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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **241602**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **nCS1507252223/3RP-1003**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.70080** Longitude **-108.00131** *NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Madsen Gas Com #1E**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **02/05/2015**	Serial # *(if applicable)* **N/A**

Unit Letter	Section	Township	Range	County
C	**28**	**29N**	**11W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* **Burrell TC Trust ETAL/Ronald and Patricia Johnson)**

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **36.57 MCF**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **5-7 Barrels**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: From 2017 to July 2021, Enterprise conducted quarterly and semi-annual groundwater monitoring events per the NMOCD approved work plan (3R-1003). In addition, Enterprise conducted total fluid removal events and another soil remediation event on March 6, 2020 during routine hydro-testing/maintenance of the Masden GC #1E pipeline. Quarterly groundwater monitoring and total fluids removal is ongoing at the site to facilitate groundwater remediation. Annual reporting will continue until New Mexico Quality Control Commission standards are met for eight consecutive quarters.

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

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Thomas Long Title: Senior Environmental Scientist

Signature: Thomas Long Date: 11/18/2021

email: tjlong@eprod.com Telephone: 505-599-2286

OCD Only

Received by: _____ Date: _____

ENSOLUM

Supplemental Soil Remediation and Groundwater Monitoring Report

Property:

Masden Gas Com #1E (2/05/2015)
NW ¼, S28, T29N R11W
San Juan County, New Mexico

New Mexico EMNRD OCD RP No. 3RP-1003
Incident ID No. nCS1507252223

January 18, 2021(Revised November 10, 2021)
Ensolum Project No. 05A1226026

Prepared for:

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

Prepared by:

Ranee Deechilly
Environmental Scientist

Kyle Summers, CPG
Senior Project Manager

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ENSOLUM

Supplemental Soil Remediation and Groundwater Monitoring Report

New Mexico EMNRD OCD RP No. 3RP-1003

Ensolum Project No. 05A1226026

1.0 INTRODUCTION

This report documents the 2020 soil remediation activities and groundwater monitoring activities at the Masden Gas Com #1E site, referred to hereinafter as the "Site".

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Masden Gas Com #1E (2/05/2015)
Incident ID	nCS1507252223
Location:	36.70096° North, 108.00164° West Northwest (NW) ¼, Section 28, Township 29 North, Range 11 West Bloomfield, San Juan County, New Mexico
Property:	Private Land
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

A release of natural gas was discovered at the Site on February 4, 2015. Enterprise performed pipeline repair activities and removed petroleum hydrocarbon-affected soils from the Site. During corrective action activities, groundwater was encountered at four feet below grade surface (bgs). Souder, Miller & Associates (SMA) collected five soil samples and one water sample from the pipeline repair excavation. Analytical results identified constituent of concern (COC) concentrations above the New Mexico EMNRD OCD closure criteria in soil and above New Mexico Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQSs) in groundwater (*Masden Gas Com #1E Pipeline Release and Subsurface Water Investigation Plan*, SMA, April 17, 2015).

During July 2015, SMA performed site investigation activities to evaluate the apparent impact to shallow groundwater. SMA installed and sampled five groundwater monitoring wells (MW-1 through MW-5). The resulting groundwater analytical results identified COC concentrations above WQCC GQSs in monitoring wells MW-2 and MW-3 (*Masden Gas Com #1E Monitoring Well Installation & Sampling Report*, SMA, August 25, 2015).

During February 2016, Apex TITAN, Inc. (Apex) conducted a groundwater monitoring event at the Site. Analytical results indicated benzene concentrations above applicable WQCC GQSs in monitoring well MW-2 (*Masden Gas Com #1E Groundwater Monitoring Report (February 2016 Event)*, Apex, April 18, 2016).

During October 2016, a work plan was submitted to the New Mexico EMNRD OCD that described Enterprise's proposed plan to implement supplemental corrective action activities (groundwater removal) at monitoring well MW-2 to reduce COC concentrations in groundwater and to conduct groundwater monitoring at the Site to evaluate the pumping effectiveness (*Supplemental Corrective Action and Groundwater Monitoring Work Plan,* Apex, October 3, 2016). Since the approval of the work plan, approximately 3,000 gallons of total fluids were removed from monitoring well MW-2, and a combination of quarterly and semi-annual monitoring have been performed. During February 2019, Enterprise reassigned management of the project to Ensolum, LLC (Ensolum).

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

1.2 Project Objective

The objective of the interim soil remediation activities and groundwater monitoring/pumping events was to: 1) reduce residual COC concentrations in the on-site soils to below the applicable New Mexico EMNRD OCD closure criteria; 2) reduce COC concentrations at the Site by implementing total fluids pumping at the Site; and 3) further evaluate the concentrations of COCs in groundwater over time at the Site.

The intermittent total fluids removal and quarterly/semi-annual groundwater monitoring activities discussed herein are based on a work plan submitted to the New Mexico EMNRD OCD prepared by Apex on behalf of Enterprise (*Supplemental Corrective Action and Groundwater Monitoring Work Plan*, Apex, October 3, 2016).

2.0 SOIL AND GROUNDWATER CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address the activities related to oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites subject to reporting and/or corrective action. Ensolum utilized information provided by Enterprise, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD imaging database to determine the appropriate closure criteria for soils at the Site. Additionally, the New Mexico EMNRD OCD utilizes the New Mexico WQCC GQS (NMAC 20.6.2 *Ground and Surface Water Protection*) to evaluate groundwater conditions.[1] The following identifies the applicable siting criteria for the Site.

- The OSE tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). Numerous PODs were identified near the Site. The average depth to water for PODS located in the same Public Land Survey System (PLSS) section as the Site and additional PODs located in adjacent PLSS sections is 19 feet bgs. The average depth to water observed in the on-Site groundwater monitoring wells is four feet bgs.

- The Site is located within 300 feet of a New Mexico EMNRD OCD-defined continuously flowing watercourse or significant watercourse. An ephemeral wash is located approximately 183 feet south of the Site.

- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.

- The Site is located within 300 feet of a permanent residence, school, hospital, institution, or church. There are several permanent residences located near the Site. The closest permanent residence is located approximately 80 feet from the Site.

- Based on information provided in the OSE WRRS database there are no springs or private domestic fresh water wells used by less than five households for domestic or stock watering

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards will apply to sites that predate the 2018 rule change. Therefore, this document reflects the GQSs that were applicable at the time of initial remediation.

purposes identified within 500 feet of the Site. However, nearby residences may have unregistered water wells.

- Based on information provided in the OSE WRRS database there are fresh water wells within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3.
- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is located within 300 feet of a wetland. The Site is located approximately 177 feet northwest of a forested/shrub riparian area and approximately 298 feet northwest of a freshwater forested/shrub wetland.
- Based on information identified in the New Mexico Mining and Minerals Division's Geographic Information System (GIS), Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- Based on information identified in the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is located within a 100-year floodplain.

Applicable closure criteria for soils remaining in place at the Site include:

Tier I Closure Criteria for Soils Impacted by a Release		
Constituent*	Method	Limit
Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
TPH (GRO+DRO+MRO)[A]	EPA SW-846 Method 8015	100 mg/kg
BTEX[B]	EPA SW-846 Method 8021 or 8260	50 mg/kg
Benzene	EPA SW-846 Method 8021 or 8260	10 mg/kg

* – Constituent concentrations are in milligrams per kilograms (mg/kg).
A – Total Petroleum Hydrocarbons (TPH). Gasoline Range Organics (GRO). Diesel Range Organics (DRO). Motor Oil/Lube Oil Range Organics (MRO).
B – Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX).

Cleanup goals for groundwater located at the Site include:

WQCC Standards for Groundwater[1]		
Constituent*	Method	Limit
Xylenes	EPA SW-846 Method 8021 or 8260	620 µg/L
Ethylbenzene	EPA SW-846 Method 8021 or 8260	750 µg/L
Toluene	EPA SW-846 Method 8021 or 8260	750 µg/L
Benzene	EPA SW-846 Method 8021 or 8260	10 µg/L

* – Constituent concentrations are in micrograms per liter (µg/L).

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards will apply to sites that predate the 2018 rule change. Therefore, this document reflects the GQSs that were applicable at the time of initial remediation.

3.0 SOIL REMEDIATION ACTIVITIES

On March 5, 2020, Enterprise initiated pipeline repair activities at the Site to facilitate the replacement of a section of pipe under the road next to the well pad. During these activities Enterprise elected to attempt to remove potential residual soil impact from the 2015 release. During the remediation and corrective action activities, Sunland Construction, Inc., (Sunland) provided heavy equipment and labor support, while Ensolum provided environmental consulting support. Monitoring well MW-2 was inadvertently destroyed during excavation activities.

The final excavation measured approximately 41 feet long and 31 feet wide at the maximum extents. The maximum depth of the excavation measured approximately six feet bgs. Groundwater was encountered at approximately four feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of gravel/cobbles, unconsolidated silty sand, and sand.

Approximately 236 cubic yards of soil and 460 barrels (bbls) of water were transported to the Industrial Ecosystems, Inc., (IEI) landfarm on Crouch Mesa near Aztec, New Mexico for disposal/remediation. The executed C-138 waste acceptance form is provided in **Appendix B**. The excavation was backfilled with imported fill and then resurfaced to provide a suitable driving surface.

Figure 3 is a map that identifies the approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

3.1 Soil Sampling Program

Ensolum field screened the soil samples from the excavation utilizing a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system and a photoionization detector (PID) fitted with a 10.6 eV lamp to guide excavation extents.

Ensolum's soil sampling program included the collection of six composite soil samples (MS-1 through MS-6) from the excavation for laboratory analysis. The composite samples were comprised of five aliquots each, and each sample represents an estimated 200 square foot (ft^2) sample area per guidelines outlined in 19.15.29.12 Section D NMAC. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation. A backhoe, operated by Sunland, was utilized to obtain fresh aliquots from portions of the excavation sidewalls that were inaccessible due to the water in the excavation. Regulatory correspondence is provided in **Appendix D**.

On March 6, 2020, sampling was performed at the Site. The New Mexico EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil samples MS-1 (0'-6'), MS-2 (0'-6'), MS-3 (0'-6'), MS-4 (0'-5'), and MS-5 (0'-5') were collected from the sidewalls of the excavation. Composite soil sample MS-6 (4') was collected from the soil supporting the water line. The floor of the excavation was approximately two feet below the level of groundwater and was not sampled.

The soil samples were placed in laboratory prepared glassware. The containers were labeled and sealed using the laboratory supplied labels and custody seals and were stored on ice in a cooler. The samples were relinquished to the courier for Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico, under proper chain-of-custody procedures.

3.2 Soil Laboratory Analytical Methods

The composite soil samples were analyzed for BTEX using Environmental Protection Agency (EPA) Method SW-846 #8021; TPH GRO/DRO/MRO using EPA Method SW-846 #8015; and chlorides using EPA Method #300.0.

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

3.3 Soil Data Evaluation

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with composite soil samples (MS-1 through MS-6) to the applicable New Mexico EMNRD OCD closure criteria.

- The laboratory analytical results for the composite soil samples indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).

- The laboratory analytical results for the composite soil samples indicate total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for the composite soil samples indicate combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for the composite soil samples indicate chloride is not present at concentrations greater than laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

The laboratory analytical results are summarized in **Table 1** (**Appendix E**).

3.4 Reclamation and Revegetation

The excavation was backfilled with imported fill and resurfaced to provide a suitable driving area.

4.0 GROUNWATER MONITORING WELL INSTALLATION

On May 24, 2021, one soil boring was advanced at the Site utilizing a hollow stem auger drilling rig. The soil boring was then completed as a permanent monitoring well to replace monitoring well MW-2 that was destroyed during 2020 pipeline replacement activities. Two soil samples (MW-2(r) @ 5-7' and MW-2(r) @ 7-9') were collected from the soil boring and were submitted for laboratory analysis. The soil samples were collected and placed in laboratory prepared glassware. The containers were labeled and sealed using the laboratory supplied labels and custody seals and were stored on ice in a cooler. The samples were relinquished to the courier for HEAL of Albuquerque, New Mexico, under proper chain-of-custody procedures.

The monitoring well was completed as follows:

- Installation of 5 feet of two-inch diameter, machine slotted (0.010 inch) schedule 40 polyvinyl chloride (PVC) well screen assembly with a threaded bottom plug;
- Installation of schedule 40 PVC riser pipe to surface;
- Addition of graded silica sand for annular sand pack around the well screen from the bottom of the well to above the top of the screen;
- Placement of two feet of hydrated bentonite above the sand;
- Addition of cement to the surface; and
- Installation of a flush mounted traffic-rated well vault.

The monitoring well was developed by surging and removing groundwater until the fluid appeared relatively free of fine-grained sediment.

4.1 Soil Laboratory Analytical Program

The soil samples collected from the soil boring were analyzed for BTEX using EPA SW-846 Method #8021, TPH GRO/DRO/MRO using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0.

The soil boring laboratory results are summarized in **Table 1** (**Appendix E**). The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix F**.

4.2 Soil Data Evaluation

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory PQLs/RLs associated with the soil boring samples to the applicable New Mexico EMNRD OCD closure criteria.

- The laboratory analytical result for soil sample MW-2(r) @ (5'-7') indicates a benzene concentration of 0.058 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical result for soil sample MW-2(r) @ (7'-9') indicates benzene is not present at a concentration greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analytical result for soil sample MW-2(r) @ (5'-7') indicates a total BTEX concentration of 0.50 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 50 mg/kg The laboratory analytical result for soil sample MW-2(r) @ (7'-9') indicates total BTEX is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical result for soil sample MW-2(r) @ (5'-7') indicates a combined TPH GRO/DRO/MRO concentration of 33 mg/kg, which is below the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical result for soil sample MW-2(r) @ (7'-9') indicates combined TPH GRO/DRO/MRO is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for the soil samples collected from the soil boring indicate chloride is not present in concentrations greater than laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

The laboratory analytical results for the soil boring samples are summarized in **Table 1** (**Appendix E**).

5.0 GROUNDWATER REMEDIATION

Eleven groundwater pumping and disposal events were conducted at monitoring well MW-2 during May 2018, July 2018, August 2018, September 2018, October 2018, November 2018, and January 2019 by Apex and during February 2019, March 2019, and August 2019 by Ensolum. Apex and Ensolum utilized a portable submersible pump to remove approximately 3,000 gallons of affected groundwater since 2018. Each pumping event during the first two quarters of 2020 ended prematurely with the failure of the submersible pump. Purged groundwater was disposed of at Basin Disposal.

Monitoring well MW-2 was destroyed during March 2020. Pumping will resume (if necessary) based on observed COC concentrations.

6.0 GROUNDWATER MONITORING

6.1 Groundwater Sampling Program

Ensolum did not have access to groundwater reports for the Site after February 2016 and has created new maps and tables to document both the recent and historical data. Groundwater sampling events were conducted during November 2016, February 2017, July 2017, November 2017, January 2018, April 2018, July 2018, October 2018, and January 2019 by Apex and during August 2019, January 2020, September 2020, January 2021, and July 2021 by Ensolum. The Apex and Ensolum groundwater sampling programs consisted of the collection of one groundwater sample from each of the viable monitoring wells at the Site. During March 2020, monitoring well MW-2 was destroyed during excavation activities and therefore only four viable monitoring wells were available for sampling during the September 2020 and January 2021 sampling events. Monitoring well MW-2R was installed during May 2021 to replace monitoring well MW-2 and was sampled during July 2021.

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

The groundwater sampling programs consist of the following activities:

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

- When possible, each monitoring well is sampled utilizing micro-purge low-flow sampling techniques. Low-flow or low-stress sampling refer to sampling methods that are intended to minimize the stress that is imparted to the formation pore water in the vicinity of the well screen. Water level drawdown provides the best indication of the stress that is imparted by a given flow rate for a given hydrological situation. Pumping rates of 0.1 to 0.5 liters per minute (L/min) are typically maintained during the low-flow/low-stress sampling activities, using dedicated or decontaminated sampling equipment.

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

- Monitoring well MW-2 exhibited a casing obstruction in August 2019 and January 2020, which did not permit the use of the bladder pump for sampling. Based on an inspection of the well, the well casing appears to have been compromised by road maintenance activities. As a result, this monitoring well was purged three casing volumes utilizing a small-diameter disposable bailer. Subsequent to the completion of the purging process and the recovery of groundwater to static levels, one groundwater sample was collected from the monitoring well.

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

6.2 Groundwater Laboratory Analytical Methods

The groundwater samples collected from the monitoring wells during the 2016-2021 groundwater sampling events were analyzed for BTEX using EPA Method SW-846 #8021 or #8260.

The laboratory analytical results are summarized in **Table 2** in **Appendix E**. The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix F**.

6.3 Groundwater Flow Direction

Each of the monitoring wells has been surveyed to determine top-of-casing (TOC) elevations. In July 2021, each of the monitoring wells were re-surveyed. Based on gauging data, the groundwater flow direction at the Site is generally toward the southwest. The observed gradients during the 2016-2021 monitoring events averaged approximately 0.002 feet per foot (ft/ft) across the Site.

Groundwater elevation data collected during the 2016, 2017, 2018, 2019, 2020, and 2021 gauging events (as well as historical gauging data) are presented in **Table 3** (**Appendix E**). Ensolum created new gradient maps for all events after February 2016. These maps are included as **Figures 4A** through **4N** (**Appendix A**).

6.4 Groundwater Data Evaluation

Ensolum performed a full review of groundwater monitoring data going back to February of 2016. Ensolum compared the BTEX laboratory analytical results or laboratory PQLs/RLs associated with the groundwater samples collected from the monitoring wells (MW-1 through MW-5) during each groundwater monitoring event from February 2016 through July 2021.to the New Mexico WQCC GQSs.[1] The results of the groundwater sample analyses are summarized in **Table 2** of **Appendix E**. Groundwater Quality Standards Exceedance Zone maps are provided as **Figures 5A** through **5N** of **Appendix A**.

November 2016 Sampling Event

- The groundwater sample collected from monitoring well MW-2 during the November 2016 sampling event exhibited a benzene concentration of 160 µg/L, which exceeded the WQCC GQS of 10 µg/L.[1] The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the November 2016 sampling event did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1]

- The groundwater samples collected from monitoring wells MW-1 through MW-5 during the November 2016 sampling event did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1]

2017 Sampling Events

- The groundwater samples collected from monitoring well MW-2 during the 2017 sampling events exhibited benzene concentrations ranging from 44 µg/L (July 2017) to 260 µg/L (February 2017), which exceeded the WQCC GQS of 10 µg/L.[1] The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the three 2017 sampling events did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1]

- The groundwater samples collected from monitoring wells MW-1 through MW-5 during the 2017 sampling events did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1]

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards will apply to sites that predate the 2018 rule change. Therefore, this document reflects the GQSs that were applicable at the time of initial remediation.

2018 Sampling Events

- The groundwater samples collected from monitoring well MW-2 during the 2018 sampling events exhibited benzene concentrations ranging from 21 micrograms per liter (µg/L) (January 2018) to 330 µg/L (July 2018), which exceeded the WQCC GQS of 10 µg/L.[1] The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the four 2018 sampling events did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1]

- The groundwater samples collected from monitoring wells MW-1 through MW-5 during the 2018 sampling events did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1]

2019 Sampling Events

- The groundwater samples collected from monitoring well MW-2 during the 2019 sampling events exhibited benzene concentrations of 600 µg/L (January 2019) and 150 µg/L (August 2019), which exceeded the WQCC GQS of 10 µg/L.[1] The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the two 2019 sampling events did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1]

- The groundwater samples collected from monitoring wells MW-1 through MW-5 during the two 2019 sampling events did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1]

2020 Sampling Events

- The groundwater sample collected from monitoring well MW-2 during the January 2020 sampling event exhibited a benzene concentration of 830 µg/L, which exceeds the WQCC GQS of 10 µg/L.[1] The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the January and September 2020 sampling events did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1]

- The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the January and September 2020 sampling events did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1]

2021 Sampling Events

- The groundwater samples collected from monitoring wells MW-1, and MW-3 through MW-5 during the January and July 2021 sampling events did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1] The groundwater sample collected from replacement monitoring well MW-2R during the July 2021 sampling event did not exhibit benzene concentrations above the WQCC GQS of 10 µg/L.[1]

- The groundwater samples collected from monitoring wells MW-1 and MW-3 through MW-5 during the January and July 2021 sampling events did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1] The groundwater sample collected from

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards will apply to sites that predate the 2018 rule change. Therefore, this document reflects the GQSs that were applicable at the time of initial remediation.

replacement monitoring well MW- MW-2R during the July 2021 sampling event did not exhibit toluene, ethylbenzene, or total xylenes concentrations above the applicable WQCC GQSs.[1]

No data qualifier flags were associated with the 2016 through 2021 groundwater analytical results.

7.0 FINDINGS

Based on field observations and laboratory analytical results from the soil remediation activities, and based on the evaluation of the analytical results from the 2016-2021 groundwater monitoring events, Ensolum presents the following findings:

- During the March 2020 supplemental soil remediation activities, six composite soil samples were collected from the excavation for laboratory analyses. Based on laboratory analytical results, the soils remaining at the Site do not exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria.

- During the excavation activities, approximately 236 cubic yards of soil and 460 bbls of water were transported to the IEI landfarm for disposal/remediation. The excavation was backfilled with imported fill and was then resurfaced to provide a suitable driving area.

- During May 2021, a new monitoring well was installed at the Site to replace monitoring well MW-2 that was destroyed during the 2020 pipeline repair activities. Soil samples collected from the replacement monitoring well did not exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria.

- The groundwater flow direction at the Site is generally towards the southwest, with an approximate gradient of 0.002 ft/ft across the Site.

- The analytical results for the groundwater samples collected from monitoring well MW-2 between 2016 and 2020 indicate that benzene concentrations were above the New Mexico WQCC GQSs. The analytical results for the remaining monitoring wells during these events do not indicate COC concentrations above the applicable WQCC GQSs.

- During 2019 and prior to the destruction of monitoring well MW-2, it appeared as though benzene concentrations were trending upwards, likely indicating that residual impacted soils were still adversely affecting the groundwater.

- The analytical results for the groundwater samples collected from monitoring wells MW-1, MW-2R, MW-3, MW-4, and MW-5 in July 2021 do not indicate COC concentrations above the applicable WQCC GQSs, apparently indicating successful removal of residual impacted soils at the Site.

[1] NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards will apply to sites that predate the 2018 rule change. Therefore, this document reflects the GQSs that were applicable at the time of initial remediation.

8.0 RECOMMENDATIONS

Based on these findings, Ensolum recommends the following:

- Report the soil remediation results and groundwater monitoring results to the New Mexico EMNRD OCD.
- Continue quarterly groundwater monitoring at the Site.
- If conditions warrant, resume groundwater pumping and disposal events.
- If necessary, evaluate additional corrective action alternatives for the remediation of affected groundwater.
- Request that the New Mexico EMNRD OCD make a determination regarding closure standards at historic groundwater sites that predate the 2018 rule change.

9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

9.1 Standard of Care

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

9.2 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 recommendation are based solely upon data available to Ensolum at the time of these services.

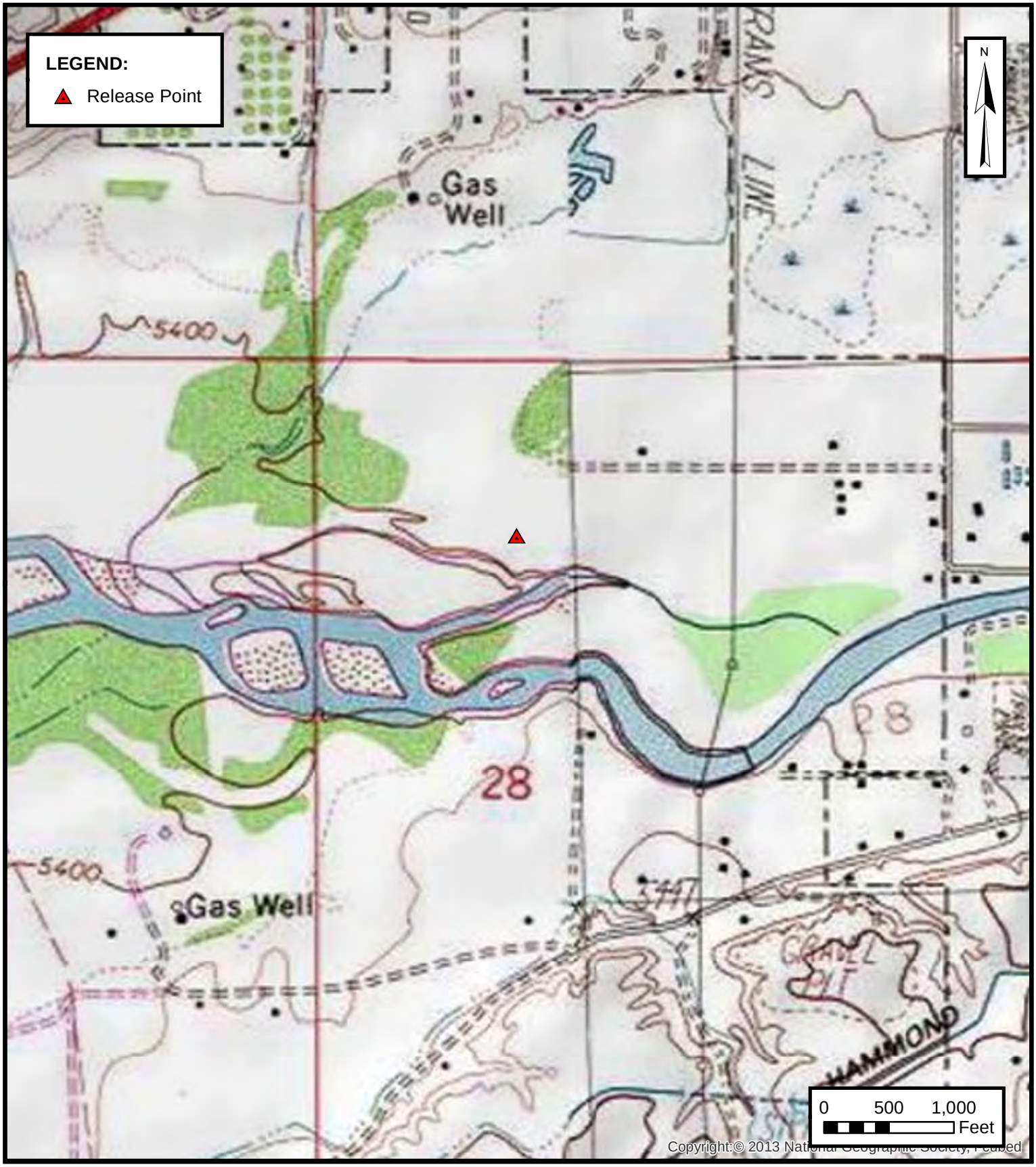
9.3 Reliance

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

ENSOLUM

APPENDIX A

Figures



ENSOLUM
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TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E (2/05/2015)
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
1

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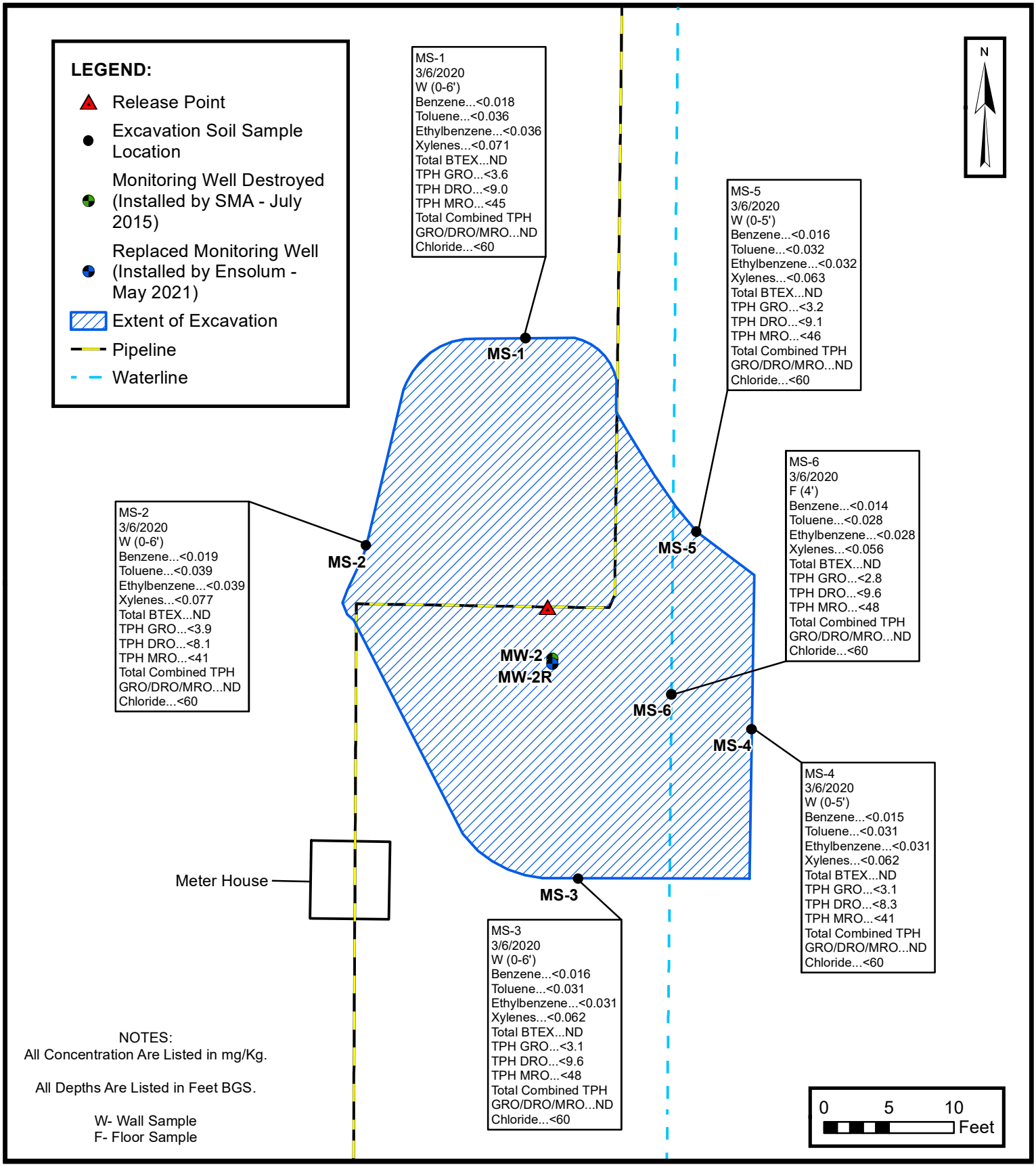
SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
2



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2020 EXCAVATION WITH SOIL ANALYTICAL RESULTS

ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

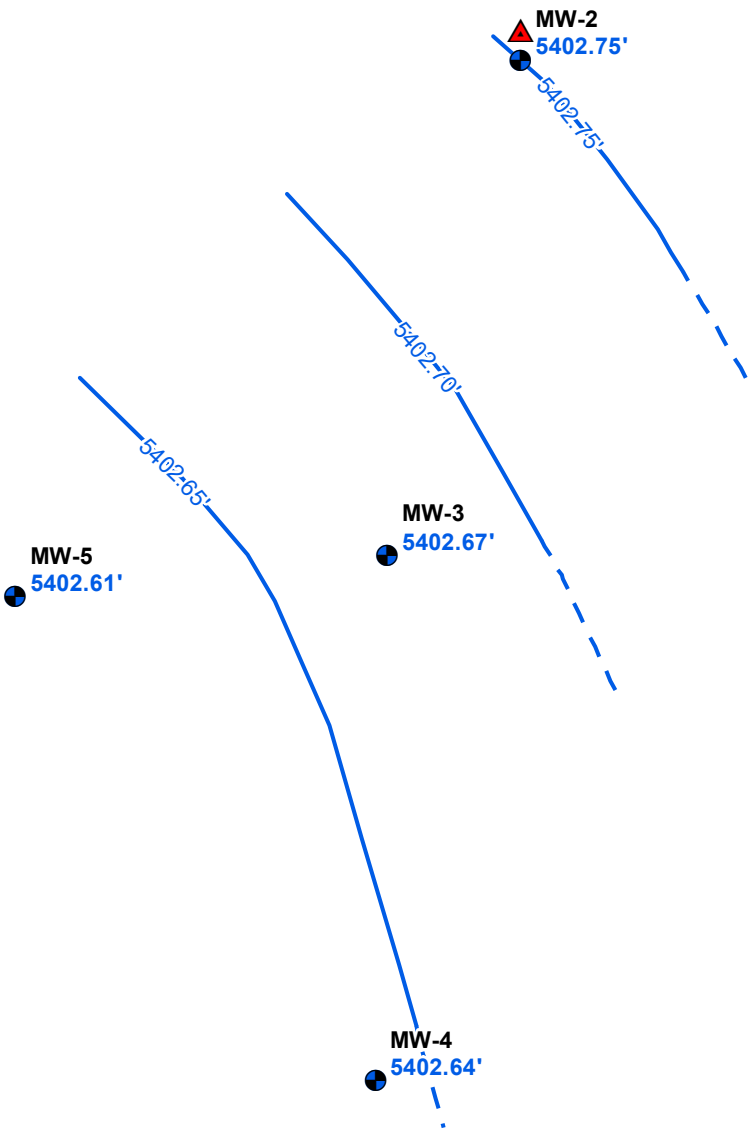
PROJECT NUMBER: 05A1226026

FIGURE
3

LEGEND:

- Release Point
- Monitoring Well Location
- Groundwater Elevation Contour (Contour Interval = 0.05')
- Inferred Groundwater Elevation Contour

NOTES:
Groundwater elevations in **blue** are listed in feet as measured from set OPUS adjusted control point.



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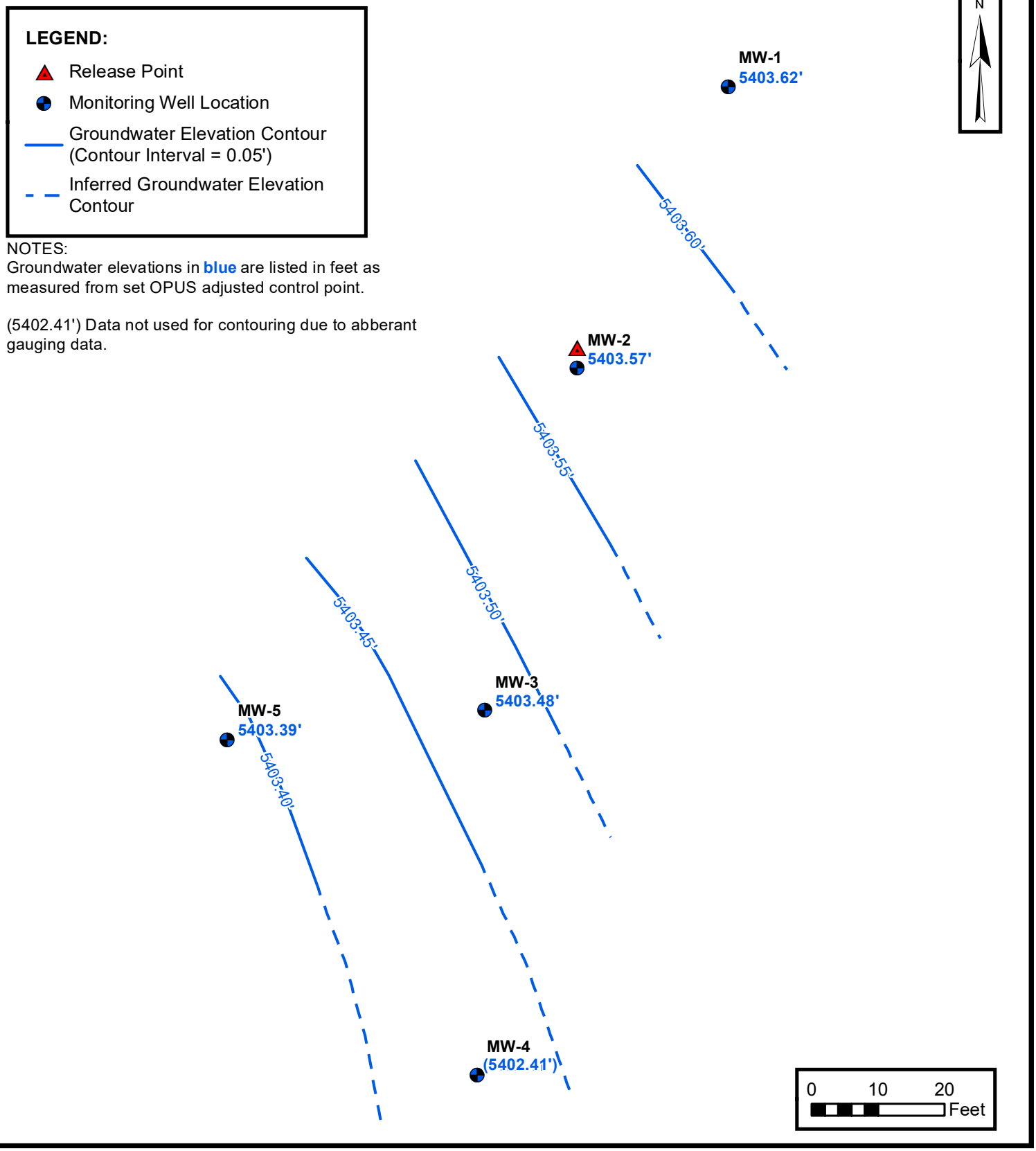
GROUNDWATER GRADIENT MAP
NOVEMBER 2016
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4A



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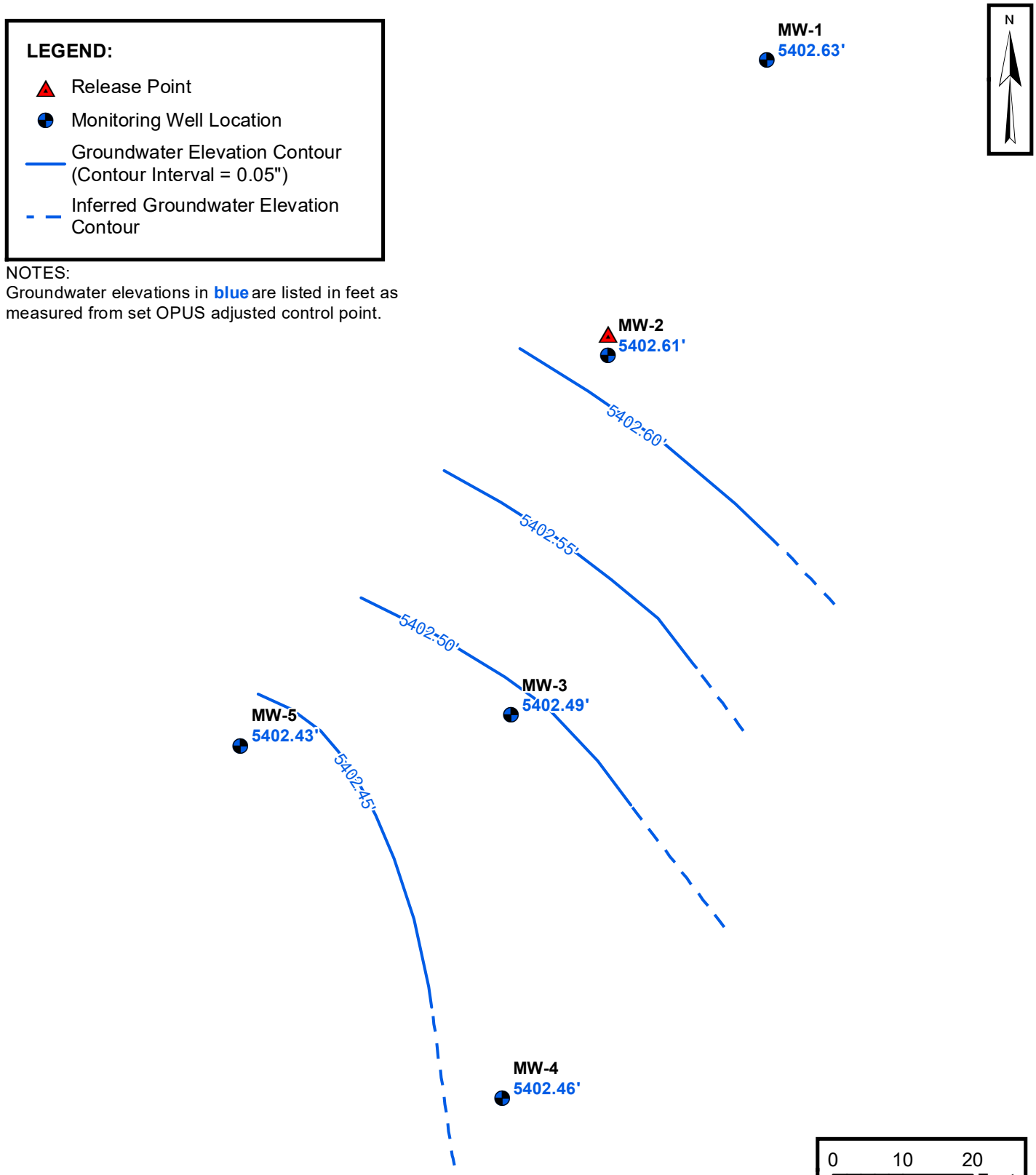
GROUNDWATER GRADIENT MAP
FEBRUARY 2017
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4B



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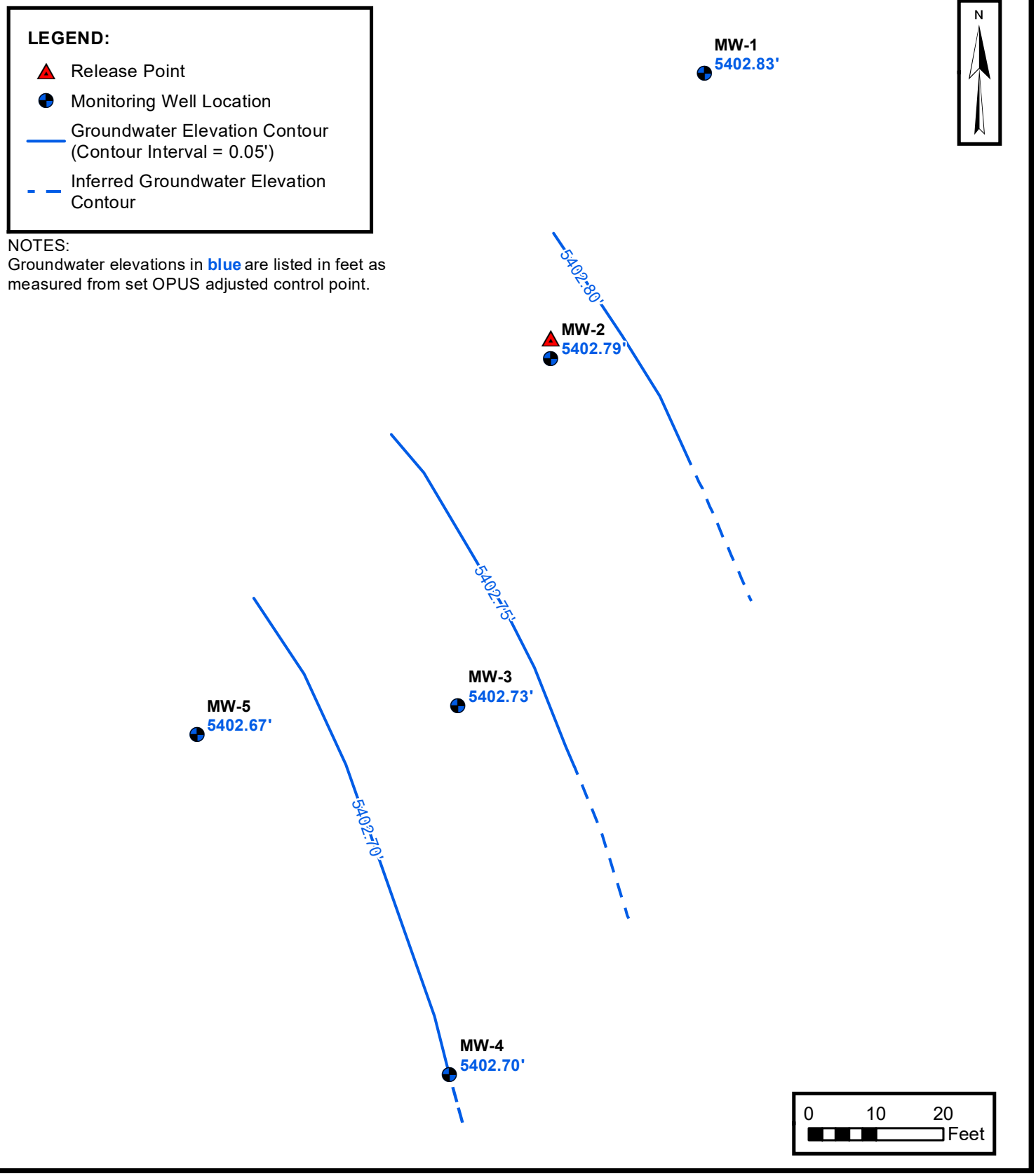
GROUNDWATER GRADIENT MAP
JULY 2017
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4C



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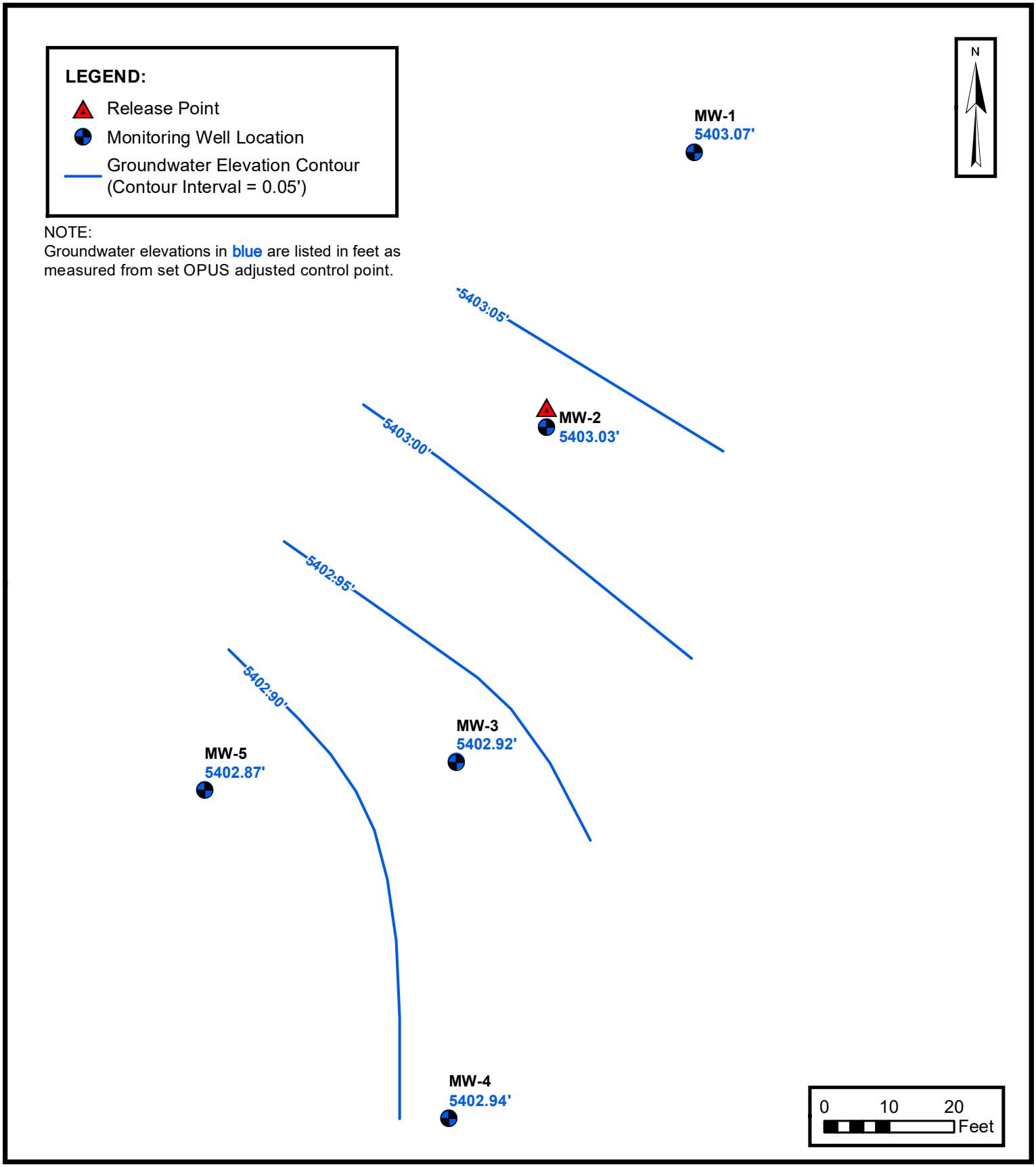
GROUNDWATER GRADIENT MAP
NOVEMBER 2017
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4D



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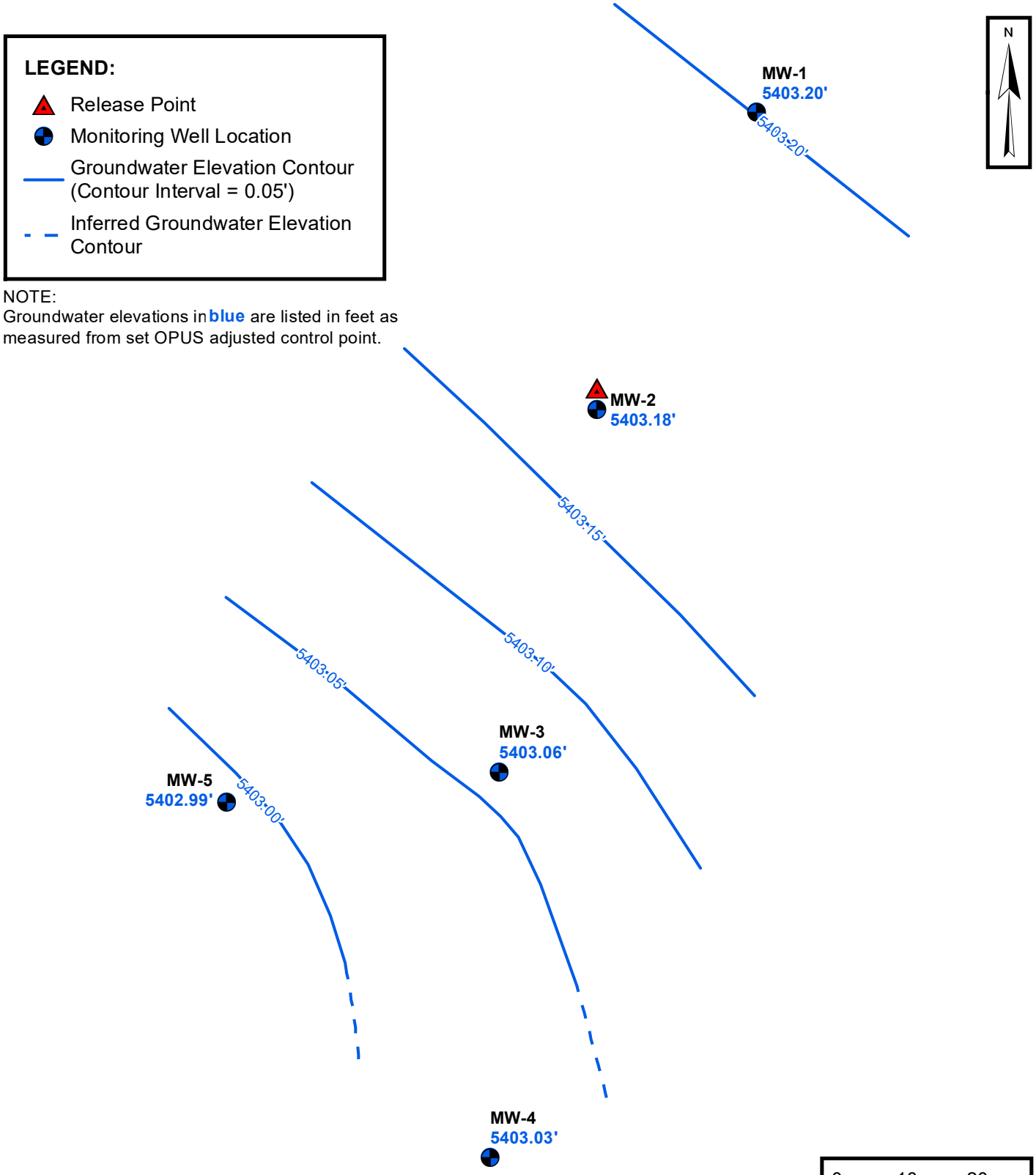
GROUNDWATER GRADIENT MAP
JANUARY 2018
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4E



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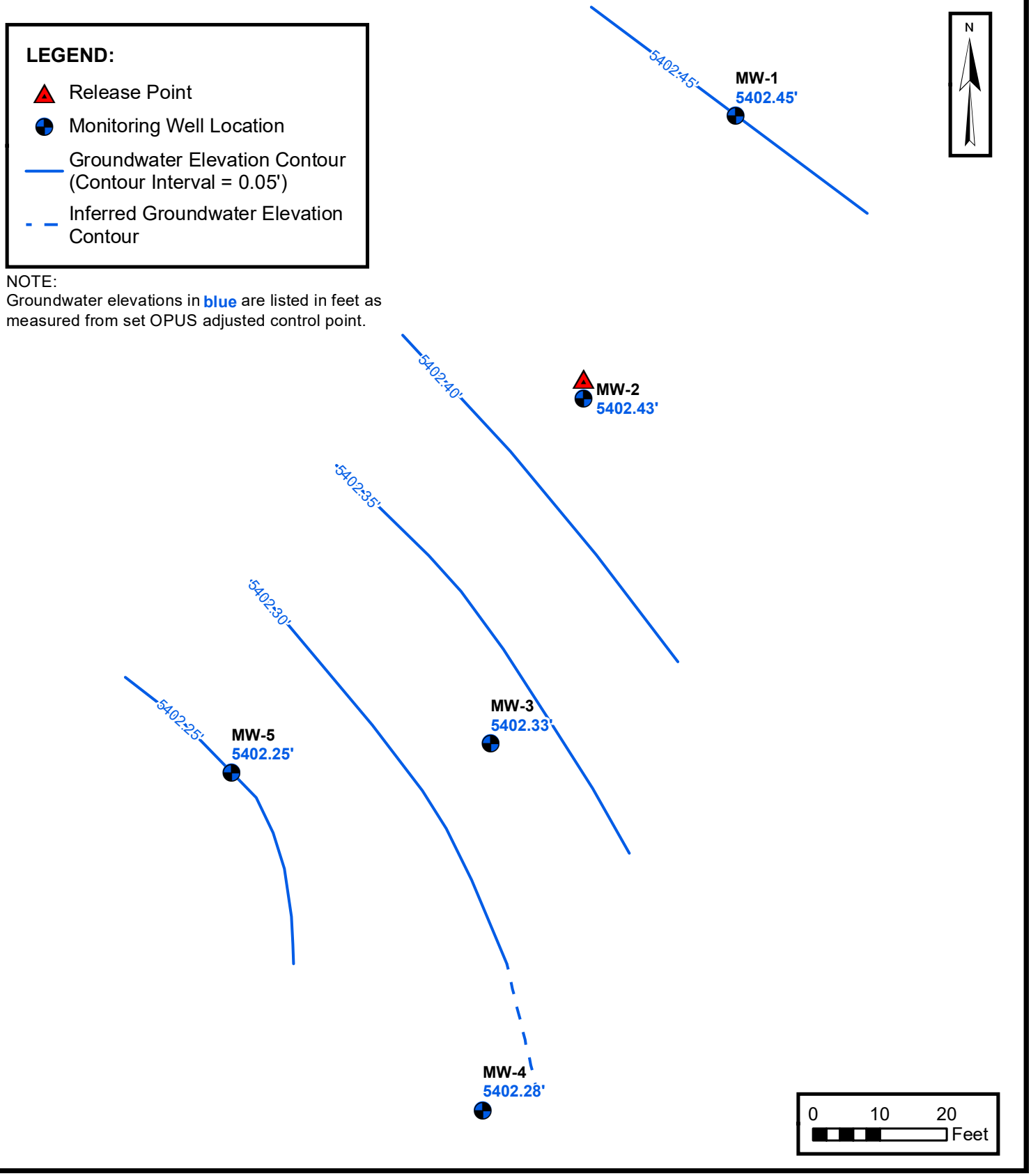
GROUNDWATER GRADIENT MAP
APRIL 2018
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4F



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GROUNDWATER GRADIENT MAP
JULY 2018
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

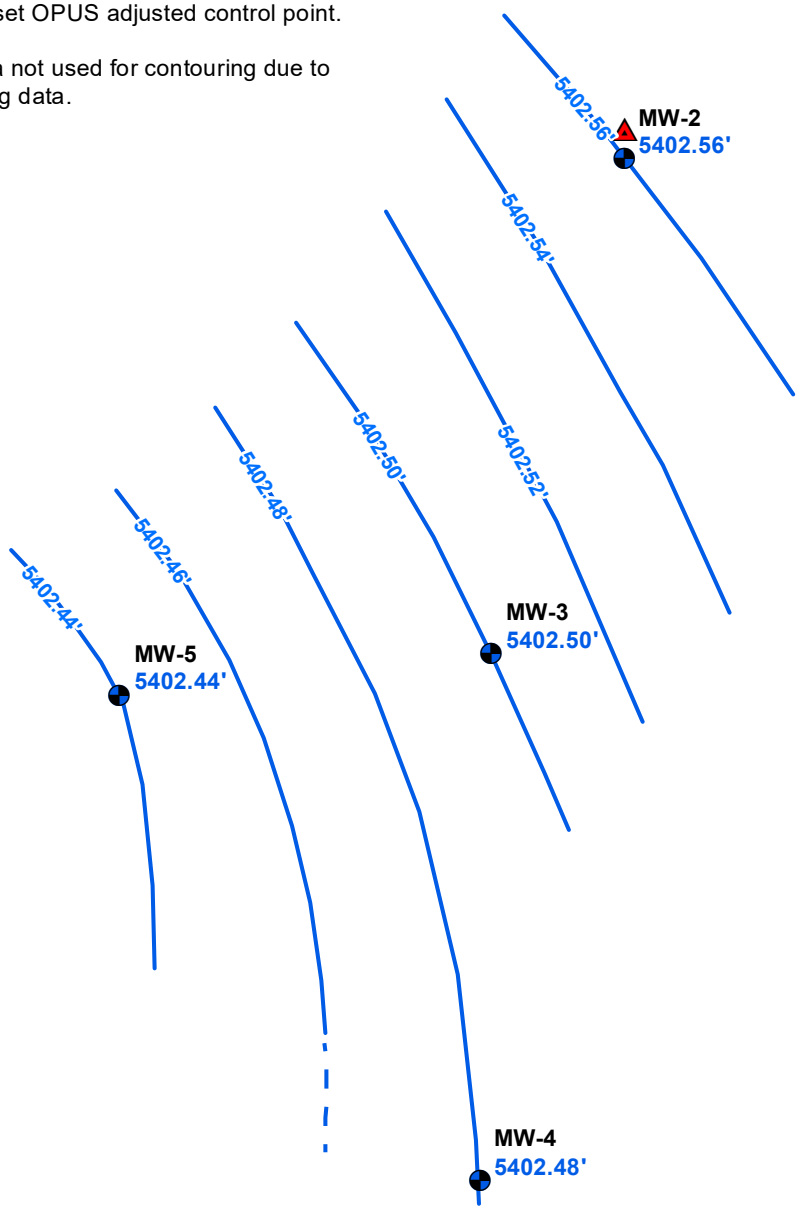
FIGURE
4G

LEGEND:

- Release Point
- Monitoring Well Location
- Groundwater Elevation Contour (Contour Interval = 0.02')
- Inferred Groundwater Elevation Contour

NOTES:
Groundwater elevations in **blue** are listed in feet as measured from set OPUS adjusted control point.

(5402.55') - Data not used for contouring due to abberant gauging data.



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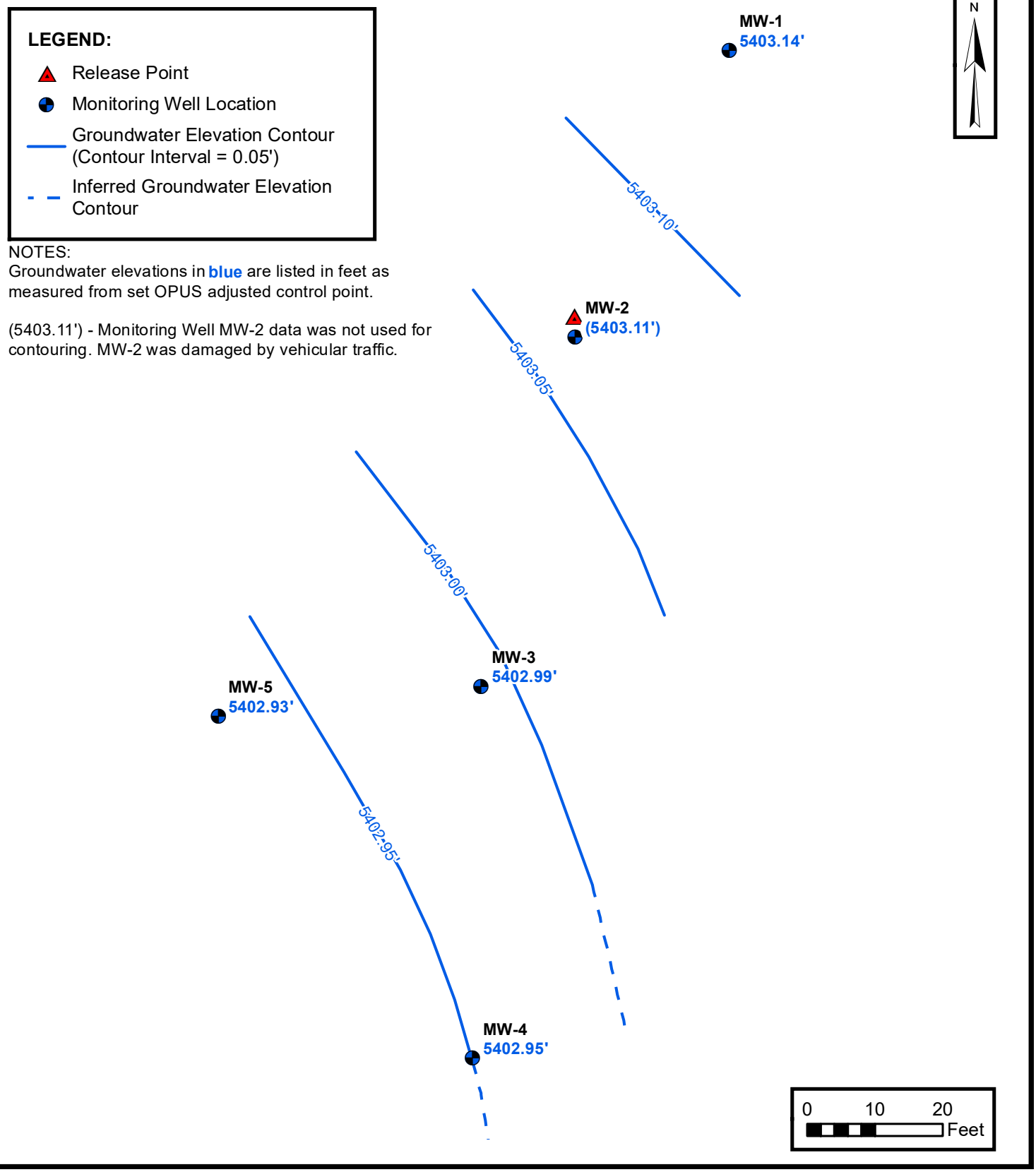
GROUNDWATER GRADIENT MAP
OCTOBER 2018
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4H



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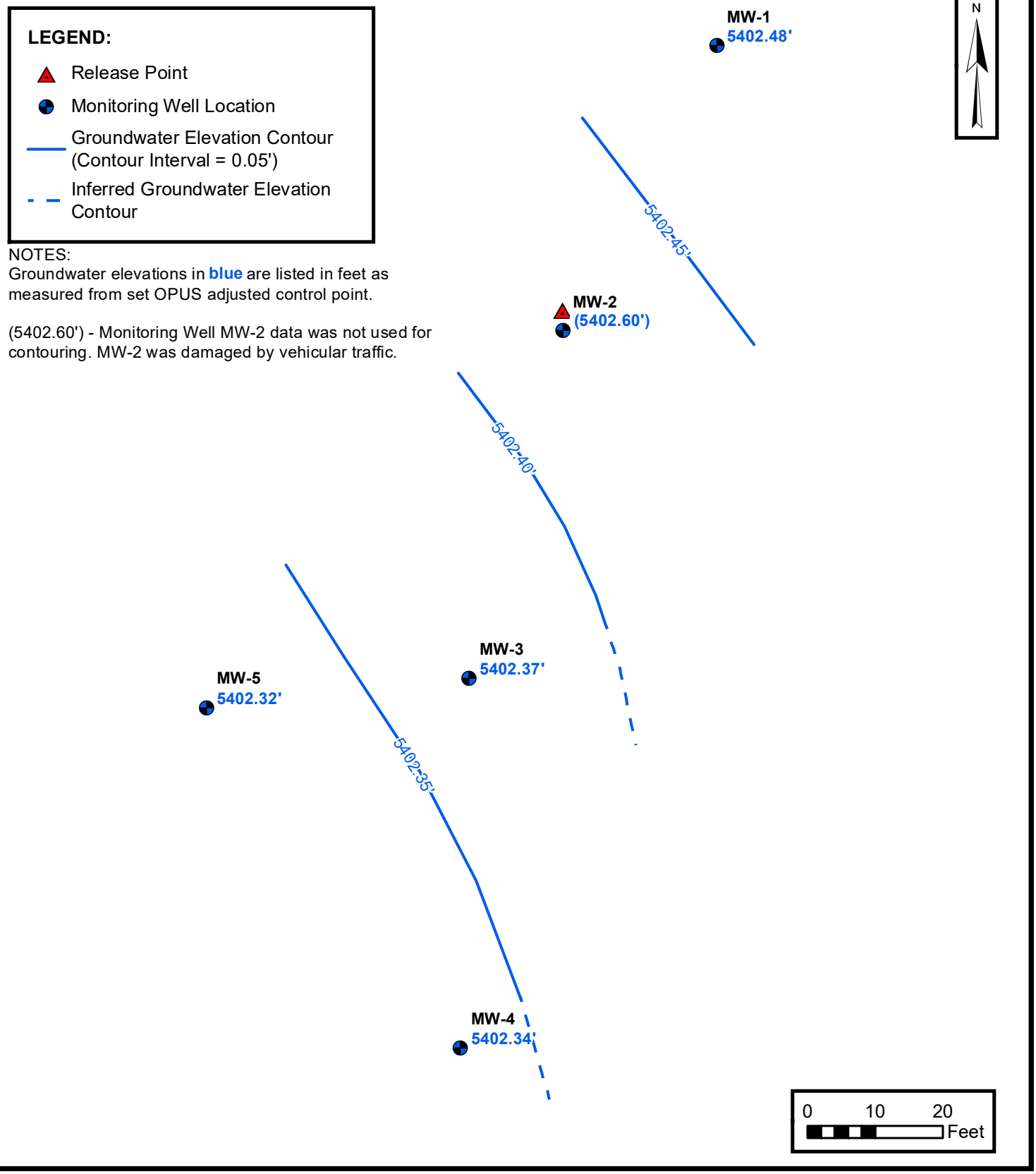
GROUNDWATER GRADIENT MAP
JANUARY 2019
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4I



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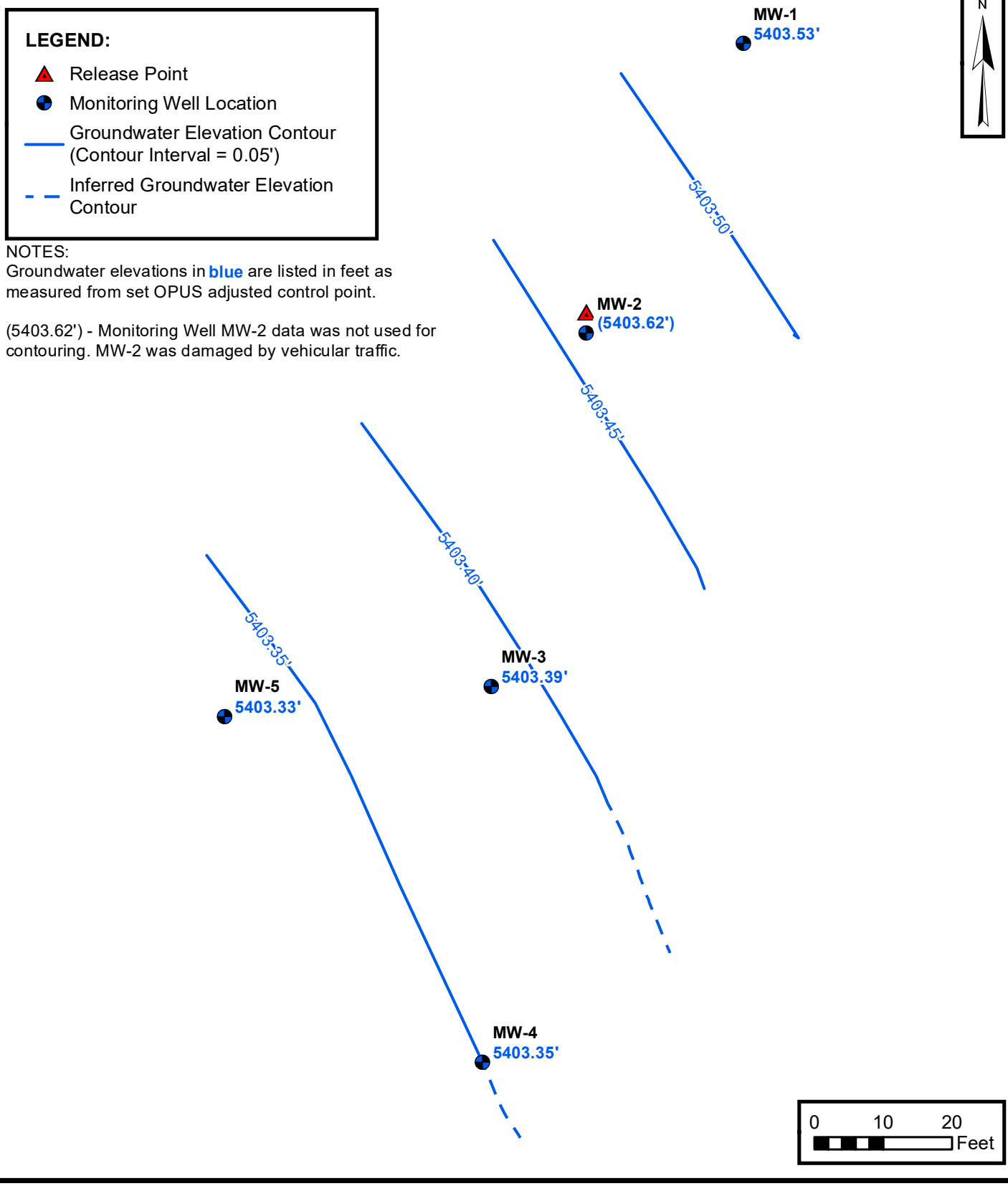
GROUNDWATER GRADIENT MAP
AUGUST 2019
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4J



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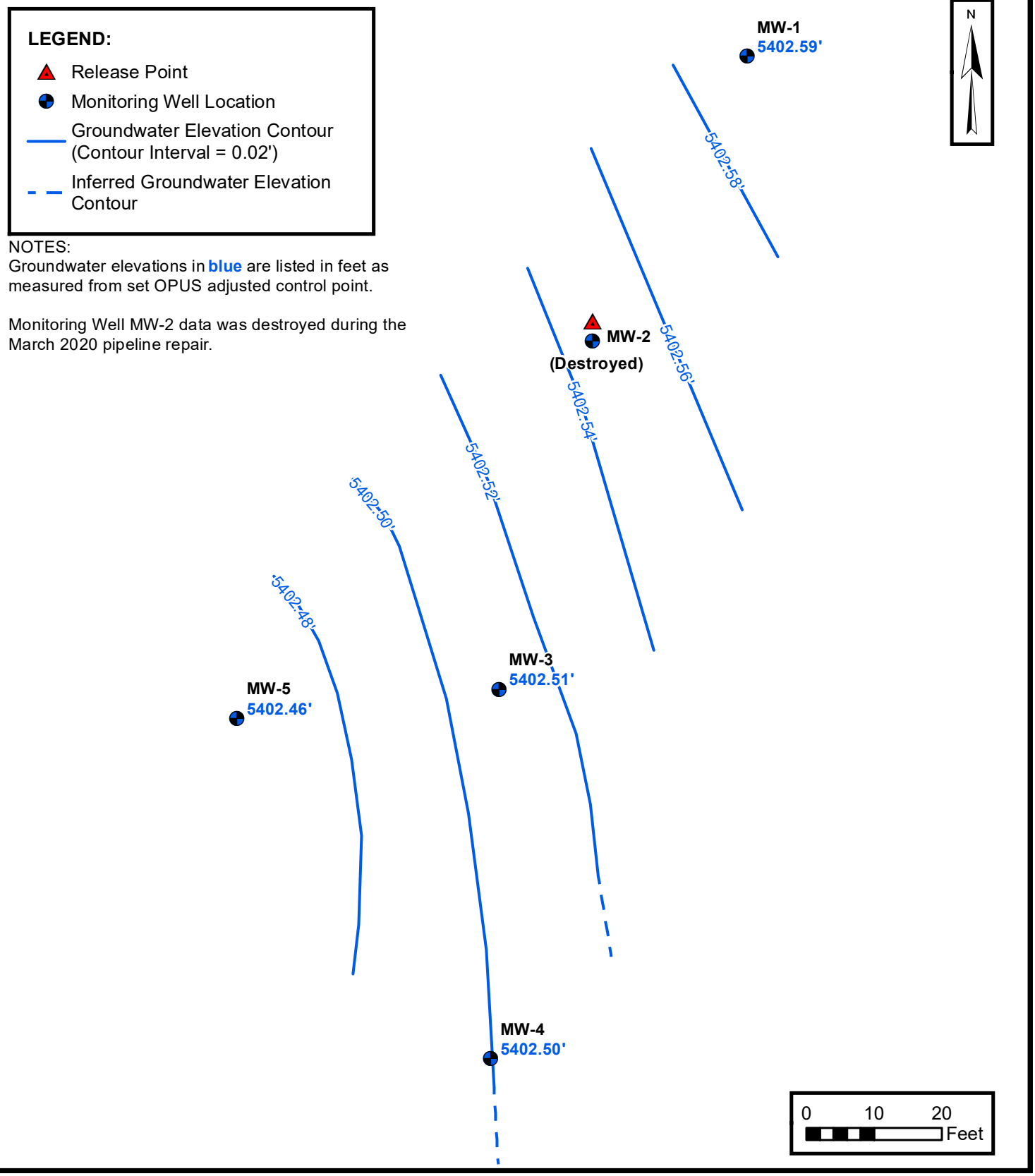
GROUNDWATER GRADIENT MAP
JANUARY 2020
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4K



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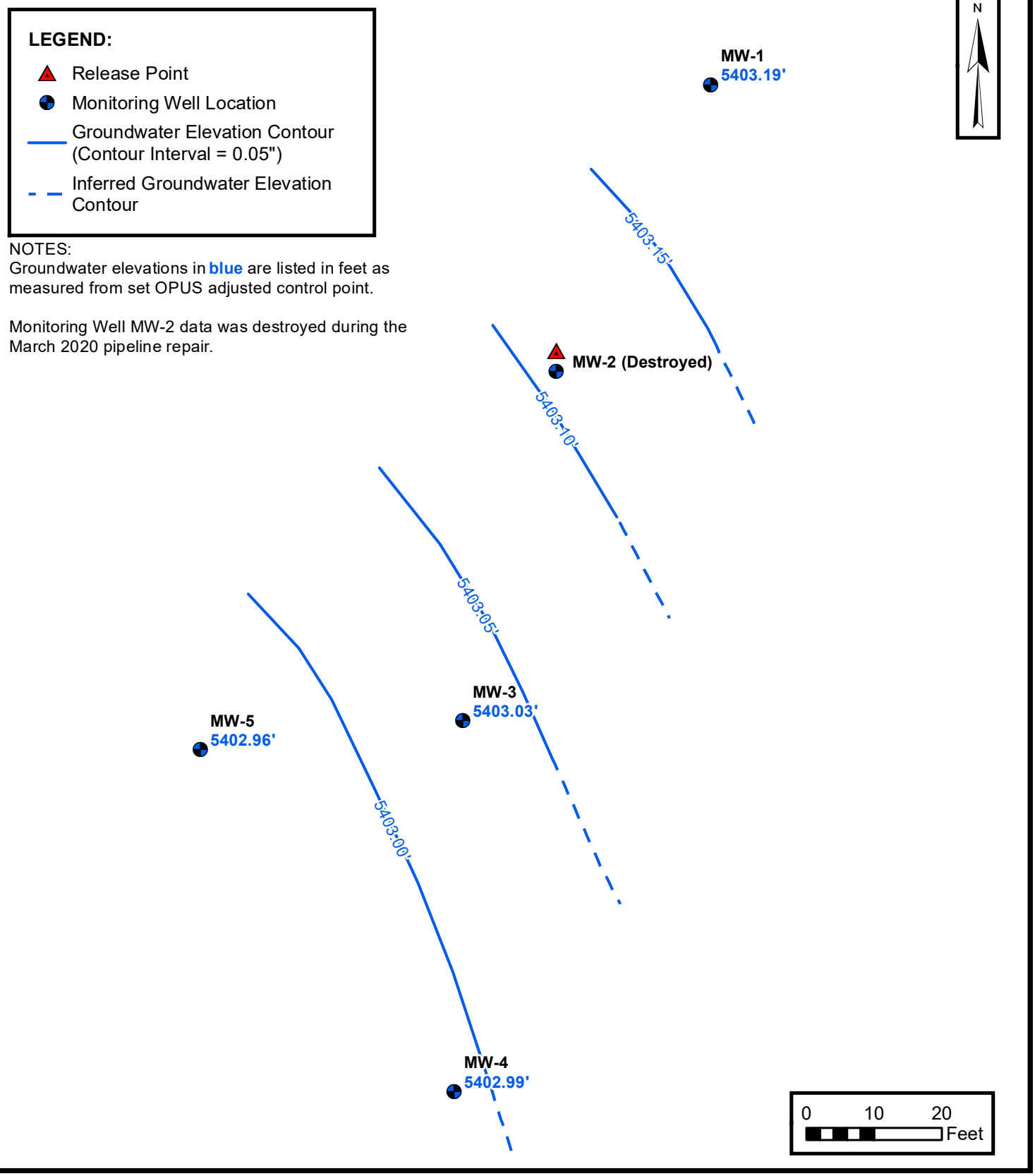
GROUNDWATER GRADIENT MAP
SEPTEMBER 2020
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4L



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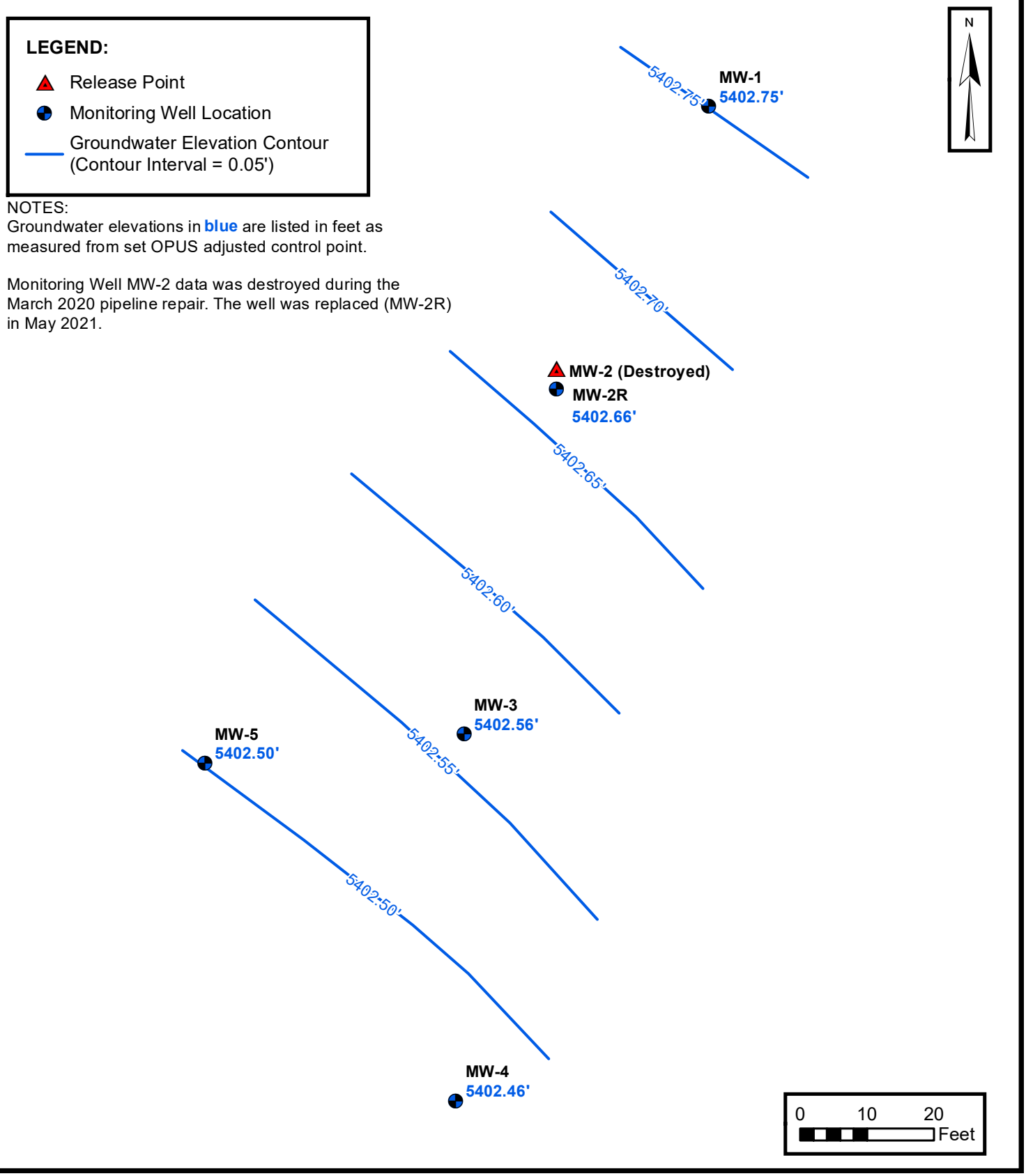
GROUNDWATER GRADIENT MAP
JANUARY 2021
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4M



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GROUNDWATER GRADIENT MAP
JULY 2021
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
4N

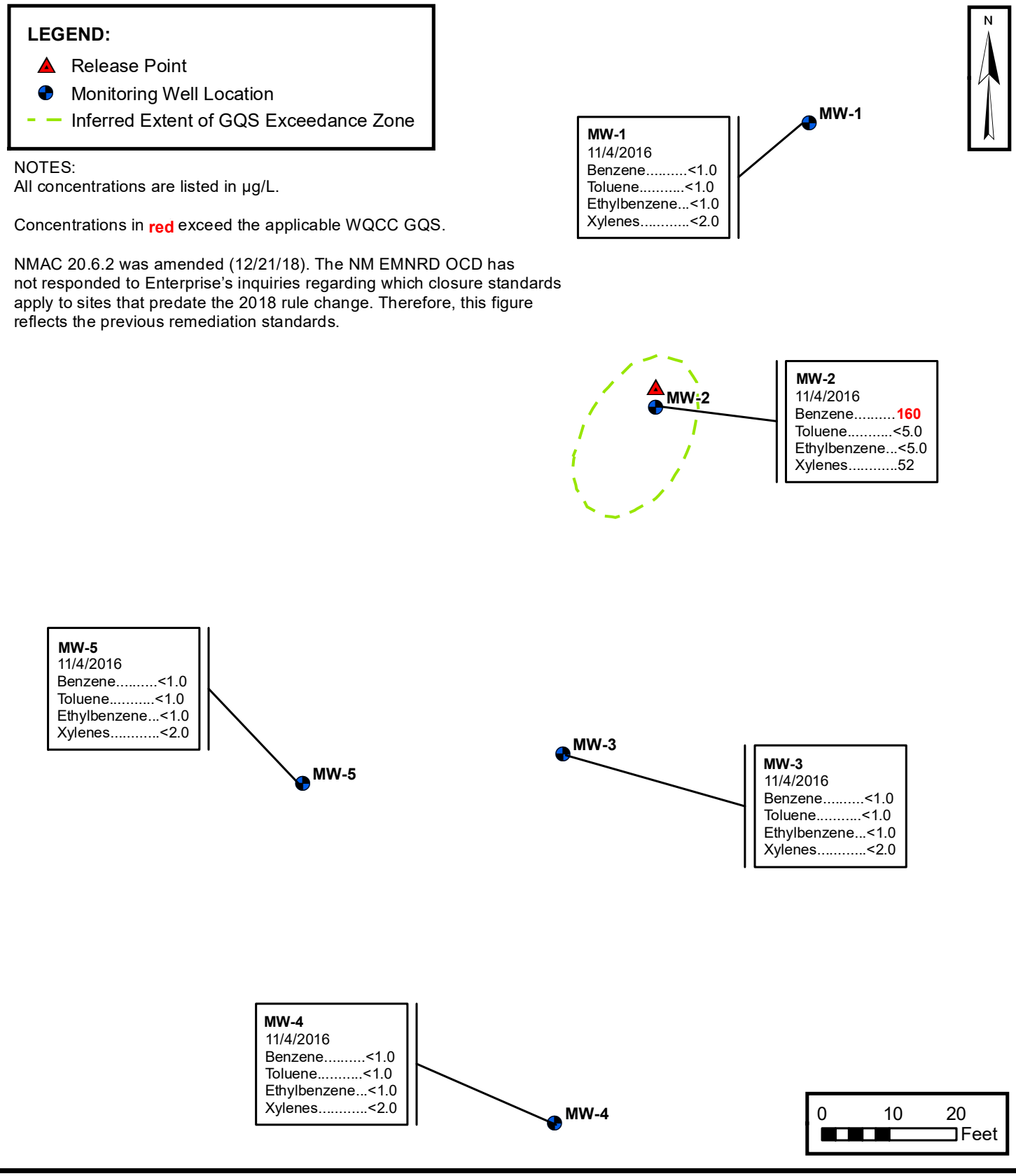
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



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GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (NOVEMBER 2016)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5A

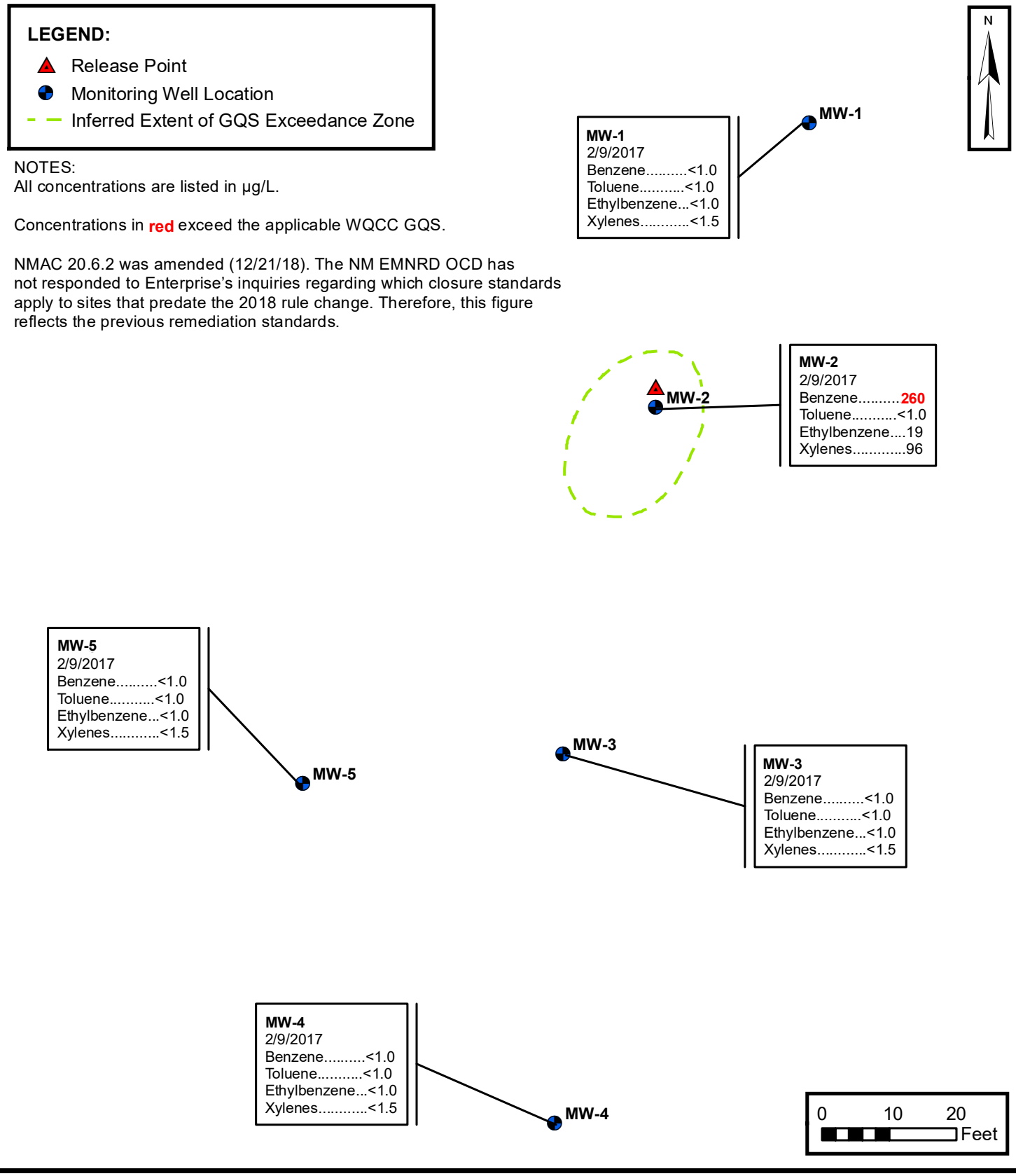
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



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GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (FEBRUARY 2017)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5B

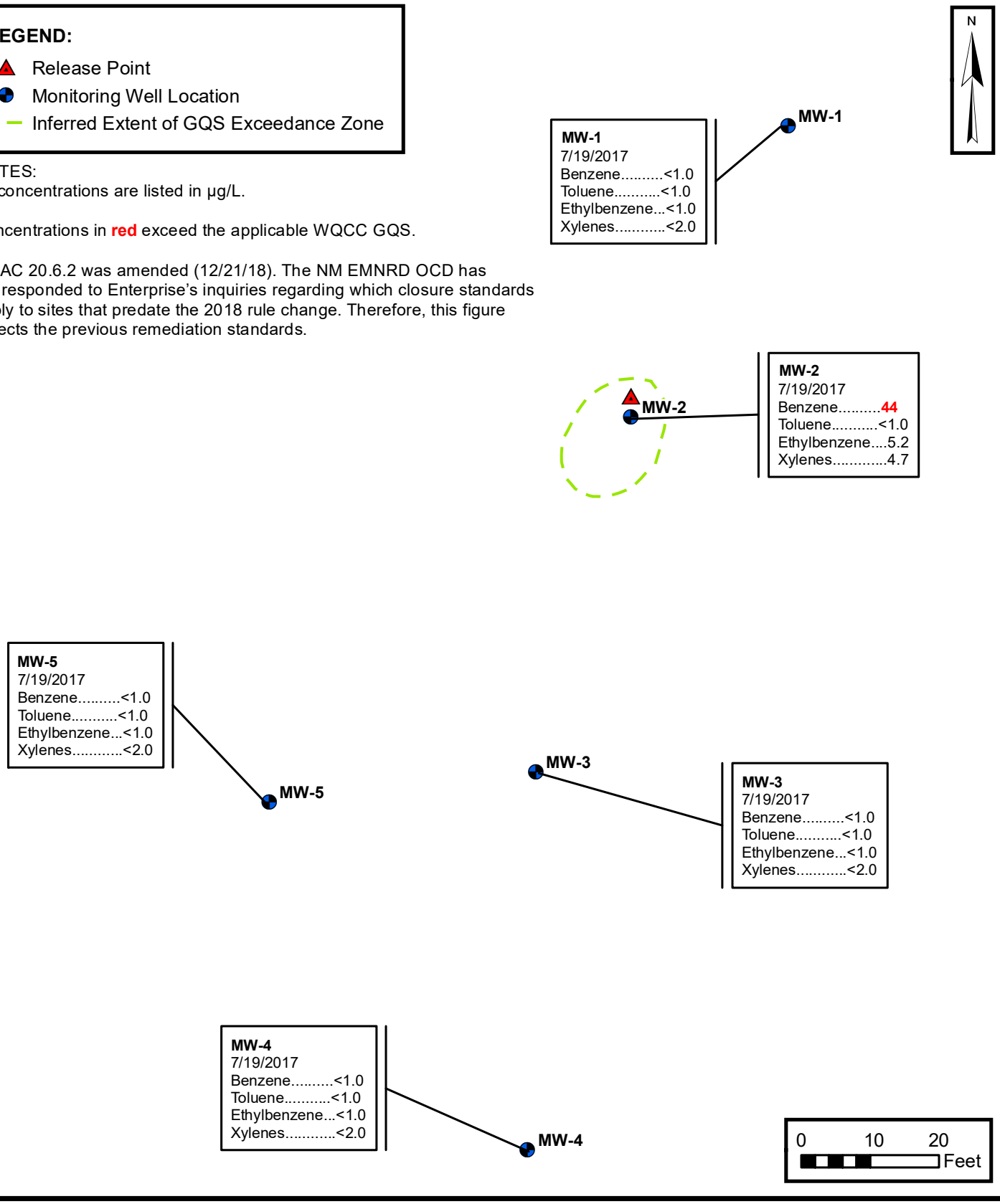
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



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Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JULY 2017)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5C

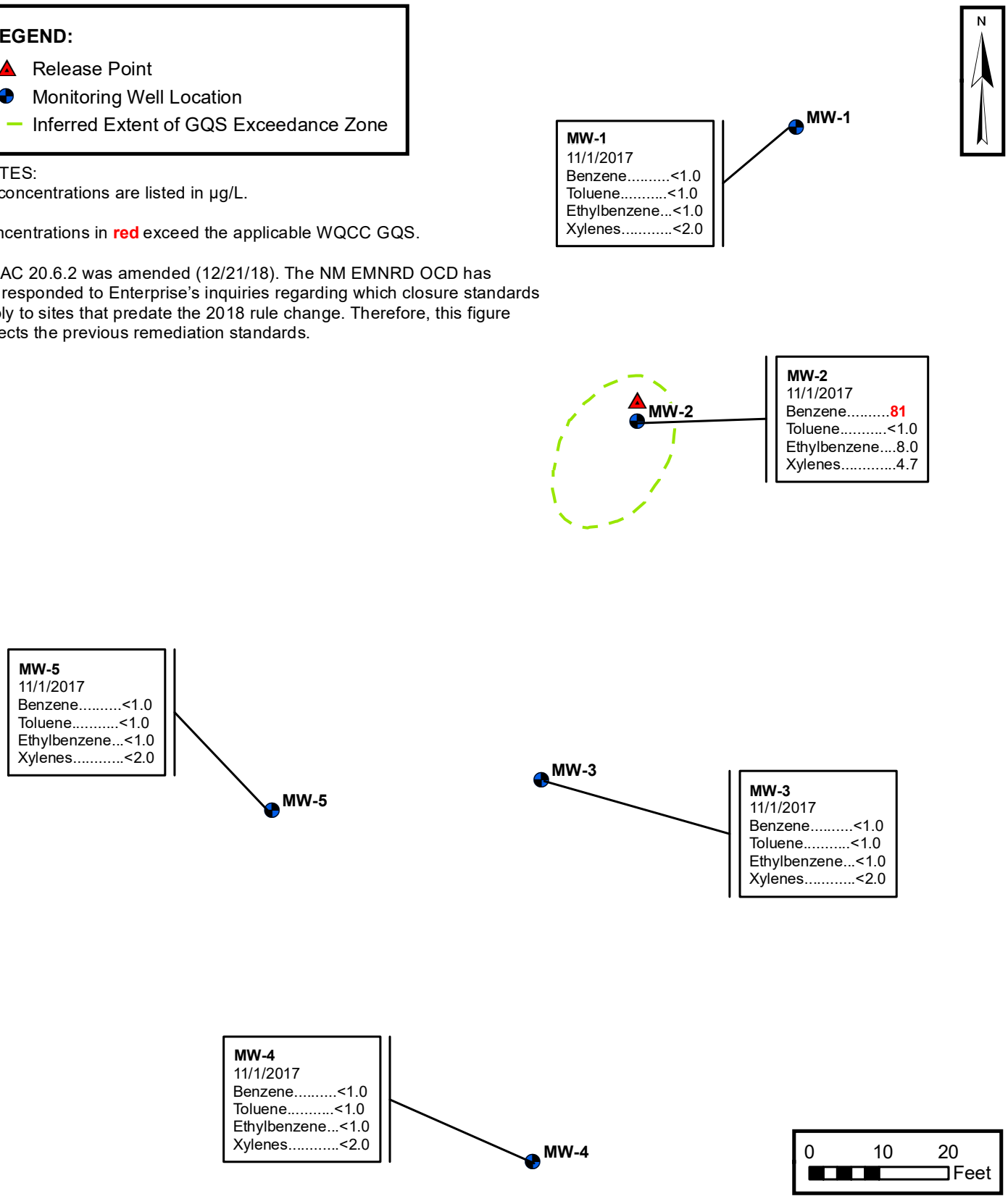
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



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GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (NOVEMBER 2017)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5D

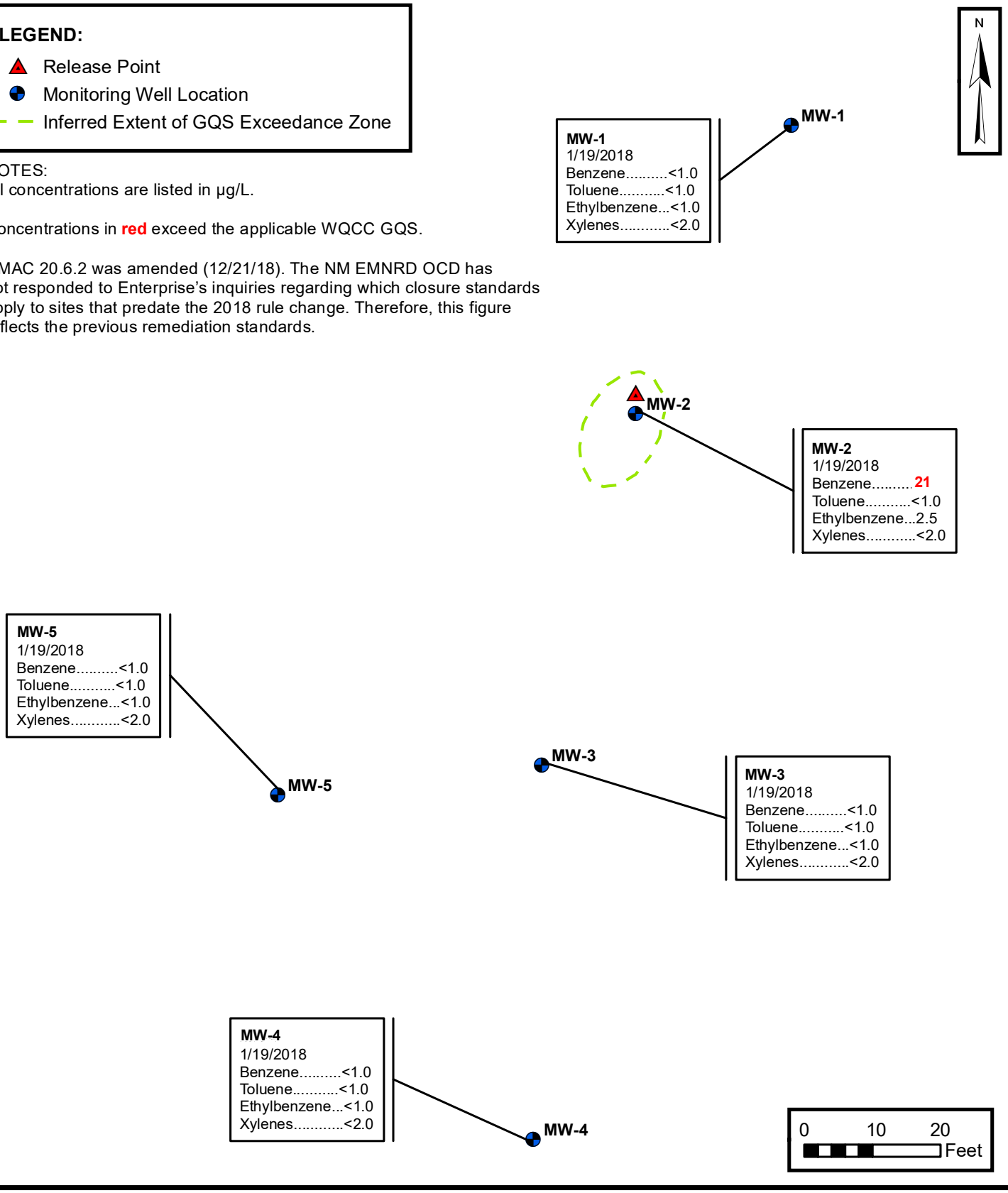
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JANUARY 2018)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5E

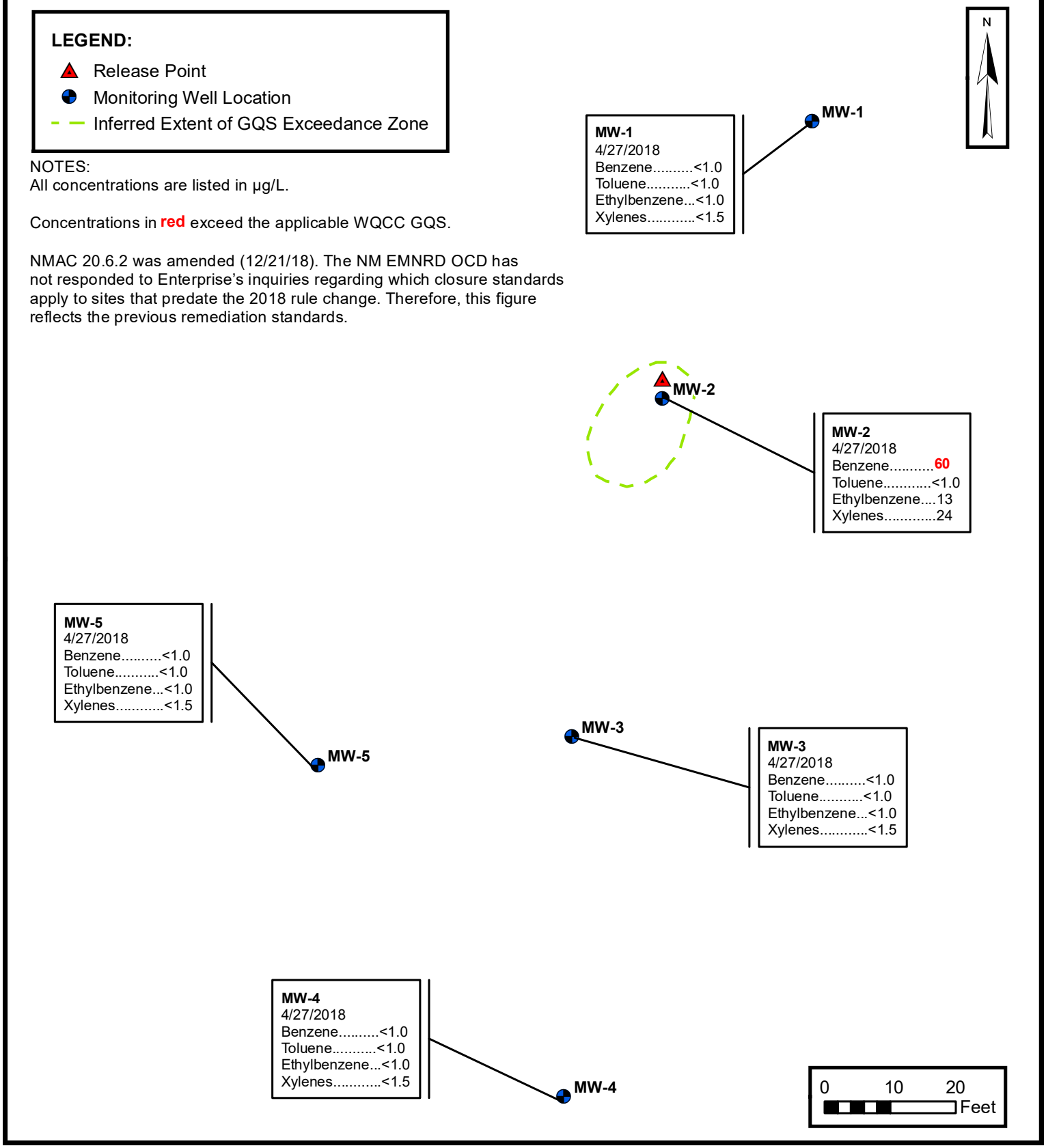
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (APRIL 2018)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5F

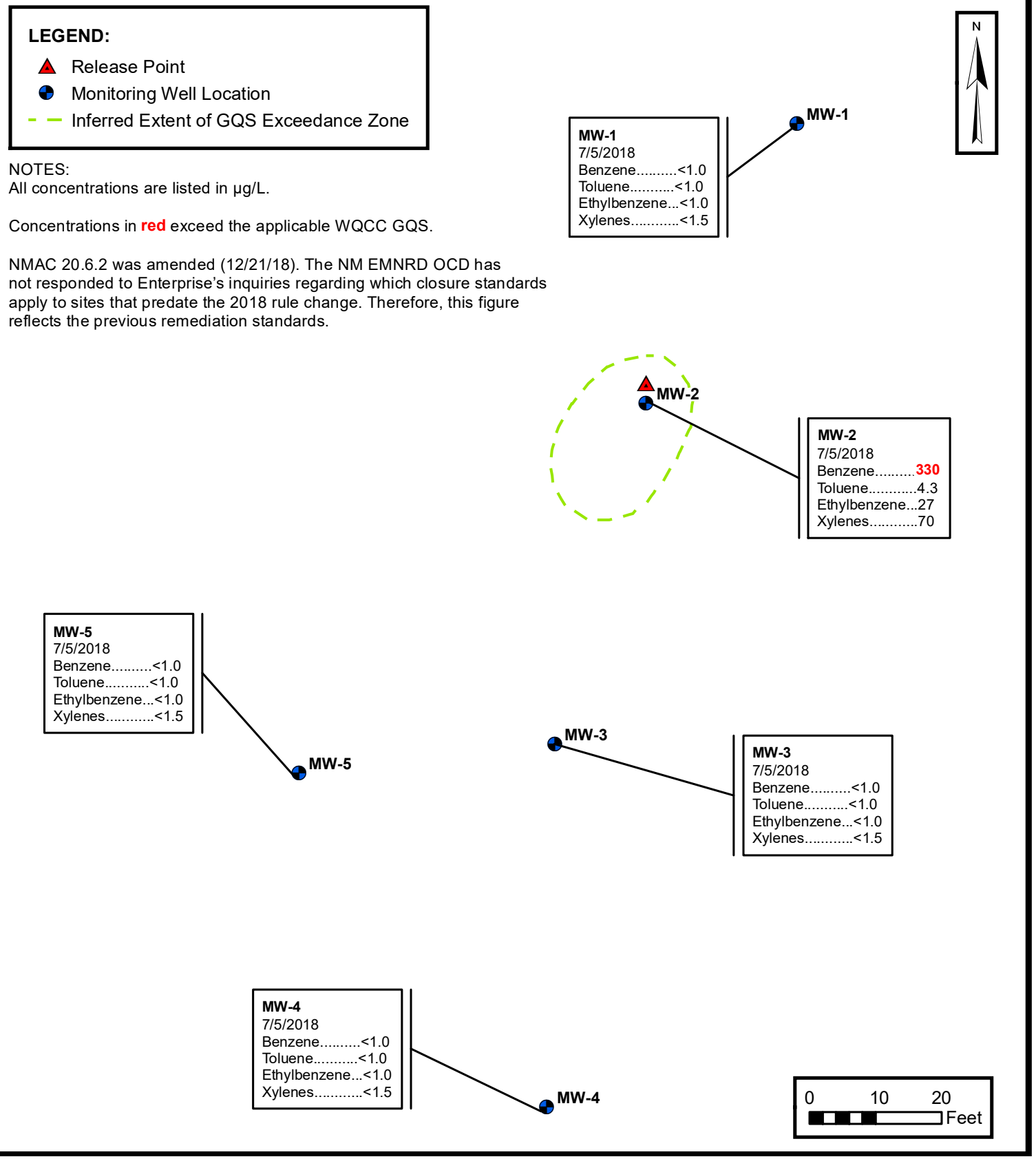
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



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GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JULY 2018)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5G

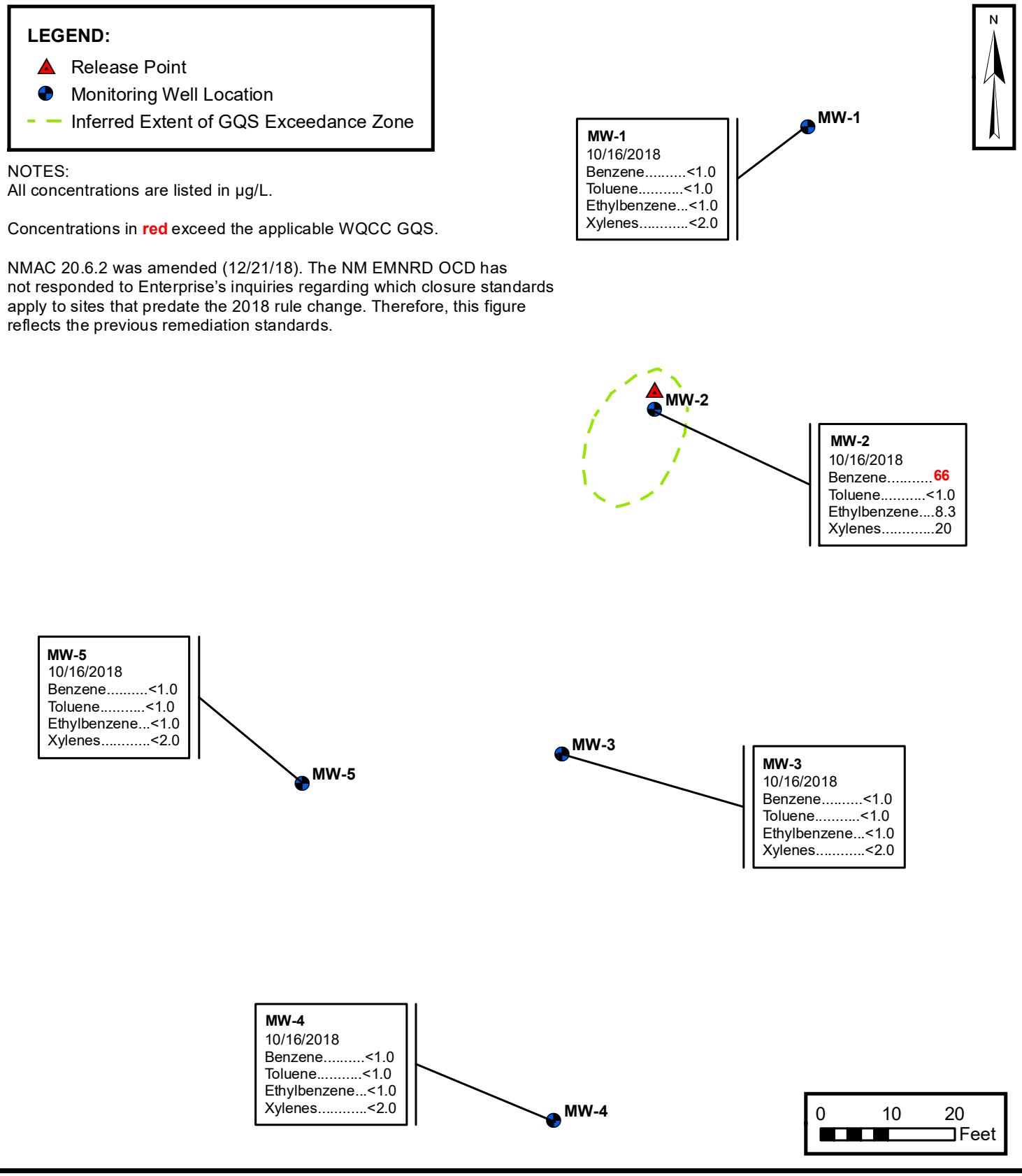
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (OCTOBER 2018)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5H

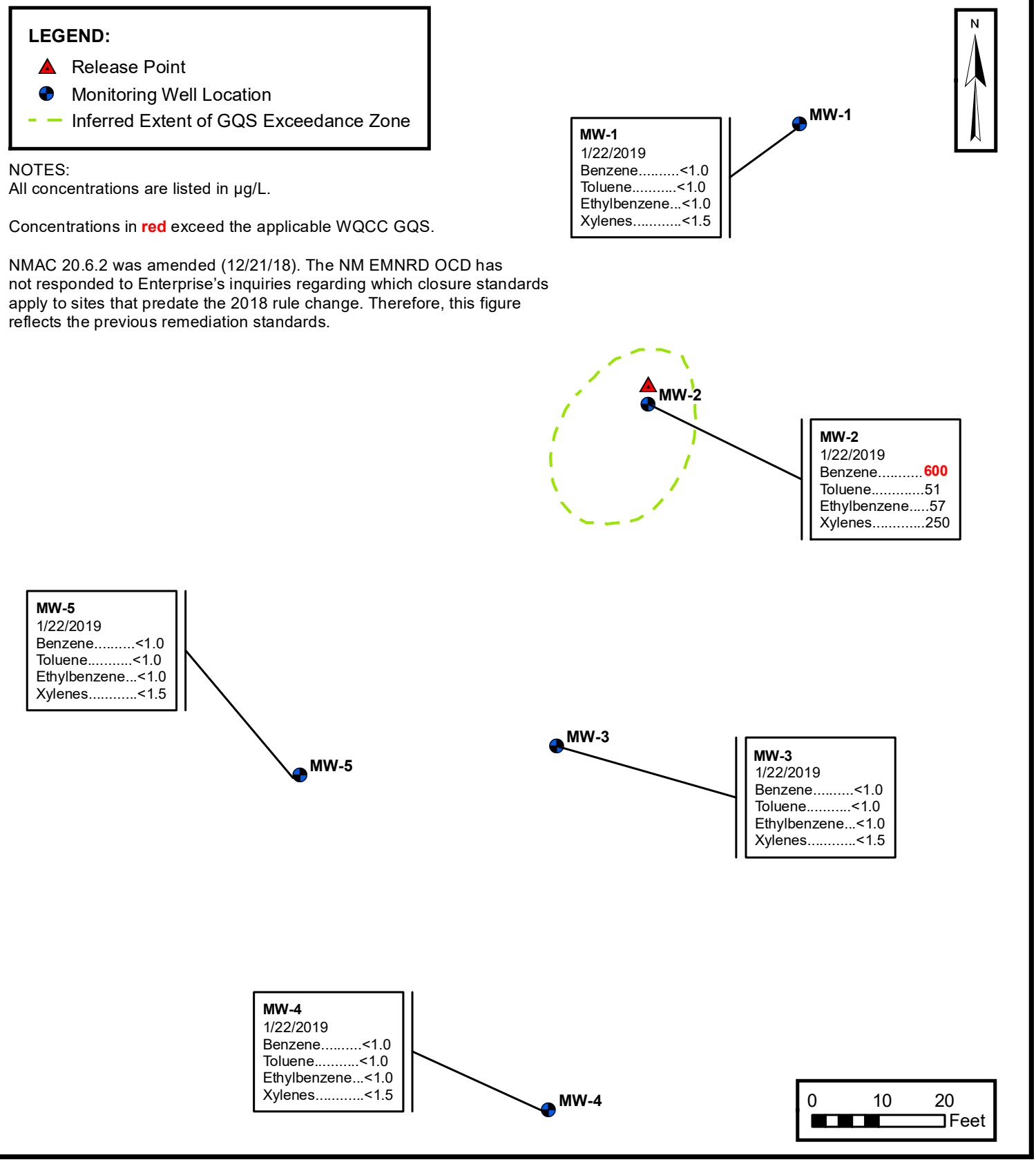
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JANUARY 2019)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5I

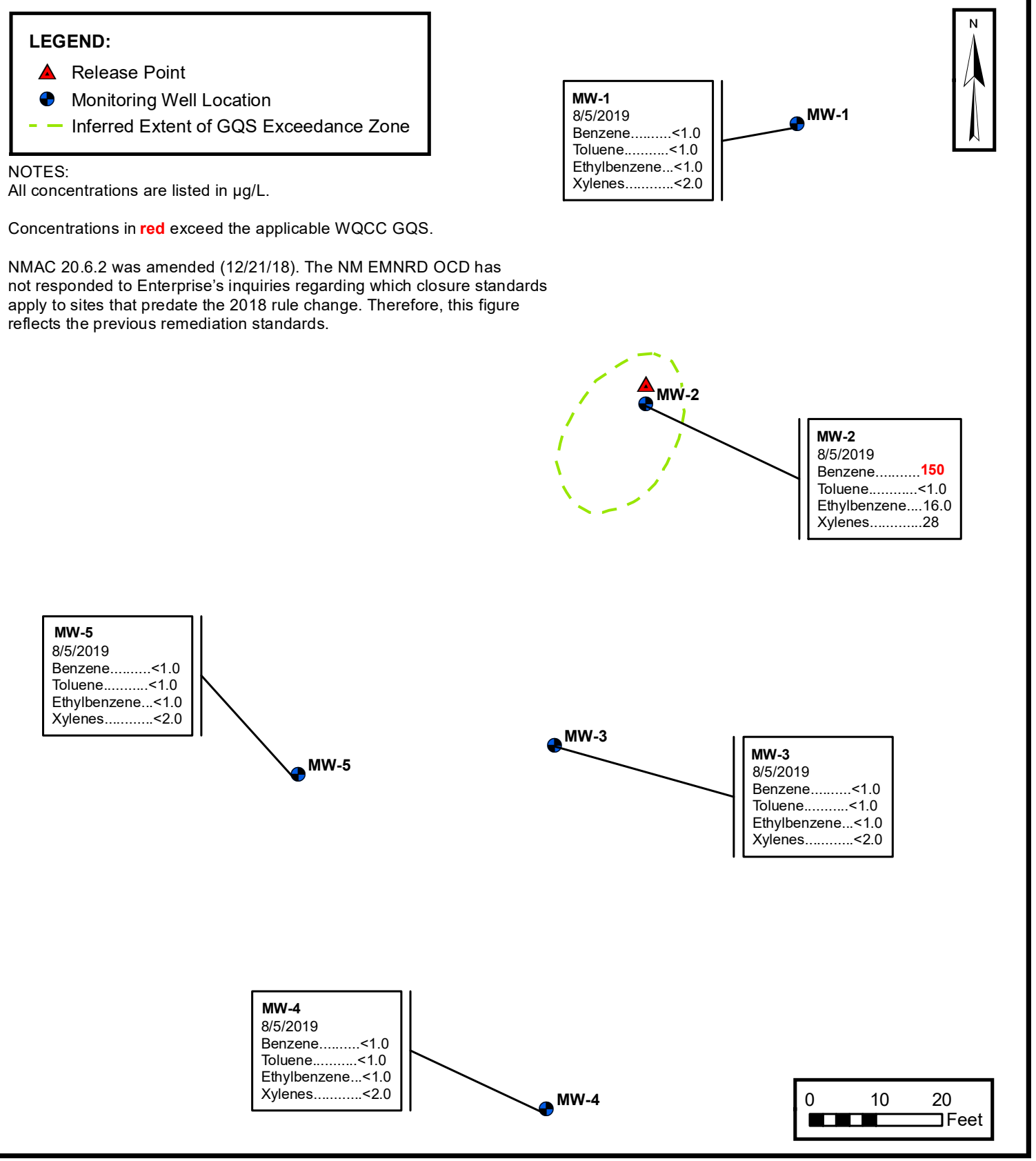
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (AUGUST 2019)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5J

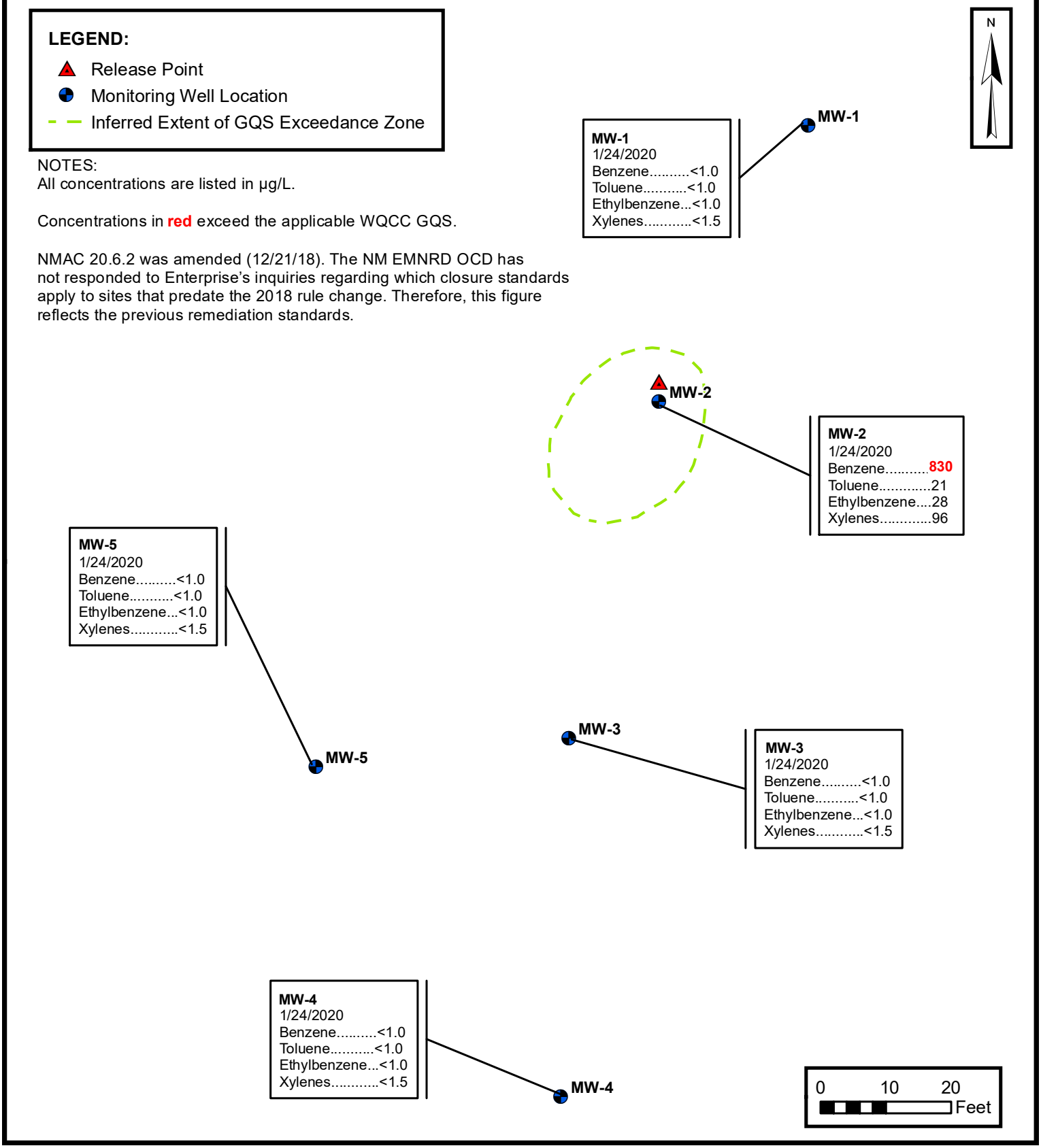
LEGEND:

- Release Point
- Monitoring Well Location
- Inferred Extent of GQS Exceedance Zone

NOTES:
All concentrations are listed in µg/L.

Concentrations in **red** exceed the applicable WQCC GQS.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JANUARY 2020)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5K

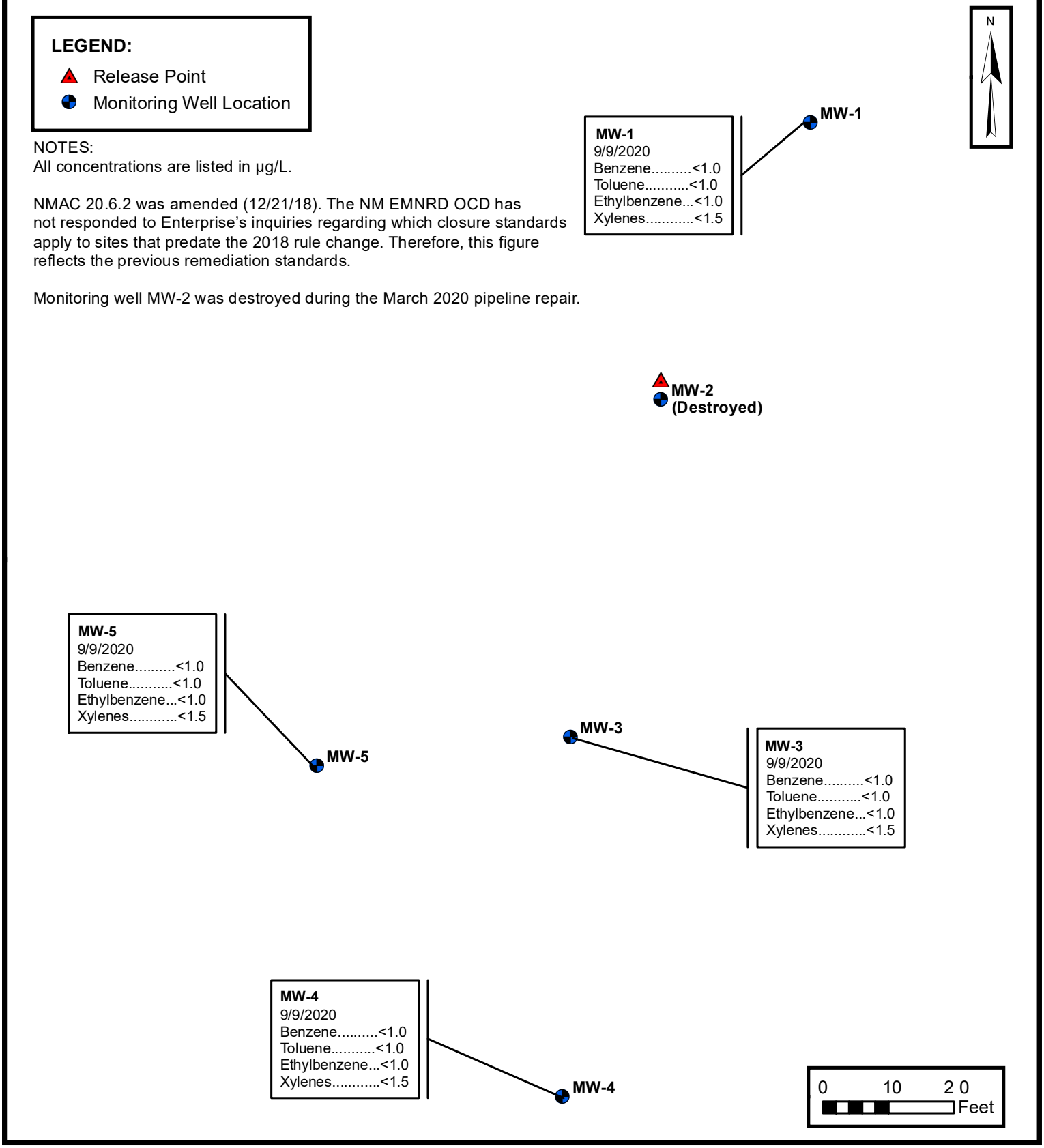
LEGEND:

- Release Point
- Monitoring Well Location

NOTES:
All concentrations are listed in µg/L.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.

Monitoring well MW-2 was destroyed during the March 2020 pipeline repair.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (SEPTEMBER 2020)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5L

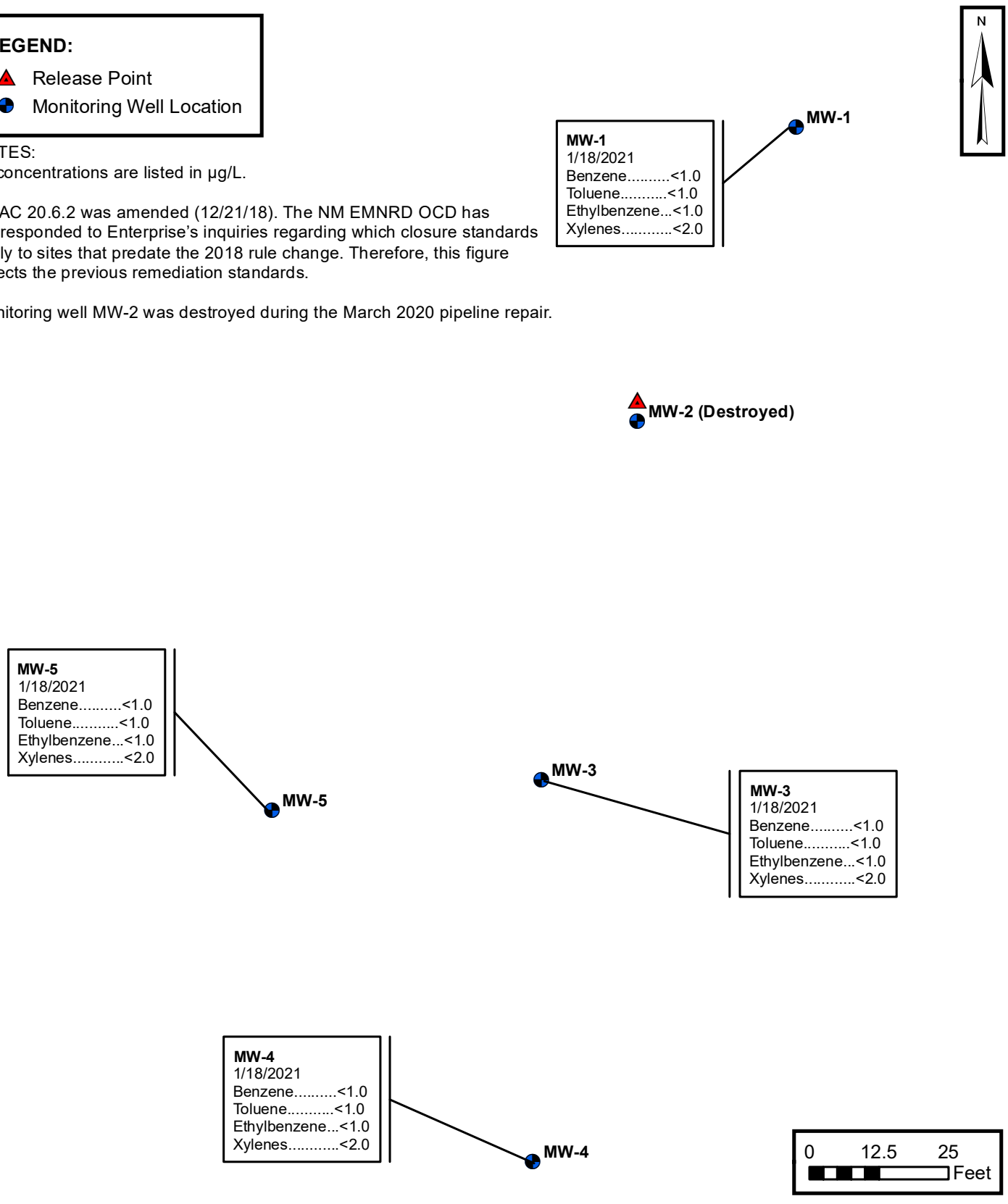
LEGEND:

- Release Point
- Monitoring Well Location

NOTES:
All concentrations are listed in µg/L.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.

Monitoring well MW-2 was destroyed during the March 2020 pipeline repair.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JANUARY 2021)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5M

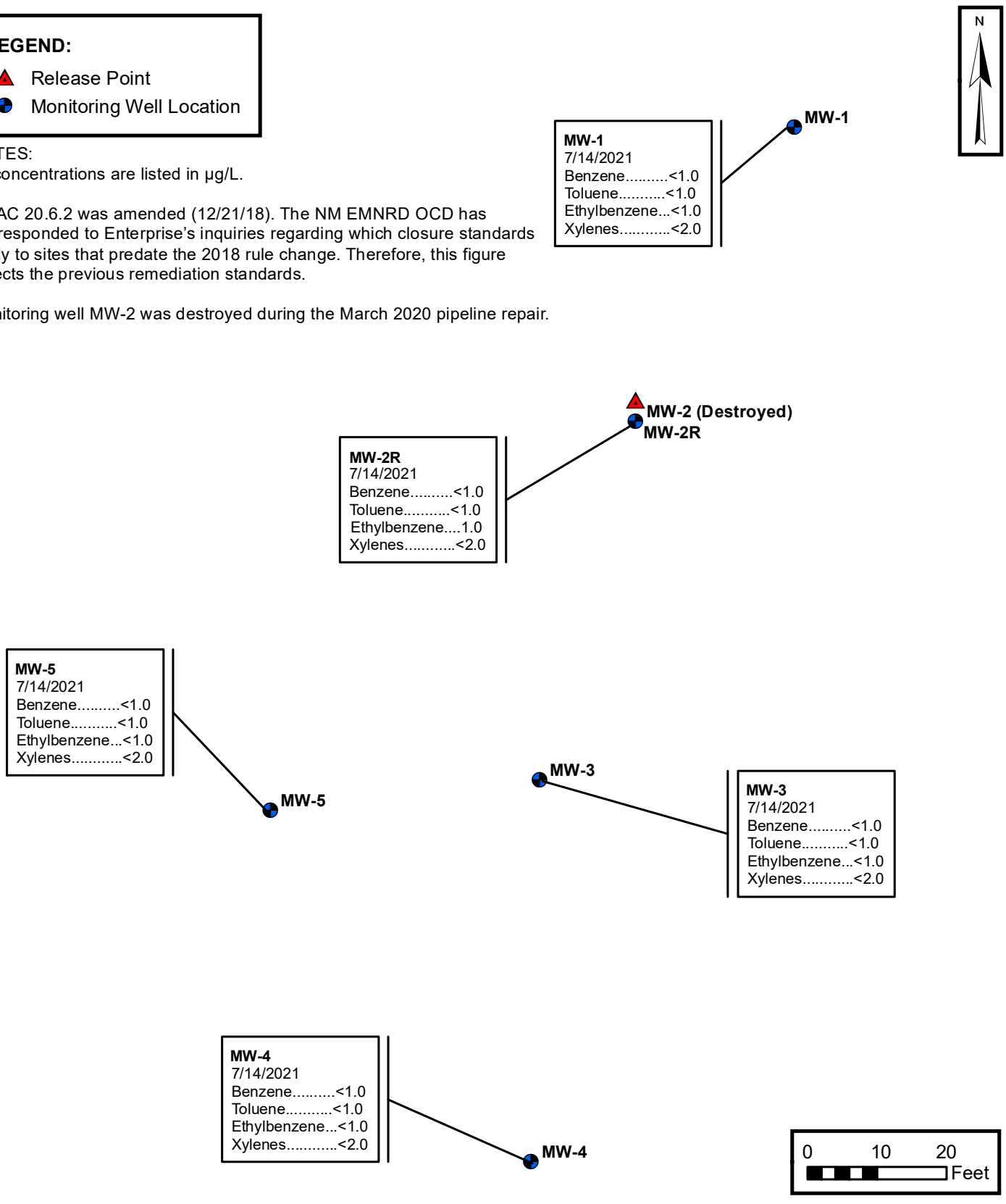
LEGEND:

- Release Point
- Monitoring Well Location

NOTES:
All concentrations are listed in µg/L.

NMAC 20.6.2 was amended (12/21/18). The NM EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards apply to sites that predate the 2018 rule change. Therefore, this figure reflects the previous remediation standards.

Monitoring well MW-2 was destroyed during the March 2020 pipeline repair.



ENSOLUM
Environmental & Hydrogeologic Consultants

GROUNDWATER QUALITY STANDARD (GQS) EXCEEDANCE ZONE MAP (JULY 2021)
ENTERPRISE FIELD SERVICES, LLC
MASDEN GAS COM #1E
NW ¼, S28 T29N R11W, San Juan County, New Mexico
36.70096° N, 108.00164° W

PROJECT NUMBER: 05A1226026

FIGURE
5N

ENSOLUM

APPENDIX B

Executed C-138 Solid Waste Acceptance Form

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
220 S. St. Francis Dr., Santa Fe, NM 87505

State of N[illegible]
Energy Minerals an[illegible]
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

rm C-138
Revised 08/01/11

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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

2. Originating Site: Madsen Gas Com #1E

140 BBLS / 3-11-20
10 yds
125 BBLS - 3/6/20
86 yds - 3/6/20
140 yds - 3/5/20
140 BBLS - 3/5/20

3. Location of Material (Street Address, City, State or ULSTR):
Unit Letter C Sec 28 T 29N R 11W, GPS 36.70080, -108.00131, San Juan County, NM

4. Source and Description of Waste:
Source: Hydrocarbon Impacted Soils from a Pipeline Release.
Description: Hydrocarbon impacted soils associated clean up and maintenance activities.
Estimated Volume 80 yd³ / (bbls) Known Volume (to be entered by the operator at the end of the haul) 55 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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

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

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 3-4-2020, representative for Enterprise Products Operating authorizes IEI, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: Kelly Oil Field Services / Various / CNJ

OCD Permitted Surface Waste Management Facility

CL-139
PH-1

Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * **Permit #: NM 01-0010B**
Address of Facility: **#49 CR 2150 Aztec, New Mexico**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

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

PRINT NAME: BETTY PRUDEN TITLE: Clerk DATE: 3/4/20
SIGNATURE: Betty Pruden TELEPHONE NO.: 505-632-1782
Surface Waste Management Facility Authorized Agent

3/4

ENSOLUM

APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Soil Remediation and Groundwater Monitoring Report
Masden Gas Com #1E (2/05/2015)
Ensolum Project No. 05A1226026

ENSOLUM

Photograph 1 Photograph Description: View of in-process excavation activities.	
Photograph 2 Photograph Description: View of in-process excavation activities.	
Photograph 3 Photograph Description: View of in-process excavation activities.	

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Soil Remediation and Groundwater Monitoring Report
Masden Gas Com #1E (2/05/2015)
Ensolum Project No. 05A1226026

ENSOLUM

Photograph 4 Photograph Description: View of in-process excavation activities. Part of the excavation was backfilled with clean fill in order to accommodate pipeline repairs.	
Photograph 5 Photograph Description: View of the final pipeline repair.	
Photograph 6 Photograph Description: View of in-process excavation activities, after the final pipeline repair.	

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Soil Remediation and Groundwater Monitoring Report
Masden Gas Com #1E (2/05/2015)
Ensolum Project No. 05A1226026

ENSOLUM

Photograph 7 Photograph Description: View of the final extent of the excavation.	
Photograph 8 Photograph Description: View of the final extent of the excavation.	

ENSOLUM

APPENDIX D

Regulatory Correspondence

From: Long, Thomas
To: "Smith, Cory, EMNRD (Cory.Smith@state.nm.us)"
Cc: Stone, Brian; Griswold, Jim, EMNRD
Subject: Masden Gas Com #1E (3R-1033); Unit Letter C Section 28 T 29N R 11W; 36.70080, -108.0013; San Juan County, NM
Date: Thursday, March 5, 2020 10:53:00 AM

Cory,

This email is a follow up to our phone conversation earlier. Enterprise is performing maintenance activities on the Masden Gas Com #1E pipeline in preparation for a hydro-test. We are excavating additional impacted soil from the 2015 release area and this email is a notification that Enterprise will be collecting soil samples for laboratory analysis tomorrow, March 6, 2020 at 2:00 p.m. If you have any questions, please call or email.

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

ENSOLUM

APPENDIX E

Tables

ENSOLUM

TABLE 1
Masden Gas Com #1E Pipeline (2/05/2015)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (Feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Excavation Composite Soil Samples (2020)													
MS-1	3.06.20	C	0 to 6	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.0	<45	ND	<60
MS-2	3.06.20	C	0 to 6	<0.019	<0.039	<0.039	<0.077	ND	<3.9	<8.1	<41	ND	<60
MS-3	3.06.20	C	0 to 6	<0.016	<0.031	<0.031	<0.062	ND	<3.1	<9.6	<48	ND	<60
MS-4	3.06.20	C	0 to 5	<0.015	<0.031	<0.031	<0.062	ND	<3.1	<8.3	<41	ND	<60
MS-5	3.06.20	C	0 to 5	<0.016	<0.032	<0.032	<0.063	ND	<3.2	<9.1	<46	ND	<60
MS-6	3.06.20	C	4	<0.014	<0.028	<0.028	<0.056	ND	<2.8	<9.6	<48	ND	<60
Soil Boring Soil Samples (2021)													
MW-2(r)@ 5-7'	5.24.21	C	5 to 7	0.058	<0.048	0.095	0.35	0.50	33	<10	<50	33	<60
MW-2(r)@ 7-9'	5.24.21	C	7 to 9	<0.025	<0.050	<0.050	<0.10	ND	<5.0	<9.9	<49	ND	<60

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits (PQLs) or Reporting Limits (RLs)

NE = Not Established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

TABLE 2
Masden Gas Com #1E (2/05/2015)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Chloride (mg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]	NE
MW-1	7.10.15	<1.0	<1.0	<1.0	<1.5	210
	2.26.16	<1.0	<1.0	<1.0	<2.0	NA
	11.04.16	<1.0	<1.0	<1.0	<2.0	NA
	2.09.17	<1.0	<1.0	<1.0	<1.5	NA
	7.19.17	<1.0	<1.0	<1.0	<2.0	NA
	11.01.17	<1.0	<1.0	<1.0	<2.0	NA
	1.19.18	<1.0	<1.0	<1.0	<2.0	NA
	4.27.18	<1.0	<1.0	<1.0	<1.5	NA
	7.05.18	<1.0	<1.0	<1.0	<1.5	NA
	10.16.18	<1.0	<1.0	<1.0	<2.0	NA
	1.22.19	<1.0	<1.0	<1.0	<1.5	NA
	8.5.19	<1.0	<1.0	<1.0	<2.0	NA
	1.24.20	<1.0	<1.0	<1.0	<1.5	NA
	9.09.20	<1.0	<1.0	<1.0	<1.5	NA
	1.18.21	<1.0	<1.0	<1.0	<2.0	NA
	7.14.21	<1.0	<1.0	<1.0	<2.0	NA
MW-2	7.10.15	**790**	**1,300**	100	**880**	210
	2.26.16	**640**	35	55	470	NA
	11.04.16	**160**	<5.0	<5.0	52	NA
	2.09.17	**260**	<1.0	19	96	NA
	7.19.17	**44**	<1.0	5.2	4.7	NA
	11.01.17	**81**	<1.0	8.0	20	NA
	1.19.18	**21**	<1.0	2.5	<2.0	NA
	4.27.18	**60**	<1.0	13	24	NA
	7.05.18	**330**	4.3	27	70	NA
	10.16.18	**66**	<1.0	8.3	20	NA
	1.22.19	**600**	51	57	250	NA
	8.5.19	**150**	<1.0	16	28	NA
	1.24.20	**830**	21	28	96	NA
	9.09.20	Monitoring Well was Destroyed during the March 2020 Pipeline Repair.				
	1.18.21					
MW-2R	7.14.21	<1.0	<1.0	1.0	<2.0	NA
MW-3	7.10.15	**95**	<5.0	<5.0	<7.5	180
	2.26.16	<1.0	<1.0	<1.0	<2.0	NA
	11.04.16	<1.0	<1.0	<1.0	<2.0	NA
	2.09.17	<1.0	<1.0	<1.0	<1.5	NA
	7.19.17	<1.0	<1.0	<1.0	<2.0	NA
	11.01.17	<1.0	<1.0	<1.0	<2.0	NA
	1.19.18	<1.0	<1.0	<1.0	<2.0	NA
	4.27.18	<1.0	<1.0	<1.0	<1.5	NA
	7.05.18	<1.0	<1.0	<1.0	<1.5	NA
	10.16.18	<1.0	<1.0	<1.0	<2.0	NA
	1.22.19	<1.0	<1.0	<1.0	<1.5	NA
	8.5.19	<1.0	<1.0	<1.0	<2.0	NA
	1.24.20	<1.0	<1.0	<1.0	<1.5	NA
	9.09.20	<1.0	<1.0	<1.0	<1.5	NA
	1.18.21	<1.0	<1.0	<1.0	<2.0	NA
	7.14.21	<1.0	<1.0	<1.0	<2.0	NA

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TABLE 2
Masden Gas Com #1E (2/05/2015)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Chloride (mg/L)
New Mexico Water Quality Control Commmission Groundwater Quality Standards		10[A]	750[A]	750[A]	620[A]	NE
MW-4	7.10.15	<1.0	<1.0	<1.0	<1.5	230
	2.26.16	<1.0	<1.0	<1.0	<2.0	NA
	11.04.16	<1.0	<1.0	<1.0	<2.0	NA
	2.09.17	<1.0	<1.0	<1.0	<1.5	NA
	7.19.17	<1.0	<1.0	<1.0	<2.0	NA
	11.01.17	<1.0	<1.0	<1.0	<2.0	NA
	1.19.18	<1.0	<1.0	<1.0	<2.0	NA
	4.27.18	<1.0	<1.0	<1.0	<1.5	NA
	7.05.18	<1.0	<1.0	<1.0	<1.5	NA
	10.16.18	<1.0	<1.0	<1.0	<2.0	NA
	1.22.19	<1.0	<1.0	<1.0	<1.5	NA
	8.5.19	<1.0	<1.0	<1.0	<2.0	NA
	1.24.20	<1.0	<1.0	<1.0	<1.5	NA
	9.09.20	<1.0	<1.0	<1.0	<1.5	NA
	1.18.21	<1.0	<1.0	<1.0	<2.0	NA
	7.14.21	<1.0	<1.0	<1.0	<2.0	NA
MW-5	7.10.15	<2.0	<2.0	<2.0	<3.0	170
	2.26.16	<1.0	<1.0	<1.0	<2.0	NA
	11.04.16	<1.0	<1.0	<1.0	<2.0	NA
	2.09.17	<1.0	<1.0	<1.0	<1.5	NA
	7.19.17	<1.0	<1.0	<1.0	<2.0	NA
	11.01.17	<1.0	<1.0	<1.0	<2.0	NA
	1.19.18	<1.0	<1.0	<1.0	<2.0	NA
	4.27.18	<1.0	<1.0	<1.0	<1.5	NA
	7.05.18	<1.0	<1.0	<1.0	<1.5	NA
	10.16.18	<1.0	<1.0	<1.0	<2.0	NA
	1.22.19	<1.0	<1.0	<1.0	<1.5	NA
	8.5.19	<1.0	<1.0	<1.0	<2.0	NA
	1.24.20	<1.0	<1.0	<1.0	<1.5	NA
	9.09.20	<1.0	<1.0	<1.0	<1.5	NA
	1.18.21	<1.0	<1.0	<1.0	<2.0	NA
	7.14.21	<1.0	<1.0	<1.0	<2.0	NA

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

A = NMAC 20.6.2 was amended (12/21/18). The New Mexico EMNRD OCD has not responded to Enterprise's inquiries regarding which closure standards will apply to sites that predate the 2018 rule change. Therefore, this table reflects the previous remediation standards.

NA = Not Analyzed

NE = Not Established

µg/L = microgram per liter

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

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TABLE 3
Masden Gas Com #1E (2/05/2015)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-1	7.10.15	ND	6.68	ND	5409.52	5402.84
	2.26.16	ND	6.13	ND		5403.39
	11.04.16	ND	6.73	ND		5402.79
	2.09.17	ND	5.90	ND		5403.62
	7.19.17	ND	6.89	ND		5402.63
	11.01.17	ND	6.69	ND		5402.83
	1.19.18	ND	6.45	ND		5403.07
	4.27.18	ND	6.32	ND		5403.20
	7.05.18	ND	7.07	ND		5402.45
	10.16.18[1]	ND	6.97	ND		5402.55
	1.22.19	ND	6.38	ND		5403.14
	8.05.19	ND	7.04	ND		5402.48
	1.24.20	ND	5.99	ND		5403.53
	9.09.20	ND	6.93	ND		5402.59
	1.18.21	ND	6.33	ND		5403.19
	7.14.21	ND	6.96	ND	5409.71	5402.75
MW-2	7.10.15	ND	3.97	ND	5406.67	5402.70
	2.26.16	ND	3.31	ND		5403.36
	11.04.16	ND	3.92	ND		5402.75
	2.09.17	ND	3.10	ND		5403.57
	7.19.17	ND	4.06	ND		5402.61
	11.01.17	ND	3.88	ND		5402.79
	1.19.18	ND	3.64	ND		5403.03
	4.27.18	ND	3.49	ND		5403.18
	7.05.18	ND	4.24	ND		5402.43
	10.16.18	ND	4.11	ND		5402.56
	1.22.19	ND	3.56	ND		5403.11
	8.05.19	ND	4.07	ND		5402.60
	1.24.20	ND	3.05	ND		5403.62
	9.09.20	Monitoring Well was Destroyed during the March 2020 Pipeline Repair.				
	1.18.21					
MW-2R	7.14.21	ND	4.28	ND	5406.94	5402.66
MW-3	7.10.15	ND	6.89	ND	5409.45	5402.56
	2.26.16	ND	6.20	ND		5403.25
	11.04.16	ND	6.78	ND		5402.67
	2.09.17	ND	5.97	ND		5403.48
	7.19.17	ND	6.96	ND		5402.49
	11.01.17	ND	6.72	ND		5402.73
	1.19.18	ND	6.53	ND		5402.92
	4.27.18	ND	6.39	ND		5403.06
	7.05.18	ND	7.12	ND		5402.33
	10.16.18	ND	6.95	ND		5402.50
	1.22.19	ND	6.46	ND		5402.99
	8.05.19	ND	7.08	ND		5402.37
	1.24.20	ND	6.06	ND		5403.39
	9.09.20	ND	6.94	ND		5402.51
	1.18.21	ND	6.42	ND		5403.03
	7.14.21	ND	7.04	ND	5409.60	5402.56

ENSOLUM

TABLE 3
Masden Gas Com #1E (2/05/2015)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-4	7.10.15	ND	6.71	ND	5409.21	5402.50
	2.26.16	ND	6.00	ND		5403.21
	11.04.16	ND	6.57	ND		5402.64
	2.09.17	ND	6.80	ND		5402.41
	7.19.17	ND	6.75	ND		5402.46
	11.01.17	ND	6.51	ND		5402.70
	1.19.18	ND	6.27	ND		5402.94
	4.27.18	ND	6.18	ND		5403.03
	7.05.18	ND	6.93	ND		5402.28
	10.16.18	ND	6.73	ND		5402.48
	1.22.19	ND	6.26	ND		5402.95
	8.05.19	ND	6.87	ND		5402.34
	1.24.20	ND	5.86	ND		5403.35
	9.09.20	ND	6.71	ND		5402.50
	1.18.21	ND	6.22	ND		5402.99
	7.14.21	ND	6.85	ND	5409.31	5402.46
MW-5	7.10.15	ND	3.28	ND	5405.75	5402.47
	2.26.16	ND	2.58	ND		5403.17
	11.04.16	ND	3.14	ND		5402.61
	2.09.17	ND	2.36	ND		5403.39
	7.19.17	ND	3.32	ND		5402.43
	11.01.17	ND	3.08	ND		5402.67
	1.19.18	ND	2.88	ND		5402.87
	4.27.18	ND	2.76	ND		5402.99
	7.05.18	ND	3.50	ND		5402.25
	10.16.18	ND	3.31	ND		5402.44
	1.22.19	ND	2.82	ND		5402.93
	8.05.19	ND	3.43	ND		5402.32
	1.24.20	ND	2.42	ND		5403.33
	9.09.20	ND	3.29	ND		5402.46
	1.18.21	ND	2.79	ND		5402.96
	7.14.21	ND	3.39	ND	5405.89	5402.50

* - corrected for presence of phase-sepated hydrocarbon using a site-specific density correction factor of 0.729

[1] = Aberrant gauging data

BTOC - below top of casing

AMSL - above mean sea level

TOC - top of casing

ENSOLUM

APPENDIX F

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

November 11, 2016

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

RE: Masden Gas Com 1 E OrderNo.: 1611289

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/5/2016 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

Analytical Report
Lab Order **1611289**
Date Reported: **11/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com 1 E
Collection Date: 11/4/2016 10:05:00 AM
Lab ID: 1611289-001 **Matrix:** AQUEOUS **Received Date:** 11/5/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/9/2016 9:37:07 PM	B38568
Toluene	ND	1.0		µg/L	1	11/9/2016 9:37:07 PM	B38568
Ethylbenzene	ND	1.0		µg/L	1	11/9/2016 9:37:07 PM	B38568
Xylenes, Total	ND	2.0		µg/L	1	11/9/2016 9:37:07 PM	B38568
Surr: 4-Bromofluorobenzene	102	87.9-146		%Rec	1	11/9/2016 9:37:07 PM	B38568

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
R	RPD outside accepted recovery limits	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 **1611289**
Date Reported: **11/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com 1 E
Collection Date: 11/4/2016 10:45:00 AM
Lab ID: 1611289-002 **Matrix:** AQUEOUS **Received Date:** 11/5/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/9/2016 10:50:14 PM	B38568
Toluene	ND	1.0		µg/L	1	11/9/2016 10:50:14 PM	B38568
Ethylbenzene	ND	1.0		µg/L	1	11/9/2016 10:50:14 PM	B38568
Xylenes, Total	ND	2.0		µg/L	1	11/9/2016 10:50:14 PM	B38568
Surr: 4-Bromofluorobenzene	97.8	87.9-146		%Rec	1	11/9/2016 10:50:14 PM	B38568

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
R	RPD outside accepted recovery limits	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 **1611289**
Date Reported: **11/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Client Sample ID:** MW-1
Project: Masden Gas Com 1 E **Collection Date:** 11/4/2016 11:20:00 AM
Lab ID: 1611289-003 **Matrix:** AQUEOUS **Received Date:** 11/5/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/9/2016 11:14:34 PM	B38568
Toluene	ND	1.0		µg/L	1	11/9/2016 11:14:34 PM	B38568
Ethylbenzene	ND	1.0		µg/L	1	11/9/2016 11:14:34 PM	B38568
Xylenes, Total	ND	2.0		µg/L	1	11/9/2016 11:14:34 PM	B38568
Surr: 4-Bromofluorobenzene	98.5	87.9-146		%Rec	1	11/9/2016 11:14:34 PM	B38568

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
R	RPD outside accepted recovery limits	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 **1611289**
Date Reported: **11/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com 1 E
Collection Date: 11/4/2016 11:55:00 AM
Lab ID: 1611289-004 **Matrix:** AQUEOUS **Received Date:** 11/5/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/9/2016 11:38:56 PM	B38568
Toluene	ND	1.0		µg/L	1	11/9/2016 11:38:56 PM	B38568
Ethylbenzene	ND	1.0		µg/L	1	11/9/2016 11:38:56 PM	B38568
Xylenes, Total	ND	2.0		µg/L	1	11/9/2016 11:38:56 PM	B38568
Surr: 4-Bromofluorobenzene	99.7	87.9-146		%Rec	1	11/9/2016 11:38:56 PM	B38568

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
R	RPD outside accepted recovery limits	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 **1611289**
Date Reported: **11/11/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com 1 E
Collection Date: 11/4/2016 12:20:00 PM
Lab ID: 1611289-005 **Matrix:** AQUEOUS **Received Date:** 11/5/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	160	5.0		µg/L	5	11/10/2016 12:27:43 AM	B38568
Toluene	ND	5.0		µg/L	5	11/10/2016 12:27:43 AM	B38568
Ethylbenzene	ND	5.0		µg/L	5	11/10/2016 12:27:43 AM	B38568
Xylenes, Total	52	10		µg/L	5	11/10/2016 12:27:43 AM	B38568
Surr: 4-Bromofluorobenzene	100	87.9-146		%Rec	5	11/10/2016 12:27:43 AM	B38568

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
R	RPD outside accepted recovery limits	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#: **1611289**

11-Nov-16

Client: APEX TITAN

Project: Masden Gas Com 1 E

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**B38568**	RunNo:	**38568**					
Prep Date:		Analysis Date:	**11/9/2016**	SeqNo:	**1205277**	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		98.5	87.9	146			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**B38568**	RunNo:	**38568**					
Prep Date:		Analysis Date:	**11/9/2016**	SeqNo:	**1205278**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	20	1.0	20.00	0	101	80	120			
Ethylbenzene	18	1.0	20.00	0	90.9	80	120			
Xylenes, Total	53	2.0	60.00	0	88.8	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		96.0	87.9	146			

Sample ID	**1611289-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-4**	Batch ID:	**B38568**	RunNo:	**38568**					
Prep Date:		Analysis Date:	**11/9/2016**	SeqNo:	**1205287**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	63	126			
Toluene	18	1.0	20.00	0	90.6	80	120			
Ethylbenzene	17	1.0	20.00	0	83.8	80	120			
Xylenes, Total	52	2.0	60.00	0	85.9	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.2	87.9	146			

Sample ID	**1611289-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-4**	Batch ID:	**B38568**	RunNo:	**38568**					
Prep Date:		Analysis Date:	**11/9/2016**	SeqNo:	**1205294**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	63	126	0.366	20	
Toluene	19	1.0	20.00	0	93.7	80	120	3.27	20	
Ethylbenzene	17	1.0	20.00	0	86.9	80	120	3.61	20	
Xylenes, Total	53	2.0	60.00	0	88.5	80	120	2.97	20	
Surr: 4-Bromofluorobenzene	20		20.00		97.9	87.9	146	0	0	

Qualifiers:

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

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: 1611289 RcptNo: 1

Received by/date: 11/05/16

Logged By: Lindsay Mangin 11/5/2016 8:30:00 AM

Completed By: Lindsay Mangin 11/7/2016 8:36:04 AM

Reviewed By: aJS 11/07/16

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	1.3	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec N.M

Project Manager: K. Summers

Laboratory: Hall Env

Address: ABQ N.M

Contact: A Freeman

Phone:

PO/SO #:

Sampler's Name: Chad DAponti

Sampler's Signature:

Proj. No.: 725040.112134

Project Name: Masden Gas Com #1E

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.3

1	2	3	4	5

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	11/4/16	10:05			mw-4			3					1611289-001
		10:45			mw-5			3					-002
		11:20			mw-1			3					-003
		11:55			mw-3			3					-004
		12:20			mw-2			3					-005
													-006

NPS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	11-4-16	1346		11/4/16	1340
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	11/4/16	1752		11/05/16	0830
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES: Bill to Apex Corp Rate

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

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

February 15, 2017

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

RE: Masden Gas Com #1E OrderNo.: 1702513

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/10/2017 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

Analytical Report
Lab Order **1702513**
Date Reported: **2/15/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com #1E
Collection Date: 2/9/2017 11:50:00 AM
Lab ID: 1702513-001 **Matrix:** AQUEOUS **Received Date:** 2/10/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	2/10/2017 3:19:00 PM	A40672
Toluene	ND	1.0		µg/L	1	2/10/2017 3:19:00 PM	A40672
Ethylbenzene	ND	1.0		µg/L	1	2/10/2017 3:19:00 PM	A40672
Xylenes, Total	ND	1.5		µg/L	1	2/10/2017 3:19:00 PM	A40672
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	2/10/2017 3:19:00 PM	A40672
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	2/10/2017 3:19:00 PM	A40672
Surr: Dibromofluoromethane	103	70-130		%Rec	1	2/10/2017 3:19:00 PM	A40672
Surr: Toluene-d8	102	70-130		%Rec	1	2/10/2017 3:19:00 PM	A40672

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
R	RPD outside accepted recovery limits	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 **1702513**
Date Reported: **2/15/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com #1E
Collection Date: 2/9/2017 12:20:00 PM
Lab ID: 1702513-002 **Matrix:** AQUEOUS **Received Date:** 2/10/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	2/10/2017 3:43:00 PM	A40672
Toluene	ND	1.0		µg/L	1	2/10/2017 3:43:00 PM	A40672
Ethylbenzene	ND	1.0		µg/L	1	2/10/2017 3:43:00 PM	A40672
Xylenes, Total	ND	1.5		µg/L	1	2/10/2017 3:43:00 PM	A40672
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	2/10/2017 3:43:00 PM	A40672
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	2/10/2017 3:43:00 PM	A40672
Surr: Dibromofluoromethane	105	70-130		%Rec	1	2/10/2017 3:43:00 PM	A40672
Surr: Toluene-d8	102	70-130		%Rec	1	2/10/2017 3:43:00 PM	A40672

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
R	RPD outside accepted recovery limits	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 **1702513**
Date Reported: **2/15/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com #1E
Collection Date: 2/9/2017 12:50:00 PM
Lab ID: 1702513-003 **Matrix:** AQUEOUS **Received Date:** 2/10/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	2/10/2017 4:07:00 PM	A40672
Toluene	ND	1.0		µg/L	1	2/10/2017 4:07:00 PM	A40672
Ethylbenzene	ND	1.0		µg/L	1	2/10/2017 4:07:00 PM	A40672
Xylenes, Total	ND	1.5		µg/L	1	2/10/2017 4:07:00 PM	A40672
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	2/10/2017 4:07:00 PM	A40672
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	2/10/2017 4:07:00 PM	A40672
Surr: Dibromofluoromethane	105	70-130		%Rec	1	2/10/2017 4:07:00 PM	A40672
Surr: Toluene-d8	103	70-130		%Rec	1	2/10/2017 4:07:00 PM	A40672

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
R	RPD outside accepted recovery limits	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 **1702513**
Date Reported: **2/15/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden Gas Com #1E
Collection Date: 2/9/2017 1:20:00 PM
Lab ID: 1702513-004 **Matrix:** AQUEOUS **Received Date:** 2/10/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	2/10/2017 4:30:00 PM	A40672
Toluene	ND	1.0		µg/L	1	2/10/2017 4:30:00 PM	A40672
Ethylbenzene	ND	1.0		µg/L	1	2/10/2017 4:30:00 PM	A40672
Xylenes, Total	ND	1.5		µg/L	1	2/10/2017 4:30:00 PM	A40672
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%Rec	1	2/10/2017 4:30:00 PM	A40672
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	2/10/2017 4:30:00 PM	A40672
Surr: Dibromofluoromethane	102	70-130		%Rec	1	2/10/2017 4:30:00 PM	A40672
Surr: Toluene-d8	103	70-130		%Rec	1	2/10/2017 4:30:00 PM	A40672

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
R	RPD outside accepted recovery limits	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 **1702513**
Date Reported: **2/15/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com #1E
Collection Date: 2/9/2017 1:50:00 PM
Lab ID: 1702513-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	260	10		µg/L	10	2/13/2017 3:42:19 PM	R40699
Toluene	ND	1.0		µg/L	1	2/10/2017 4:54:00 PM	A40672
Ethylbenzene	19	1.0		µg/L	1	2/10/2017 4:54:00 PM	A40672
Xylenes, Total	96	1.5		µg/L	1	2/10/2017 4:54:00 PM	A40672
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	1	2/10/2017 4:54:00 PM	A40672
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	2/10/2017 4:54:00 PM	A40672
Surr: Dibromofluoromethane	102	70-130		%Rec	1	2/10/2017 4:54:00 PM	A40672
Surr: Toluene-d8	103	70-130		%Rec	1	2/10/2017 4:54:00 PM	A40672

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
R	RPD outside accepted recovery limits	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#: **1702513**

15-Feb-17

Client: APEX TITAN

Project: Masden Gas Com #1E

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **A40672**	RunNo: **40672**
Prep Date:	Analysis Date: **2/10/2017**	SeqNo: **1274137** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A40672**	RunNo: **40672**
Prep Date:	Analysis Date: **2/10/2017**	SeqNo: **1274139** 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: 1,2-Dichloroethane-d4	9.8		10.00		97.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R40699**	RunNo: **40699**
Prep Date:	Analysis Date: **2/13/2017**	SeqNo: **1275122** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R40699**	RunNo: **40699**
Prep Date:	Analysis Date: **2/13/2017**	SeqNo: **1275123** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.4	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
R	RPD outside accepted recovery limits	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#: **1702513**

15-Feb-17

Client: APEX TITAN

Project: Masden Gas Com #1E

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R40699**	RunNo: **40699**
Prep Date:	Analysis Date: **2/13/2017**	SeqNo: **1275123** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.9		10.00		99.2	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
R	RPD outside accepted recovery limits	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: 1702513 | RcptNo: 1

Received by/date: AJ 02/10/17

Logged By: Andy Jansson 2/10/2017 8:00:00 AM

Completed By: Andy Jansson 02/10/17

Reviewed By: 2/10/17

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	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec N.M

Project Manager: K Summers

Laboratory: Hall Env

Address: ABQ N.M

Contact: A. Freeman

Phone:

PO/SO #:

Sampler's Name: Chad D'Aponte

Sampler's Signature:

Lab use only
Due Date:

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

1	2	3	4	5

Page 1 of 1

ANALYSIS REQUESTED

STEX 8021

Proj. No.	Project Name	No/Type of Containers
1357040 112 1341	Masden Gas Com #1E	

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	2/6/17	1150			mw-4			3					1702513-001
W	2/6/17	1020			mw-5			3					-002
W	2/6/17	1250			mw-3			3					-003
W	2/6/17	1320			mw-1			3					-004
W	2/6/17	1350			mw-2			3					-005

YES

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	2-9-17	1446		2-9-17	1440
Christian Wooten	2/9/17	1917		02/10/17	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

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

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

July 25, 2017

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

RE: Masden Gas Com 1E OrderNo.: 1707A27

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/20/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1707A27**
Date Reported: **7/25/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 7/19/2017 10:55:00 AM
Lab ID: 1707A27-001 **Matrix:** AQUEOUS **Received Date:** 7/20/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/24/2017 12:53:09 PM	D44437
Toluene	ND	1.0		µg/L	1	7/24/2017 12:53:09 PM	D44437
Ethylbenzene	ND	1.0		µg/L	1	7/24/2017 12:53:09 PM	D44437
Xylenes, Total	ND	2.0		µg/L	1	7/24/2017 12:53:09 PM	D44437
Surr: 4-Bromofluorobenzene	110	72.5-140		%Rec	1	7/24/2017 12:53:09 PM	D44437

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 **1707A27**
Date Reported: **7/25/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 7/19/2017 11:50:00 AM
Lab ID: 1707A27-002 **Matrix:** AQUEOUS **Received Date:** 7/20/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/24/2017 1:16:54 PM	D44437
Toluene	ND	1.0		µg/L	1	7/24/2017 1:16:54 PM	D44437
Ethylbenzene	ND	1.0		µg/L	1	7/24/2017 1:16:54 PM	D44437
Xylenes, Total	ND	2.0		µg/L	1	7/24/2017 1:16:54 PM	D44437
Surr: 4-Bromofluorobenzene	106	72.5-140		%Rec	1	7/24/2017 1:16:54 PM	D44437

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 **1707A27**
Date Reported: **7/25/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 7/19/2017 12:30:00 PM
Lab ID: 1707A27-003 **Matrix:** AQUEOUS **Received Date:** 7/20/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/24/2017 1:40:41 PM	D44437
Toluene	ND	1.0		µg/L	1	7/24/2017 1:40:41 PM	D44437
Ethylbenzene	ND	1.0		µg/L	1	7/24/2017 1:40:41 PM	D44437
Xylenes, Total	ND	2.0		µg/L	1	7/24/2017 1:40:41 PM	D44437
Surr: 4-Bromofluorobenzene	105	72.5-140		%Rec	1	7/24/2017 1:40:41 PM	D44437

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 **1707A27**
Date Reported: **7/25/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 7/19/2017 1:15:00 PM
Lab ID: 1707A27-004 **Matrix:** AQUEOUS **Received Date:** 7/20/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/24/2017 2:04:36 PM	D44437
Toluene	ND	1.0		µg/L	1	7/24/2017 2:04:36 PM	D44437
Ethylbenzene	ND	1.0		µg/L	1	7/24/2017 2:04:36 PM	D44437
Xylenes, Total	ND	2.0		µg/L	1	7/24/2017 2:04:36 PM	D44437
Surr: 4-Bromofluorobenzene	104	72.5-140		%Rec	1	7/24/2017 2:04:36 PM	D44437

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 **1707A27**
Date Reported: **7/25/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com 1E
Collection Date: 7/19/2017 2:10:00 PM
Lab ID: 1707A27-005 **Matrix:** AQUEOUS **Received Date:** 7/20/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	44	1.0		µg/L	1	7/24/2017 10:54:10 AM	D44437
Toluene	ND	1.0		µg/L	1	7/24/2017 10:54:10 AM	D44437
Ethylbenzene	5.2	1.0		µg/L	1	7/24/2017 10:54:10 AM	D44437
Xylenes, Total	4.7	2.0		µg/L	1	7/24/2017 10:54:10 AM	D44437
Surr: 4-Bromofluorobenzene	113	72.5-140		%Rec	1	7/24/2017 10:54:10 AM	D44437

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707A27**

25-Jul-17

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**D44437**	RunNo:	**44437**					
Prep Date:		Analysis Date:	**7/24/2017**	SeqNo:	**1405091**	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		113	72.5	140			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**D44437**	RunNo:	**44437**					
Prep Date:		Analysis Date:	**7/24/2017**	SeqNo:	**1405092**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.0	71.7	126			
Toluene	18	1.0	20.00	0	90.9	73.3	119			
Ethylbenzene	19	1.0	20.00	0	93.3	80	120			
Xylenes, Total	56	2.0	60.00	0	92.9	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		117	72.5	140			

Sample ID	**1707A27-005AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-2**	Batch ID:	**D44437**	RunNo:	**44437**					
Prep Date:		Analysis Date:	**7/24/2017**	SeqNo:	**1405094**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	57	1.0	20.00	43.85	66.3	62.3	126			
Toluene	17	1.0	20.00	0.4028	83.4	48.8	134			
Ethylbenzene	23	1.0	20.00	5.195	87.4	44.4	142			
Xylenes, Total	58	2.0	60.00	4.668	88.2	55.7	129			
Surr: 4-Bromofluorobenzene	23		20.00		114	72.5	140			

Sample ID	**1707A27-005AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-2**	Batch ID:	**D44437**	RunNo:	**44437**					
Prep Date:		Analysis Date:	**7/24/2017**	SeqNo:	**1405095**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	57	1.0	20.00	43.85	67.4	62.3	126	0.385	20	
Toluene	17	1.0	20.00	0.4028	84.0	48.8	134	0.680	20	
Ethylbenzene	23	1.0	20.00	5.195	88.2	44.4	142	0.648	20	
Xylenes, Total	58	2.0	60.00	4.668	88.3	55.7	129	0.146	20	
Surr: 4-Bromofluorobenzene	23		20.00		113	72.5	140	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1707A27 RcptNo: 1

Received By: Sophia Campuzano 7/20/2017 7:30:00 AM

Completed By: Ashley Gallegos 7/20/2017 8:30:12 AM

Reviewed By: 7/21/17

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 ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	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	1.1	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM
606 S. Rio Grande Unit A

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 #: 725040112134

Sampler's Name: Ranee Deechilly
Sampler's Signature: Ranee Deechilly

Proj. No.: 725040112134
Project Name: Masden Gas Com #1E

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.1

1	2	3	4	5

Page 1 of 1

ANALYSIS REQUESTED: 8021 BTEX

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	7/19/17	1055			MW-1			3					1707A27-001
W	7/19/17	1150			MW-3			3					-002
W	7/19/17	1230			MW-4			3					-003
W	7/19/17	1315			MW-5			3					-004
W	7/19/17	1410			MW-2			3					-005

NFS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Ranee Deechilly	7/19/17	1530	Mint Walk	7/19/17	1530
Mint Walk	7/19/17	1821	Sarah Cox	07/20/17	0730

NOTES:
Bill to Apex
Corporate rate

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

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

November 08, 2017

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

RE: Masden Gas Com 1E OrderNo.: 1711087

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/2/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1711087**
Date Reported: **11/8/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 11/1/2017 10:25:00 AM
Lab ID: 1711087-001 **Matrix:** AQUEOUS **Received Date:** 11/2/2017 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/7/2017 3:22:42 PM	B46935
Toluene	ND	1.0		µg/L	1	11/7/2017 3:22:42 PM	B46935
Ethylbenzene	ND	1.0		µg/L	1	11/7/2017 3:22:42 PM	B46935
Xylenes, Total	ND	2.0		µg/L	1	11/7/2017 3:22:42 PM	B46935
Surr: 4-Bromofluorobenzene	110	72.5-140		%Rec	1	11/7/2017 3:22:42 PM	B46935

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 **1711087**
Date Reported: **11/8/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 11/1/2017 11:15:00 AM
Lab ID: 1711087-002 **Matrix:** AQUEOUS **Received Date:** 11/2/2017 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/7/2017 4:33:55 PM	B46935
Toluene	ND	1.0		µg/L	1	11/7/2017 4:33:55 PM	B46935
Ethylbenzene	ND	1.0		µg/L	1	11/7/2017 4:33:55 PM	B46935
Xylenes, Total	ND	2.0		µg/L	1	11/7/2017 4:33:55 PM	B46935
Surr: 4-Bromofluorobenzene	112	72.5-140		%Rec	1	11/7/2017 4:33:55 PM	B46935

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 **1711087**
Date Reported: **11/8/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 11/1/2017 12:00:00 PM
Lab ID: 1711087-003 **Matrix:** AQUEOUS **Received Date:** 11/2/2017 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/7/2017 4:57:43 PM	B46935
Toluene	ND	1.0		µg/L	1	11/7/2017 4:57:43 PM	B46935
Ethylbenzene	ND	1.0		µg/L	1	11/7/2017 4:57:43 PM	B46935
Xylenes, Total	ND	2.0		µg/L	1	11/7/2017 4:57:43 PM	B46935
Surr: 4-Bromofluorobenzene	112	72.5-140		%Rec	1	11/7/2017 4:57:43 PM	B46935

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 **1711087**
Date Reported: **11/8/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 11/1/2017 12:55:00 AM
Lab ID: 1711087-004 **Matrix:** AQUEOUS **Received Date:** 11/2/2017 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/7/2017 5:21:26 PM	B46935
Toluene	ND	1.0		µg/L	1	11/7/2017 5:21:26 PM	B46935
Ethylbenzene	ND	1.0		µg/L	1	11/7/2017 5:21:26 PM	B46935
Xylenes, Total	ND	2.0		µg/L	1	11/7/2017 5:21:26 PM	B46935
Surr: 4-Bromofluorobenzene	112	72.5-140		%Rec	1	11/7/2017 5:21:26 PM	B46935

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 **1711087**
Date Reported: **11/8/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com 1E
Collection Date: 11/1/2017 1:50:00 PM
Lab ID: 1711087-005 **Matrix:** AQUEOUS **Received Date:** 11/2/2017 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	81	1.0		µg/L	1	11/7/2017 5:45:10 PM	B46935
Toluene	ND	1.0		µg/L	1	11/7/2017 5:45:10 PM	B46935
Ethylbenzene	8.0	1.0		µg/L	1	11/7/2017 5:45:10 PM	B46935
Xylenes, Total	20	2.0		µg/L	1	11/7/2017 5:45:10 PM	B46935
Surr: 4-Bromofluorobenzene	117	72.5-140		%Rec	1	11/7/2017 5:45:10 PM	B46935

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711087**

08-Nov-17

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**LCSW**	Batch ID:	**B46935**		RunNo:	**46935**				
Prep Date:		Analysis Date:	**11/7/2017**		SeqNo:	**1497785**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	73.9	120			
Toluene	21	1.0	20.00	0	104	77.3	117			
Ethylbenzene	21	1.0	20.00	0	104	78.8	119			
Xylenes, Total	61	2.0	60.00	0	102	76.9	121			
Surr: 4-Bromofluorobenzene	23		20.00		113	72.5	140			

Sample ID	**1711087-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**MW-1**	Batch ID:	**B46935**		RunNo:	**46935**				
Prep Date:		Analysis Date:	**11/7/2017**		SeqNo:	**1497795**	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	62.3	126			
Toluene	21	1.0	20.00	0	103	48.8	134			
Ethylbenzene	21	1.0	20.00	0	103	44.4	142			
Xylenes, Total	62	2.0	60.00	0	103	55.7	129			
Surr: 4-Bromofluorobenzene	23		20.00		114	72.5	140			

Sample ID	**1711087-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**MW-1**	Batch ID:	**B46935**		RunNo:	**46935**				
Prep Date:		Analysis Date:	**11/7/2017**		SeqNo:	**1497796**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	62.3	126	1.54	20	
Toluene	21	1.0	20.00	0	104	48.8	134	1.18	20	
Ethylbenzene	21	1.0	20.00	0	103	44.4	142	0.538	20	
Xylenes, Total	61	2.0	60.00	0	101	55.7	129	1.78	20	
Surr: 4-Bromofluorobenzene	23		20.00		116	72.5	140	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1711087 RcptNo: 1

Received By: Erin Melendrez 11/2/2017 7:55:00 AM

Completed By: Isaiah Ortiz 11/2/2017 8:56:23 AM

Reviewed By: SRe 11/02/17

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	2.8	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location
606 S. Rio Grande Suite A
Aztec, NM 87410
Project Manager KSummers

Laboratory: Hall Environmental Analysis Laboratory
Address: 4901 Hawkins NE
Albuquerque, NM 87109
Contact: A. Freeman
Phone: 505-345-3975
PO/SO #: 72504012134

Sampler's Name: Ranee Deechilly
Sampler's Signature:

Proj. No.: 72504012134
Project Name: Masden Gas Com #1E

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:
Temp. of coolers when received (C°): 2.8
1 | 2 | 3 | 4 | 5
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	11/1/17	1025			MW-1			3					1711087-001
W	11/1/17	1115			MW-3			3					-002
W	11/1/17	1200			MW-4			3					-003
W	11/1/17	1255			MW-5			3					-004
W	11/1/17	1350			MW-2			3					-005

NES

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	11/1/17	1605		11/1/17	1605
	11/1/17	1927		11/2/17	0755

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

January 23, 2018

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

RE: Masden 1E OrderNo.: 1801A15

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/20/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1801A15**
Date Reported: **1/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden 1E
Collection Date: 1/19/2018 9:20:00 AM
Lab ID: 1801A15-001 **Matrix:** AQUEOUS **Received Date:** 1/20/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/22/2018 1:15:34 PM	B48596
Toluene	ND	1.0		µg/L	1	1/22/2018 1:15:34 PM	B48596
Ethylbenzene	ND	1.0		µg/L	1	1/22/2018 1:15:34 PM	B48596
Xylenes, Total	ND	2.0		µg/L	1	1/22/2018 1:15:34 PM	B48596
Surr: 4-Bromofluorobenzene	112	72.5-140		%Rec	1	1/22/2018 1:15:34 PM	B48596

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 **1801A15**
Date Reported: **1/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden 1E
Collection Date: 1/19/2018 9:50:00 AM
Lab ID: 1801A15-002 **Matrix:** AQUEOUS **Received Date:** 1/20/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/22/2018 2:27:10 PM	B48596
Toluene	ND	1.0		µg/L	1	1/22/2018 2:27:10 PM	B48596
Ethylbenzene	ND	1.0		µg/L	1	1/22/2018 2:27:10 PM	B48596
Xylenes, Total	ND	2.0		µg/L	1	1/22/2018 2:27:10 PM	B48596
Surr: 4-Bromofluorobenzene	114	72.5-140		%Rec	1	1/22/2018 2:27:10 PM	B48596

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
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Analytical Report
Lab Order **1801A15**
Date Reported: **1/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden 1E
Collection Date: 1/19/2018 10:20:00 AM
Lab ID: 1801A15-003 **Matrix:** AQUEOUS **Received Date:** 1/20/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/22/2018 2:51:07 PM	B48596
Toluene	ND	1.0		µg/L	1	1/22/2018 2:51:07 PM	B48596
Ethylbenzene	ND	1.0		µg/L	1	1/22/2018 2:51:07 PM	B48596
Xylenes, Total	ND	2.0		µg/L	1	1/22/2018 2:51:07 PM	B48596
Surr: 4-Bromofluorobenzene	113	72.5-140		%Rec	1	1/22/2018 2:51:07 PM	B48596

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
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Analytical Report
Lab Order **1801A15**
Date Reported: **1/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden 1E
Collection Date: 1/19/2018 10:50:00 AM
Lab ID: 1801A15-004
Matrix: AQUEOUS
Received Date: 1/20/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/22/2018 3:15:02 PM	B48596
Toluene	ND	1.0		µg/L	1	1/22/2018 3:15:02 PM	B48596
Ethylbenzene	ND	1.0		µg/L	1	1/22/2018 3:15:02 PM	B48596
Xylenes, Total	ND	2.0		µg/L	1	1/22/2018 3:15:02 PM	B48596
Surr: 4-Bromofluorobenzene	113	72.5-140		%Rec	1	1/22/2018 3:15:02 PM	B48596

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
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Analytical Report
Lab Order **1801A15**
Date Reported: **1/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden 1E
Collection Date: 1/19/2018 11:20:00 AM
Lab ID: 1801A15-005
Matrix: AQUEOUS
Received Date: 1/20/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	21	1.0		µg/L	1	1/22/2018 12:27:57 PM	B48596
Toluene	ND	1.0		µg/L	1	1/22/2018 12:27:57 PM	B48596
Ethylbenzene	2.5	1.0		µg/L	1	1/22/2018 12:27:57 PM	B48596
Xylenes, Total	ND	2.0		µg/L	1	1/22/2018 12:27:57 PM	B48596
Surr: 4-Bromofluorobenzene	116	72.5-140		%Rec	1	1/22/2018 12:27:57 PM	B48596

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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801A15**

23-Jan-18

Client: APEX TITAN

Project: Masden 1E

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**B48596**	RunNo:	**48596**					
Prep Date:		Analysis Date:	**1/22/2018**	SeqNo:	**1563328**	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	22		20.00		111	72.5	140			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**B48596**	RunNo:	**48596**					
Prep Date:		Analysis Date:	**1/22/2018**	SeqNo:	**1563329**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	87.7	73.9	120			
Toluene	18	1.0	20.00	0	89.2	77.3	117			
Ethylbenzene	18	1.0	20.00	0	90.5	78.8	119			
Xylenes, Total	54	2.0	60.00	0	90.3	76.9	121			
Surr: 4-Bromofluorobenzene	23		20.00		113	72.5	140			

Sample ID	**1801A15-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-5**	Batch ID:	**B48596**	RunNo:	**48596**					
Prep Date:		Analysis Date:	**1/22/2018**	SeqNo:	**1563331**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	75	121			
Toluene	20	1.0	20.00	0	101	78.1	119			
Ethylbenzene	20	1.0	20.00	0	97.8	78.8	125			
Xylenes, Total	58	2.0	60.00	0	96.3	76.4	128			
Surr: 4-Bromofluorobenzene	23		20.00		116	72.5	140			

Sample ID	**1801A15-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**MW-5**	Batch ID:	**B48596**	RunNo:	**48596**					
Prep Date:		Analysis Date:	**1/22/2018**	SeqNo:	**1563332**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.8	75	121	6.78	20	
Toluene	19	1.0	20.00	0	95.4	78.1	119	5.30	20	
Ethylbenzene	19	1.0	20.00	0	96.0	78.8	125	1.84	20	
Xylenes, Total	57	2.0	60.00	0	95.7	76.4	128	0.656	20	
Surr: 4-Bromofluorobenzene	23		20.00		117	72.5	140	0	0	

Qualifiers:

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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: 1801A15 RcptNo: 1

Received By: Andy Freeman 1/20/2018 9:25:00 AM

Completed By: Anne Thorne 1/22/2018 7:39:31 AM

Reviewed By: SRR 01/22/18

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? _____
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

CUSTODY SEALS ON SAMPLE VOA VIALS/at 1/22/18

17. Cooler Information

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

CHAIN OF CUSTODY RECORD

APEX

Office Location 606 S Rio Grande Suit A Aztec NM 87410

Project Manager K Summers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87109

Contact: A Feenan

Phone: 505-345-3979

PO/SO #:

Sampler's Name: Chad D'Agonti

Sampler's Signature:

Proj. No. 725040112134

Project Name: Masden #1E

Lab use only
Due Date:

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

1	2	3	4	5

Page 1 of 1

ANALYSIS REQUESTED: BTEX 8021

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	1/19/18	9:20		X	MW-5			3					1801A15 001
W	1/19/18	950		X	MW-4			3					002
W	1/19/18	1020		X	MW-3			3					003
W	1/19/18	1050		X	MW-1			3					004
W	1/19/18	1120		X	MW-2			3					005

NES

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1-19-18	1234		1/19/18	1234
	1/19/18	1810		1/20/18	0925

NOTES: Bill to Apex (Corp Rate)

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

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

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

May 02, 2018

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

RE: Masden Gas Com 1E OrderNo.: 1804E27

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/28/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1804E27**
Date Reported: **5/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 4/27/2018 8:00:00 AM
Lab ID: 1804E27-001 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/30/2018 8:13:15 PM	C50932
Toluene	ND	1.0		µg/L	1	4/30/2018 8:13:15 PM	C50932
Ethylbenzene	ND	1.0		µg/L	1	4/30/2018 8:13:15 PM	C50932
Xylenes, Total	ND	1.5		µg/L	1	4/30/2018 8:13:15 PM	C50932
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	4/30/2018 8:13:15 PM	C50932
Surr: Toluene-d8	97.2	70-130		%Rec	1	4/30/2018 8:13:15 PM	C50932

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
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Analytical Report
Lab Order **1804E27**
Date Reported: **5/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 4/27/2018 8:50:00 AM
Lab ID: 1804E27-002 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/30/2018 8:36:23 PM	C50932
Toluene	ND	1.0		µg/L	1	4/30/2018 8:36:23 PM	C50932
Ethylbenzene	ND	1.0		µg/L	1	4/30/2018 8:36:23 PM	C50932
Xylenes, Total	ND	1.5		µg/L	1	4/30/2018 8:36:23 PM	C50932
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	4/30/2018 8:36:23 PM	C50932
Surr: Toluene-d8	95.2	70-130		%Rec	1	4/30/2018 8:36:23 PM	C50932

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

Qualifiers:

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Analytical Report
Lab Order **1804E27**
Date Reported: **5/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 4/27/2018 9:40:00 AM
Lab ID: 1804E27-003 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/30/2018 8:59:25 PM	C50932
Toluene	ND	1.0		µg/L	1	4/30/2018 8:59:25 PM	C50932
Ethylbenzene	ND	1.0		µg/L	1	4/30/2018 8:59:25 PM	C50932
Xylenes, Total	ND	1.5		µg/L	1	4/30/2018 8:59:25 PM	C50932
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	4/30/2018 8:59:25 PM	C50932
Surr: Toluene-d8	104	70-130		%Rec	1	4/30/2018 8:59:25 PM	C50932

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

Qualifiers:

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Analytical Report
Lab Order **1804E27**
Date Reported: **5/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 4/27/2018 10:30:00 AM
Lab ID: 1804E27-004 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	4/30/2018 9:22:28 PM	C50932
Toluene	ND	1.0		µg/L	1	4/30/2018 9:22:28 PM	C50932
Ethylbenzene	ND	1.0		µg/L	1	4/30/2018 9:22:28 PM	C50932
Xylenes, Total	ND	1.5		µg/L	1	4/30/2018 9:22:28 PM	C50932
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	4/30/2018 9:22:28 PM	C50932
Surr: Toluene-d8	89.7	70-130		%Rec	1	4/30/2018 9:22:28 PM	C50932

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

Qualifiers:

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Analytical Report
Lab Order **1804E27**
Date Reported: **5/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com 1E
Collection Date: 4/27/2018 11:25:00 AM
Lab ID: 1804E27-005 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	60	5.0		µg/L	5	5/1/2018 12:24:15 PM	C50932
Toluene	ND	1.0		µg/L	1	4/30/2018 9:45:37 PM	C50932
Ethylbenzene	13	1.0		µg/L	1	4/30/2018 9:45:37 PM	C50932
Xylenes, Total	24	1.5		µg/L	1	4/30/2018 9:45:37 PM	C50932
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	4/30/2018 9:45:37 PM	C50932
Surr: Toluene-d8	100	70-130		%Rec	1	4/30/2018 9:45:37 PM	C50932

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 5 of 6
	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#: **1804E27**

02-May-18

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID	**100ng lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**BatchQC**	Batch ID:	**C50932**	RunNo:	**50932**
Prep Date:		Analysis Date:	**4/30/2018**	SeqNo:	**1653826** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.5	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	62	1.5	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	**rb2**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**PBW**	Batch ID:	**C50932**	RunNo:	**50932**
Prep Date:		Analysis Date:	**4/30/2018**	SeqNo:	**1653842** 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	12		10.00		122	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Qualifiers:

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

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: 1804E27 RcptNo: 1

Received By: Andy Freeman 4/28/2018 10:40:00 AM

Completed By: Anne Thorne 4/30/2018 10:45:17 AM

Reviewed By: ENM 4/30/18

Labeled by: 04/30/18

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: _____

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 4/30/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	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 #: 725040112134

Sampler's Name: Ranee Deechilly
Sampler's Signature: Ranee Deechilly

Proj. No.: 725040112134
Project Name: Masden Gas Com #1E

Lab use only
Due Date:
Temp. of coolers when received (C°): 3.1°C
1 2 3 4 5
Page 1 of 1

ANALYSIS REQUESTED: BTEX 8021

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	4/27/18	800			MW-1			3					1804E27-001
W	4/27/18	850			MW-3			3					002
W	4/27/18	940			MW-4			3					003
W	4/27/18	1030			MW-5			3					004
W	4/27/18	1125			MW-2			3					005

NYS

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Ranee Deechilly	4/27/18	1247	Matt Walters	4/27/18	1247
Matt Walters	4/27/18	1850		4/27/18	2040

NOTES:
Bill to Apex
Corporate rate

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

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

July 10, 2018

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

RE: Masden Gas Com 1E OrderNo.: 1807212

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/6/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to 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 **1807212**
Date Reported: **7/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 7/5/2018 10:10:00 AM
Lab ID: 1807212-001 **Matrix:** AQUEOUS **Received Date:** 7/6/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	7/9/2018 10:13:52 AM	R52555
Toluene	ND	1.0		µg/L	1	7/9/2018 10:13:52 AM	R52555
Ethylbenzene	ND	1.0		µg/L	1	7/9/2018 10:13:52 AM	R52555
Xylenes, Total	ND	1.5		µg/L	1	7/9/2018 10:13:52 AM	R52555
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	7/9/2018 10:13:52 AM	R52555
Surr: Toluene-d8	99.5	70-130		%Rec	1	7/9/2018 10:13:52 AM	R52555

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 **1807212**
Date Reported: **7/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 7/5/2018 10:55:00 AM
Lab ID: 1807212-002 **Matrix:** AQUEOUS **Received Date:** 7/6/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	7/9/2018 11:23:13 AM	R52555
Toluene	ND	1.0		µg/L	1	7/9/2018 11:23:13 AM	R52555
Ethylbenzene	ND	1.0		µg/L	1	7/9/2018 11:23:13 AM	R52555
Xylenes, Total	ND	1.5		µg/L	1	7/9/2018 11:23:13 AM	R52555
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	7/9/2018 11:23:13 AM	R52555
Surr: Toluene-d8	97.7	70-130		%Rec	1	7/9/2018 11:23:13 AM	R52555

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 **1807212**
Date Reported: **7/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 7/5/2018 11:40:00 AM
Lab ID: 1807212-003 **Matrix:** AQUEOUS **Received Date:** 7/6/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	7/9/2018 11:46:20 AM	R52555
Toluene	ND	1.0		µg/L	1	7/9/2018 11:46:20 AM	R52555
Ethylbenzene	ND	1.0		µg/L	1	7/9/2018 11:46:20 AM	R52555
Xylenes, Total	ND	1.5		µg/L	1	7/9/2018 11:46:20 AM	R52555
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	7/9/2018 11:46:20 AM	R52555
Surr: Toluene-d8	100	70-130		%Rec	1	7/9/2018 11:46:20 AM	R52555

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 **1807212**
Date Reported: **7/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 7/5/2018 12:30:00 PM
Lab ID: 1807212-004 **Matrix:** AQUEOUS **Received Date:** 7/6/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	7/9/2018 12:09:33 PM	R52555
Toluene	ND	1.0		µg/L	1	7/9/2018 12:09:33 PM	R52555
Ethylbenzene	ND	1.0		µg/L	1	7/9/2018 12:09:33 PM	R52555
Xylenes, Total	ND	1.5		µg/L	1	7/9/2018 12:09:33 PM	R52555
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	7/9/2018 12:09:33 PM	R52555
Surr: Toluene-d8	98.5	70-130		%Rec	1	7/9/2018 12:09:33 PM	R52555

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 **1807212**
Date Reported: **7/10/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com 1E
Collection Date: 7/5/2018 1:25:00 PM
Lab ID: 1807212-005 **Matrix:** AQUEOUS **Received Date:** 7/6/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	330	10		µg/L	10	7/9/2018 4:50:33 PM	R52555
Toluene	4.3	1.0		µg/L	1	7/9/2018 12:32:47 PM	R52555
Ethylbenzene	27	1.0		µg/L	1	7/9/2018 12:32:47 PM	R52555
Xylenes, Total	70	1.5		µg/L	1	7/9/2018 12:32:47 PM	R52555
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	7/9/2018 12:32:47 PM	R52555
Surr: Toluene-d8	99.4	70-130		%Rec	1	7/9/2018 12:32:47 PM	R52555

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807212**

10-Jul-18

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID	**100ng btex lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**R52555**	RunNo:	**52555**					
Prep Date:		Analysis Date:	**7/9/2018**	SeqNo:	**1723888**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	61	1.5	60.00	0	101	80	120			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.2	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:	**R52555**	RunNo:	**52555**					
Prep Date:		Analysis Date:	**7/9/2018**	SeqNo:	**1723904**	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	12		10.00		116	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID	**1807212-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-1**	Batch ID:	**R52555**	RunNo:	**52555**					
Prep Date:		Analysis Date:	**7/9/2018**	SeqNo:	**1723966**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	22	1.0	20.00	0	108	80	120			
Xylenes, Total	63	1.5	60.00	0.3944	105	80	120			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.1	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID	**1807212-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-1**	Batch ID:	**R52555**	RunNo:	**52555**					
Prep Date:		Analysis Date:	**7/9/2018**	SeqNo:	**1723967**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120	4.02	20	
Toluene	21	1.0	20.00	0	107	80	120	1.25	20	
Ethylbenzene	21	1.0	20.00	0	104	80	120	3.67	20	
Xylenes, Total	61	1.5	60.00	0.3944	102	80	120	3.23	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807212**

10-Jul-18

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID	**1807212-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-1**	Batch ID:	**R52555**	RunNo:	**52555**					
Prep Date:		Analysis Date:	**7/9/2018**	SeqNo:	**1723967**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.2	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1807212 RcptNo: 1

Received By: Anne Thorne 7/6/2018 7:00:00 AM

Completed By: Anne Thorne 7/6/2018 8:19:26 AM

Reviewed By: JAB 07/06/18
CB: IO 7/6/18

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: IO 7/6/18 (<2 or >12 unless noted)
Adjusted? 7/6/18
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: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON VOA VIALS/at 7/6/18

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	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 #: 725040112134

Sampler's Name: Ranee Deechilly

Sampler's Signature: Ranee Deechilly

Proj. No.: 725040112134

Project Name: Masden Gas Com #1E

Lab use only
Due Date:

2.4 CF 1.0 = 1.4
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Page 1 of 1

ANALYSIS REQUESTED: BTEX 8021

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No/Type of Containers: VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
W	7/5/18	1010			MW-1			3					X 1807212-001
W	7/5/18	1055			MW-3			3					X -002
W	7/5/18	1140			MW-4			3					X -003
W	7/5/18	1230			MW-5			3					X -004
W	7/5/18	1325			MW-2			3					X -005

NPS

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
	7/5/18	1620		07/06/18	0700

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

October 23, 2018

Kyle Summers

Apex Titan, Inc.
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (214) 350-5469
FAX (214) 350-2914

RE: Masden Gas Com 1E OrderNo.: 1810949

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/17/2018 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 **1810949**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-4
Project: Masden Gas Com 1E **Collection Date:** 10/16/2018 9:20:00 AM
Lab ID: 1810949-001 **Matrix:** AQUEOUS **Received Date:** 10/17/2018 8:13:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	10/19/2018 6:34:52 PM
Toluene	ND	1.0		µg/L	1	10/19/2018 6:34:52 PM
Ethylbenzene	ND	1.0		µg/L	1	10/19/2018 6:34:52 PM
Xylenes, Total	ND	2.0		µg/L	1	10/19/2018 6:34:52 PM
Surr: 4-Bromofluorobenzene	111	76.6-136		%Rec	1	10/19/2018 6:34:52 PM

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 **1810949**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-5
Project: Masden Gas Com 1E **Collection Date:** 10/16/2018 9:50:00 AM
Lab ID: 1810949-002 **Matrix:** AQUEOUS **Received Date:** 10/17/2018 8:13:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	10/19/2018 6:57:43 PM
Toluene	ND	1.0		µg/L	1	10/19/2018 6:57:43 PM
Ethylbenzene	ND	1.0		µg/L	1	10/19/2018 6:57:43 PM
Xylenes, Total	ND	2.0		µg/L	1	10/19/2018 6:57:43 PM
Surr: 4-Bromofluorobenzene	105	76.6-136		%Rec	1	10/19/2018 6:57:43 PM

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 **1810949**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-3
Project: Masden Gas Com 1E **Collection Date:** 10/16/2018 10:30:00 AM
Lab ID: 1810949-003 **Matrix:** AQUEOUS **Received Date:** 10/17/2018 8:13:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	10/19/2018 7:20:32 PM
Toluene	ND	1.0		µg/L	1	10/19/2018 7:20:32 PM
Ethylbenzene	ND	1.0		µg/L	1	10/19/2018 7:20:32 PM
Xylenes, Total	ND	2.0		µg/L	1	10/19/2018 7:20:32 PM
Surr: 4-Bromofluorobenzene	107	76.6-136		%Rec	1	10/19/2018 7:20:32 PM

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 **1810949**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-1
Project: Masden Gas Com 1E **Collection Date:** 10/16/2018 11:05:00 AM
Lab ID: 1810949-004 **Matrix:** AQUEOUS **Received Date:** 10/17/2018 8:13:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	10/19/2018 7:43:25 PM
Toluene	ND	1.0		µg/L	1	10/19/2018 7:43:25 PM
Ethylbenzene	ND	1.0		µg/L	1	10/19/2018 7:43:25 PM
Xylenes, Total	ND	2.0		µg/L	1	10/19/2018 7:43:25 PM
Surr: 4-Bromofluorobenzene	105	76.6-136		%Rec	1	10/19/2018 7:43:25 PM

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 **1810949**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc. **Client Sample ID:** MW-2
Project: Masden Gas Com 1E **Collection Date:** 10/16/2018 11:40:00 AM
Lab ID: 1810949-005 **Matrix:** AQUEOUS **Received Date:** 10/17/2018 8:13:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	66	1.0		µg/L	1	10/19/2018 8:29:01 PM
Toluene	ND	1.0		µg/L	1	10/19/2018 8:29:01 PM
Ethylbenzene	8.3	1.0		µg/L	1	10/19/2018 8:29:01 PM
Xylenes, Total	20	2.0		µg/L	1	10/19/2018 8:29:01 PM
Surr: 4-Bromofluorobenzene	109	76.6-136		%Rec	1	10/19/2018 8:29:01 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810949**

23-Oct-18

Client: Apex Titan, Inc.

Project: Masden Gas Com 1E

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBW**	Batch ID:	**B55023**	RunNo:	**55023**					
Prep Date:		Analysis Date:	**10/19/2018**	SeqNo:	**1829554**	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		103	76.6	136			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSW**	Batch ID:	**B55023**	RunNo:	**55023**					
Prep Date:		Analysis Date:	**10/19/2018**	SeqNo:	**1829555**	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	73.9	120			
Toluene	19	1.0	20.00	0	96.5	77.3	117			
Ethylbenzene	19	1.0	20.00	0	94.0	78.8	119			
Xylenes, Total	56	2.0	60.00	0	93.0	76.9	121			
Surr: 4-Bromofluorobenzene	22		20.00		109	76.6	136			

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 Titan** Work Order Number: **1810949** RcptNo: **1**

Received By: **Victoria Zellar** **10/17/2018 8:13:00 AM** Victoria Zellar

Completed By: **Ashley Gallegos** **10/17/2018 2:52:50 PM** AG

Reviewed By: JAB 10/19/18 labeled by: ENM 10/19/18

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: ENM 10/19/18

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	2.1	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX

Office Location: Lobo Srvc Grande Suite A Aztec NM 87410

Project Manager: K Summers

Laboratory: Hall Environmental Lab

Address: 4901 Hawkins NE Albuquerque NM 87109

Contact: A Freeman

Phone: 505-345-3975

PO/SO #: 725040.12134

Sampler's Name: C D Aponti

Sampler's Signature:

Proj. No.: 725040.12134

Project Name: Masden Gas Com #1E

ANALYSIS REQUESTED: BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Page 1 of 1

Temp: 2.1 VVZ 10/17/18

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	BTEX 8021	Lab Sample ID (Lab Use Only)
W	10/16/18	920			mw-4			3					X	1810949-001
W	10/16/18	950			mw-5			3					X	-002
W	10/16/18	1030			mw-3			3					X	-003
W	10/16/18	1105			mw-1			3					X	-004
W	10/16/18	1140			mw-2			3					X	-005

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

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/16/18	1219		10/16/18	1219
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/16/18	1754		10/17/18	8:13
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:
Bill to Apex
(Corp Rate)

Courier VVZ 10/17/18

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

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 28, 2019

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

RE: Masden Gas Com 1E OrderNo.: 1901883

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/23/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1901883**
Date Reported: **1/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 1/22/2019 9:15:00 AM
Lab ID: 1901883-001 **Matrix:** AQUEOUS **Received Date:** 1/23/2019 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	1/24/2019 10:47:19 PM	A57241
Toluene	ND	1.0		µg/L	1	1/24/2019 10:47:19 PM	A57241
Ethylbenzene	ND	1.0		µg/L	1	1/24/2019 10:47:19 PM	A57241
Xylenes, Total	ND	1.5		µg/L	1	1/24/2019 10:47:19 PM	A57241
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/24/2019 10:47:19 PM	A57241
Surr: Toluene-d8	102	70-130		%Rec	1	1/24/2019 10:47:19 PM	A57241

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 **1901883**
Date Reported: **1/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 1/22/2019 10:00:00 AM
Lab ID: 1901883-002 **Matrix:** AQUEOUS **Received Date:** 1/23/2019 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	1/24/2019 11:44:29 PM	A57241
Toluene	ND	1.0		µg/L	1	1/24/2019 11:44:29 PM	A57241
Ethylbenzene	ND	1.0		µg/L	1	1/24/2019 11:44:29 PM	A57241
Xylenes, Total	ND	1.5		µg/L	1	1/24/2019 11:44:29 PM	A57241
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/24/2019 11:44:29 PM	A57241
Surr: Toluene-d8	104	70-130		%Rec	1	1/24/2019 11:44:29 PM	A57241

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 **1901883**
Date Reported: **1/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 1/22/2019 10:45:00 AM
Lab ID: 1901883-003 **Matrix:** AQUEOUS **Received Date:** 1/23/2019 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	1/25/2019 12:13:01 AM	A57241
Toluene	ND	1.0		µg/L	1	1/25/2019 12:13:01 AM	A57241
Ethylbenzene	ND	1.0		µg/L	1	1/25/2019 12:13:01 AM	A57241
Xylenes, Total	ND	1.5		µg/L	1	1/25/2019 12:13:01 AM	A57241
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/25/2019 12:13:01 AM	A57241
Surr: Toluene-d8	103	70-130		%Rec	1	1/25/2019 12:13:01 AM	A57241

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 **1901883**
Date Reported: **1/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 1/22/2019 11:30:00 AM
Lab ID: 1901883-004 **Matrix:** AQUEOUS **Received Date:** 1/23/2019 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	1/25/2019 12:41:33 AM	A57241
Toluene	ND	1.0		µg/L	1	1/25/2019 12:41:33 AM	A57241
Ethylbenzene	ND	1.0		µg/L	1	1/25/2019 12:41:33 AM	A57241
Xylenes, Total	ND	1.5		µg/L	1	1/25/2019 12:41:33 AM	A57241
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/25/2019 12:41:33 AM	A57241
Surr: Toluene-d8	98.2	70-130		%Rec	1	1/25/2019 12:41:33 AM	A57241

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 **1901883**
Date Reported: **1/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Client Sample ID: MW-2
Project: Masden Gas Com 1E
Collection Date: 1/22/2019 12:20:00 PM
Lab ID: 1901883-005 **Matrix:** AQUEOUS **Received Date:** 1/23/2019 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	600	10		µg/L	10	1/25/2019 10:55:09 AM	B57285
Toluene	51	1.0		µg/L	1	1/25/2019 1:10:05 AM	A57241
Ethylbenzene	57	1.0		µg/L	1	1/25/2019 1:10:05 AM	A57241
Xylenes, Total	250	15		µg/L	10	1/25/2019 10:55:09 AM	B57285
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/25/2019 1:10:05 AM	A57241
Surr: Toluene-d8	103	70-130		%Rec	1	1/25/2019 1:10:05 AM	A57241

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901883**

28-Jan-19

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **A57241**	RunNo: **57241**
Prep Date:	Analysis Date: **1/24/2019**	SeqNo: **1914662** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A57241**	RunNo: **57241**
Prep Date:	Analysis Date: **1/24/2019**	SeqNo: **1914675** 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: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **B57285**	RunNo: **57285**
Prep Date:	Analysis Date: **1/25/2019**	SeqNo: **1916355** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **B57285**	RunNo: **57285**
Prep Date:	Analysis Date: **1/25/2019**	SeqNo: **1916357** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901883**

28-Jan-19

Client: APEX TITAN

Project: Masden Gas Com 1E

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **B57285**	RunNo: **57285**
Prep Date:	Analysis Date: **1/25/2019**	SeqNo: **1916357** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		102	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: 1901883 RcptNo: 1

Received By: Victoria Zellar 1/23/2019 8:10:00 AM Victoria Zellar
Completed By: Erin Melendrez 1/23/2019 11:37:06 AM
Reviewed By: JO 1/23/19
LB: VVZ 1/23/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ 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 ☑ VVZ 1/23/19
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good				
2	2.3	Good				

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 #: 725040112134

Sampler's Name: Ranee Deechilly

Sampler's Signature: Ranee Deechilly

Proj. No.: 725040112134

Project Name: Masden Gas Com #1E

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Page 1 of 1

Temp: 1.3°, 2.3°C

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	BTEX 8021	Lab Sample ID (Lab Use Only)
W	1/22/19	915			MW-1			3					X	1801883-001
W	1/22/19	1000			MW-3			3					X	-002
W	1/22/19	1045			MW-4			3					X	-003
W	1/22/19	1130			MW-5			3					X	-004
W	1/22/19	1220			MW-2			3					X	-005

NFS

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

Relinquished by (Signature)	Date	Time	Received by: (Signature)	Date	Time
Ranee Deechilly	1/22/19	1513	Christa Waits	1/22/19	1513
Grant Walters	1/22/19	1521	Victoria Ballan	1/23/19	0810

NOTES: Bill to ~~Apex~~ COG 1/23 Tom Long

Copy Tom Long (EPROD) on results

Pay key RB21200

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
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TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 12, 2019

Kyle Summers

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

RE: Masden Gas Com 1E OrderNo.: 1908283

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/6/2019 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 **1908283**
Date Reported: **8/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MW-1
Project: Masden Gas Com 1E **Collection Date:** 8/5/2019 11:10:00 AM
Lab ID: 1908283-001 **Matrix:** AQUEOUS **Received Date:** 8/6/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/7/2019 10:50:08 PM	D61961
Toluene	ND	1.0		µg/L	1	8/7/2019 10:50:08 PM	D61961
Ethylbenzene	ND	1.0		µg/L	1	8/7/2019 10:50:08 PM	D61961
Xylenes, Total	ND	2.0		µg/L	1	8/7/2019 10:50:08 PM	D61961
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	8/7/2019 10:50:08 PM	D61961

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 **1908283**
Date Reported: **8/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 8/5/2019 11:45:00 AM
Lab ID: 1908283-002 **Matrix:** AQUEOUS **Received Date:** 8/6/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/7/2019 11:13:39 PM	D61961
Toluene	ND	1.0		µg/L	1	8/7/2019 11:13:39 PM	D61961
Ethylbenzene	ND	1.0		µg/L	1	8/7/2019 11:13:39 PM	D61961
Xylenes, Total	ND	2.0		µg/L	1	8/7/2019 11:13:39 PM	D61961
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	8/7/2019 11:13:39 PM	D61961

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 **1908283**
Date Reported: **8/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 8/5/2019 12:20:00 PM
Lab ID: 1908283-003 **Matrix:** AQUEOUS **Received Date:** 8/6/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/7/2019 11:37:10 PM	D61961
Toluene	ND	1.0		µg/L	1	8/7/2019 11:37:10 PM	D61961
Ethylbenzene	ND	1.0		µg/L	1	8/7/2019 11:37:10 PM	D61961
Xylenes, Total	ND	2.0		µg/L	1	8/7/2019 11:37:10 PM	D61961
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	8/7/2019 11:37:10 PM	D61961

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 **1908283**
Date Reported: **8/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 8/5/2019 1:00:00 PM
Lab ID: 1908283-004 **Matrix:** AQUEOUS **Received Date:** 8/6/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	8/8/2019 12:00:39 AM	D61961
Toluene	ND	1.0		µg/L	1	8/8/2019 12:00:39 AM	D61961
Ethylbenzene	ND	1.0		µg/L	1	8/8/2019 12:00:39 AM	D61961
Xylenes, Total	ND	2.0		µg/L	1	8/8/2019 12:00:39 AM	D61961
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	8/8/2019 12:00:39 AM	D61961

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 **1908283**
Date Reported: **8/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-2
Project: Masden Gas Com 1E
Collection Date: 8/5/2019 2:20:00 PM
Lab ID: 1908283-005 **Matrix:** AQUEOUS **Received Date:** 8/6/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	150	10		µg/L	10	8/8/2019 12:24:09 AM	D61961
Toluene	ND	1.0		µg/L	1	8/8/2019 1:10:55 PM	D61961
Ethylbenzene	16	1.0		µg/L	1	8/8/2019 1:10:55 PM	D61961
Xylenes, Total	28	2.0		µg/L	1	8/8/2019 1:10:55 PM	D61961
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	8/8/2019 1:10:55 PM	D61961

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#: **1908283**

12-Aug-19

Client: ENSOLUM

Project: Masden Gas Com 1E

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

Client ID: **PBW** Batch ID: **D61961** RunNo: **61961**

Prep Date: Analysis Date: **8/7/2019** SeqNo: **2101909** Units: **µg/L**

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

Sample ID: **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSW** Batch ID: **D61961** RunNo: **61961**

Prep Date: Analysis Date: **8/7/2019** SeqNo: **2101910** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.2	80	120			
Toluene	18	1.0	20.00	0	92.5	80	120			
Ethylbenzene	18	1.0	20.00	0	90.8	80	120			
Xylenes, Total	55	2.0	60.00	0	91.1	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.1	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: **1908283** RcptNo: **1**

Received By: **Desiree Dominguez** **8/6/2019 8:15:00 AM** DD

Completed By: **Leah Baca** **8/6/2019 3:57:03 PM** Leah Baca

Reviewed By: ENM 8/7/19

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: DAD 8/7/19

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	4.4	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande, Suite A

Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☐ Rush

Project Name: Masden Gas Com #1E

Project #: 05A1226026

Project Manager: KSummers

Sampler: RDeChilly

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.7 - 0.3 = 4.4°c

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1908283	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)
8/5/19	1110	W	MW-1	3 40mL VOA	$HgCl_2$	-001	X									
8/5/19	1145	W	MW-3	3 40mL VOA	$HgCl_2$	-002	X									
8/5/19	1220	W	MW-4	3 40mL VOA	$HgCl_2$	-003	X									
8/5/19	1300	W	MW-5	3 40mL VOA	$HgCl_2$	-004	X									
8/5/19	1420	W	MW-2	3 40mL VOA	$HgCl_2$	-005	X									

NFS

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/5/19	1616			Courier	8/5/19	1616
8/5/19	1817			Courier	8/6/19	8:15

Remarks: Bill to Ensolum

Copy Tom Long (EPROD) on final results

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 28, 2020

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

RE: Masden Gas Com 1E OrderNo.: 2001A18

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/25/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2001A18**
Date Reported: **1/28/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MW-1
Project: Masden Gas Com 1E **Collection Date:** 1/24/2020 10:10:00 AM
Lab ID: 2001A18-001 **Matrix:** AQUEOUS **Received Date:** 1/25/2020 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	1/27/2020 6:06:00 PM	SL66079
Toluene	ND	1.0		µg/L	1	1/27/2020 6:06:00 PM	SL66079
Ethylbenzene	ND	1.0		µg/L	1	1/27/2020 6:06:00 PM	SL66079
Xylenes, Total	ND	1.5		µg/L	1	1/27/2020 6:06:00 PM	SL66079
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	1/27/2020 6:06:00 PM	SL66079
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	1/27/2020 6:06:00 PM	SL66079
Surr: Dibromofluoromethane	97.9	70-130		%Rec	1	1/27/2020 6:06:00 PM	SL66079
Surr: Toluene-d8	91.2	70-130		%Rec	1	1/27/2020 6:06:00 PM	SL66079

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 **2001A18**
Date Reported: **1/28/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MW-3
Project: Masden Gas Com 1E **Collection Date:** 1/24/2020 10:55:00 AM
Lab ID: 2001A18-002 **Matrix:** AQUEOUS **Received Date:** 1/25/2020 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	1/27/2020 6:30:00 PM	SL66079
Toluene	ND	1.0		µg/L	1	1/27/2020 6:30:00 PM	SL66079
Ethylbenzene	ND	1.0		µg/L	1	1/27/2020 6:30:00 PM	SL66079
Xylenes, Total	ND	1.5		µg/L	1	1/27/2020 6:30:00 PM	SL66079
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/27/2020 6:30:00 PM	SL66079
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	1/27/2020 6:30:00 PM	SL66079
Surr: Dibromofluoromethane	101	70-130		%Rec	1	1/27/2020 6:30:00 PM	SL66079
Surr: Toluene-d8	91.0	70-130		%Rec	1	1/27/2020 6:30:00 PM	SL66079

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 **2001A18**
Date Reported: **1/28/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 1/24/2020 11:35:00 AM
Lab ID: 2001A18-003 **Matrix:** AQUEOUS **Received Date:** 1/25/2020 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	1/27/2020 6:54:00 PM	SL66079
Toluene	ND	1.0		µg/L	1	1/27/2020 6:54:00 PM	SL66079
Ethylbenzene	ND	1.0		µg/L	1	1/27/2020 6:54:00 PM	SL66079
Xylenes, Total	ND	1.5		µg/L	1	1/27/2020 6:54:00 PM	SL66079
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	1/27/2020 6:54:00 PM	SL66079
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	1/27/2020 6:54:00 PM	SL66079
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	1/27/2020 6:54:00 PM	SL66079
Surr: Toluene-d8	91.6	70-130		%Rec	1	1/27/2020 6:54:00 PM	SL66079

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 **2001A18**
Date Reported: **1/28/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 1/24/2020 12:20:00 PM
Lab ID: 2001A18-004 **Matrix:** AQUEOUS **Received Date:** 1/25/2020 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	1/27/2020 7:17:00 PM	SL66079
Toluene	ND	1.0		µg/L	1	1/27/2020 7:17:00 PM	SL66079
Ethylbenzene	ND	1.0		µg/L	1	1/27/2020 7:17:00 PM	SL66079
Xylenes, Total	ND	1.5		µg/L	1	1/27/2020 7:17:00 PM	SL66079
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	1/27/2020 7:17:00 PM	SL66079
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/27/2020 7:17:00 PM	SL66079
Surr: Dibromofluoromethane	97.0	70-130		%Rec	1	1/27/2020 7:17:00 PM	SL66079
Surr: Toluene-d8	91.0	70-130		%Rec	1	1/27/2020 7:17:00 PM	SL66079

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 **2001A18**
Date Reported: **1/28/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MW-2
Project: Masden Gas Com 1E **Collection Date:** 1/24/2020 1:30:00 PM
Lab ID: 2001A18-005 **Matrix:** AQUEOUS **Received Date:** 1/25/2020 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	830	10		µg/L	10	1/27/2020 7:41:00 PM	SL66079
Toluene	21	1.0		µg/L	1	1/27/2020 8:05:00 PM	SL66079
Ethylbenzene	28	1.0		µg/L	1	1/27/2020 8:05:00 PM	SL66079
Xylenes, Total	96	1.5		µg/L	1	1/27/2020 8:05:00 PM	SL66079
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	1/27/2020 8:05:00 PM	SL66079
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/27/2020 8:05:00 PM	SL66079
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	1/27/2020 8:05:00 PM	SL66079
Surr: Toluene-d8	91.5	70-130		%Rec	1	1/27/2020 8:05:00 PM	SL66079

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#: **2001A18**
28-Jan-20

Client: ENSOLUM
Project: Masden Gas Com 1E

Sample ID: **100ng BTEX lcs** SampType: **LCS4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **SL66079** RunNo: **66079**
Prep Date: Analysis Date: **1/27/2020** SeqNo: **2270000** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	20	1.0	20.00	0	98.2	80	120			
Ethylbenzene	19	1.0	20.00	0	95.7	80	120			
Xylenes, Total	59	1.5	60.00	0	98.4	80	120			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Toluene-d8	8.5		10.00		85.0	70	130			

Sample ID: **mb2** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **SL66079** RunNo: **66079**
Prep Date: Analysis Date: **1/27/2020** SeqNo: **2270358** 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: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.5	70	130			
Surr: Toluene-d8	9.2		10.00		92.2	70	130			

Sample ID: **2001A18-001ams** SampType: **MS4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-1** Batch ID: **SL66079** RunNo: **66079**
Prep Date: Analysis Date: **1/27/2020** SeqNo: **2270366** 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	19	1.0	20.00	0	94.4	80	120			
Ethylbenzene	18	1.0	20.00	0	91.9	80	120			
Xylenes, Total	58	1.5	60.00	0	96.0	80	120			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Toluene-d8	9.1		10.00		90.9	70	130			

Sample ID: **2001A18-001amsd** SampType: **MSD4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-1** Batch ID: **SL66079** RunNo: **66079**
Prep Date: Analysis Date: **1/27/2020** SeqNo: **2270367** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.2	80	120	12.6	20	
Toluene	15	1.0	20.00	0	75.8	80	120	21.8	20	RS

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001A18**
28-Jan-20

Client: ENSOLUM
Project: Masden Gas Com 1E

Sample ID: **2001A18-001amsd** SampType: **MSD4** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-1** Batch ID: **SL66079** RunNo: **66079**
Prep Date: Analysis Date: **1/27/2020** SeqNo: **2270367** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	18	1.0	20.00	0	91.0	80	120	1.03	20	
Xylenes, Total	57	1.5	60.00	0	94.2	80	120	1.91	20	
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130	0	0	
Surr: Toluene-d8	7.2		10.00		71.5	70	130	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
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: 2001A18 RcptNo: 1

Received By: **Erin Melendrez** 1/25/2020 8:45:00 AM

Completed By: **Daniel Marquez** 1/27/2020 8:26:04 AM

Reviewed By: ENM 1/27/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Adjusted? _____

Checked by: YB 1/27/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 6016 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: Masden Gas Com #1E

Project #: 05A1226026

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 1.6+0.5(CF)=2.1 (°C)

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. 2001A18	BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/24/20	1010	W	MW-1	3x40mL VOA	$HgCl_2$	001	X									
1/24/20	1055	W	MW-3	3x40mL VOA	$HgCl_2$	002	X									
1/24/20	1135	W	MW-4	3x40mL VOA	$HgCl_2$	003	X									
1/24/20	1220	W	MW-5	3x40mL VOA	$HgCl_2$	004	X									
1/24/20	1330	W	MW-2	3x40mL VOA	$HgCl_2$	005	X									

Date	Time	Relinquished by	Received by	Via	Date	Time
1/24/20	1518					
1/24/20	1741			courier	1/25/20	0845

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

March 10, 2020

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

RE: Masden GC 1E OrderNo.: 2003329

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/7/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2003329**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MS-1
Project: Masden GC 1E **Collection Date:** 3/6/2020 2:05:00 PM
Lab ID: 2003329-001 **Matrix:** MEOH (SOIL) **Received Date:** 3/7/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	ND	60		mg/Kg	20	3/9/2020 11:47:28 AM	50957
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	3/9/2020 10:31:01 AM	50954
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/9/2020 10:31:01 AM	50954
Surr: DNOP	97.4	55.1-146		%Rec	1	3/9/2020 10:31:01 AM	50954
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	3/9/2020 9:35:22 AM	A67115
Surr: BFB	79.9	66.6-105		%Rec	1	3/9/2020 9:35:22 AM	A67115
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.018		mg/Kg	1	3/9/2020 9:35:22 AM	B67115
Toluene	ND	0.036		mg/Kg	1	3/9/2020 9:35:22 AM	B67115
Ethylbenzene	ND	0.036		mg/Kg	1	3/9/2020 9:35:22 AM	B67115
Xylenes, Total	ND	0.071		mg/Kg	1	3/9/2020 9:35:22 AM	B67115
Surr: 4-Bromofluorobenzene	85.6	80-120		%Rec	1	3/9/2020 9:35:22 AM	B67115

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

Qualifiers:

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

Analytical Report
Lab Order **2003329**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MS-2
Project: Masden GC 1E **Collection Date:** 3/6/2020 2:10:00 PM
Lab ID: 2003329-002 **Matrix:** MEOH (SOIL) **Received Date:** 3/7/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	ND	60		mg/Kg	20	3/9/2020 11:59:49 AM	50957
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	8.1		mg/Kg	1	3/9/2020 10:55:14 AM	50954
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	3/9/2020 10:55:14 AM	50954
Surr: DNOP	97.8	55.1-146		%Rec	1	3/9/2020 10:55:14 AM	50954
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	3/9/2020 9:58:40 AM	A67115
Surr: BFB	83.0	66.6-105		%Rec	1	3/9/2020 9:58:40 AM	A67115
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.019		mg/Kg	1	3/9/2020 9:58:40 AM	B67115
Toluene	ND	0.039		mg/Kg	1	3/9/2020 9:58:40 AM	B67115
Ethylbenzene	ND	0.039		mg/Kg	1	3/9/2020 9:58:40 AM	B67115
Xylenes, Total	ND	0.077		mg/Kg	1	3/9/2020 9:58:40 AM	B67115
Surr: 4-Bromofluorobenzene	87.4	80-120		%Rec	1	3/9/2020 9:58:40 AM	B67115

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 **2003329**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MS-3
Project: Masden GC 1E **Collection Date:** 3/6/2020 2:15:00 PM
Lab ID: 2003329-003 **Matrix:** MEOH (SOIL) **Received Date:** 3/7/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	ND	60		mg/Kg	20	3/9/2020 12:12:10 PM	50957
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/9/2020 10:09:03 AM	50954
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/9/2020 10:09:03 AM	50954
Surr: DNOP	97.0	55.1-146		%Rec	1	3/9/2020 10:09:03 AM	50954
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/9/2020 10:22:16 AM	A67115
Surr: BFB	93.9	66.6-105		%Rec	1	3/9/2020 10:22:16 AM	A67115
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.016		mg/Kg	1	3/9/2020 10:22:16 AM	B67115
Toluene	ND	0.031		mg/Kg	1	3/9/2020 10:22:16 AM	B67115
Ethylbenzene	ND	0.031		mg/Kg	1	3/9/2020 10:22:16 AM	B67115
Xylenes, Total	ND	0.062		mg/Kg	1	3/9/2020 10:22:16 AM	B67115
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	3/9/2020 10:22:16 AM	B67115

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 **2003329**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MS-4
Project: Masden GC 1E **Collection Date:** 3/6/2020 2:20:00 PM
Lab ID: 2003329-004 **Matrix:** MEOH (SOIL) **Received Date:** 3/7/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	3/9/2020 12:24:31 PM	50957
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.3		mg/Kg	1	3/9/2020 10:31:11 AM	50954
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	3/9/2020 10:31:11 AM	50954
Surr: DNOP	96.3	55.1-146		%Rec	1	3/9/2020 10:31:11 AM	50954
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/9/2020 10:45:51 AM	A67115
Surr: BFB	88.2	66.6-105		%Rec	1	3/9/2020 10:45:51 AM	A67115
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.015		mg/Kg	1	3/9/2020 10:45:51 AM	B67115
Toluene	ND	0.031		mg/Kg	1	3/9/2020 10:45:51 AM	B67115
Ethylbenzene	ND	0.031		mg/Kg	1	3/9/2020 10:45:51 AM	B67115
Xylenes, Total	ND	0.062		mg/Kg	1	3/9/2020 10:45:51 AM	B67115
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	3/9/2020 10:45:51 AM	B67115

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 **2003329**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MS-5
Project: Masden GC 1E **Collection Date:** 3/6/2020 2:25:00 PM
Lab ID: 2003329-005 **Matrix:** MEOH (SOIL) **Received Date:** 3/7/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	ND	60		mg/Kg	20	3/9/2020 12:36:52 PM	50957
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/9/2020 10:57:04 AM	50954
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/9/2020 10:57:04 AM	50954
Surr: DNOP	97.0	55.1-146		%Rec	1	3/9/2020 10:57:04 AM	50954
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	3/9/2020 11:09:25 AM	A67115
Surr: BFB	87.3	66.6-105		%Rec	1	3/9/2020 11:09:25 AM	A67115
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.016		mg/Kg	1	3/9/2020 11:09:25 AM	B67115
Toluene	ND	0.032		mg/Kg	1	3/9/2020 11:09:25 AM	B67115
Ethylbenzene	ND	0.032		mg/Kg	1	3/9/2020 11:09:25 AM	B67115
Xylenes, Total	ND	0.063		mg/Kg	1	3/9/2020 11:09:25 AM	B67115
Surr: 4-Bromofluorobenzene	92.4	80-120		%Rec	1	3/9/2020 11:09:25 AM	B67115

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 **2003329**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** MS-6
Project: Masden GC 1E **Collection Date:** 3/6/2020 2:30:00 PM
Lab ID: 2003329-006 **Matrix:** MEOH (SOIL) **Received Date:** 3/7/2020 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	3/9/2020 12:49:13 PM	50957
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/9/2020 11:19:09 AM	50954
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/9/2020 11:19:09 AM	50954
Surr: DNOP	96.3	55.1-146		%Rec	1	3/9/2020 11:19:09 AM	50954
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	3/9/2020 11:32:58 AM	A67115
Surr: BFB	84.8	66.6-105		%Rec	1	3/9/2020 11:32:58 AM	A67115
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.014		mg/Kg	1	3/9/2020 11:32:58 AM	B67115
Toluene	ND	0.028		mg/Kg	1	3/9/2020 11:32:58 AM	B67115
Ethylbenzene	ND	0.028		mg/Kg	1	3/9/2020 11:32:58 AM	B67115
Xylenes, Total	ND	0.056		mg/Kg	1	3/9/2020 11:32:58 AM	B67115
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	3/9/2020 11:32:58 AM	B67115

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#: **2003329**

10-Mar-20

Client: ENSOLUM

Project: Masden GC 1E

Sample ID: **MB-50957** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **50957** RunNo: **67121**

Prep Date: **3/9/2020** Analysis Date: **3/9/2020** SeqNo: **2312534** Units: **mg/Kg**

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

Sample ID: **LCS-50957** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **50957** RunNo: **67121**

Prep Date: **3/9/2020** Analysis Date: **3/9/2020** SeqNo: **2312535** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2003329**

10-Mar-20

Client: ENSOLUM

Project: Masden GC 1E

Sample ID: **LCS-50954** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50954** RunNo: **67107**
Prep Date: **3/9/2020** Analysis Date: **3/9/2020** SeqNo: **2310944** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	70	130			
Surr: DNOP	4.6		5.000		91.5	55.1	146			

Sample ID: **MB-50954** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50954** RunNo: **67107**
Prep Date: **3/9/2020** Analysis Date: **3/9/2020** SeqNo: **2310945** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.0	55.1	146			

Sample ID: **2003329-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **MS-1** Batch ID: **50954** RunNo: **67107**
Prep Date: **3/9/2020** Analysis Date: **3/9/2020** SeqNo: **2311345** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.1	45.33	0	105	47.4	136			
Surr: DNOP	4.5		4.533		99.9	55.1	146			

Sample ID: **2003329-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **MS-1** Batch ID: **50954** RunNo: **67107**
Prep Date: **3/9/2020** Analysis Date: **3/9/2020** SeqNo: **2311346** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	8.6	43.03	0	105	47.4	136	5.61	43.4	
Surr: DNOP	4.4		4.303		102	55.1	146	0	0	

Sample ID: **LCS-50931** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50931** RunNo: **67107**
Prep Date: **3/6/2020** Analysis Date: **3/9/2020** SeqNo: **2312091** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.8	55.1	146			

Sample ID: **MB-50931** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50931** RunNo: **67107**
Prep Date: **3/6/2020** Analysis Date: **3/9/2020** SeqNo: **2312093** Units: **%Rec**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2003329**
10-Mar-20

Client: ENSOLUM
Project: Masden GC 1E

Sample ID: **MB-50931** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50931** RunNo: **67107**
Prep Date: **3/6/2020** Analysis Date: **3/9/2020** SeqNo: **2312093** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		91.5	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2003329**

10-Mar-20

Client: ENSOLUM

Project: Masden GC 1E

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **A67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311931** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		81.6	66.6	105			

Sample ID: **2.5ug gro lcsb** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **A67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311932** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.8	80	120			
Surr: BFB	1000		1000		101	66.6	105			

Sample ID: **2003329-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **MS-1** Batch ID: **A67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311934** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	17.86	0	98.2	69.1	142			
Surr: BFB	700		714.3		97.6	66.6	105			

Sample ID: **2003329-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **MS-1** Batch ID: **A67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311935** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	17.86	0	101	69.1	142	2.41	20	
Surr: BFB	680		714.3		95.8	66.6	105	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2003329**

10-Mar-20

Client: ENSOLUM

Project: Masden GC 1E

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **B67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311958** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		87.5	80	120			

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

Client ID: **LCSS** Batch ID: **B67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311959** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.8	80	120			
Toluene	0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.3	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	80	120			

Sample ID: **2003329-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MS-2** Batch ID: **B67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311962** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.019	0.7740	0.01362	88.3	78.5	119			
Toluene	0.73	0.039	0.7740	0.01091	93.3	75.7	123			
Ethylbenzene	0.75	0.039	0.7740	0	96.8	74.3	126			
Xylenes, Total	2.3	0.077	2.322	0.03026	97.1	72.9	130			
Surr: 4-Bromofluorobenzene	0.72		0.7740		92.6	80	120			

Sample ID: **2003329-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MS-2** Batch ID: **B67115** RunNo: **67115**

Prep Date: Analysis Date: **3/9/2020** SeqNo: **2311963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.019	0.7740	0.01362	85.1	78.5	119	3.71	20	
Toluene	0.71	0.039	0.7740	0.01091	90.4	75.7	123	3.15	20	
Ethylbenzene	0.73	0.039	0.7740	0	94.1	74.3	126	2.79	20	
Xylenes, Total	2.2	0.077	2.322	0.03026	94.7	72.9	130	2.45	20	
Surr: 4-Bromofluorobenzene	0.71		0.7740		92.1	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **2003329** RcptNo: 1

Received By: **Erin Melendrez** **3/7/2020 9:30:00 AM**

Completed By: **Erin Melendrez** **3/7/2020 10:30:13 AM**

Reviewed By: JR 3/9/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Adjusted? _____

Checked by: ENM 3/7/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good				
2	4.7	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time: SAME DAY
☐ Standard ☒ ~~Rush~~ 100%

Project Name: Masden GC #1E

Project #: See notes

Project Manager: JCSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 2
Cooler Temp(including CF): 4.1-0.1(CF)=4.0 (°C)
4.8-0.1(CF)=4.7

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. 2003329	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)	Chlorides
3/6/20	1405	S	MS-1	1x4oz Jar	cool	-001	X	X									X
3/6/20	1410	S	MS-2	1x4oz Jar	cool	-002	X	X									X
3/6/20	1415	S	MS-3	1x4oz Jar	cool	-003	X	X									X
3/6/20	1420	S	MS-4	1x4oz Jar	cool	-004	X	X									X
3/6/20	1425	S	MS-5	1x4oz Jar	cool	-005	X	X									X
3/6/20	1430	S	MS-6	1x4oz Jar	cool	-006	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/6/20	1558		Christin Wall		3/6/20	1558
3/6/20	1814			courier	3/7/20	0930

Remarks: SAME DAY
PM - Tom Long (EPROD)
Pay Key - RB21200
NM AFE - N20669

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: clients.hallenvironmental.com

September 15, 2020

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

RE: Masden Gas Com 1E OrderNo.: 2009560

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/10/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2009560**
Date Reported: **9/15/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 9/9/2020 8:50:00 AM
Lab ID: 2009560-001 **Matrix:** AQUEOUS **Received Date:** 9/10/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/13/2020 1:20:00 PM	SL71801
Toluene	ND	1.0		µg/L	1	9/13/2020 1:20:00 PM	SL71801
Ethylbenzene	ND	1.0		µg/L	1	9/13/2020 1:20:00 PM	SL71801
Xylenes, Total	ND	1.5		µg/L	1	9/13/2020 1:20:00 PM	SL71801
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	9/13/2020 1:20:00 PM	SL71801
Surr: Dibromofluoromethane	101	70-130		%Rec	1	9/13/2020 1:20:00 PM	SL71801
Surr: Toluene-d8	100	70-130		%Rec	1	9/13/2020 1:20:00 PM	SL71801

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 **2009560**
Date Reported: **9/15/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC **Client Sample ID:** MW-5
Project: Masden Gas Com 1E **Collection Date:** 9/9/2020 9:20:00 AM
Lab ID: 2009560-002 **Matrix:** AQUEOUS **Received Date:** 9/10/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/13/2020 2:31:00 PM	SL71801
Toluene	ND	1.0		µg/L	1	9/13/2020 2:31:00 PM	SL71801
Ethylbenzene	ND	1.0		µg/L	1	9/13/2020 2:31:00 PM	SL71801
Xylenes, Total	ND	1.5		µg/L	1	9/13/2020 2:31:00 PM	SL71801
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	9/13/2020 2:31:00 PM	SL71801
Surr: Dibromofluoromethane	102	70-130		%Rec	1	9/13/2020 2:31:00 PM	SL71801
Surr: Toluene-d8	102	70-130		%Rec	1	9/13/2020 2:31:00 PM	SL71801

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 **2009560**
Date Reported: **9/15/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 9/9/2020 9:50:00 AM
Lab ID: 2009560-003 **Matrix:** AQUEOUS **Received Date:** 9/10/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/13/2020 2:55:00 PM	SL71801
Toluene	ND	1.0		µg/L	1	9/13/2020 2:55:00 PM	SL71801
Ethylbenzene	ND	1.0		µg/L	1	9/13/2020 2:55:00 PM	SL71801
Xylenes, Total	ND	1.5		µg/L	1	9/13/2020 2:55:00 PM	SL71801
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	9/13/2020 2:55:00 PM	SL71801
Surr: Dibromofluoromethane	101	70-130		%Rec	1	9/13/2020 2:55:00 PM	SL71801
Surr: Toluene-d8	98.4	70-130		%Rec	1	9/13/2020 2:55:00 PM	SL71801

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 **2009560**
Date Reported: **9/15/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 9/9/2020 10:20:00 AM
Lab ID: 2009560-004 **Matrix:** AQUEOUS **Received Date:** 9/10/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/13/2020 3:43:00 PM	SL71801
Toluene	ND	1.0		µg/L	1	9/13/2020 3:43:00 PM	SL71801
Ethylbenzene	ND	1.0		µg/L	1	9/13/2020 3:43:00 PM	SL71801
Xylenes, Total	ND	1.5		µg/L	1	9/13/2020 3:43:00 PM	SL71801
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	9/13/2020 3:43:00 PM	SL71801
Surr: Dibromofluoromethane	102	70-130		%Rec	1	9/13/2020 3:43:00 PM	SL71801
Surr: Toluene-d8	94.2	70-130		%Rec	1	9/13/2020 3:43:00 PM	SL71801

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#: **2009560**
15-Sep-20

Client: ENSOLUM AZTEC
Project: Masden Gas Com 1E

Sample ID: **100ng 8260 lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **SL71801** RunNo: **71801**
Prep Date: Analysis Date: **9/13/2020** SeqNo: **2512602** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.0	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.5	70	130			
Surr: Dibromofluoromethane	10		10.00		99.7	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **SL71801** RunNo: **71801**
Prep Date: Analysis Date: **9/13/2020** SeqNo: **2512605** 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: 1,2-Dichloroethane-d4	9.5		10.00		94.7	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.2	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **2009560-001ams** SampType: **MS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-4** Batch ID: **SL71801** RunNo: **71801**
Prep Date: Analysis Date: **9/13/2020** SeqNo: **2512607** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.9	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **2009560-001amsd** SampType: **MSD** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-4** Batch ID: **SL71801** RunNo: **71801**
Prep Date: Analysis Date: **9/13/2020** SeqNo: **2512608** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130	5.26	20	
Toluene	22	1.0	20.00	0	109	70	130	3.52	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2009560**
15-Sep-20

Client: ENSOLUM AZTEC
Project: Masden Gas Com 1E

Sample ID: **2009560-001amsd** SampType: **MSD** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-4** Batch ID: **SL71801** RunNo: **71801**
Prep Date: Analysis Date: **9/13/2020** SeqNo: **2512608** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		99.8	70	130	0	0	
Surr: Toluene-d8	10		10.00		103	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2009560** RcptNo: 1

Received By: **Emily Mocho** **9/10/2020 8:00:00 AM**

Completed By: **Emily Mocho** **9/10/2020 8:50:42 AM**

Reviewed By: Em 9/10/20

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. 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: Em 9/10/20

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Aztec NM 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: Masden Gas Com #1E

Project #: 05A1226126

Project Manager: K Summers

Sampler: C Whanti

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.1 ± 0 = 1.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)
9-9	850	W	MW-4	3402 Jar	HgCl2	2009560-1	X									
9-9	920	W	MW-5		HgCl2	-2	X									
9-9	950	W	MW-3		HgCl2	-3	X									
9-9	1020	W	MW-2		HgCl2	-4	X									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9/9/20	1045		Christian Walters		9/9/2020	1045
9/9/2020	1743	Christian Walters	CJM	courier	9/10/20	8:00

Remarks: Bill to Ensolum

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 20, 2021

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

RE: Masden Gas Com 1E OrderNo.: 2101661

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/19/2021 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: **2101661**
Date Reported: **1/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC **Lab Order:** 2101661
Project: Masden Gas Com 1E

Lab ID: 2101661-001 **Collection Date:** 1/18/2021 9:05:00 AM
Client Sample ID: MW-5 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/19/2021 12:11:15 PM	W7469
Toluene	ND	1.0		µg/L	1	1/19/2021 12:11:15 PM	W7469
Ethylbenzene	ND	1.0		µg/L	1	1/19/2021 12:11:15 PM	W7469
Xylenes, Total	ND	2.0		µg/L	1	1/19/2021 12:11:15 PM	W7469
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/19/2021 12:11:15 PM	W7469

Lab ID: 2101661-002 **Collection Date:** 1/18/2021 9:50:00 AM
Client Sample ID: MW-4 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/19/2021 1:22:09 PM	W7469
Toluene	ND	1.0		µg/L	1	1/19/2021 1:22:09 PM	W7469
Ethylbenzene	ND	1.0		µg/L	1	1/19/2021 1:22:09 PM	W7469
Xylenes, Total	ND	2.0		µg/L	1	1/19/2021 1:22:09 PM	W7469
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/19/2021 1:22:09 PM	W7469

Lab ID: 2101661-003 **Collection Date:** 1/18/2021 10:25:00 AM
Client Sample ID: MW-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/19/2021 1:45:42 PM	W7469
Toluene	ND	1.0		µg/L	1	1/19/2021 1:45:42 PM	W7469
Ethylbenzene	ND	1.0		µg/L	1	1/19/2021 1:45:42 PM	W7469
Xylenes, Total	ND	2.0		µg/L	1	1/19/2021 1:45:42 PM	W7469
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/19/2021 1:45:42 PM	W7469

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

Qualifiers:

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

Analytical Report
Lab Order: **2101661**
Date Reported: **1/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC **Lab Order:** 2101661
Project: Masden Gas Com 1E

Lab ID: 2101661-004 **Collection Date:** 1/18/2021 11:05:00 AM
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	1/19/2021 2:09:18 PM	W7469
Toluene	ND	1.0		µg/L	1	1/19/2021 2:09:18 PM	W7469
Ethylbenzene	ND	1.0		µg/L	1	1/19/2021 2:09:18 PM	W7469
Xylenes, Total	ND	2.0		µg/L	1	1/19/2021 2:09:18 PM	W7469
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/19/2021 2:09:18 PM	W7469

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2101661**

20-Jan-21

Client: ENSOLUM AZTEC

Project: Masden Gas Com 1E

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBW** Batch ID: **W74699** RunNo: **74699**

Prep Date: Analysis Date: **1/19/2021** SeqNo: **2636876** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		102	80	120			

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

Client ID: **LCSW** Batch ID: **W74699** RunNo: **74699**

Prep Date: Analysis Date: **1/19/2021** SeqNo: **2636877** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.4	80	120			
Toluene	20	1.0	20.00	0	99.3	80	120			
Ethylbenzene	20	1.0	20.00	0	99.5	80	120			
Xylenes, Total	59	2.0	60.00	0	98.7	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		104	80	120			

Sample ID: **2101661-001ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MW-5** Batch ID: **W74699** RunNo: **74699**

Prep Date: Analysis Date: **1/19/2021** SeqNo: **2636882** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.9	80	120			
Toluene	20	1.0	20.00	0	99.7	80	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	61	2.0	60.00	0	101	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		111	80	120			

Sample ID: **2101661-001amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MW-5** Batch ID: **W74699** RunNo: **74699**

Prep Date: Analysis Date: **1/19/2021** SeqNo: **2636883** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.2	80	120	1.71	20	
Toluene	20	1.0	20.00	0	98.7	80	120	0.958	20	
Ethylbenzene	20	1.0	20.00	0	100	80	120	1.04	20	
Xylenes, Total	60	2.0	60.00	0	100	80	120	0.934	20	
Surr: 4-Bromofluorobenzene	22		20.00		111	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: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2101661** RcptNo: 1

Received By: **Sean Livingston** **1/19/2021 8:00:00 AM** Sean Livingston

Completed By: **Desiree Dominguez** **1/19/2021 8:41:05 AM** DD

Reviewed By: ENM 1/19/21

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

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

Adjusted? _____

Checked by: DAD 01/19/21

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	3.3	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Mason Gas Com #1E

Project #: 05A1226026

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.3±0 =3.3 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2101661	BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/18/21	905	W	MW-5	3x40mL VOA	$HgCl_2$	-001	X									
1/18/21	950	W	MW-4	3x40mL VOA	$HgCl_2$	-002	X									
1/18/21	1025	W	MW-3	3x40mL VOA	$HgCl_2$	-003	X									
1/18/21	1105	W	MW-1	3x40mL VOA	$HgCl_2$	-004	X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/18/21	1622		Christen Waele		1/18/21	1622
1/18/21	1743	Christen Waele		SGL courier	1/19/21	8:00

Remarks: Bill to Ensolum

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 07, 2021

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

RE: Masden Gas Com 1E OrderNo.: 2105B44

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/27/2021 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 **2105B44**
Date Reported: **6/7/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-2 (r) @ 5-7'
Project: Masden Gas Com 1E
Collection Date: 5/24/2021 1:30:00 PM
Lab ID: 2105B44-001 **Matrix:** SOIL **Received Date:** 5/27/2021 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**VP**
Chloride	ND	60		mg/Kg	20	6/1/2021 11:53:31 PM	60371
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**SB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/1/2021 6:49:11 PM	60330
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2021 6:49:11 PM	60330
Surr: DNOP	108	70-130		%Rec	1	6/1/2021 6:49:11 PM	60330
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	33	4.8		mg/Kg	1	6/1/2021 12:44:13 PM	60329
Surr: BFB	177	70-130	S	%Rec	1	6/1/2021 12:44:13 PM	60329
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	0.058	0.024		mg/Kg	1	6/1/2021 12:44:13 PM	60329
Toluene	ND	0.048		mg/Kg	1	6/1/2021 12:44:13 PM	60329
Ethylbenzene	0.095	0.048		mg/Kg	1	6/1/2021 12:44:13 PM	60329
Xylenes, Total	0.35	0.096		mg/Kg	1	6/1/2021 12:44:13 PM	60329
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	6/1/2021 12:44:13 PM	60329

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 **2105B44**
Date Reported: **6/7/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-2 (r) @ 7-9'
Project: Masden Gas Com 1E
Collection Date: 5/24/2021 1:40:00 PM
Lab ID: 2105B44-002 **Matrix:** SOIL **Received Date:** 5/27/2021 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**VP**
Chloride	ND	60		mg/Kg	20	6/2/2021 12:05:56 AM	60371
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**SB**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/1/2021 7:18:50 PM	60330
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/1/2021 7:18:50 PM	60330
Surr: DNOP	101	70-130		%Rec	1	6/1/2021 7:18:50 PM	60330
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/1/2021 1:55:12 PM	60329
Surr: BFB	106	70-130		%Rec	1	6/1/2021 1:55:12 PM	60329
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	6/1/2021 1:55:12 PM	60329
Toluene	ND	0.050		mg/Kg	1	6/1/2021 1:55:12 PM	60329
Ethylbenzene	ND	0.050		mg/Kg	1	6/1/2021 1:55:12 PM	60329
Xylenes, Total	ND	0.10		mg/Kg	1	6/1/2021 1:55:12 PM	60329
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/1/2021 1:55:12 PM	60329

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#: **2105B44**

07-Jun-21

Client: ENSOLUM AZTEC

Project: Masden Gas Com 1E

Sample ID: **MB-60371**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **60371**	RunNo: **78785**
Prep Date: **6/1/2021**	Analysis Date: **6/1/2021**	SeqNo: **2762695** Units: **mg/Kg**

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

Sample ID: **LCS-60371**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **60371**	RunNo: **78785**
Prep Date: **6/1/2021**	Analysis Date: **6/1/2021**	SeqNo: **2762696** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B44**
07-Jun-21

Client: ENSOLUM AZTEC
Project: Masden Gas Com 1E

Sample ID: **LCS-60318** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **60318** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762508** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		105	70	130			

Sample ID: **LCS-60319** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **60319** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762509** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		5.000		109	70	130			

Sample ID: **MB-60318** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **60318** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762510** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		113	70	130			

Sample ID: **MB-60319** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **60319** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762511** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		109	70	130			

Sample ID: **2105B44-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **MW-2 (r) @ 5-7'** Batch ID: **60330** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762857** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	9.9	49.60	0	81.6	15	184			
Surr: DNOP	5.2		4.960		105	70	130			

Sample ID: **2105B44-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **MW-2 (r) @ 5-7'** Batch ID: **60330** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762858** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.1	45.45	0	82.4	15	184	7.76	23.9	
Surr: DNOP	5.0		4.545		110	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B44**
07-Jun-21

Client: ENSOLUM AZTEC
Project: Masden Gas Com 1E

Sample ID: **LCS-60330** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **60330** RunNo: **78780**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762911** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	115	68.9	141			
Surr: DNOP	5.9		5.000		118	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B44**
07-Jun-21

Client: ENSOLUM AZTEC
Project: Masden Gas Com 1E

Sample ID: **MB-60329** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762565** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	70	130			

Sample ID: **lcs-60329** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762566** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.5	78.6	131			
Surr: BFB	1100		1000		115	70	130			

Sample ID: **2105b44-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MW-2 (r) @ 5-7'** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762568** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	190	4.8	23.83	33.00	678	61.3	114			S
Surr: BFB	4200		953.3		436	70	130			S

Sample ID: **2105b44-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MW-2 (r) @ 5-7'** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762569** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	81	4.9	24.41	33.00	195	61.3	114	82.8	20	RS
Surr: BFB	2900		976.6		295	70	130	0	0	S

Sample ID: **mb-60345** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **60345** RunNo: **78783**
Prep Date: **5/29/2021** Analysis Date: **6/1/2021** SeqNo: **2762589** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	70	130			

Sample ID: **lcs-60345** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **60345** RunNo: **78783**
Prep Date: **5/29/2021** Analysis Date: **6/1/2021** SeqNo: **2762590** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		113	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B44**
07-Jun-21

Client: ENSOLUM AZTEC
Project: Masden Gas Com 1E

Sample ID: **MB-60329** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762613** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: **LCS-60329** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762614** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: **2105b44-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-2 (r) @ 7-9'** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762617** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.024	0.9542	0	86.4	76.3	120			
Toluene	0.84	0.048	0.9542	0.01688	86.2	78.5	120			
Ethylbenzene	0.83	0.048	0.9542	0	87.2	78.1	124			
Xylenes, Total	2.5	0.095	2.863	0	88.1	79.3	125			
Surr: 4-Bromofluorobenzene	0.98		0.9542		102	70	130			

Sample ID: **2105b44-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-2 (r) @ 7-9'** Batch ID: **60329** RunNo: **78783**
Prep Date: **5/28/2021** Analysis Date: **6/1/2021** SeqNo: **2762618** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9891	0	88.5	76.3	120	5.96	20	
Toluene	0.89	0.049	0.9891	0.01688	88.6	78.5	120	6.12	20	
Ethylbenzene	0.89	0.049	0.9891	0	90.1	78.1	124	6.86	20	
Xylenes, Total	2.7	0.099	2.967	0	91.4	79.3	125	7.26	20	
Surr: 4-Bromofluorobenzene	1.0		0.9891		106	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B44**

07-Jun-21

Client: ENSOLUM AZTEC

Project: Masden Gas Com 1E

Sample ID: **mb-60345** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **60345** RunNo: **78783**

Prep Date: **5/29/2021** Analysis Date: **6/1/2021** SeqNo: **2762632** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

Sample ID: **LCS-60345** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **60345** RunNo: **78783**

Prep Date: **5/29/2021** Analysis Date: **6/1/2021** SeqNo: **2762633** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2105B44** RcptNo: **1**

Received By: **Juan Rojas** **5/27/2021 7:10:00 AM**

Completed By: **Desiree Dominguez** **5/27/2021 8:12:08 AM**

Reviewed By: SPA 5.27.21

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. 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: CM 5/27/21

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	0.4	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: ksummers@ensolum

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Masden Gas Com #1E

Project #: See notes

Project Manager: Ksummers

Sampler: RDeechilly

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.6-0.2=0.4 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2105B44	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)	Chlorides
5/24/21	1330	S	MW-2(c)@ 5-7'	1x4oz Jar	cool	-001	X	X									X
5/24/21	1340	S	MW-2(s)@ 7-9'	1x4oz Jar	cool	-002	X	X									X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/26/21	1748		Mustafa Walla		5/26/21	1748
5/26/21	1851	Mustafa Walla		courier	5/27/21	7:10

Remarks: PM - Tom Long (EPROD)
Pay Key - RB21200
Nm AFE - N20669

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: clients.hallenvironmental.com

July 22, 2021

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

RE: Masden Gas Com 1E OrderNo.: 2107747

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/15/2021 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 **2107747**
Date Reported: **7/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-5
Project: Masden Gas Com 1E
Collection Date: 7/14/2021 9:30:00 AM
Lab ID: 2107747-001 **Matrix:** AQUEOUS **Received Date:** 7/15/2021 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/16/2021 11:54:15 AM	B79857
Toluene	ND	1.0		µg/L	1	7/16/2021 11:54:15 AM	B79857
Ethylbenzene	ND	1.0		µg/L	1	7/16/2021 11:54:15 AM	B79857
Xylenes, Total	ND	2.0		µg/L	1	7/16/2021 11:54:15 AM	B79857
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/16/2021 11:54:15 AM	B79857

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 **2107747**
Date Reported: **7/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-4
Project: Masden Gas Com 1E
Collection Date: 7/14/2021 10:30:00 AM
Lab ID: 2107747-002 **Matrix:** AQUEOUS **Received Date:** 7/15/2021 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/16/2021 12:17:59 PM	B79857
Toluene	ND	1.0		µg/L	1	7/16/2021 12:17:59 PM	B79857
Ethylbenzene	ND	1.0		µg/L	1	7/16/2021 12:17:59 PM	B79857
Xylenes, Total	ND	2.0		µg/L	1	7/16/2021 12:17:59 PM	B79857
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/16/2021 12:17:59 PM	B79857

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 **2107747**
Date Reported: **7/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-3
Project: Masden Gas Com 1E
Collection Date: 7/14/2021 11:10:00 AM
Lab ID: 2107747-003 **Matrix:** AQUEOUS **Received Date:** 7/15/2021 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/16/2021 12:41:40 PM	B79857
Toluene	ND	1.0		µg/L	1	7/16/2021 12:41:40 PM	B79857
Ethylbenzene	ND	1.0		µg/L	1	7/16/2021 12:41:40 PM	B79857
Xylenes, Total	ND	2.0		µg/L	1	7/16/2021 12:41:40 PM	B79857
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	7/16/2021 12:41:40 PM	B79857

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 **2107747**
Date Reported: **7/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-1
Project: Masden Gas Com 1E
Collection Date: 7/14/2021 12:10:00 PM
Lab ID: 2107747-004 **Matrix:** AQUEOUS **Received Date:** 7/15/2021 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/16/2021 1:05:23 PM	B79857
Toluene	ND	1.0		µg/L	1	7/16/2021 1:05:23 PM	B79857
Ethylbenzene	ND	1.0		µg/L	1	7/16/2021 1:05:23 PM	B79857
Xylenes, Total	ND	2.0		µg/L	1	7/16/2021 1:05:23 PM	B79857
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/16/2021 1:05:23 PM	B79857

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 **2107747**
Date Reported: **7/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM AZTEC
Client Sample ID: MW-2R
Project: Masden Gas Com 1E
Collection Date: 7/14/2021 1:00:00 PM
Lab ID: 2107747-005 **Matrix:** AQUEOUS **Received Date:** 7/15/2021 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/16/2021 1:29:04 PM	B79857
Toluene	ND	1.0		µg/L	1	7/16/2021 1:29:04 PM	B79857
Ethylbenzene	1.0	1.0		µg/L	1	7/16/2021 1:29:04 PM	B79857
Xylenes, Total	ND	2.0		µg/L	1	7/16/2021 1:29:04 PM	B79857
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	7/16/2021 1:29:04 PM	B79857

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#: **2107747**

22-Jul-21

Client: ENSOLUM AZTEC

Project: Masden Gas Com 1E

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

Client ID: **PBW** Batch ID: **B79857** RunNo: **79857**

Prep Date: Analysis Date: **7/16/2021** SeqNo: **2809917** 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		100	70	130			

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

Client ID: **LCSW** Batch ID: **B79857** RunNo: **79857**

Prep Date: Analysis Date: **7/16/2021** SeqNo: **2809918** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	80	120			
Toluene	20	1.0	20.00	0	98.4	80	120			
Ethylbenzene	20	1.0	20.00	0	98.7	80	120			
Xylenes, Total	59	2.0	60.00	0	98.7	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		103	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2107747** RcptNo: 1

Received By: **Cheyenne Cason** **7/15/2021 7:40:00 AM** Chl

Completed By: **Sean Livingston** **7/15/2021 10:18:56 AM** Sean Livingston

Reviewed By: JR 7/15/21

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. 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: TMC, 7-15-21

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Masden Gas Com #1E

Project #: 05A1226026

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.1 - 0 = 2.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2107747	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)
7/14/21	9:30	W	MW-5	3x40mL VOA	$HgCl_2$	001	X									
7/14/21	10:30	W	MW-4	3x40mL VOA	$HgCl_2$	002	X									
7/14/21	11:10	W	MW-3	3x40mL VOA	$HgCl_2$	003	X									
7/14/21	12:10	W	MW-1	3x40mL VOA	$HgCl_2$	004	X									
7/14/21	13:00	W	MW-2R	3x40mL VOA	$HgCl_2$	005	X									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
7/14/21	1425				7/14/21	1425
7/14/21	1802	Christian Waters				
				Courier	7/15/21	0740

Remarks: Seal intact on 7/15/21

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 62635

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 62635
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	GW benzene GW standard is now 5 ug/l. Continue with 1/4 ly sampling as per previous. If COC's return, re-initiate pumping and disposal as pre previous. In next report, examine change in benzene observed and suggestions/ideas thereof.	6/14/2022