibited ethylbenzene concentrations ranging from below laboratory RLs to 270 µg/L (SVE-2), which are below the WQCC GQS of 750 µg/L.

The groundwater samples collected from monitoring wells SVE-2 and MW-2 exhibited xylenes concentrations of 1,900 µg/L and 2,500 µg/L, respectively, which exceed the WQCC GQS of 620 µg/L. The groundwater samples collected from monitoring wells SVE-1R, SVE-3, and MW-1 exhibited xylenes concentrations ranging from below laboratory RLs to 190 µg/L (SVE-1R), which are below the WQCC GQS of 620 µg/L.

Data Qualifier Flags		
Sample ID	**Data Qualifier Flag**	**Comments/Reactions**
SVE-1 (collected 11/13/2014)	SW-846 Method 8021 BTEX Surrogate Recovery was outside the accepted recovery limits.	The BTEX data is suitable for use as an estimated value. The surrogate recovery was slightly outside the accepted "high" limit of 167% with a recovery of 183%.

6.0 FINDINGS

Semi-annual groundwater monitoring events were conducted at the Lateral K-12 Y#3 condensate tank release (3/19/2012) Site during February and November 2014. The Site is located within the Enterprise pipeline ROW in the SW 1/4, of Section 23, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico. The Site is located adjacent to an unpaved road, on public land managed by the BLM. The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities. Two natural gas pipelines operated by Enterprise traverse the northwest portion of the Site, parallel to the road, and a condensate tank is present in the central portion of the Site, which overlies a backfilled remediation excavation. The objective of the groundwater monitoring events was to further evaluate the concentrations of COCs in groundwater.

- Based on available information, the first groundwater bearing unit at the Site is very limited in thickness and may be more accurately described as subsurface water. It appears that it is limited to percolating water from precipitation events that collects on or near the surface of the weathered bedrock (perches) and subsequently fills or partially fills the monitoring wells and the associated well bore annulus. 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 suspected source.

- Monitoring wells MW-3 and MW-4 were reported to be dry during the February 2014 sampling event. Monitoring wells MW-3, MW-4 and MW-5 were found to be dry or did not recharge a sufficient volume of water to allow for the collection of samples during the November 2014 sampling event.

- A sheen of NAPL in monitoring well MW-3 was noted during the February 2014 sampling event; however, no other evidence has been identified to indicate hydrocarbon impact at monitoring well MW-3.

- **The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, MW-2 and MW-5 during the February 2014 sampling event exhibited benzene and xylenes concentrations in exceedance of the WQCC GQSs. The groundwater samples collected from monitoring wells SVE-1R, MW-2 and MW-5 during the February 2014 sampling event exhibited toluene concentrations in exceedance of the WQCC GQS.**

- **The groundwater samples collected from monitoring wells SVE-1R, SVE-2, SVE-3, and MW-2 during the November 2014 sampling event exhibited benzene concentrations in exceedance of the WQCC GQSs. The groundwater samples collected from monitoring wells SVE-2 and MW-2 exhibited xylenes concentrations in exceedance of the WQCC GQS.**

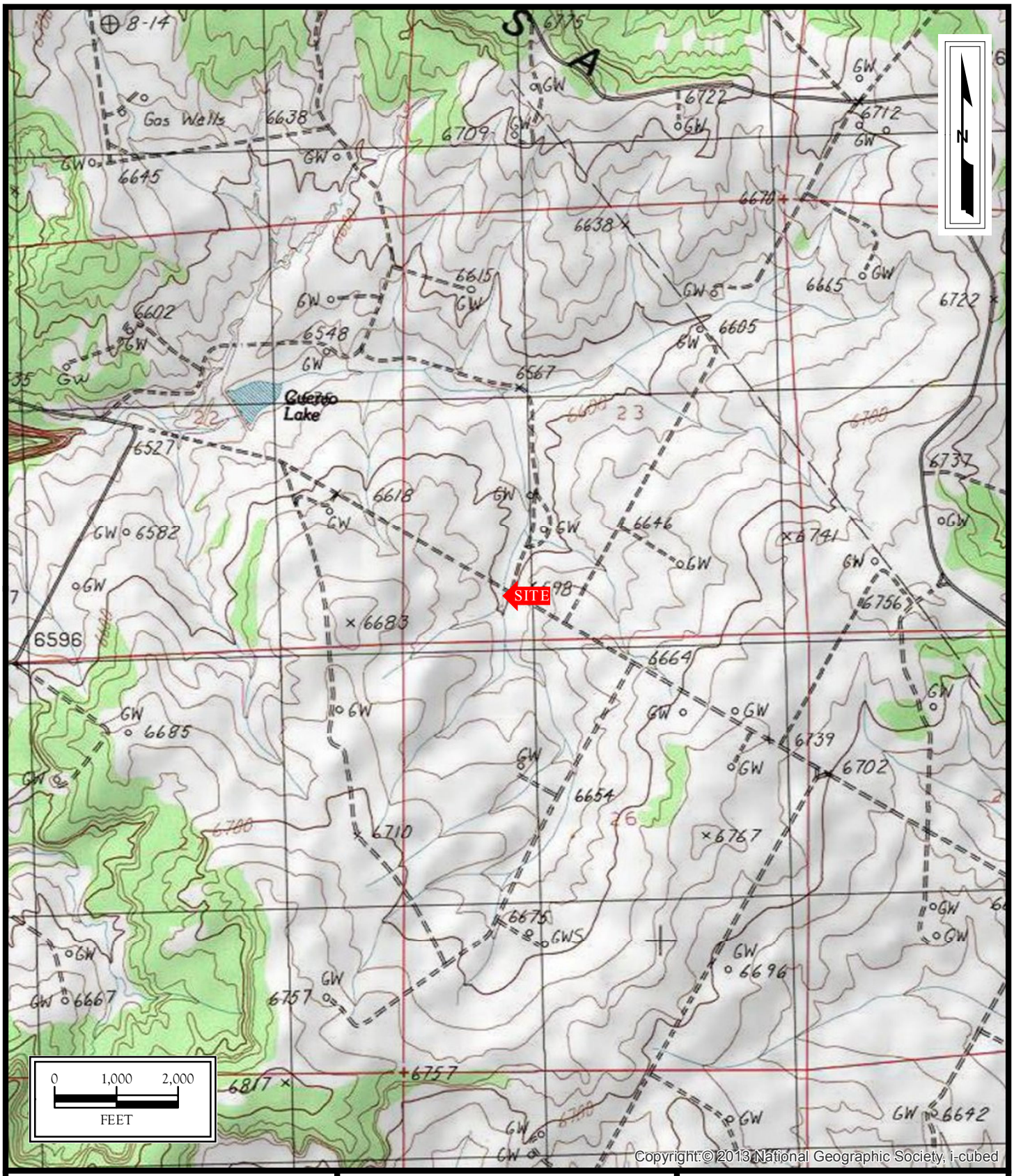
7.0 RECOMMENDATIONS

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

- **Report the groundwater monitoring results to the OCD;**
- **Continue semi-annual groundwater monitoring at the Site;**
- **Install additional soil borings/monitoring wells to further delineate the COCs in soil and groundwater; and**
- **Evaluate active corrective action alternatives for the remediation of residual impacted soils and/or groundwater.**

APPENDIX A

Figures



K-12 Y#3 Condensate Tank Release
SW1/4 S23 T27N R7W
Rio Arriba County, New Mexico
36.55412N, 107.54935W

Project No. 7030414G015.001

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

FIGURE 1
Topographic Map
Gould Pass, NM Quadrangle
1985

K-12 Y#3 Condensate Tank Release
SW1/4 S23 T27N R7W
Rio Arriba County, New Mexico
36.55412N, 107.54935W

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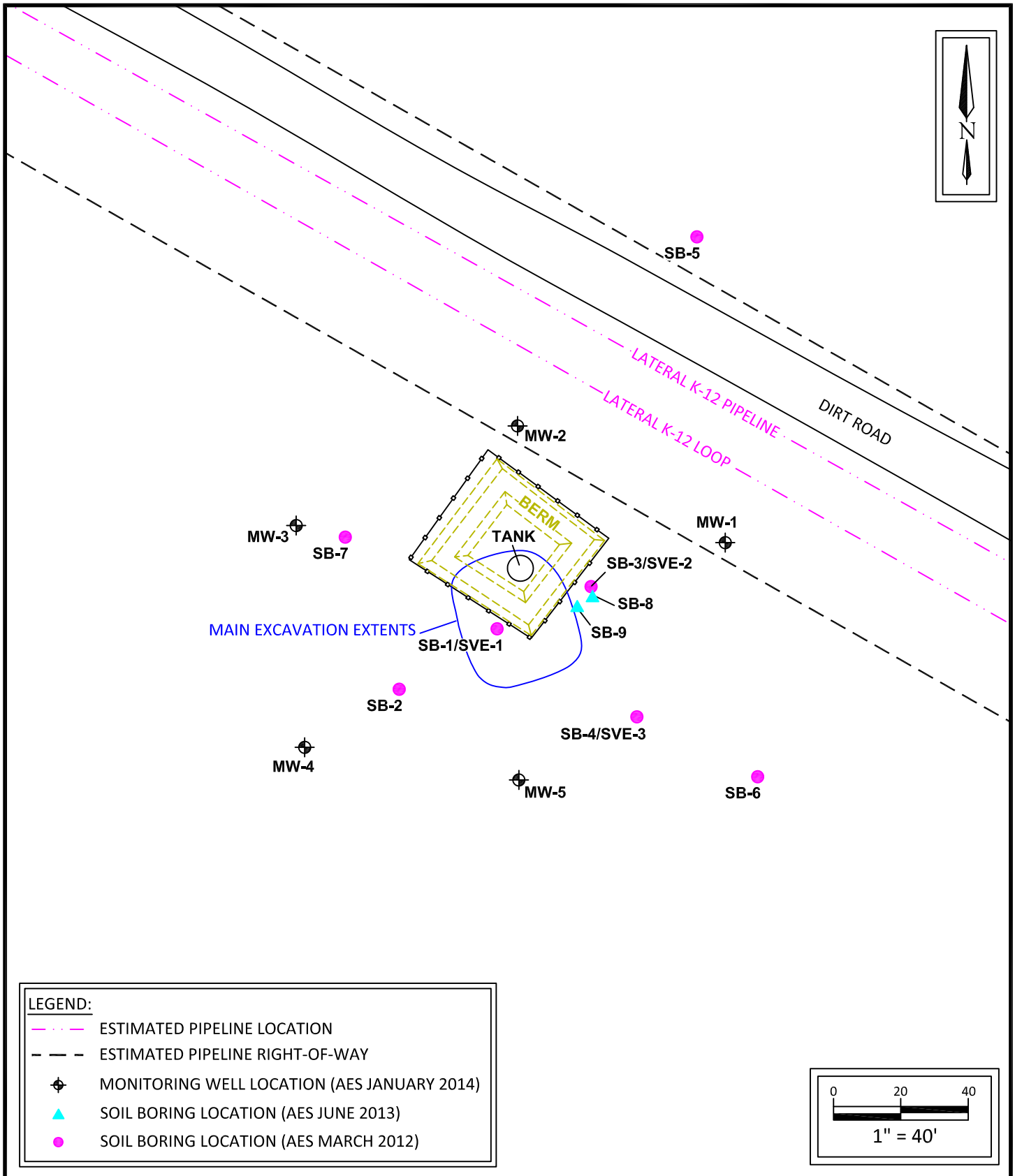
FIGURE 2
Site Vicinity Map



LEGEND:

- ESTIMATED PIPELINE LOCATION
- ESTIMATED PIPELINE RIGHT-OF-WAY
- MONITORING WELL LOCATION (AES JANUARY 2014)
- SOIL BORING LOCATION (AES JUNE 2013)
- SOIL BORING LOCATION (AES MARCH 2012)

0 20 40

1" = 40'

K-12 Y#3 Condensate Tank Release
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FIGURE 3
Site Map

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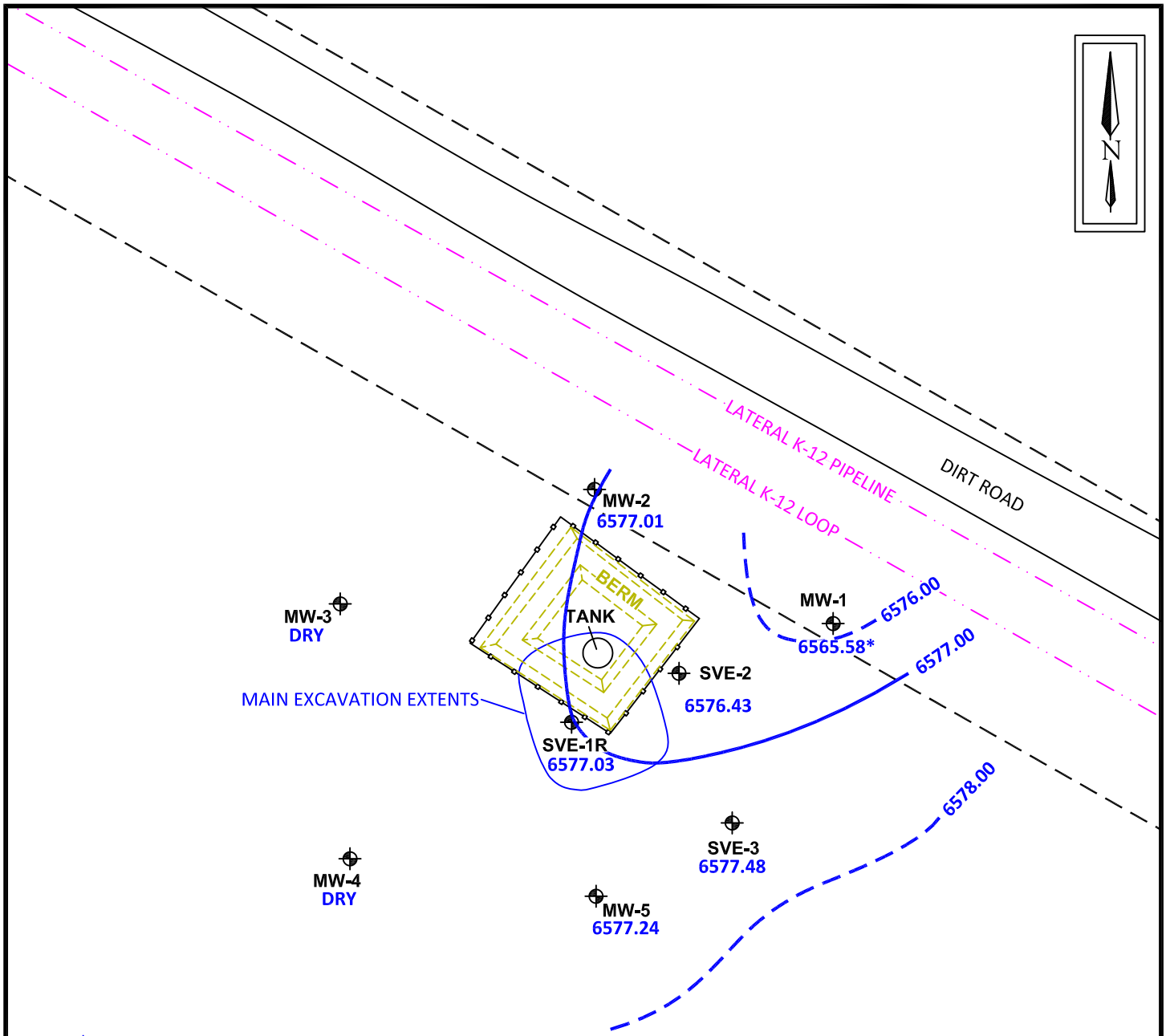

NOTE: * GROUNDWATER ELEVATION EXCLUDED FROM GRADIENT CALCULATION

LEGEND:

- ESTIMATED PIPELINE LOCATION
- ESTIMATED PIPELINE RIGHT-OF-WAY
- EXISTING MONITORING WELL LOCATION
- 6577.03 GROUNDWATER ELEVATION (FEET AMSL)
- 6570.00 GROUNDWATER ELEVATION CONTOUR (FEET AMSL)

0 20 40

1" = 40'

K-12 Y#3 Condensate Tank Release
SW1/4 S23 T27N R7W
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36.55412N, 107.54935W

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FIGURE 4A
Groundwater Gradient Map
February 2014

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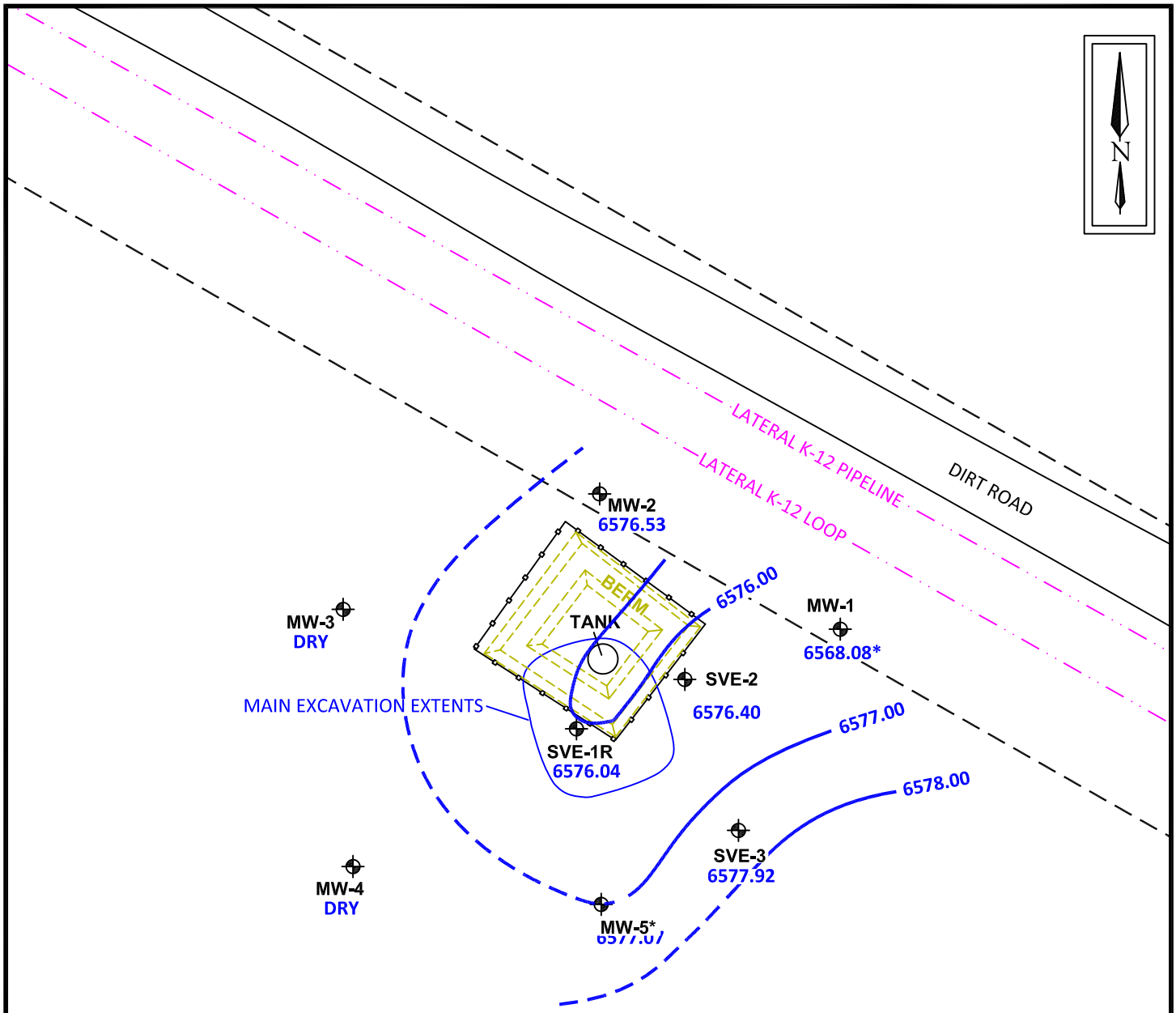

NOTE: * GROUNDWATER ELEVATION EXCLUDED FROM GRADIENT CALCULATION

LEGEND:

- ESTIMATED PIPELINE LOCATION
- ESTIMATED PIPELINE RIGHT-OF-WAY
- EXISTING MONITORING WELL LOCATION
- 6577.03 GROUNDWATER ELEVATION (FEET AMSL)
- 6570.00 GROUNDWATER ELEVATION CONTOUR (FEET AMSL)

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FIGURE 4B
Groundwater Gradient Map
November 2014

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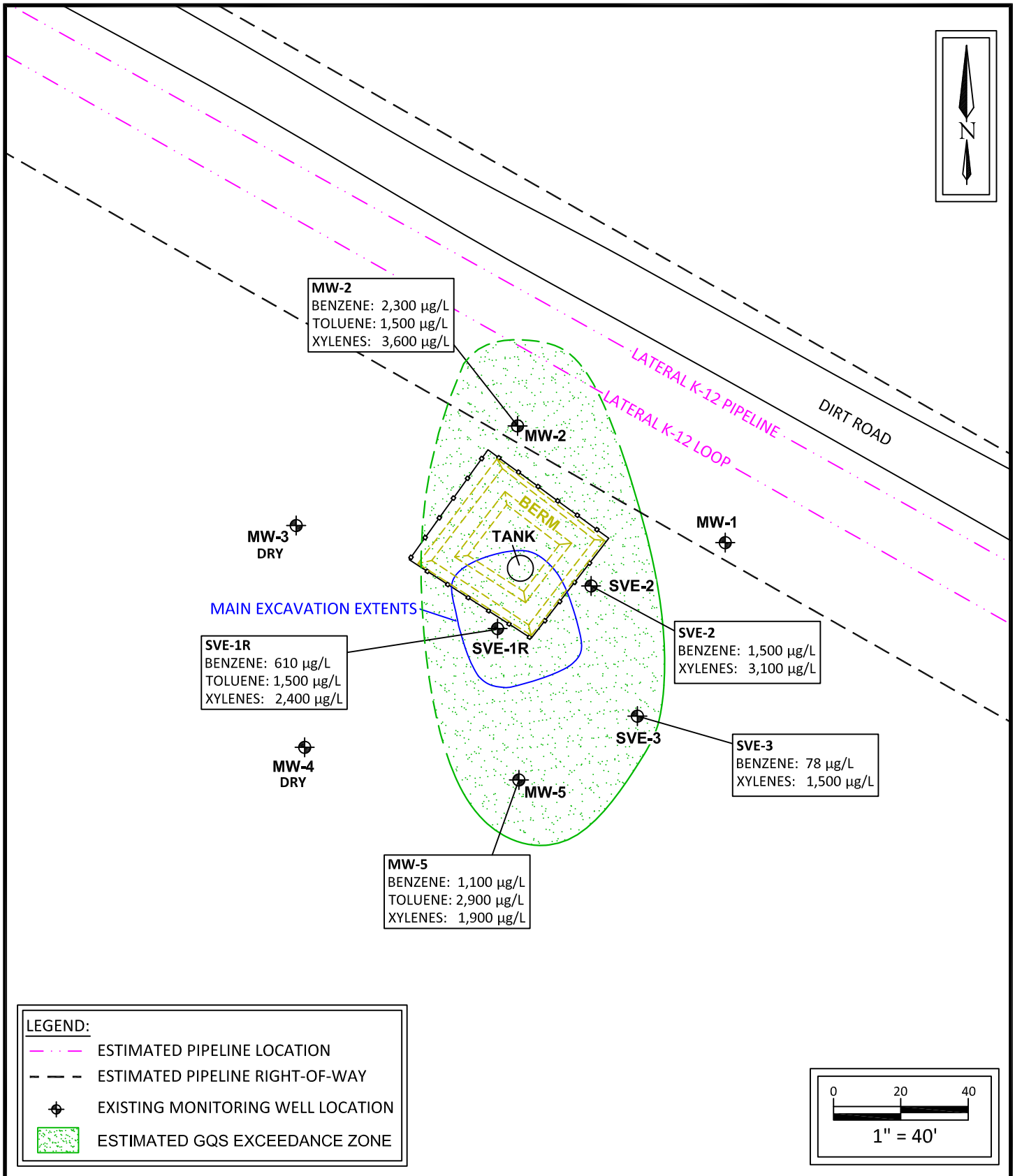

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Rio Arriba County, New Mexico
36.55412N, 107.54935W

Project No. 7030414G015.001

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

FIGURE 5A
Groundwater GQS Exceedance Zone Map
February 2014

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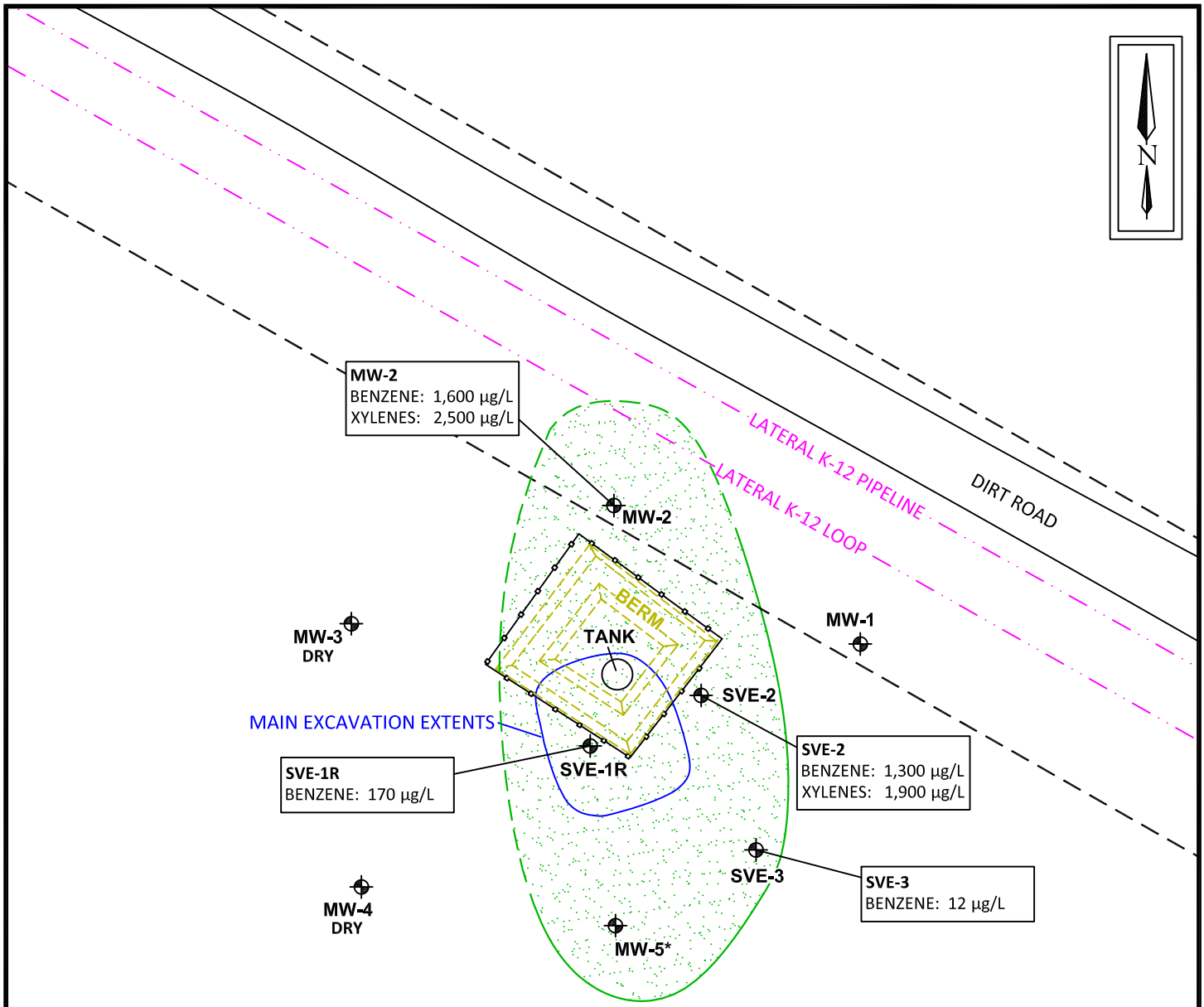

NOTE: * INSUFFICIENT VOLUME TO SAMPLE

LEGEND:

- ESTIMATED PIPELINE LOCATION
- ESTIMATED PIPELINE RIGHT-OF-WAY
- EXISTING MONITORING WELL LOCATION
- ESTIMATED GQS EXCEEDANCE ZONE

0 20 40

1" = 40'

K-12 Y#3 Condensate Tank Release
SW1/4 S23 T27N R7W
Rio Arriba County, New Mexico
36.55412N, 107.54935W

Project No. 7030414G015.001

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FIGURE 5B
Groundwater GQS Exceedance Zone Map
November 2014

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APPENDIX B

Tables

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

Sample I.D.	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**
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
SVE-2	10.8.13	**1,600**	180	270	**4,200**	18	15	<5.0
	02.12.14	**1,500**	100	360	**3,100**	NA	NA	NA
	11.13.14	**1,300**	110	270	**1,900**	NA	NA	NA
SVE-3	10.8.13	**110**	450	210	**2,000**	20	9.3	<5.0
	02.12.14	**78**	170	160	**1,500**	NA	NA	NA
	11.13.14	**12**	6.5	68	140	NA	NA	NA
MW-1	02.12.14	<1	<1	<1	<3	NA	NA	NA
	11.13.14	<1.0	<1.0	<1.0	<2.0	NA	NA	NA
MW-2	02.12.14	**2,300**	**1,500**	350	**3,600**	NA	NA	NA
	11.13.14	**1,600**	520	220	**2,500**	NA	NA	NA
MW-3	02.12.14	Not Sampled - Well Dry						
	11.13.14	Not Sampled - Well Dry						
MW-4	02.12.14	Not Sampled - Well Dry						
	11.13.14	Not Sampled - Well Dry						
MW-5	02.12.14	**1,100**	**2,900**	220	**1,900**	NA	NA	NA
	11.13.14	Not Sampled - Insufficient volume to collect sample						

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

NA = Not Analyzed

NE = Not Established

µg/L = Micrograms per Liter

mg/L = Milligrams per Liter

* SVE-1 was replaced by SVE-1R on January 15, 2014

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

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	6606.09	6576.04
SVE-2	10.08.13	ND	28.00	ND	6605.82	6577.82
	02.12.14	ND	29.39	ND	6605.82	6576.43
	11.13.14	ND	29.42	ND	6605.82	6576.40
SVE-3	10.08.13	ND	31.85	ND	6607.46	6575.61
	02.12.14	ND	29.98	ND	6607.46	6577.48
	11.13.14	ND	29.54	ND	6607.46	6577.92
MW-1	02.12.14	ND	40.95	ND	6606.53	6565.58
	11.13.14	ND	38.45	ND	6606.53	6568.08
MW-2	02.12.14	ND	28.79	ND	6605.80	6577.01
	11.13.14	ND	29.27	ND	6605.80	6576.53
MW-3	02.12.14	ND	DRY	ND	6607.53	DRY
	11.13.14	ND	DRY	ND	6607.53	DRY
MW-4	02.12.14	ND	DRY	ND	6609.20	DRY
	11.13.14	ND	DRY	ND	6609.20	DRY
MW-5	02.12.14	ND	29.87	ND	6607.11	6577.24
	11.13.14	ND	30.04	ND	6607.11	6577.07

BTOC - below top of casing

AMSL - above mean sea level

TOC - top of casing

ND - Not detected

NA - Not applicable

* SVE-1 was replaced by SVE-1R on January 15, 2014

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

24-Feb-2014

Heather Woods
Animas Environmental Services
624 E. Comanche
Farmington, NM 87401

Tel: (505) 436-2064
Fax: (505) 324-2022

Re: Lateral K-12 Work Order: **1402655**

Dear Heather,

ALS Environmental received 7 samples on 15-Feb-2014 09:52 AM for the analyses presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

The total number of pages in this revised report is 21.

Regards,

Electronically approved by: Joni S. Blankfield

Joni S. Blankfield
Project Manager

Certificate No: T104704231-13-12

ALS Environmental

Date: 24-Feb-14

Client: Animas Environmental Services
Project: Lateral K-12
Work Order: **1402655**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1402655-01	MW-5	Water		2/12/2014 13:22	2/15/2014 09:52	☐
1402655-02	MW-1	Water		2/12/2014 14:39	2/15/2014 09:52	☐
1402655-03	SVE-3	Water		2/12/2014 15:22	2/15/2014 09:52	☐
1402655-04	MW-2	Water		2/12/2014 16:01	2/15/2014 09:52	☐
1402655-05	SVE-2	Water		2/12/2014 16:27	2/15/2014 09:52	☐
1402655-06	SVE-1	Water		2/12/2014 16:52	2/15/2014 09:52	☐
1402655-07	VBLKW 140207	Water		2/12/2014	2/15/2014 09:52	☐

ALS Environmental

Date: 24-Feb-14

Client:	Animas Environmental Services
Project:	Lateral K-12
Work Order:	1402655

Case Narrative

REVISED REPORT (02/24/14): This report has been revised to report in ug/L per client request.

A Trip Blank was received; however, it was not listed on the chain of custody. The Trip Blank was logged for BTEX analysis by Method 8012 per the ARF.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: MW-5 **Lab ID:** 1402655-01
Collection Date: 2/12/2014 01:22 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	**1,400**		**100**	**ug/L**	50	2/19/2014 07:47 PM
o-Xylene	**550**		**50**	**ug/L**	50	2/19/2014 07:47 PM
Benzene	**1,100**		**50**	**ug/L**	50	2/19/2014 07:47 PM
Toluene	**2,900**		**50**	**ug/L**	50	2/19/2014 07:47 PM
Ethylbenzene	**220**		**50**	**ug/L**	50	2/19/2014 07:47 PM
Xylenes, Total	**1,900**		**150**	**ug/L**	50	2/19/2014 07:47 PM
Surr: 4-Bromofluorobenzene	*103*		*75-129*	*%REC*	50	2/19/2014 07:47 PM
Surr: Trifluorotoluene	*99.4*		*75-130*	*%REC*	50	2/19/2014 07:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: MW-1 **Lab ID:** 1402655-02
Collection Date: 2/12/2014 02:39 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	ND		2	ug/L	1	2/19/2014 06:55 PM
o-Xylene	ND		1	ug/L	1	2/19/2014 06:55 PM
Benzene	ND		1	ug/L	1	2/19/2014 06:55 PM
Toluene	ND		1	ug/L	1	2/19/2014 06:55 PM
Ethylbenzene	ND		1	ug/L	1	2/19/2014 06:55 PM
Xylenes, Total	ND		3	ug/L	1	2/19/2014 06:55 PM
Surr: 4-Bromofluorobenzene	*113*		*75-129*	*%REC*	1	2/19/2014 06:55 PM
Surr: Trifluorotoluene	*109*		*75-130*	*%REC*	1	2/19/2014 06:55 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: SVE-3 **Lab ID:** 1402655-03
Collection Date: 2/12/2014 03:22 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	**1,100**		**50**	**ug/L**	25	2/20/2014 11:35 AM
o-Xylene	**440**		**25**	**ug/L**	25	2/20/2014 11:35 AM
Benzene	**78**		**25**	**ug/L**	25	2/20/2014 11:35 AM
Toluene	**170**		**25**	**ug/L**	25	2/20/2014 11:35 AM
Ethylbenzene	**160**		**25**	**ug/L**	25	2/20/2014 11:35 AM
Xylenes, Total	**1,500**		**75**	**ug/L**	25	2/20/2014 11:35 AM
Surr: 4-Bromofluorobenzene	*118*		*75-129*	*%REC*	25	2/20/2014 11:35 AM
Surr: Trifluorotoluene	*112*		*75-130*	*%REC*	25	2/20/2014 11:35 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: MW-2 **Lab ID:** 1402655-04
Collection Date: 2/12/2014 04:01 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	**2,600**		**50**	**ug/L**	25	2/20/2014 11:52 AM
o-Xylene	**1,000**		**25**	**ug/L**	25	2/20/2014 11:52 AM
Benzene	**2,300**		**25**	**ug/L**	25	2/20/2014 11:52 AM
Toluene	**1,500**		**25**	**ug/L**	25	2/20/2014 11:52 AM
Ethylbenzene	**350**		**25**	**ug/L**	25	2/20/2014 11:52 AM
Xylenes, Total	**3,600**		**75**	**ug/L**	25	2/20/2014 11:52 AM
Surr: 4-Bromofluorobenzene	*120*		*75-129*	*%REC*	25	2/20/2014 11:52 AM
Surr: Trifluorotoluene	*108*		*75-130*	*%REC*	25	2/20/2014 11:52 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: SVE-2 **Lab ID:** 1402655-05
Collection Date: 2/12/2014 04:27 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	**2,400**		**50**	**ug/L**	25	2/20/2014 12:10 PM
o-Xylene	**720**		**25**	**ug/L**	25	2/20/2014 12:10 PM
Benzene	**1,500**		**25**	**ug/L**	25	2/20/2014 12:10 PM
Toluene	**100**		**25**	**ug/L**	25	2/20/2014 12:10 PM
Ethylbenzene	**360**		**25**	**ug/L**	25	2/20/2014 12:10 PM
Xylenes, Total	**3,100**		**75**	**ug/L**	25	2/20/2014 12:10 PM
Surr: 4-Bromofluorobenzene	*111*		*75-129*	*%REC*	25	2/20/2014 12:10 PM
Surr: Trifluorotoluene	*98.7*		*75-130*	*%REC*	25	2/20/2014 12:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: SVE-1 **Lab ID:** 1402655-06
Collection Date: 2/12/2014 04:52 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	**1,800**		**20**	**ug/L**	10	2/19/2014 07:30 PM
o-Xylene	**580**		**10**	**ug/L**	10	2/19/2014 07:30 PM
Benzene	**610**		**10**	**ug/L**	10	2/19/2014 07:30 PM
Toluene	**1,500**		**10**	**ug/L**	10	2/19/2014 07:30 PM
Ethylbenzene	**100**		**10**	**ug/L**	10	2/19/2014 07:30 PM
Xylenes, Total	**2,400**		**30**	**ug/L**	10	2/19/2014 07:30 PM
Surr: 4-Bromofluorobenzene	*113*		*75-129*	*%REC*	10	2/19/2014 07:30 PM
Surr: Trifluorotoluene	*103*		*75-130*	*%REC*	10	2/19/2014 07:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *24-Feb-14*

Client: Animas Environmental Services
Project: Lateral K-12 **Work Order:** 1402655
Sample ID: VBLKW 140207 **Lab ID:** 1402655-07
Collection Date: 2/12/2014 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX BY SW8021B			**SW8021B**			Analyst: **DNR**
m,p-Xylene	ND		2	ug/L	1	2/18/2014 05:37 PM
o-Xylene	ND		1	ug/L	1	2/18/2014 05:37 PM
Benzene	ND		1	ug/L	1	2/18/2014 05:37 PM
Toluene	ND		1	ug/L	1	2/18/2014 05:37 PM
Ethylbenzene	ND		1	ug/L	1	2/18/2014 05:37 PM
Xylenes, Total	ND		3	ug/L	1	2/18/2014 05:37 PM
Surr: 4-Bromofluorobenzene	*114*		*75-129*	*%REC*	1	2/18/2014 05:37 PM
Surr: Trifluorotoluene	*113*		*75-130*	*%REC*	1	2/18/2014 05:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Work Order: 1402655
Client: Animas Environmental Services
Project: Lateral K-12

DATES REPORT

Sample ID	Client Sample ID	Matrix	Collection Date	TCLP Date	Prep Date	Analysis Date
Batch ID R161554	**Test Name:** BTEX by SW8021B					
1402655-07A	VBLKW 140207	Water	2/12/2014			2/18/2014 05:37 PM
Batch ID R161608	**Test Name:** BTEX by SW8021B					
1402655-01A	MW-5	Water	2/12/2014 1:22:00 PM			2/19/2014 07:47 PM
1402655-02A	MW-1		2/12/2014 2:39:00 PM			2/19/2014 06:55 PM
1402655-06A	SVE-1		2/12/2014 4:52:00 PM			2/19/2014 07:30 PM
Batch ID R161662	**Test Name:** BTEX by SW8021B					
1402655-03A	SVE-3	Water	2/12/2014 3:22:00 PM			2/20/2014 11:35 AM
1402655-04A	MW-2		2/12/2014 4:01:00 PM			2/20/2014 11:52 AM
1402655-05A	SVE-2		2/12/2014 4:27:00 PM			2/20/2014 12:10 PM

QC BATCH REPORT

Batch ID: **R161554** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW1-140218-R161554** Units: **µg/L** Analysis Date: **2/18/2014 12:24 PM**

Client ID: Run ID: **BTEX1_140218A** SeqNo: **3535644** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	33.31	1.0	*30*	*0*	*111*	*75-129*	*0*			
Surr: Trifluorotoluene	32.45	1.0	*30*	*0*	*108*	*75-130*	*0*			

LCS Sample ID: **BLCSS1-140218-R161554** Units: **µg/L** Analysis Date: **2/18/2014 11:21 AM**

Client ID: Run ID: **BTEX1_140218A** SeqNo: **3535643** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	35.95	2.0	40	0	89.9	75-125				
o-Xylene	18.63	1.0	20	0	93.2	75-125				
Benzene	18.94	1.0	20	0	94.7	75-126				
Toluene	18.58	1.0	20	0	92.9	75-125				
Ethylbenzene	17.81	1.0	20	0	89.1	75-125				
Xylenes, Total	54.59	3.0	60	0	91	75-125				
Surr: 4-Bromofluorobenzene	33.63	1.0	*30*	*0*	*112*	*75-129*	*0*			
Surr: Trifluorotoluene	24.23	1.0	*30*	*0*	*80.8*	*75-130*	*0*			

MS Sample ID: **1402676-01AMS** Units: **µg/L** Analysis Date: **2/18/2014 01:09 PM**

Client ID: Run ID: **BTEX1_140218A** SeqNo: **3535646** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	39.37	2.0	40	0	98.4	75-125				
o-Xylene	19.65	1.0	20	0	98.2	75-125				
Benzene	20.74	1.0	20	0	104	75-126				
Toluene	20.36	1.0	20	0	102	75-125				
Ethylbenzene	19.78	1.0	20	0	98.9	75-125				
Xylenes, Total	59.01	3.0	60	0	98.4	75-125				
Surr: 4-Bromofluorobenzene	32.53	1.0	*30*	*0*	*108*	*75-129*	*0*			
Surr: Trifluorotoluene	34.18	1.0	*30*	*0*	*114*	*75-130*	*0*			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Animas Environmental Services
Work Order: 1402655
Project: Lateral K-12

QC BATCH REPORT

Batch ID: **R161554** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1402676-01AMSD** Units: **µg/L** Analysis Date: **2/18/2014 01:26 PM**

Client ID: Run ID: **BTEX1_140218A** SeqNo: **3535647** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	40.21	2.0	40	0	101	75-125	39.37	2.12	20	
o-Xylene	19.95	1.0	20	0	99.7	75-125	19.65	1.53	20	
Benzene	20.87	1.0	20	0	104	75-126	20.74	0.601	20	
Toluene	20.57	1.0	20	0	103	75-125	20.36	1.02	20	
Ethylbenzene	20.06	1.0	20	0	100	76-125	19.78	1.4	20	
Xylenes, Total	60.16	3.0	60	0	100	75-125	59.01	1.92	20	
Surr: 4-Bromofluorobenzene	32.49	1.0	*30*	*0*	*108*	*75-129*	*32.53*	*0.114*	*20*	
Surr: Trifluorotoluene	34.18	1.0	*30*	*0*	*114*	*75-130*	*34.18*	*0*	*20*	

The following samples were analyzed in this batch: 1402655-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Animas Environmental Services
Work Order: 1402655
Project: Lateral K-12

QC BATCH REPORT

Batch ID: **R161608** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW1-140219-R161608** Units: **µg/L** Analysis Date: **2/19/2014 11:08 AM**
Client ID: Run ID: **BTEX1_140219B** SeqNo: **3536847** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	33.39	1.0	*30*	*0*	*111*	*75-129*	*0*			
Surr: Trifluorotoluene	32.25	1.0	*30*	*0*	*107*	*75-130*	*0*			

LCS Sample ID: **BLCSS1-140219-R161608** Units: **µg/L** Analysis Date: **2/19/2014 10:33 AM**
Client ID: Run ID: **BTEX1_140219B** SeqNo: **3536846** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	38.17	2.0	40	0	95.4	75-125				
o-Xylene	18.93	1.0	20	0	94.6	75-125				
Benzene	19.46	1.0	20	0	97.3	75-126				
Toluene	19.33	1.0	20	0	96.7	75-125				
Ethylbenzene	18.87	1.0	20	0	94.4	75-125				
Xylenes, Total	57.1	3.0	60	0	95.2	75-125				
Surr: 4-Bromofluorobenzene	31.97	1.0	*30*	*0*	*107*	*75-129*	*0*			
Surr: Trifluorotoluene	31.21	1.0	*30*	*0*	*104*	*75-130*	*0*			

MS Sample ID: **1402760-01AMS** Units: **µg/L** Analysis Date: **2/19/2014 03:27 PM**
Client ID: Run ID: **BTEX1_140219B** SeqNo: **3536990** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	39	2.0	40	0	97.5	75-125				
o-Xylene	19.5	1.0	20	0	97.5	75-125				
Benzene	20.06	1.0	20	0	100	75-126				
Toluene	19.83	1.0	20	0	99.2	75-125				
Ethylbenzene	19.43	1.0	20	0	97.1	75-125				
Xylenes, Total	58.5	3.0	60	0	97.5	75-125				
Surr: 4-Bromofluorobenzene	30.79	1.0	*30*	*0*	*103*	*75-129*	*0*			
Surr: Trifluorotoluene	30	1.0	*30*	*0*	*100*	*75-130*	*0*			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Animas Environmental Services
Work Order: 1402655
Project: Lateral K-12

QC BATCH REPORT

Batch ID: **R161608** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1402760-01AMSD** Units: **µg/L** Analysis Date: **2/19/2014 03:44 PM**

Client ID: Run ID: **BTEX1_140219B** SeqNo: **3536991** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	39.64	2.0	40	0	99.1	75-125	39	1.61	20	
o-Xylene	19.8	1.0	20	0	99	75-125	19.5	1.5	20	
Benzene	20.32	1.0	20	0	102	75-126	20.06	1.3	20	
Toluene	20.26	1.0	20	0	101	75-125	19.83	2.16	20	
Ethylbenzene	19.8	1.0	20	0	99	76-125	19.43	1.89	20	
Xylenes, Total	59.43	3.0	60	0	99.1	75-125	58.5	1.57	20	
Surr: 4-Bromofluorobenzene	32.56	1.0	*30*	*0*	*109*	*75-129*	*30.79*	*5.61*	*20*	
Surr: Trifluorotoluene	31.62	1.0	*30*	*0*	*105*	*75-130*	*30*	*5.24*	*20*	

The following samples were analyzed in this batch: 1402655-01A 1402655-02A 1402655-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Animas Environmental Services
Work Order: 1402655
Project: Lateral K-12

QC BATCH REPORT

Batch ID: **R161662** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW1-140220-R161662** Units: **µg/L** Analysis Date: **2/20/2014 10:39 AM**

Client ID: Run ID: **BTEX1_140220A** SeqNo: **3537958** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	32.21	1.0	*30*	*0*	*107*	*75-129*	*0*			
Surr: Trifluorotoluene	30.48	1.0	*30*	*0*	*102*	*75-130*	*0*			

LCS Sample ID: **BLCSS1-140220-R161662** Units: **µg/L** Analysis Date: **2/20/2014 10:56 AM**

Client ID: Run ID: **BTEX1_140220A** SeqNo: **3537959** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	36.16	2.0	40	0	90.4	75-125				
o-Xylene	18.08	1.0	20	0	90.4	75-125				
Benzene	18.48	1.0	20	0	92.4	75-126				
Toluene	18.37	1.0	20	0	91.8	75-125				
Ethylbenzene	17.93	1.0	20	0	89.6	75-125				
Xylenes, Total	54.24	3.0	60	0	90.4	75-125				
Surr: 4-Bromofluorobenzene	34.59	1.0	*30*	*0*	*115*	*75-129*	*0*			
Surr: Trifluorotoluene	32.77	1.0	*30*	*0*	*109*	*75-130*	*0*			

MS Sample ID: **1402807-01AMS** Units: **µg/L** Analysis Date: **2/20/2014 01:47 PM**

Client ID: Run ID: **BTEX1_140220A** SeqNo: **3537967** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	40.54	2.0	40	0.682	99.6	75-125				
o-Xylene	20.19	1.0	20	0	101	75-125				
Benzene	22.33	1.0	20	1.632	104	75-126				
Toluene	20.04	1.0	20	0	100	75-125				
Ethylbenzene	19.89	1.0	20	0	99.4	75-125				
Xylenes, Total	60.73	3.0	60	0.682	100	75-125				
Surr: 4-Bromofluorobenzene	33.1	1.0	*30*	*0*	*110*	*75-129*	*0*			
Surr: Trifluorotoluene	30.26	1.0	*30*	*0*	*101*	*75-130*	*0*			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Animas Environmental Services
Work Order: 1402655
Project: Lateral K-12

QC BATCH REPORT

Batch ID: **R161662** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1402807-01AMSD** Units: **µg/L** Analysis Date: **2/20/2014 02:04 PM**

Client ID: Run ID: **BTEX1_140220A** SeqNo: **3537968** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	40.42	2.0	40	0.682	99.3	75-125	40.54	0.294	20	
o-Xylene	20.13	1.0	20	0	101	75-125	20.19	0.318	20	
Benzene	22.37	1.0	20	1.632	104	75-126	22.33	0.179	20	
Toluene	20.18	1.0	20	0	101	75-125	20.04	0.689	20	
Ethylbenzene	20.13	1.0	20	0	101	76-125	19.89	1.22	20	
Xylenes, Total	60.55	3.0	60	0.682	99.8	75-125	60.73	0.302	20	
Surr: 4-Bromofluorobenzene	32.76	1.0	*30*	*0*	*109*	*75-129*	*33.1*	*1.03*	*20*	
Surr: Trifluorotoluene	30.12	1.0	*30*	*0*	*100*	*75-130*	*30.26*	*0.459*	*20*	

The following samples were analyzed in this batch: 1402655-03A 1402655-04A 1402655-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Animas Environmental Services
Project: Lateral K-12
WorkOrder: **1402655**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
ug/L	Micrograms per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **ANIMAS ENVIRONMENTAL SERV** Date/Time Received: **15-Feb-14 09:52**

Work Order: **1402655** Received by: **LOT**

Checklist completed by Paresh M. Giga 17-Feb-14 Reviewed by: Joni S. Blankfield 17-Feb-14

eSignature | Date | eSignature | Date

Matrices: Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.3c/0.3c C/U	IR3	
Cooler(s)/Kit(s):	5865		
Date/Time sample(s) sent to storage:	2/17/14 12:30		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes: Trip Blank not on chain - Logged in with no analysis

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 101746

1402655

WV

ANIMAS ENVIRONMENTAL SERVICES: Animas Environmental Services

Project: Lateral K-12 Y#3 Condensate Tank Release

ALS Project Manager:

Customer Information		Project Information			
Purchase Order	AFE# P09064	Project Name	Lateral K-12	A	BTEX (8021)
Work Order		Project Number		B	
Company Name	Animas Environmental Services	Bill To Company	Enterprise Products	C	
Send Report To	Heather Woods	Invoice Attn	Farah Ullah	D	
Address	624 E. Comanche	Address	1100 Louisiana	E	
				F	
City/State/Zip	Farmington, NM 87401	City/State/Zip	Hosuton, TX 77002	G	
Phone	(505) 564-2281	Phone	(713) 381-4357	H	
Fax	(505) 324-2022	Fax		I	
e-Mail Address	hwoods@animasenvironmental.com	e-Mail Address	fullah@eprod.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-5	2/12/2014	1322	H_2O	HCL												
2	MW-1	2/12/2014	1439	H_2O	HCL												
3	SVE-3	2/12/2014	1522	H_2O	HCL												
4	MW-2	2/12/2014	1601	H_2O	HCL												
5	SVE-2	2/12/2014	1627	H_2O	HCL												
6	SVE-1	2/12/2014	1652	H_2O	HCL												
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: LAVINA LAMONE

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Relinquished by:	Date:	Time:	Received by (Laboratory): 2/15/14 952	Cooler ID / Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check One Box Below)
☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

FedEx Express Package US Airbill

FedEx Tracking Number 8042 5199 1941

Form ID No. 0215

From

Date 2/14/14

Sender's Name Heather Woods Phone 505 564 2281

Company Animas Environmental Services

Address 624 E. Comanche Dept/Floor/Suite/Room

City Farmington State NM ZIP 87401

2 Your Internal Billing Reference

3 To

Recipient's Name CLIENT SERVICES Phone 281 530-5656

Company ALS LABORATORY GROUP

Address 10450 STANCLIFF RD STE 210 Dept/Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City HOUSTON State TX ZIP 77099-4338

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0113218778

8042 5199 1941

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., see the FedEx Express Freight US Airbill.

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☒ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

- ☐ No Signature Required — Package may be left without obtaining a signature for delivery.
- ☐ Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 16 lbs. Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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fedex.com 1.800.GoFedEx 1.800.463.3339

CUSTODY SEAL

Time: 835

Heather Woods

Animas Environmental Services

Seal Broken By: E Davis

Date: 2-17-14

ALS Environmental

10450 Stancliff Rd., Suite 210

Houston, Texas 77099

Tel. +1 281 530 5656

Fax. +1 281 530 5887

Date: 2/14

Name: Hea

Company: A

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

November 20, 2014

Heather Woods

Apex Titan, Inc.
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX (214) 350-2914

RE: Lateral K-12 OrderNo.: 1411593

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/15/2014 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.
Project: Lateral K-12

Lab Order: 1411593

Lab ID: 1411593-001 **Collection Date:** 11/13/2014 12:20:00 PM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/18/2014 3:15:57 PM	R22618
Toluene	ND	1.0		µg/L	1	11/18/2014 3:15:57 PM	R22618
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 3:15:57 PM	R22618
Xylenes, Total	ND	2.0		µg/L	1	11/18/2014 3:15:57 PM	R22618
Surr: 4-Bromofluorobenzene	98.1	66.6-167		%REC	1	11/18/2014 3:15:57 PM	R22618

Lab ID: 1411593-002 **Collection Date:** 11/13/2014 1:35:00 PM
Client Sample ID: SVE-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	12	1.0		µg/L	1	11/18/2014 4:37:21 PM	R22618
Toluene	6.5	1.0		µg/L	1	11/18/2014 4:37:21 PM	R22618
Ethylbenzene	68	1.0		µg/L	1	11/18/2014 4:37:21 PM	R22618
Xylenes, Total	140	2.0		µg/L	1	11/18/2014 4:37:21 PM	R22618
Surr: 4-Bromofluorobenzene	111	66.6-167		%REC	1	11/18/2014 4:37:21 PM	R22618

Lab ID: 1411593-003 **Collection Date:** 11/13/2014 2:40:00 PM
Client Sample ID: SVE-1 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	170	5.0		µg/L	5	11/19/2014 3:24:02 PM	R22638
Toluene	3.4	1.0		µg/L	1	11/18/2014 5:04:41 PM	R22618
Ethylbenzene	93	1.0		µg/L	1	11/18/2014 5:04:41 PM	R22618
Xylenes, Total	190	2.0		µg/L	1	11/18/2014 5:04:41 PM	R22618
Surr: 4-Bromofluorobenzene	183	66.6-167	S	%REC	1	11/18/2014 5:04:41 PM	R22618

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.
Project: Lateral K-12

Lab Order: 1411593

Lab ID: 1411593-004 **Collection Date:** 11/13/2014 3:50:00 PM
Client Sample ID: SVE-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1300	20		µg/L	20	11/19/2014 3:51:05 PM	R22638
Toluene	110	20		µg/L	20	11/19/2014 3:51:05 PM	R22638
Ethylbenzene	270	20		µg/L	20	11/19/2014 3:51:05 PM	R22638
Xylenes, Total	1900	40		µg/L	20	11/19/2014 3:51:05 PM	R22638
Surr: 4-Bromofluorobenzene	114	66.6-167		%REC	20	11/19/2014 3:51:05 PM	R22638

Lab ID: 1411593-005 **Collection Date:** 11/13/2014 4:30:00 PM
Client Sample ID: MW-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1600	50		µg/L	50	11/19/2014 4:18:09 PM	R22638
Toluene	520	50		µg/L	50	11/19/2014 4:18:09 PM	R22638
Ethylbenzene	220	50		µg/L	50	11/19/2014 4:18:09 PM	R22638
Xylenes, Total	2500	100		µg/L	50	11/19/2014 4:18:09 PM	R22638
Surr: 4-Bromofluorobenzene	104	66.6-167		%REC	50	11/19/2014 4:18:09 PM	R22638

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411593**

20-Nov-14

Client: Apex Titan, Inc.

Project: Lateral K-12

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R22618**	RunNo: **22618**
Prep Date:	Analysis Date: **11/18/2014**	SeqNo: **667135** 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		107	66.6	167			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R22618**	RunNo: **22618**
Prep Date:	Analysis Date: **11/18/2014**	SeqNo: **667136** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.5	80	120			
Toluene	19	1.0	20.00	0	95.8	80	120			
Ethylbenzene	19	1.0	20.00	0	96.1	80	120			
Xylenes, Total	62	2.0	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		105	66.6	167			

Sample ID **1411593-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-1**	Batch ID: **R22618**	RunNo: **22618**
Prep Date:	Analysis Date: **11/18/2014**	SeqNo: **667154** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.8	80	120			
Toluene	19	1.0	20.00	0.2160	93.3	80	120			
Ethylbenzene	19	1.0	20.00	0	96.2	79.7	126			
Xylenes, Total	62	2.0	60.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	66.6	167			

Sample ID **1411593-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-1**	Batch ID: **R22618**	RunNo: **22618**
Prep Date:	Analysis Date: **11/18/2014**	SeqNo: **667155** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.7	80	120	4.18	20	
Toluene	19	1.0	20.00	0.2160	96.4	80	120	3.24	20	
Ethylbenzene	20	1.0	20.00	0	100	79.7	126	3.96	20	
Xylenes, Total	64	2.0	60.00	0	106	80	120	1.96	20	
Surr: 4-Bromofluorobenzene	21		20.00		104	66.6	167	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411593**

20-Nov-14

Client: Apex Titan, Inc.

Project: Lateral K-12

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R22638**	RunNo: **22638**
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668042** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		95.5	66.6	167			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R22638**	RunNo: **22638**
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668043** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	103	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	66.6	167			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

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: **1411593** RcptNo: **1**

Received by/date: AF 11/15/14

Logged By: **Lindsay Mangin** **11/15/2014 10:00:00 AM**

Completed By: **Lindsay Mangin** **11/17/2014 9:22:37 AM**

Reviewed By: CS 11/17/14

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. 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: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: AZTEC, NM

Project Manager: HEATHER WOODS

Laboratory: HALL

Address: ABQ

Contact: FREEMAN

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 4.5

1 | 2 | 3 | 4 | 5

Page 1 of 1

Sampler's Name: AARON BRYANT, RANEE DEECHILLY

Sampler's Signature:

Proj. No.: 70304146015

Project Name: LATERAL K-12

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	ANALYSIS REQUESTED: BTEX 8021	Lab Sample ID (Lab Use Only)
W	11-17-14	1220		X	MW-1			3					X	1411593-001
"	"	1335		"	SVE 3			"					"	-002
"	"	1440		"	SVE 1			"					"	-003
"	"	1550		"	SVE 2			"					"	-004
"	"	1630		"	MW 2			"					"	-005

NFE
AB

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	11-14-14	0640		11/14/14	0640
	11-14-14	0700	Heather M. Woods	11-14-14	0900
Heather M. Woods	11-14-14	1410	Mattie Walters	11/14/14	1410
Mattie Walters	11/14/14	1725		11/15/14	1900

NOTES:
Enterprise rate billed to Apex

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