



Site Status Report for 2022

REVIEWED

By Mike Buchanan at 3:55 pm, Aug 14, 2023

North Monument 6-Inch Gathering Line AP# 34

HF Sinclair Corporation

March 22, 2023

Site Status for 2022 Reviewed on behalf of HF Sinclair Corporation: **Content Satisfactory**

1. Continue to monitor groundwater wells and analyze for BTEX, TPH-GRO, DRO, on quarterly basis throughout 2023.
2. Conduct an evaluation for the remainder of crude oil and submit a scope of work plan to NMOCD based on how to mitigate the remainder of NAPL.
3. Continue to submit Site Status Reports with the 2023 Site Report to be submitted to NMOCD by or before April 1, 2024.

→ **The Power of Commitment**

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1. Introduction

This Site Status report is submitted by GHD, on behalf of **HF Sinclair Corporation (HFS)** for the North Monument 6 inch Gathering Line Release (Site) (AP# 34) located in Lea County, New Mexico (**Figure 1**). The release, which occurred in 2002, was a result of leaks from a pipeline owned by Holly Energy Partners LLC (HEP). The C141 report was submitted in October 2002. The Stage 1 Abatement Plan was submitted in April 2004 and the Stage 2 Abatement Plan was submitted in October 2012. Annual status reports were submitted in 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, and 2021. This report covers activities at the Site for March 2021 to December 2022 and contains information on the status of the crude oil recovery in the area of the release and the results of groundwater monitoring.

1.1 Site Background

On October 5, 2002, a leak was suspected in a 6-inch crude oil gathering line because of a 2,100 barrels (bbls) inventory discrepancy. The line was relatively new, having been installed in 2000, but the leak may have been a result of acidized crude oil found in the line. The line was exposed in the area of the leak and a 600-foot section of the damaged pipe was removed and replaced in 2002. Between five and seven leaks were found in this section of pipe in the area mainly located east of Maddox Road and secondarily west of Maddox Road. The corroded section was replaced with new pipe and relocated approximately 150 feet to the south of the leak area so as not to interfere with remedial efforts. Petroleum-stained soil was removed from the leak area, encompassing approximately 300 feet by 700 feet to approximately 15 feet deep.

1.2 Site Setting

The Site is located on State of New Mexico land and approximately 2 miles northwest of Monument, New Mexico, in the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 30, Township 19 South, Range 37 East (N 32° 37' 50.2", W 103° 17' 52.8") (**Figure 1**). The release occurred on HEP's pipeline Right of Way (ROW), approximately 0.5 miles north of NM 322 (County Road 42) and adjacent to Maddox Road (County Road 41). The topography at the Site is relatively flat and the average elevation is 3,637 feet mean sea level (**Figure 1**). The surrounding land contains oil and gas production wells and open rangeland.

1.3 Summary of Previous Investigations

Based on the available site information, in October 2002, approximately 2,100 bbls of crude oil were released from a 6-inch crude oil pipeline to the subsurface, impacting an area encompassing approximately 700 feet by 300 feet oriented in the direction of the pipeline (east to west) on the west and east sides of Maddox Road (**Figure 2**). From 2002 to 2011, seven groundwater monitor wells and 164 temporary borehole wells were used to characterize the subsurface soil and groundwater and to recover the released crude oil at the Site. Of the 164 borehole wells, 102 were completed as temporary borehole wells. Approximately 1,079 bbls of crude oil were recovered from these wells by March 2004 and records indicate approximately 100 barrels were recovered from the borehole wells from 2004 to 2011 using manually controlled total fluid pumps. Since 2011, approximately 180 barrels have been recovered from these wells. Most of the borehole wells were abandoned in 2015 due to a lack of water or oil. Presently, there are 32 borehole wells remaining that are used to recover crude oil and to measure crude oil with 17 wells consistently containing measurable crude oil.

Hydrocarbon impacts at the Site were limited to soil and groundwater in the area of the pipeline leaks. The majority of the petroleum-stained soil, that was located on the east side of Maddox Road and in an area adjacent to the north side of the pipeline, was excavated in 2004 to a depth of approximately 15 feet. However, hydrocarbon saturated soils were observed below the bottom of the excavation in the impacted area. For safety reasons, the excavation was backfilled at the time. Due to the presence of monitoring and borehole wells in the area, only a limited amount of soil was removed from the south side of the pipeline and away from the pipeline leaks. Soil borings located within close

proximity to the leak area did detect hydrocarbons in soil above the New Mexico Oil Conservation Division (NMOCD) recommended remediation action levels.

Of the seven original monitor wells that were installed following the release, two of the monitor wells (MW-2 and MW-4) were abandoned in 2002 after free product was measured in these wells. Two additional monitor wells (MW-6 and MW-7) were installed in 2008, bringing the total number of monitor wells to five (**Figure 2**). From 2004 to 2006, monitor well MW-3 had benzene detections above the NMWQCC standard and the last time MW-5 had benzene detections above the NMWQCC standard was in 2004. Monitor well MW-6 had benzene detections above the NMWQCC standard in 2010 and 2014. Monitor well (MW-1) located approximately 150 feet to the northwest from the release, and in a up gradient direction from the release, did not have soil staining or any detections of hydrocarbons above the state standard in the soil or groundwater. Since 2014, none of the five monitor wells have had any detections of BTEX above state standards.

In February 2013, 14 4-inch oil recovery wells were installed to recover the free product in area of the release and immediately east of Maddox Road (**Figure 2**). A crude oil only recovery system was installed at the Site in September 2013 and oil was recovered from the new wells until March 2015, when it was discovered that the pumps were damaged by the released acidified crude oil and could no longer be used to recover oil. Since June 2015, the crude oil has been recovered using a vacuum truck and oil absorbent socks.

The maximum thickness of oil accumulation on top of groundwater since 2012 was measured in WBH-20 at 3.32 feet in September 2020. The site total accumulated thickness (total of all the wells thickness) has decreased by approximately 38 feet since 2013, when it was measured at 52.12. The site total accumulated thickness in December 2022 was 8.46 feet.

The dissolved phase hydrocarbon concentrations in the groundwater monitor wells have remained below the New Mexico Water Quality Control Commission (NMWQCC) standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX) since 2014. Polycyclic aromatic hydrocarbons (PAHs) have not been detected above state standards in any of the five monitor wells.

1.4 Site Conceptual Model

The Site is located on New Mexico State land and within the pipeline ROW for the 6-inch gathering line associated with area oil production. There are no surface water bodies within 1,000 feet of the Site. Based on the depth to groundwater 16 feet below ground surface (ft-bgs), it is unlikely that any ephemeral or perennial stream would exist at any time within 1,000 feet of the Site. The Site is in an area of multiple well pads and crude oil gathering lines and is about two miles northwest of Monument, New Mexico. The closest residences are approximately 0.8 miles southeast from the Site. One windmill well is located approximately 1,500 feet to the east and down gradient of the Site. This well was sampled for hydrocarbons following the discovery of the release and was found to not be impacted by the release.

The soil types encountered at the Site are of variable thickness and include carbonate indurated, locally referred to as "caliche", fine grained sand, gravelly sand, caliche sandstone, and fractured silica indurated sandstone. Groundwater at the Site is found at approximately 14 to 22 ft-bgs and the groundwater flow direction is towards the east at average gradient of 0.005 feet/foot (ft/ft).

Since 2002, most of the crude oil originating from the release has remained in the near vicinity of the release. The groundwater down gradient of the release has not shown any crude oil in any of the monitor wells. Crude oil has been removed from the area of the release since 2004 and was removed using a vacuum truck throughout 2021 and 2022. The total accumulated thickness of crude oil as measured in all of the wells at the Site has decreased since 2012 from approximately 52 feet to approximately 8.46 feet, presently.

The dissolved phase hydrocarbon concentrations in groundwater have been below the New Mexico Water Quality Control Commission (NMWQCC) standards for benzene, toluene, ethyl benzene and total xylenes (BTEX) since 2014. Benzene was detected once above the NMWQCC standard of 10 µg/L in well MW-6 at a concentration 11.5 µg/L in

December 2014. There have been no detections of any BTEX constituents since 2014 nor any PAHs in 2018 above the state standards.

The primary chemicals of concern are hydrocarbon constituents that originated from the crude oil. The NMWQCC standards for hydrocarbons in groundwater are as follows:

- 5 micrograms per liter (µg/L) for benzene
- 1000 µg/L for toluene
- 700 µg/L for ethylbenzene
- 620 µg/L for total xylenes

There appears to be no immediate threat to the environment or to drinking water wells located in the area, caused by the release and any remaining impacts. The remaining crude oil impacts are confined to the immediate area of the release and have not migrated from this area since the release. The crude oil has a very low mobility and does not readily desorb nor dissolve due to the high amount of paraffin in the oil. The measurable crude oil impacts are decreasing, suggesting that most of the soil impacts have been mitigated and supporting the conclusion that the released crude oil has a low mobility rate and is not readily dissolved in groundwater. The Site will close when measurable oil is removed to a negligible amount and there are no detections of hydrocarbons above the standards in any of the five monitoring wells for eight (8) consecutive quarters as has been observed at the site since 2015.

2. Site Activities

Site activities have included groundwater monitoring, fluid level measurements and oil recovery. Groundwater monitoring has been conducted at the Site on a quarterly basis since December 2017. Fluid levels were measured on a quarterly basis and as needed for crude oil recovery. Monitoring has included fluid levels in all wells, acquisition of groundwater samples for laboratory analyses for BETX, total petroleum hydrocarbon gasoline range organics (TPH-GRO) and total petroleum hydrocarbon diesel range organics (TPH-DRO). Enhanced fluid recovery (EFR) using a vacuum truck has been used at the Site since June 2015 to recover crude oil. Presently, there are five monitoring wells used for groundwater sampling and 32 other wells used to measure fluids and to recover oil.

3. Groundwater Monitoring Procedures and Results

For this reporting period, groundwater monitoring was conducted at the Site in 2021 and 2022 in March, June, September, and December. Fluid levels were measured in all five monitor wells and 32 borehole/recovery wells. Groundwater samples were collected from all five monitor wells during all the sampling events. This section summarizes the results for 2021 and details the results for 2022.

Prior to purging of the wells and obtaining groundwater samples, fluid levels were measured in all monitor wells using a water level indicator and all other wells using an oil/water level indicator. The groundwater samples were analyzed for BTEX by Method 8260C, TPH-GRO by 8015V and TPH-DRO by Method 8015D. Groundwater samples were immediately placed into the appropriate laboratory provided containers following field parameter measurements and placed in an ice chilled cooler for transport to DHL laboratory, Round Rock, Texas under chain-of-custody procedures. The laboratory reports for all sampling events are contained in **Appendix D**.

March 2021

Crude oil was not measured in any of the monitor wells during the March 2021 monitoring event but was measured in 18 of the 32 borehole wells. The maximum crude oil thickness in March was measured in well BH-17 at 2.38 feet. The crude oil thicknesses for 2021 are detailed in **Appendix A**.

The groundwater levels for the monitor wells that were measured in March 2021 were almost 1.50 feet lower than the water levels that were measured in March 2020. For March 2021 monitoring period, the depth to groundwater across the Site varied from approximately 16 ft-bgs (MW-6) to approximately 23 ft-bgs (MW-5). As reported in 2021, the groundwater flow in March was towards the east and the groundwater gradient was relatively flat with a gradient of 0.005 ft/ft (0.006 ft/ft in March 2020).

The March 2021 hydrocarbon concentrations for each monitor well are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in March 2021. The highest TPH-GRO concentration of 0.950 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.714 mg/L was detected in well MW-6 (**Table 1**).

June 2021

Crude oil was not measured in any of the monitor wells during the June 2021 monitoring event but was measured in 20 of the 32 borehole wells. The maximum crude oil thickness was measured at well WBH-13 at 2.56 feet in June. The crude oil thicknesses for 2021 are detailed in **Appendix A**.

Groundwater elevations were approximately 0.75 ft lower in June 2021 than in June 2020. For this monitoring period, the depth to groundwater across the Site varied from approximately 15 ft-bgs (MW-6) to 22 ft-bgs (MW-5). As reported in 2021, the groundwater flow in June 2021 was towards the east and the groundwater gradient was 0.005 ft/ft (0.005 ft/ft in June 2020).

The hydrocarbon concentrations for each monitor well sampled in June 2021 are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in June 2021, as observed in June 2020. The highest TPH-GRO concentration of 0.983 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.523 mg/L was detected in well MW-6 (**Table 1**).

September 2021

Crude oil was not measured in any of the monitor wells during the September 2021 monitoring event but was measured in 11 of the 32 borehole wells. The maximum crude oil thickness was measured in well BH-39 at 1.68 feet in September. The crude oil thicknesses for 2021 are detailed in **Appendix A**.

Groundwater elevations were approximately 0.80 feet higher in September 2021 than in September 2020. For this monitoring period, the depth to groundwater across the Site varied from approximately 14 ft-bgs (MW-6) to 20 ft-bgs (MW-5). As reported in 2021, the groundwater flow in September 2021 was towards the east and the groundwater gradient was 0.006 ft/ft (0.005 ft/ft in September 2020).

The hydrocarbon concentrations for each monitor well sampled in September 2021 are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in September 2021. The highest TPH-GRO concentration of 0.539 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.822 mg/L was detected in well MW-6 (**Table 1**).

December 2021

Crude oil was not measured in any of the monitor wells during the December 2021 monitoring event but was measured in 17 of the 32 borehole wells. The maximum crude oil thickness was measured at well WBH-13 at 1.04 feet in December. The crude oil thicknesses for 2021 are detailed in **Appendix A**.

Groundwater levels were approximately 0.40 feet higher in December 2021 than in December 2020. For this monitoring period, the depth to groundwater across the Site varied from approximately 15 ft-bgs (MW-6) to 21 ft-bgs (MW-5). As reported in 2021, the groundwater flow in December 2021 was towards the east and the groundwater gradient was 0.005 ft/ft (0.005 ft/ft in December 2020).

The hydrocarbon concentrations for each monitor well sampled in December 2021 are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in December 2021. The highest TPH-GRO concentration of 0.550 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.407 mg/L was detected in well MW-6 (**Table 1**).

March 2022

Crude oil was not measured in any of the monitor wells during the March 2022 monitoring event but was measured in 15 of the 32 borehole wells. The maximum crude oil thickness in March was measured in well BH-66 at 1.17 feet. The crude oil thicknesses for 2022 are shown in **Figure 3** and detailed in **Appendix A**.

The groundwater levels for the monitor wells that were measured in March 2022 were similar to the water levels that were measured in March 2021. For March 2022 monitoring period, the depth to groundwater across the Site varied from approximately 15 ft-bgs (MW-6) to approximately 23 ft-bgs (MW-5). The groundwater flow in March (**Figure 4**) was towards the east and the groundwater gradient was relatively flat with a gradient of 0.004 ft/ft (0.005 ft/ft in March 2021).

The March 2022 hydrocarbon concentrations for each monitor well are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in March 2022. The highest TPH-GRO concentration of 0.527 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.476 mg/L was detected in well MW-6 (**Table 1**).

June 2022

Crude oil was not measured in any of the monitor wells during the June 2022 monitoring event but was measured in 14 of the 32 borehole wells. The maximum crude oil thickness was measured at well BH-17 at 0.79 feet in June. The crude oil thicknesses for 2022 are detailed in **Appendix A** and shown in **Figure 3**.

Groundwater elevations were similar in June 2022 compared to June 2021. For this monitoring period, the depth to groundwater across the Site varied from approximately 15 ft-bgs (MW-6) to 22 ft-bgs (MW-5). The groundwater flow in June 2022 (**Figure 5**) was towards the east and the groundwater gradient was 0.005 ft/ft (0.005 ft/ft in June 2021).

The hydrocarbon concentrations for each monitor well sampled in June 2022 are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in June 2022 as observed in June 2020. The highest TPH-GRO concentration of 0.560 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.855 mg/L was detected in well MW-6 (**Table 1**).

September 2022

Crude oil was not measured in any of the monitor wells during the September 2022 monitoring event but was measured in 20 of the 32 borehole wells. The maximum crude oil thickness was measured in well BH-17 at 1.37 feet in September. The crude oil thicknesses for 2022 are detailed in **Appendix A** and shown in **Figure 3**.

Groundwater elevations were generally over 1 foot lower in September 2022 than in September 2021. For this monitoring period, the depth to groundwater across the Site varied from approximately 16 ft-bgs (MW-6) to 22 ft-bgs (MW-5). The groundwater flow in September 2022 (**Figure 6**) was towards the east and the groundwater gradient was 0.004 ft/ft (0.005 ft/ft in September 2021).

The hydrocarbon concentrations for each monitor well sampled in September 2022 are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in September 2022. The highest TPH-GRO concentration of 0.456

mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 2.01 mg/L was detected in well MW-6 (**Table 1**).

December 2022

Crude oil was not measured in any of the monitor wells during the December 2022 monitoring event but was measured in 17 of the 32 borehole wells. The maximum crude oil thickness was measured at well BH-16 at 1.30 feet in December. The crude oil thicknesses for 2022 are shown in **Figure 3** and detailed in **Appendix A**.

Groundwater levels were approximately 0.40 feet lower in December 2022 than in December 2021. For this monitoring period, the depth to groundwater across the Site varied from approximately 15 ft-bgs (MW-6) to 22 ft-bgs (MW-5). The groundwater flow in December 2021 (**Figure 7**) was towards the east and the groundwater gradient was 0.004 ft/ft (0.005 ft/ft in December 2020).

The hydrocarbon concentrations for each monitor well sampled in December 2021 are shown in **Figure 8** and summarized in **Table 1**. There were no detections of any of the BTEX constituents above the NMWQCC standards in the five monitor wells that were sampled at the Site in December 2021. The highest TPH-GRO concentration of 0.441 mg/L was detected in well MW-6 and the highest TPH-DRO concentration of 0.567 mg/L was detected in well MW-6 (**Table 1**).

4. QA/QC Results

Quality Assurance/Quality Control (QA/QC) measures were followed according to the abatement plan. For this reporting period, QA/QC samples included duplicate samples for each monitoring period and trip blanks for March, June, September, and December. Trip blanks were analyzed for BTEX, and TPH-GRO. The duplicate samples were analyzed for BTEX, TPH-GRO, and TPH-DRO. There were no detections above the lower laboratory reporting limit for the constituents in any of the trip blanks. There were no differences in the hydrocarbon results for the duplicate samples (**Table 2**). All samples were analyzed within the holding times and all coolers were received at the proper temperature. Based on this evaluation, all the data meets acceptance criteria and is suitable for use in this report.

5. Remediation Status

Crude oil was recovered from recovery wells using a crude oil only skimmer pump system from 2013 to 2015 and oil absorbent socks and EFR since 2015. The oil recovery system was shut down due to the damage to the pumps caused by acidified oil in March 2015. Oil absorbent socks are being used in wells containing less than 0.25 feet of crude oil and EFR is being used on all other wells on a bi-monthly or monthly basis.

The crude oil thickness has been declining since 2012 with the maximum thickness declining from a high of 3.00 feet measured in well MRW-5 in 2013 to the maximum thickness measured in well BH-66 at 1.30 feet in December 2022. The total accumulated thickness of the crude oil as measured in all wells for the Site has declined from 52.12 feet in June 2013 to the Site total accumulated thickness of 8.46 feet in December 2022 (**Figure 9**).

The site total accumulated thickness of crude oil has decreased from 20.12 feet in 2020 to 8.46 feet in 2022 (**Figure 9**). For Well WBH-13 crude oil has decreased from a high of 2.70 feet in March 2019 to 0.70 feet in December 2022. Well WBH-20 crude oil has decreased from 2.34 feet in August 2020 to 0.32 feet in December 2022. The number of wells containing crude oil has decreased from 20 wells in December 2020 to 17 wells in December 2022. **Appendix C** contains graphs of fluid levels for selected wells.

6. Conclusion and Recommendations

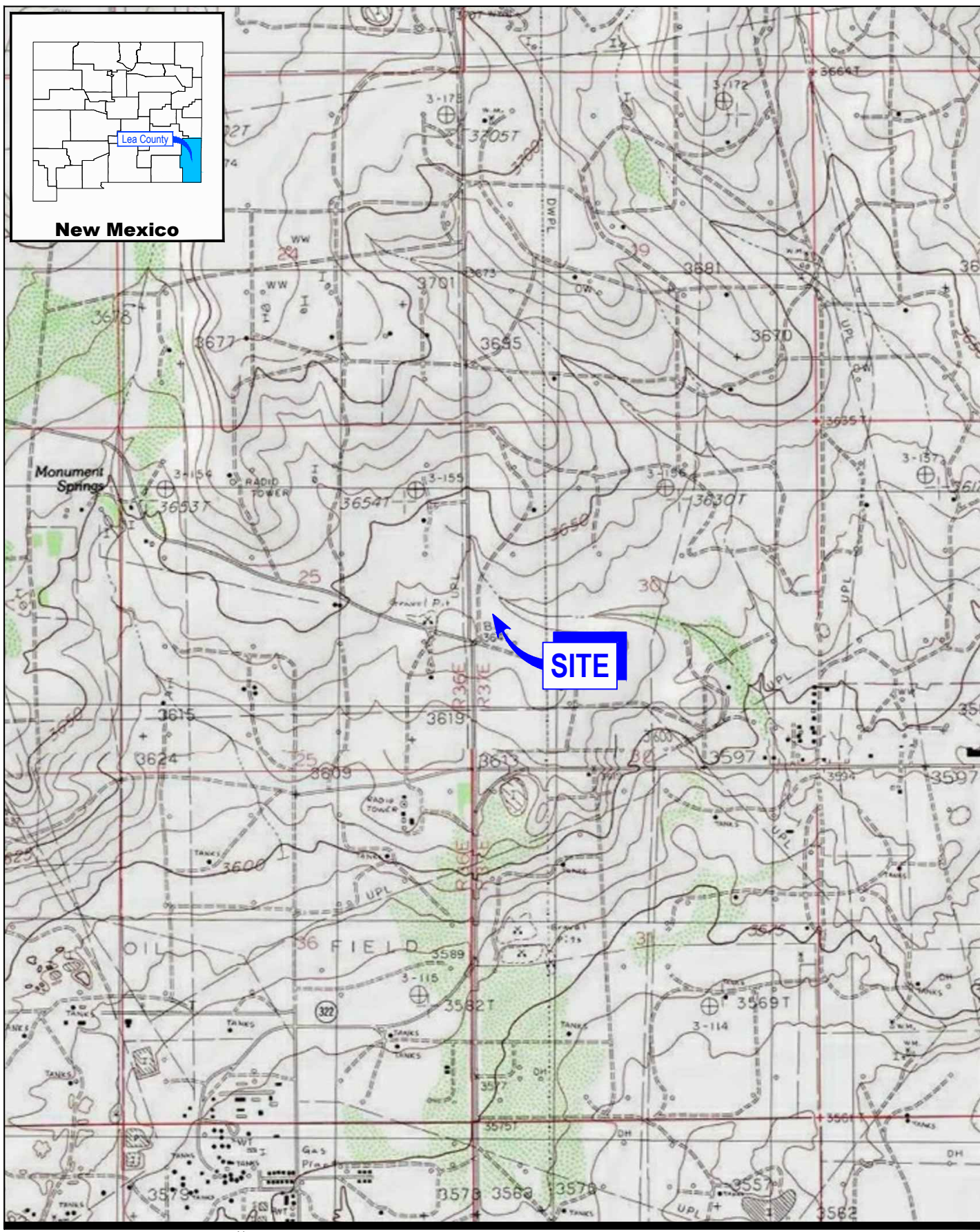
The measured thicknesses of the crude oil have decreased since the release in 2002 and none of the monitoring wells have shown hydrocarbon concentrations above the state standards since 2014. Crude oil thickness has decreased due to removal of the crude oil by pumping, the use of EFR and absorbent socks. In 2021 and 2022, crude oil thickness decreased at the Site with no increase in thickness of the crude oil in the wells as observed in 2020 (**Figure 9**).

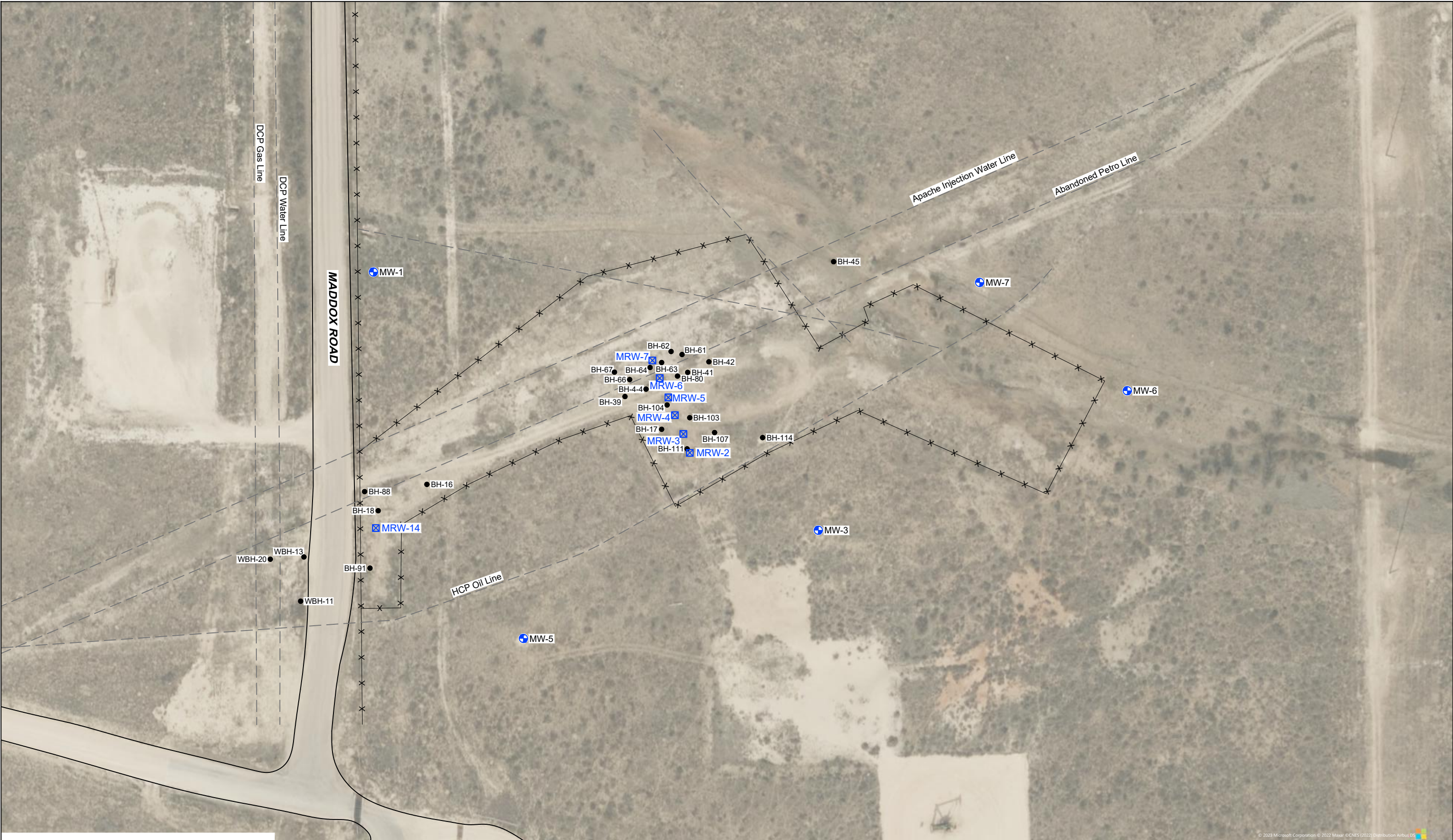
The crude oil pipeline that was the original source of the release was taken out of service in May 2020 and was purged with nitrogen at that time. The data shows that the thickness of oil in wells increased marginally after May 2020 until June 2021 but has decreased in oil since June 2021 (**Figure 9**) and is currently at or near historic lows. This trend will be re-evaluated in 2023.

The remedial strategy for site closure is based on the current NMOCD requirements. To close the Site with no further action, the measurable crude oil would first have to be removed to a negligible amount separately from groundwater (19.15.17.13 NMAC). There appears to be no immediate threat to the environment or to drinking water wells located in the area, caused by the release and any remaining impacts. The remaining crude oil impacts are confined to the immediate area of the release and have not migrated from this area since the release.

Monitor wells will continue to be sampled and analyzed for BTEX, TPH-GRO, and TPH-DRO on a quarterly basis in 2023. Fluid levels in borehole wells will be measured on a quarterly basis and EFR will be used on a bimonthly to monthly basis during the upcoming year. An evaluation of the recoverability of the remaining crude oil will be conducted during 2023, including crude oil transmissivity of select borehole wells.

Figures





LEGEND

- RECOVERY/BOREHOLE WELL LOCATION
- MONITOR WELL LOCATION
- BOREHOLE WELL LOCATION
- APPROXIMATE LOCATION OF UNDERGROUND LINE
- FENCE LINE

0 50 100 ft

1" = 100 ft

Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

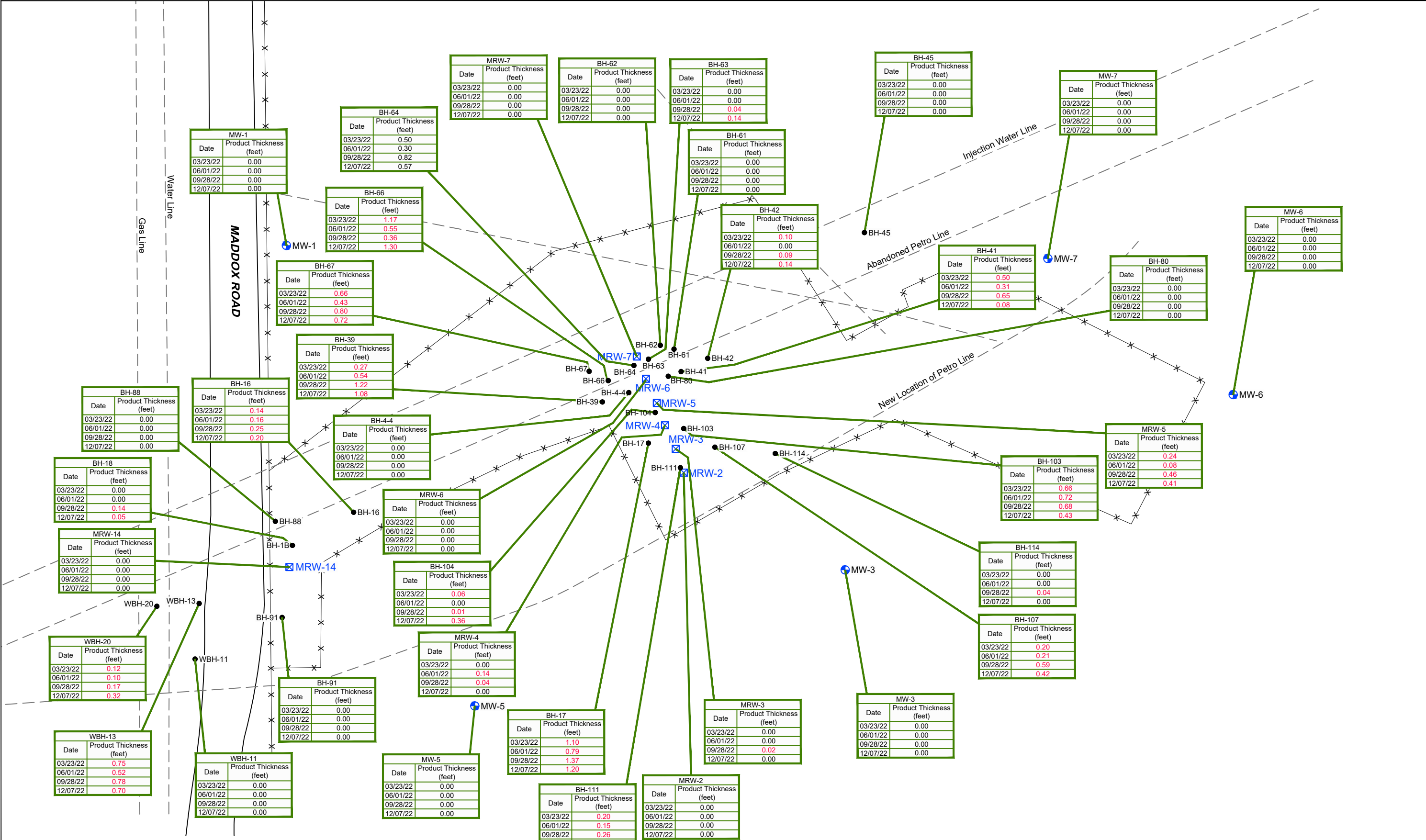
SITE MAP

Project No. **11225604**
Date **March 2023**

FIGURE 2

Filename: \\ghdnet\ghd\US\Golden\Projects\56211225604\Digital_Design\ACAD 2017\Figures\RPT002\11225604-GHD-00-00-RPT-EN-D101_DL-002.dwg
Plot Date: 01 March 2023 1:24 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 32.6306° North, 103.2980° West



LEGEND

- RECOVERY/BOREHOLE WELL LOCATION
- MONITOR WELL LOCATION
- BOREHOLE WELL LOCATION
- APPROXIMATE LOCATION OF UNDERGROUND LINE
- FENCE LINE

0 40 80 ft

1" = 80 ft

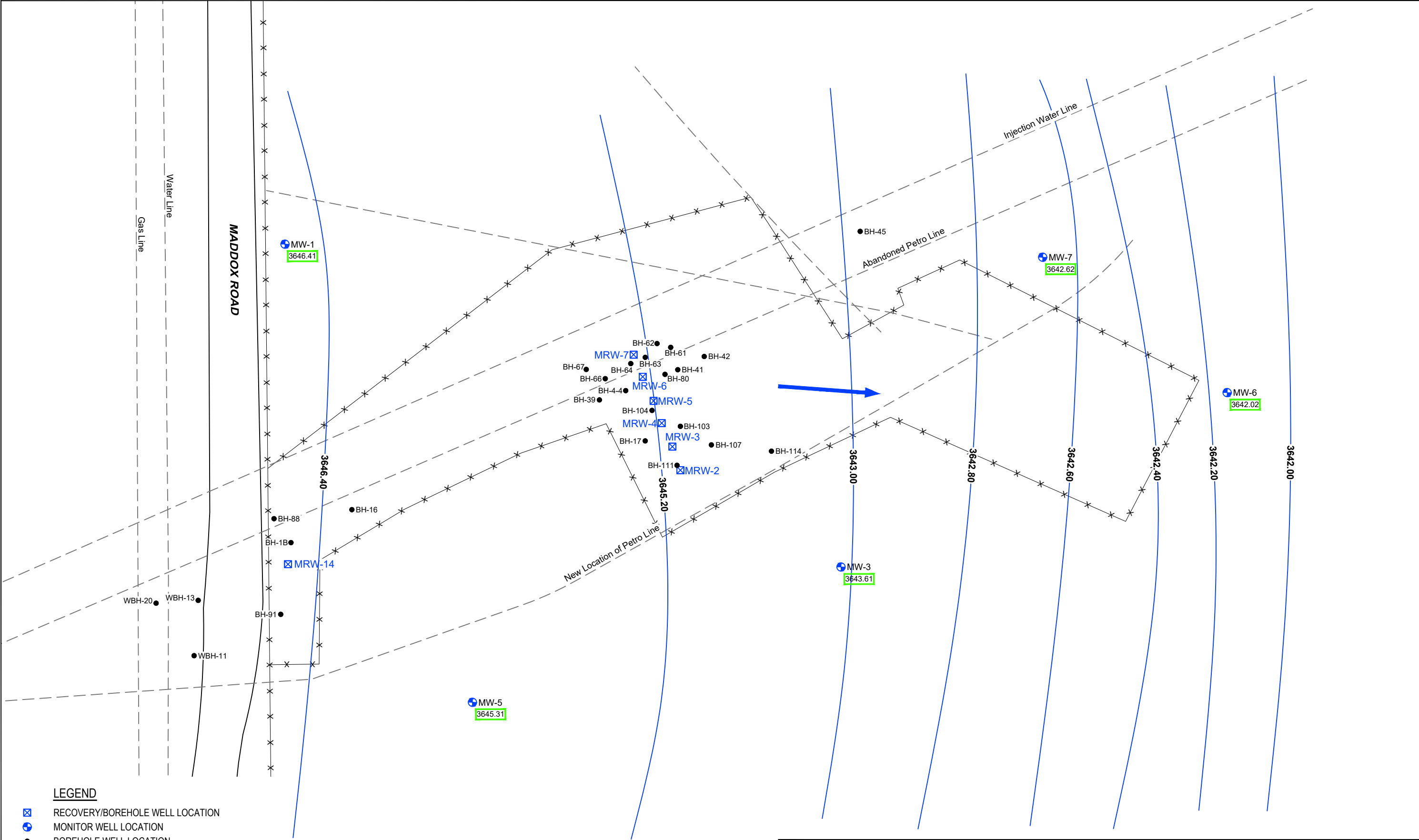
Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)

HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

Project No. 11225604
Date March 2023

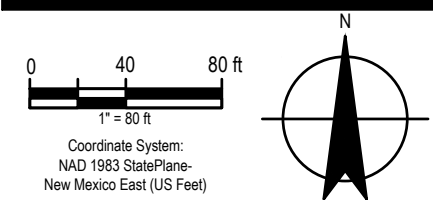
**PRODUCT THICKNESS MAP
MARCH TO DECEMBER 2022**

FIGURE 3



LEGEND

- RECOVERY/BOREHOLE WELL LOCATION
- MONITOR WELL LOCATION
- BOREHOLE WELL LOCATION
- APPROXIMATE LOCATION OF UNDERGROUND LINE
- FENCE LINE
- GROUNDWATER POTENTIOMETRIC CONTOUR (INTERVAL = 0.20 FT)
- ELEVATION OF GROUNDWATER (FT)
- DIRECTION OF GROUNDWATER FLOW

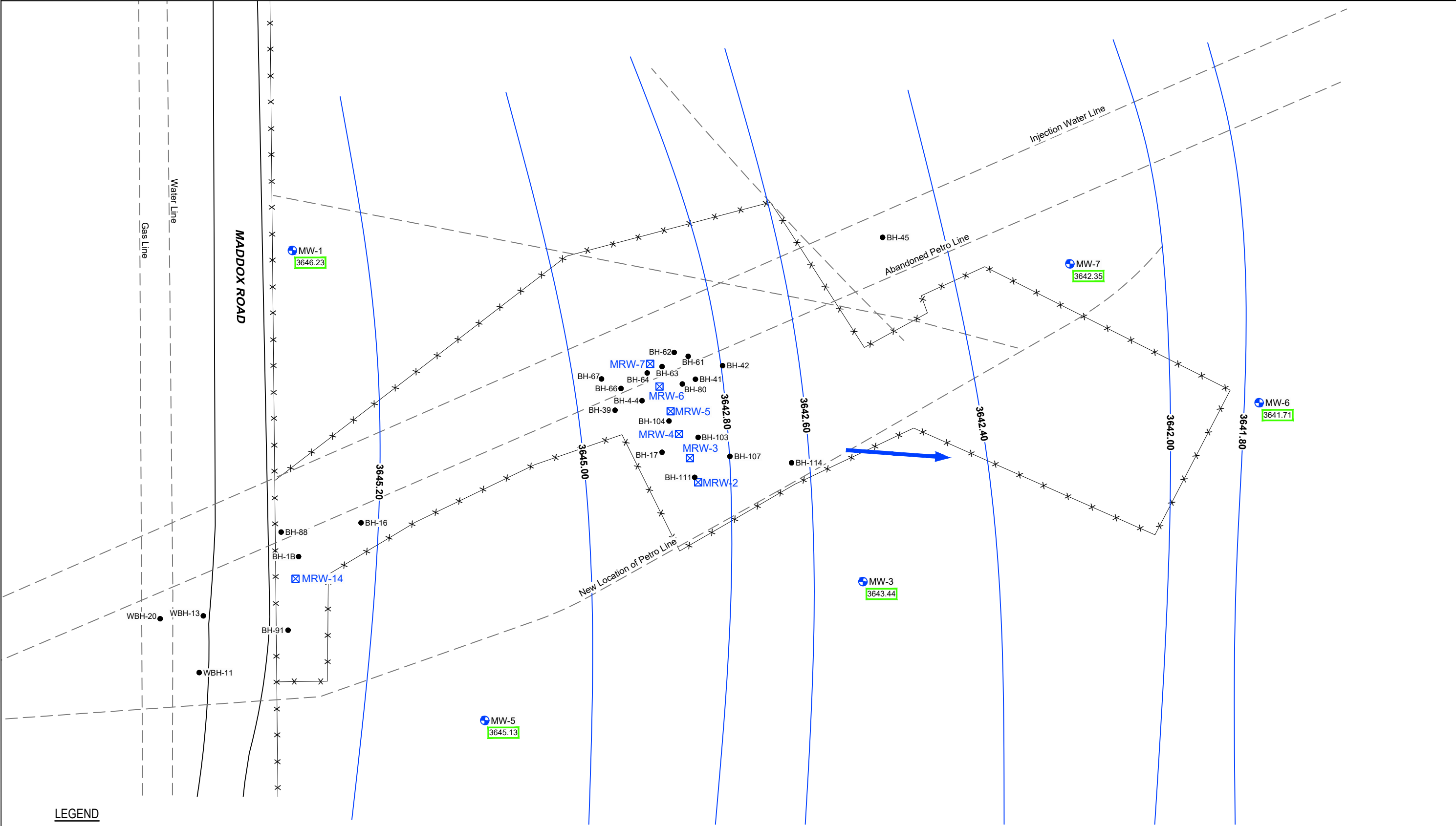


HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

**GROUNDWATER POTENTIOMETRIC
SURFACE MAP - MARCH 2022**

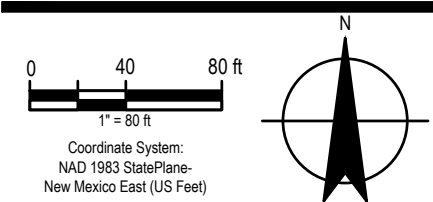
Project No. 11225604
Date March 2023

FIGURE 4



LEGEND

- RECOVERY/BOREHOLE WELL LOCATION
- MONITOR WELL LOCATION
- BOREHOLE WELL LOCATION
- APPROXIMATE LOCATION OF UNDERGROUND LINE
- FENCE LINE
- GROUNDWATER POTENTIOMETRIC CONTOUR (INTERVAL = 0.20 FT)
- ELEVATION OF GROUNDWATER (FT)
- DIRECTION OF GROUNDWATER FLOW

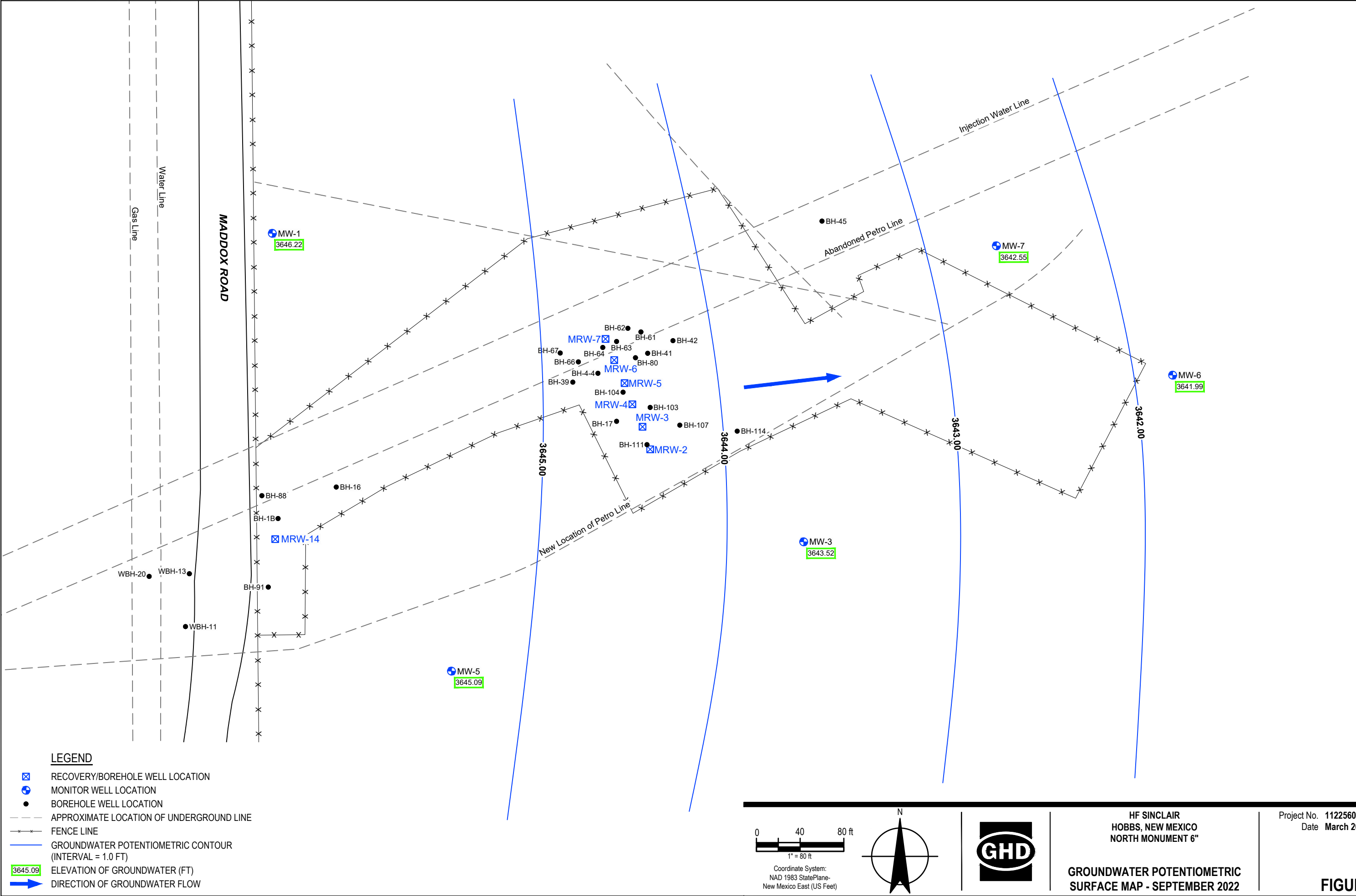


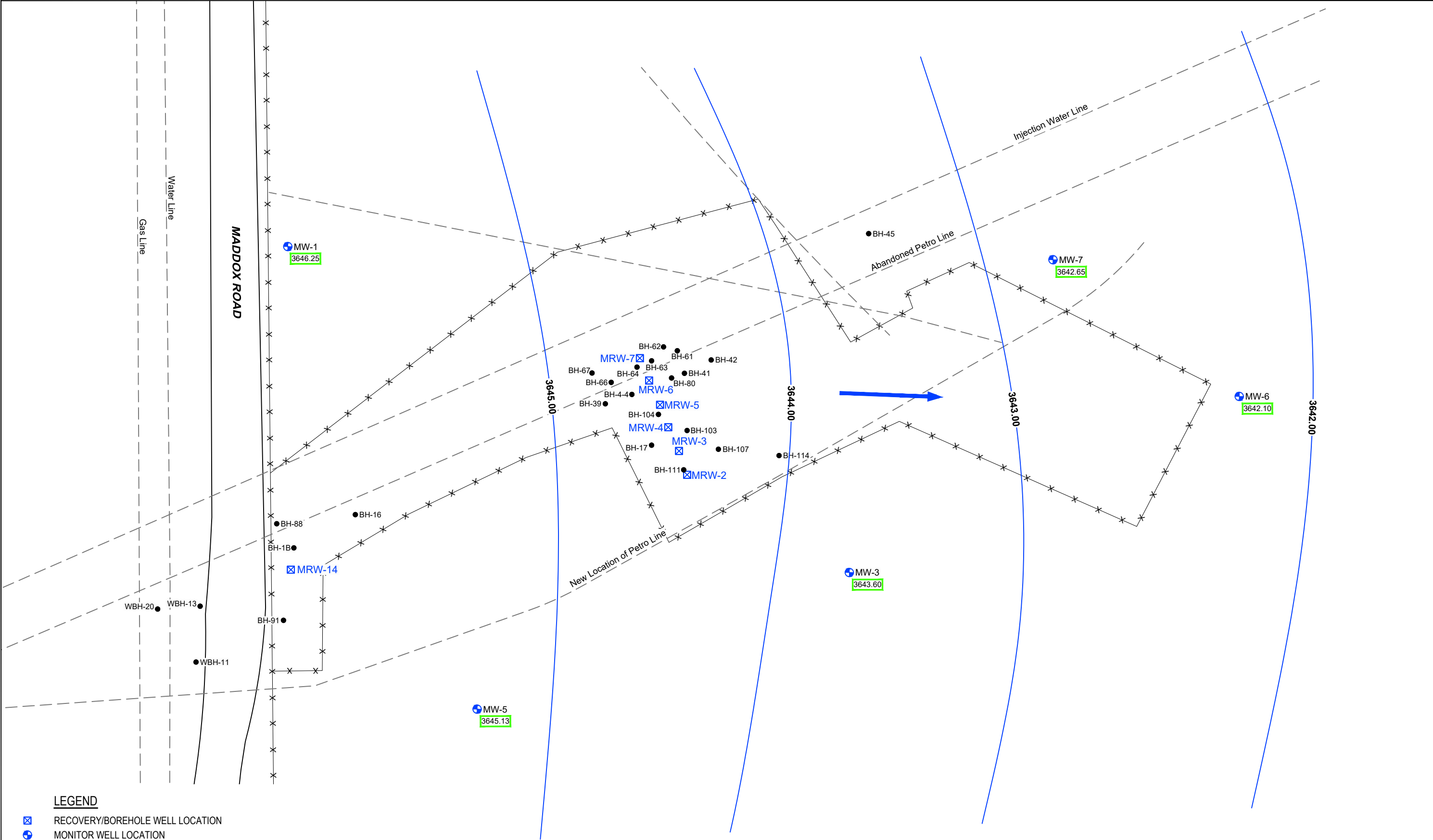
HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

**GROUNDWATER POTENTIOMETRIC
SURFACE MAP - JUNE 2022**

Project No. 11225604
Date March 2023

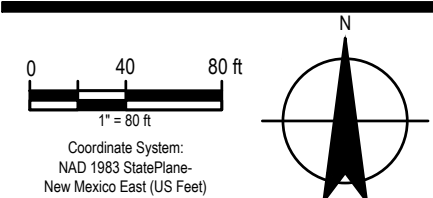
FIGURE 5





LEGEND

- RECOVERY/BOREHOLE WELL LOCATION
- MONITOR WELL LOCATION
- BOREHOLE WELL LOCATION
- APPROXIMATE LOCATION OF UNDERGROUND LINE
- FENCE LINE
- GROUNDWATER POTENTIOMETRIC CONTOUR (INTERVAL = 1.0 FT)
- ELEVATION OF GROUNDWATER (FT)
- DIRECTION OF GROUNDWATER FLOW



Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)



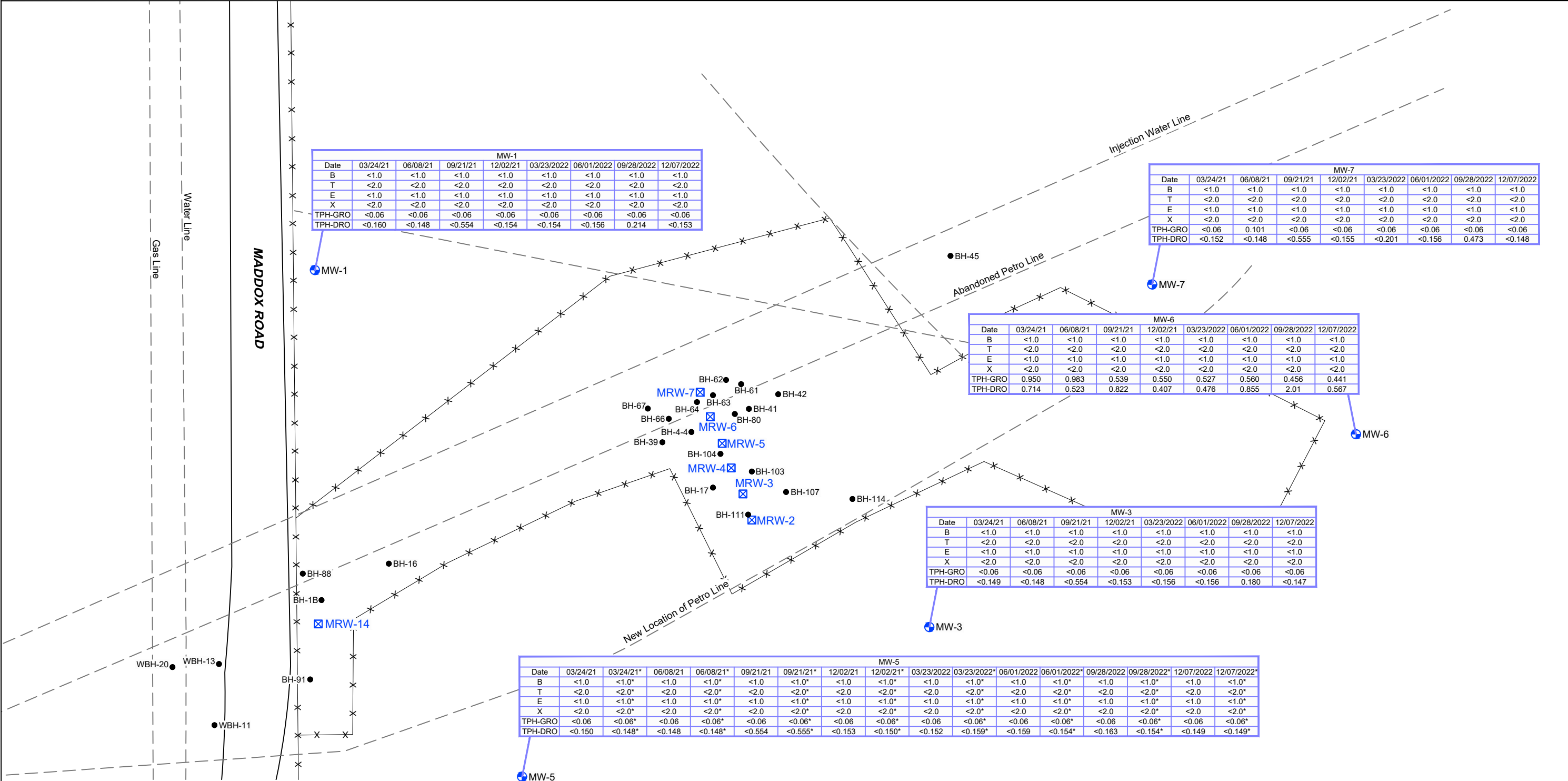
HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

**GROUNDWATER POTENTIOMETRIC
SURFACE MAP - DECEMBER 2022**

Project No. 11225604
Date March 2023

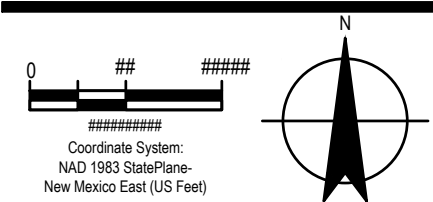
FIGURE 7

Lat/Long: 32.6306° North, 103.2980° West



LEGEND

- RECOVERY/BOREHOLE WELL LOCATION
- MONITOR WELL LOCATION
- BOREHOLE WELL LOCATION
- APPROXIMATE LOCATION OF UNDERGROUND LINE
- FENCE LINE
- B BENZENE CONCENTRATION (µg/L)
- T TOLUENE CONCENTRATION (µg/L)
- E ETHYLBENZENE CONCENTRATION (µg/L)
- X XYLENES CONCENTRATION (µg/L)
- TPH TOTAL PETROLEUM HYDROCARBONS CONCENTRATION (mg/L)
- GRO TPH AS GASOLINE RANGE ORGANICS
- DRO TPH AS DIESEL RANGE ORGANICS
- * INDICATES DUPLICATE SAMPLE

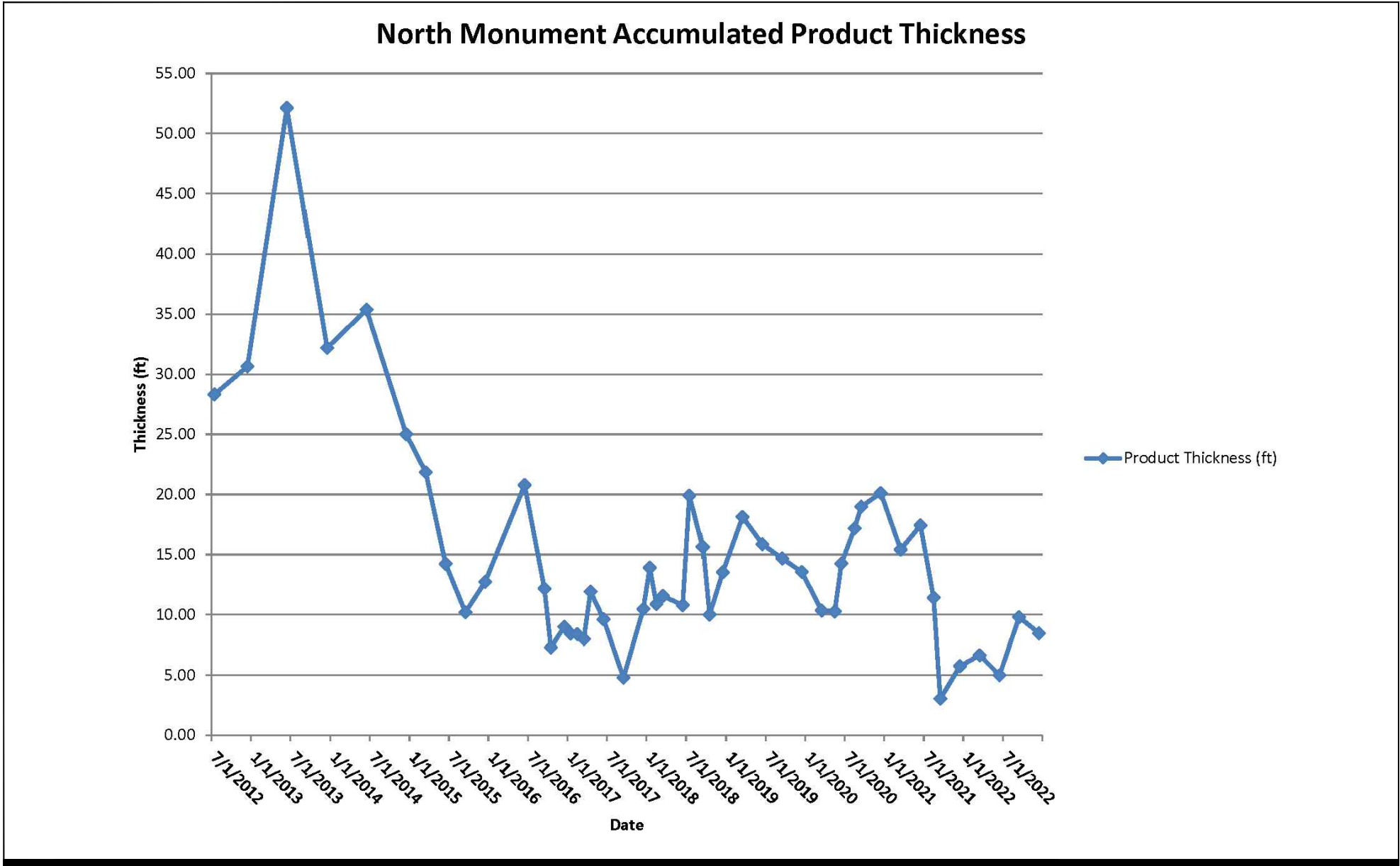


HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

ANALYTICAL MAP FOR
MARCH 2021 TO DECEMBER 2022

Project No. 11225604
Date March 2023

FIGURE 8



HF SINCLAIR
HOBBS, NEW MEXICO
NORTH MONUMENT 6"

Project No. 11225604
Date March 2023

SITE TOTAL ACCUMULATED THICKNESS

FIGURE 9

Tables

Table 1 - Summary of Groundwater Hydrocarbon Results for March 2021 to December 2022
HF Sinclair- North Monument - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	TPH- GRO (mg/L)	TPH- DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)
NMWQCC Groundwater Standards		5	1000	700	620	NE	NE		
MW-1	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.160	23.58	3,646.47
	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	23.82	3,646.23
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.554	22.12	3,647.93
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	23.04	3,647.01
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	23.64	3,646.41
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	23.80	3,646.25
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	0.214	23.83	3,646.22
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	23.80	3,646.25
MW-3	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	22.77	3,643.64
	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	22.97	3,643.44
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.554	21.65	3,644.76
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	22.33	3,644.08
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	22.80	3,643.61
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	23.00	3,643.41
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	0.180	22.89	3,643.52
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	22.81	3,643.60
MW-5	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.150	25.08	3,645.35
	duplicate 3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	25.08	3,645.35
	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	25.30	3,645.13
	duplicate 6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	25.30	3,645.13
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.554	23.93	3,646.50
	duplicate 9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.555	23.93	3,646.50
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	24.63	3,645.80
	duplicate 12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.150	24.63	3,645.80
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.152	25.12	3,645.31
	duplicate 3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159	25.12	3,645.31
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159	25.33	3,645.10
	duplicate 6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	25.33	3,645.10
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.163	25.34	3,645.09
	duplicate 9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	25.34	3,645.09
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	25.30	3,645.13
	duplicate 12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	25.30	3,645.13
MW-6	3/24/2021	<1.0	<2.0	<1.0	<2.0	0.950	0.714	18.51	3,641.99
	6/8/2021	<1.0	<2.0	<1.0	<2.0	0.983	0.523	18.79	3,641.71
	9/21/2021	<1.0	<2.0	<1.0	<2.0	0.539	0.822	17.38	3,643.12
	12/2/2021	<1.0	<2.0	<1.0	<2.0	0.550	0.407	18.03	3,642.47
	3/23/2022	<1.0	<2.0	<1.0	<2.0	0.527	0.476	18.48	3,642.02
	6/1/2022	<1.0	<2.0	<1.0	<2.0	0.560	0.855	18.74	3,641.76
	9/28/2022	<1.0	<2.0	<1.0	<2.0	0.456	2.01	18.51	3,641.99
	12/7/2022	<1.0	<2.0	<1.0	<2.0	0.441	0.567	18.40	3,642.10
MW-7	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.152	19.89	3,642.58
	6/8/2021	<1.0	<2.0	<1.0	<2.0	0.101	<0.148	20.12	3,642.35
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.555	18.78	3,643.69
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.155	19.42	3,643.05
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.201	19.85	3,642.62
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	20.10	3,642.37
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	0.473	19.92	3,642.55
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	19.82	3,642.65

BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard

µg/L = micrograms/Liter

mg/L = milligrams/Liter

ft-bmp = feet - below measuring point

ft-msl = feet - mean sea level

< = analyte not detected above reporting limit

BTEX = benzene, toluene, ethylbenzene & total xylenes

BTEX analyzed by Method 8260C

TPH-GRO = total petroleum hydrocarbons- gasoline range organics

TPH-DRO = total petroleum hydrocarbons- diesel gasoline range organics

TPH-GRO analyzed by Method 8015V

TPH-DRO analyzed by Method 8015D

NA = not analyzed

NE= Not Established

**Table 2 Summary of Groundwater QA/QC Results for 2022
HF Sinclair- North Monument - Lea County, New Mexico**

Well	Date	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH-GRO	TPH-DRO
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)
NMWQC Groundwater Standards		5	1000	700	620	NE	NE
MW-5	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.152
MW-5	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159
MW-5	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.163
MW-5	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149
Trip Blank	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	NA
Trip Blank	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	NA
Trip Blank	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	NA
Trip Blank	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	NA

BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard

µg/L = micrograms per liter

< = Not detected above indicated level

BTEX = Benzene, Toluene, Ethylbenzene and Xylenes

BTEX analyzed by Method EPA 8260C

TPH-GRO = total petroleum hydrocarbons- gasoline range organics

TPH-DRO = total petroleum hydrocarbons- diesel gasoline range organics

TPH-GRO analyzed by Method 8015V

TPH-DRO analyzed by Method 8015D

NA = not analyzed

NE= Not Established

TDS = Total Dissolved Solids

Mercury analyzed by Method SW7470A #DIV/0!

Chloride analyzed by Method E300

TDS analyzed by Method M2540C

All other metals analyzed by Method SW6020A

Appendices

Appendix A

Historical Fluid Levels

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
WBH-11 3670	7/26/2012	24.41	25.03	0.62	30.28
	12/20/2012	24.40	25.69	1.29	
	6/19/2013	24.29	26.36	2.07	
	12/12/2013	23.47	25.27	1.80	
	6/26/2014	23.32	24.87	1.55	
	12/18/2014	23.43	24.35	0.92	
	3/18/2015	24.10	25.04	0.94	
	6/8/2015	23.83	24.50	0.67	
	9/15/2015	24.40	24.54	0.14	
	12/16/2015		24.29	0.00	
	6/6/2016	24.60	24.98	0.38	
	9/25/2016	22.80	22.84	0.04	
	10/28/2016	22.79	22.84	0.05	
	12/11/2016		24.05	0.00	
	1/21/2017		24.25	0.00	
	2/19/2017	24.38	24.40	0.02	
	3/14/2017		25.40	0.00	
	4/20/2017	24.50	24.60	0.10	
	6/6/2017	24.55	24.57	0.02	
	9/19/2017	23.68	23.72	0.04	
	12/6/2017	24.32	24.42	0.10	
	1/24/2018	24.68	24.75	0.07	
	2/21/2018		24.55	0.00	
	3/15/2018		22.58	0.00	
	6/6/2018		24.70	0.00	
	7/17/2018	24.90	24.93	0.03	
	9/24/2018	Trace	24.18	0.00	
	10/10/2018	Trace	24.35	0.00	
	12/11/2018		24.20	0.00	
	3/13/2019		24.68	0.00	
	6/26/2019		24.95	0.00	
	9/21/2019		25.04	0.00	
	12/3/2019		24.70	0.00	
	3/12/2020		22.23	0.00	
	5/20/2020		24.80	0.00	
	6/18/2020		25.06	0.00	
	8/13/2020		25.78	0.00	
	9/15/2020		25.40	0.00	
	12/2/2020		24.93	0.00	
	3/24/2021		25.70	0.00	
	6/8/2021		25.82	0.00	
	8/5/2021		22.98	0.00	
	9/21/2021		24.45	0.00	
	12/2/2021		23.23	0.00	
	3/23/2022		23.76	0.00	
	6/1/2022		24.01	0.00	
	9/28/2022		25.91	0.00	
	12/7/2022		26.03	0.00	
WBH-13	7/26/2012	24.99	25.05	0.06	30.32
	12/20/2012	25.04	25.12	0.08	
	6/19/2013	25.16	25.20	0.04	
	12/12/2013	24.16	24.36	0.20	
	6/26/2014	23.95	24.32	0.37	
	12/18/2014	23.98	24.22	0.24	
	3/18/2015	24.67	25.05	0.38	
	6/8/2015	24.37	24.48	0.11	
	9/15/2015		24.90	0.00	
	12/6/2015		24.75	0.00	
	6/6/2016	25.08	25.24	0.16	
	9/25/2016	23.15	23.38	0.23	
	12/11/2016	24.45	24.90	0.45	
	1/21/2017	24.60	25.07	0.47	
	2/19/2017	24.77	25.37	0.60	
	3/14/2017	24.80	25.30	0.50	
	4/20/2017	24.90	25.75	0.85	
	6/6/2017	24.80	25.48	0.68	
	9/19/2017	24.02	24.30	0.28	
	12/6/2017	23.63	24.20	0.57	
	1/24/2018	24.69	26.29	1.60	
	2/21/2018	22.75	23.40	0.65	
	3/15/2018	24.67	26.55	1.88	
	6/6/2018	24.68	26.88	2.20	
	7/17/2018	25.00	27.70	2.70	
	9/24/2018	24.40	25.78	1.38	
	10/10/2018	24.66	25.80	1.14	
	12/11/2018	24.55	25.75	1.20	
	1/23/2019	24.76	26.60	1.84	
	3/13/2019	24.65	27.35	2.70	
	6/26/2019	25.08	27.17	2.09	
	9/21/2019	25.15	27.22	2.07	
	12/3/2019	24.87	26.80	1.93	
	3/12/2020	24.50	25.83	1.33	
	5/20/2020	24.90	26.93	2.03	
	6/18/2020	25.10	27.35	2.25	
	8/13/2020	24.48	25.83	1.35	
	9/15/2020	25.48	27.70	2.22	
	11/12/2020	25.68	27.62	1.94	
	12/2/2020	24.63	26.25	1.62	
	3/24/2021	25.90	27.70	1.80	
	6/8/2021	25.90	28.46	2.56	
	8/5/2021	25.23	26.58	1.35	
	9/21/2021	22.85	23.30	0.45	
	12/2/2021	25.48	26.52	1.04	
	3/23/2022	26.05	26.80	0.75	
	6/1/2022	26.33	26.85	0.52	
	9/28/2022	26.28	27.06	0.78	
	12/7/2022	26.25	26.95	0.70	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
WBH-20 3670	7/26/2012	23.71	24.79	1.08	30.31
	12/20/2012	23.81	24.92	1.11	
	6/19/2013	23.75	25.11	1.36	
	12/12/2013	22.95	24.10	0.36	
	6/26/2014	22.76	23.76	1.00	
	12/18/2014	22.81	23.80	0.99	
	3/18/2015	23.47	24.55	1.08	
	6/8/2015	23.22	23.95	0.73	
	9/15/2015	23.78	24.02	0.24	
	12/16/2015	23.65	23.82	0.17	
	6/6/2016	23.89	25.04	1.15	
	9/25/2016	21.98	23.38	1.40	
	10/28/2016	21.96	23.40	1.44	
	12/11/2016	23.35	24.10	0.75	
	1/21/2017	24.57	25.07	0.50	
	2/19/2017	24.70	25.20	0.50	
	3/14/2017	23.70	24.38	0.68	
	4/20/2017	23.80	24.65	0.85	
	6/6/2017	23.95	24.83	0.88	
	9/19/2017	22.97	23.57	0.60	
	12/6/2017	24.60	25.55	0.95	
	1/24/2018	23.78	24.29	0.51	
	2/21/2018	22.85	23.64	0.79	
	3/15/2018	23.87	24.77	0.90	
	6/6/2018	23.98	24.98	1.00	
	7/17/2018	24.07	25.60	1.53	
	9/24/2018	22.42	23.58	1.16	
	10/10/2018	23.66	24.33	0.67	
	12/11/2018	23.52	24.20	0.68	
	1/23/2019	23.82	24.70	0.88	
	3/13/2019	23.90	25.15	1.25	
	6/26/2019	24.11	25.52	1.41	
	9/21/2019	24.20	25.75	1.55	
	12/3/2019	23.93	25.15	1.22	
	3/12/2020	23.53	24.28	0.75	
	5/20/2020	24.00	25.33	1.33	
	6/18/2020	24.20	25.60	1.40	
	8/13/2020	25.38	27.72	2.34	
	9/15/2020	22.58	25.90	3.32	
	11/12/2020	24.80	25.61	0.81	
	12/2/2020	24.75	25.70	0.95	
	3/24/2021	25.00	25.80	0.80	
	6/8/2021	25.10	26.08	0.98	
	8/5/2021	24.28	24.80	0.52	
	9/21/2021	23.95	23.97	0.02	
	12/2/2021	24.58	24.79	0.21	
	3/23/2022	25.10	25.22	0.12	
	6/1/2022	25.34	25.44	0.10	
	9/28/2022	25.31	25.48	0.17	
	12/7/2022	25.28	25.60	0.32	
BH-18	7/26/2012	24.53	25.01	0.48	30.41
	12/20/2012	24.52	25.12	0.60	
	6/19/2013	24.25	25.36	1.11	
	12/12/2013			0.00	
	6/26/2014			0.00	
	12/18/2014	23.51	24.31	0.80	
	3/18/2015	24.28	24.95	0.67	
	6/9/2015	23.97	24.48	0.51	
	9/15/2015	24.50	24.65	0.15	
	12/16/2015	24.36	24.41	0.05	
	6/6/2016	24.74	24.75	0.01	
	9/25/2016		22.80	0.00	
	10/28/2016		23.78	0.00	
	12/11/2016		24.14	0.00	
	1/21/2017		24.35	0.00	
	2/19/2017		24.47	0.00	
	3/14/2017		24.15	0.00	
	4/20/2017		24.60	0.00	
	6/6/2017		24.66	0.00	
	9/19/2017		23.88	0.00	
	12/6/2017		24.40	0.00	
	1/24/2018		24.60	0.00	
	2/21/2018		23.90	0.00	
	3/15/2018		24.84	0.00	
	6/6/2018		22.98	0.00	
	7/17/2018		23.02	0.00	
	9/24/2018		22.25	0.00	
	10/10/2018		22.64	0.00	
	12/11/2018		24.30	0.00	
	3/13/2019		24.70	0.00	
	6/26/2019		24.35	0.00	
	9/21/2019		23.04	0.00	
	12/3/2019	24.85	24.90	0.05	
	3/12/2020	24.10	24.15	0.05	
	5/20/2020		24.55	0.00	
	6/18/2020		24.60	0.00	
	9/15/2020		24.07	0.00	
	12/2/2020		24.85	0.00	
	3/24/2021		25.92	0.00	
	6/8/2021	25.85	26.00	0.15	
	8/5/2021	25.18	25.20	0.02	
	9/21/2021		24.63	0.00	
	12/2/2021	t	23.52	0.00	
	3/23/2022	t	23.95	0.00	
	6/1/2022	t	24.26	0.00	
	9/28/2022		25.99	26.13	0.14
	12/7/2022		26.03	26.08	0.05

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-4-4	7/26/2012	18.88	19.05	0.17	25.36
	12/20/2012	18.90	19.07	0.17	
	6/19/2013	19.02	19.28	0.26	
	12/12/2013	18.04	18.43	0.39	
	6/26/2014	17.91	18.65	0.74	
	12/18/2014	17.90	18.49	0.59	
	3/18/2015	18.66	19.22	0.56	
	6/8/2015	18.23	18.77	0.54	
	9/15/2015	18.87	18.98	0.11	
	12/16/2015		18.71	0.00	
	6/6/2016	24.83	24.84	0.01	
	9/25/2016		17.22	0.00	
	10/28/2016	18.02	18.06	0.04	
	12/11/2016	18.48	18.55	0.07	
	1/21/2017		18.65	0.00	
	2/19/2017	18.78	18.80	0.02	
	3/14/2017		18.83	0.00	
	4/20/2017	18.95	19.05	0.10	
	6/6/2017	18.97	18.99	0.02	
	9/19/2017	18.08	18.11	0.03	
	12/6/2017		18.80	0.00	
	1/24/2018	19.94	20.00	0.06	
	2/21/2018		19.26	0.00	
	3/15/2018		19.26	0.00	
	6/6/2018		19.16	0.00	
	7/17/2018		19.33	0.00	
	9/24/2018		19.06	0.00	
	10/10/2018		19.24	0.00	
	12/11/2018		18.97	0.00	
	1/23/2019		19.02	0.00	
	3/13/2019		19.10	0.00	
	6/26/2019		19.46	0.00	
	9/21/2019		19.50	0.00	
	12/3/2019		19.42	0.00	
	3/12/2020		18.65	0.00	
	5/20/2020		18.88	0.00	
	6/18/2020	20.42	20.48	0.06	
	9/15/2020		20.18	0.00	
	12/2/2020		19.82	0.00	
	3/24/2021		19.00	0.00	
	6/8/2021		20.53	0.00	
	8/5/2021		19.48	0.00	
	9/21/2021		20.05	0.00	
	12/2/2021		20.68	0.00	
	3/23/2022		21.07	0.00	
	6/1/2022		21.34	0.00	
	9/28/2022		21.84	0.00	
	12/7/2022		21.98	0.00	
BH-16	7/26/2012	22.85	23.20	0.35	29.50
	12/20/2012	22.83	23.17	0.34	
	6/19/2013	22.90	23.32	0.42	
	12/12/2013	22.08	22.50	0.42	
	6/26/2014	21.89	22.33	0.44	
	12/18/2014	21.90	22.31	0.41	
	3/18/2015	22.57	23.05	0.48	
	6/9/2015	22.29	22.63	0.34	
	9/15/2015	22.78	22.88	0.10	
	12/16/2015	22.65	22.81	0.16	
	6/6/2016	23.01	23.21	0.20	
	9/25/2016	21.10	21.40	0.30	
	10/28/2016	21.98	22.09	0.11	
	12/11/2016	22.42	22.58	0.16	
	1/21/2017	22.62	22.73	0.11	
	2/19/2017	22.70	22.86	0.16	
	3/14/2017	22.76	22.90	0.14	
	4/20/2017	22.85	23.10	0.25	
	6/6/2017	22.92	23.03	0.11	
	9/19/2017		21.04	0.00	
	12/6/2017	22.84	22.95	0.11	
	1/24/2018	22.82	23.02	0.20	
	2/21/2018	22.90	23.04	0.14	
	3/15/2018		22.97	0.00	
	6/6/2018	23.10	23.20	0.10	
	7/17/2019	23.22	23.60	0.38	
	9/24/2018	22.50	22.85	0.35	
	10/10/2018	22.70	22.95	0.25	
	12/11/2018	22.58	22.70	0.12	
	1/23/2019	22.92	23.02	0.10	
	3/13/2019	23.00	23.10	0.10	
	6/26/2019	23.60	23.83	0.23	
	9/21/2019	23.60	23.75	0.15	
	12/3/2019	23.05	23.32	0.27	
	3/12/2020	22.58	22.98	0.40	
	5/20/2020	23.11	23.60	0.49	
	6/18/2020	23.26	23.66	0.40	
	9/15/2020	23.77	23.97	0.20	
	12/2/2020		23.42	0.00	
	3/24/2021	24.05	24.40	0.35	
	6/8/2021	24.12	25.00	0.88	
	8/5/2021	23.38	23.82	0.44	
	9/21/2021		23.63	0.00	
	12/2/2021	23.52	23.78	0.26	
	3/23/2022	24.08	24.22	0.14	
	6/1/2022	24.32	24.48	0.16	
	9/28/2022	24.26	24.51	0.25	
	12/7/2022	24.20	24.40	0.20	

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Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-17	7/26/2012	21.85	22.45	0.60	27.60
	12/20/2012	21.77	23.08	1.31	
	6/19/2013	21.63	23.82	2.19	
	12/12/2013	20.92	22.66	1.74	
	6/26/2014	20.80	22.72	1.92	
	12/18/2014	20.89	21.98	1.09	
	3/18/2015	21.64	22.23	0.59	
	6/8/2015	21.30	21.87	0.57	
	9/15/2015	21.70	23.31	1.61	
	12/16/2015	21.43	23.53	2.10	
	6/6/2016	21.67	24.57	2.90	
	9/25/2016	20.13	20.31	0.18	
	10/28/2016	20.99	21.56	0.57	
	12/11/2016	21.30	22.60	1.30	
	1/21/2017	21.55	22.80	1.25	
	2/19/2017	21.66	22.97	1.31	
	3/14/2017	21.72	22.90	1.18	
	4/20/2017	21.80	23.15	1.35	
	6/6/2017	21.87	22.96	1.09	
	9/19/2017	21.11	21.40	0.29	
	12/6/2017	21.70	22.48	0.78	
	1/24/2018	21.76	23.25	1.49	
	2/21/2018	21.84	23.25	1.41	
	3/15/2018	21.88	23.10	1.22	
	6/6/2018	22.04	23.02	0.98	
	7/17/2018	22.72	23.96	1.24	
	9/24/2018	20.73	22.17	1.44	
	10/10/2018	21.70	22.72	1.02	
	12/11/2018	21.49	22.65	1.16	
	1/23/2019	21.74	23.20	1.46	
	3/13/2019	21.90	23.35	1.45	
	6/26/2019	22.20	23.34	1.14	
	9/21/2019	22.30	23.55	1.25	
	12/3/2019	22.05	22.95	0.90	
	3/12/2020	21.45	23.08	1.63	
	5/20/2020	22.20	22.85	0.65	
	6/18/2020	22.22	23.32	1.10	
	8/13/2020	22.52	23.98	1.46	
	9/15/2020	21.48	22.52	1.04	
	11/12/2020	22.75	24.38	1.63	
	12/2/2020	22.63	24.75	2.12	
	3/24/2021	22.80	25.18	2.38	
	6/8/2021	22.90	25.45	2.55	
	8/5/2021	22.20	24.04	1.84	
	9/21/2021	21.83	22.65	0.82	
	12/2/2021	22.58	23.24	0.66	
	3/23/2022	23.00	24.10	1.10	
	6/1/2022	23.28	24.07	0.79	
	9/28/2022	23.11	24.48	1.37	
	12/7/2022	23.05	24.25	1.20	

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Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-39	7/26/2012	20.10	20.31	0.21	29.01
	12/20/2012	20.04	20.36	0.32	
	6/19/2013	20.11	20.62	0.51	
	12/12/2013	18.45	18.95	0.50	
	6/26/2014	18.37	18.85	0.48	
	12/18/2014	18.50	19.39	0.89	
	3/18/2015	18.99	20.00	1.01	
	6/8/2015	18.64	19.50	0.86	
	9/15/2015	19.28	19.64	0.36	
	12/16/2015	19.10	19.49	0.39	
	6/6/2016	19.39	20.10	0.71	
	9/25/2016	17.58	18.18	0.60	
	10/28/2016	18.42	19.09	0.67	
	12/11/2016	18.75	19.90	1.15	
	1/21/2017	18.95	20.08	1.13	
	2/19/2017	19.08	20.18	1.10	
	3/14/2017	19.10	20.15	1.05	
	4/20/2017	19.30	20.40	1.10	
	6/6/2017	19.31	20.42	1.11	
	9/19/2017	18.50	19.08	0.58	
	12/6/2017	19.15	19.70	0.55	
	1/24/2018	19.25	19.90	0.65	
	2/21/2018	19.38	20.32	0.94	
	3/15/2018	19.38	20.17	0.79	
	6/6/2018	19.46	20.28	0.82	
	7/17/2018	19.45	20.76	1.31	
	9/24/2018	18.83	20.25	1.42	
	10/10/2018	19.06	20.24	1.18	
	12/11/2018	18.90	19.80	0.90	
	1/23/2019	19.82	21.12	1.30	
	3/13/2019	19.40	20.05	0.65	
	6/26/2019	19.68	20.44	0.76	
	9/21/2019	19.75	20.65	0.90	
	12/3/2019	19.42	20.55	1.13	
	3/12/2020	18.87	20.17	1.30	
	5/20/2020	19.52	20.20	0.68	
	6/18/2020	19.75	20.74	0.99	
	8/13/2020	20.05	20.78	0.73	
	9/15/2020	20.20	20.70	0.50	
	11/12/2020	20.35	20.95	0.60	
	12/2/2020	20.44	21.54	1.10	
	3/24/2021	20.42	21.60	1.18	
	6/8/2021	20.40	22.18	1.78	
	8/5/2021	19.68	20.46	0.78	
	9/21/2021	19.33	20.43	1.10	
	12/2/2021	20.05	20.98	0.93	
	3/23/2022	20.08	20.35	0.27	
	6/1/2022	20.58	21.12	0.54	
	9/28/2022	20.73	21.95	1.22	
	12/7/2022	21.50	22.58	1.08	

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Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-41	7/26/2012	18.90	19.46	0.56	29.50
	12/20/2012	18.94	19.49	0.55	
	6/19/2013	19.03	19.73	0.70	
	12/12/2013	18.09	18.63	0.54	
	6/26/2014	18.01	18.65	0.64	
	12/18/2014	17.98	18.72	0.74	
	3/18/2015	18.65	19.31	0.66	
	6/8/2015	18.32	18.70	0.38	
	9/15/2015	18.93	19.30	0.37	
	12/16/2015	18.77	18.94	0.17	
	6/6/2016	19.33	19.34	0.01	
	9/25/2016		17.22	0.00	
	10/28/2016	18.15	18.17	0.02	
	12/11/2016		18.53	0.00	
	1/21/2017		18.73	0.00	
	2/19/2017	18.87	18.92	0.05	
	3/14/2017	18.90	18.95	0.05	
	4/20/2017	19.00	19.15	0.15	
	6/6/2017	19.02	19.40	0.38	
	9/19/2017	18.20	18.55	0.35	
	12/6/2017	18.75	19.55	0.80	
	1/24/2018	18.90	19.60	0.70	
	2/21/2018	19.00	19.62	0.62	
	3/15/2018	18.98	19.74	0.76	
	6/6/2018	19.11	19.90	0.79	
	7/17/2018	19.27	20.22	0.95	
	9/24/2018	18.50	19.60	1.10	
	10/10/2018	18.80	19.15	0.35	
	12/11/2018	19.12	20.35	1.23	
	1/23/2019	18.92	19.60	0.68	
	3/13/2019	19.10	19.50	0.40	
	6/26/2019	19.40	20.03	0.63	
	9/21/2019	20.45	21.19	0.74	
	12/3/2019	19.11	19.90	0.79	
	3/12/2020	18.60	19.18	0.58	
	5/20/2020	19.28	19.77	0.49	
	6/18/2020	19.06	19.45	0.39	
	8/13/2020	19.68	20.80	1.12	
	9/15/2020	19.80	20.45	0.65	
	11/12/2020	19.93	20.60	0.67	
	12/2/2020	20.08	21.10	1.02	
	3/24/2021	20.05	20.95	0.90	
	6/8/2021	20.20	21.15	0.95	
	8/5/2021	19.45	19.85	0.40	
	9/21/2021	18.95	19.25	0.30	
	12/2/2021	19.65	20.22	0.57	
	3/23/2022	20.15	20.65	0.50	
	6/1/2022	20.42	20.73	0.31	
	9/28/2022	20.32	20.97	0.65	
	12/7/2022	20.20	20.28	0.08	

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Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-42	7/26/2012	19.52	20.43	0.91	29.66
	12/20/2012	19.55	20.36	0.81	
	6/19/2013	19.65	20.50	0.85	
	12/12/2013	18.69	19.53	0.84	
	6/26/2014	18.66	19.52	0.86	
	12/18/2014	18.65	19.05	0.40	
	3/18/2015	19.31	19.77	0.46	
	6/8/2015	19.02	19.31	0.29	
	9/15/2015	19.58	19.88	0.30	
	12/16/2015	19.38	19.70	0.32	
	6/6/2016	19.84	19.94	0.10	
	9/25/2016		17.80	0.00	
	10/28/2016		18.75	0.00	
	12/11/2016		dry	0.00	
	1/21/2017		dry	0.00	
	2/19/2017		dry	0.00	
	3/14/2017		dry	0.00	
	4/20/2017	19.70	19.80	0.10	
	6/6/2017	19.73	19.80	0.07	
	9/19/2017	18.78	19.10	0.32	
	12/6/2017	19.43	19.90	0.47	
	1/24/2018	19.62	19.90	0.28	
	2/21/2018	19.70	19.98	0.28	
	3/15/2018	19.95	20.07	0.12	
	6/6/2018	20.08	20.53	0.45	
	7/17/2018	21.05	21.34	0.29	
	9/24/2018	20.18	20.95	0.77	
	10/10/2018	19.35	20.28	0.93	
	12/11/2018	19.12	20.35	1.23	
	1/23/2019	19.45	20.60	1.15	
	3/13/2019	19.70	20.45	0.75	
	6/26/2019	20.00	20.45	0.45	
	9/21/2019	20.14	20.65	0.51	
	12/3/2019	19.80	20.18	0.38	
	3/12/2020	18.28	18.58	0.30	
	5/20/2020	19.90	20.28	0.38	
	6/18/2020	20.38	20.52	0.14	
	8/13/2020	20.32	20.83	0.51	
	9/15/2020	20.48	20.88	0.40	
	11/12/2020	20.63	20.92	0.29	
	12/2/2020	20.75	21.30	0.55	
	3/24/2021	21.17	21.34	0.17	
	6/8/2021	20.06	20.22	0.16	
	8/5/2021	20.08	20.25	0.17	
	9/21/2021		19.60	0.00	
	12/2/2021	20.35	20.42	0.07	
	3/23/2022	20.80	20.90	0.10	
	6/1/2022	t	21.08	0.00	
	9/28/2022	20.97	21.06	0.09	
	12/7/2022	20.90	21.04	0.14	

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Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-45	7/26/2012	16.17	17.70	1.53	26.01
	12/20/2012	16.20	16.72	0.52	
	6/19/2013	16.31	17.00	0.69	
	12/12/2013	15.20	15.48	0.28	
	6/26/2014	14.99	15.29	0.30	
	12/18/2014	15.17	15.20	0.03	
	3/18/2015		18.92	0.00	
	6/8/2015		15.53	0.00	
	9/15/2015	16.14	16.15	0.01	
	12/16/2015	15.94	15.96	0.02	
	6/6/2016	16.36	16.40	0.04	
	9/25/2016		14.18	0.00	
	12/11/2016		15.62	0.00	
	1/21/2017		15.89	0.00	
	2/19/2017		16.04	0.00	
	3/14/2017		14.08	0.00	
	4/20/2017		16.20	0.00	
	6/6/2017		16.25	0.00	
	9/19/2017		15.20	0.00	
	12/6/2017		15.95	0.00	
	1/24/2018		16.07	0.00	
	2/21/2018		16.16	0.00	
	3/15/2018		16.28	0.00	
	6/6/2018		16.78	0.00	
	7/17/2018	t	15.86	0.00	
	9/24/2018		15.77	0.00	
	10/10/2018		15.97	0.00	
	12/11/2018		15.70	0.00	
	3/13/2019		16.40	0.00	
	6/26/2019		16.32	0.00	
	9/21/2019		16.85	0.00	
	12/3/2019		16.45	0.00	
	3/12/2020		15.88	0.00	
	5/20/2020		16.55	0.00	
	6/18/2020		16.68	0.00	
	9/15/2020		17.12	0.00	
	12/2/2020		16.34	0.00	
	3/24/2021		16.03	0.00	
	6/8/2021		16.55	0.00	
	8/5/2021		16.33	0.00	
	9/21/2021		17.22	0.00	
	12/2/2021		17.99	0.00	
	3/23/2022		18.21	0.00	
	6/1/2022		18.54	0.00	
	9/28/2022		17.38	0.00	
	12/7/2022		17.76	0.00	
BH-61	7/26/2012	19.46	19.97	0.51	29.23
	12/20/2012	19.49	20.03	0.54	
	6/19/2013	19.55	20.10	0.55	
	12/12/2013	18.61	19.25	0.64	
	6/26/2014	18.51	19.16	0.65	
	12/18/2014	18.55	19.28	0.73	
	8/13/2015	19.19	19.85	0.66	
	6/8/2015	18.88	19.00	0.12	
	9/15/2015		19.48	0.00	
	12/16/2015		19.30	0.00	
	6/6/2016	19.80	19.81	0.01	
	9/25/2016		17.85	0.00	
	10/28/2016		17.82	0.00	
	12/11/2016	19.02	19.07	0.05	
	1/21/2017	19.22	19.30	0.08	
	2/19/2017	19.35	19.49	0.14	
	3/14/2017	19.40	19.45	0.05	
	4/20/2017	19.50	19.60	0.10	
	6/6/2017	19.52	19.58	0.06	
	9/19/2017	18.66	19.09	0.43	
	12/6/2017	19.30	19.55	0.25	
	1/24/2018	17.48	17.68	0.20	
	2/21/2018	19.82	19.90	0.08	
	3/15/2018	19.55	20.04	0.49	
	6/6/2018	19.69	19.83	0.14	
	7/17/2018	19.83	20.17	0.34	
	9/24/2018	19.08	19.42	0.34	
	10/10/2018	19.30	19.60	0.30	
	12/11/2018	19.11	19.35	0.24	
	3/13/2019	18.65	18.93	0.28	
	6/26/2019		19.90	0.00	
	9/21/2019	19.98	20.25	0.27	
	12/3/2019	19.80	19.85	0.05	
	3/12/2020		19.25	0.00	
	5/20/2020		19.90	0.00	
	6/18/2020	20.05	20.18	0.13	
	8/13/2020		20.84	0.00	
	9/15/2020	20.55	20.80	0.25	
	11/12/2020	21.68	21.70	0.02	
	12/2/2020	19.76	19.92	0.16	
	3/24/2021		20.95	0.00	
	6/8/2021	20.98	21.02	0.04	
	8/5/2021	20.34	20.36	0.02	
	9/21/2021		19.48	0.00	
	12/2/2021		19.79	0.00	
	3/23/2022		21.05	0.00	
	6/1/2022		21.44	0.00	
	9/28/2022		21.12	0.00	
	12/7/2022		20.92	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-62	7/26/2012	18.88	19.67	0.79	27.92
	12/20/2012	18.85	19.82	0.97	
	6/19/2013	18.90	20.28	1.38	
	12/12/2013	17.94	19.28	1.34	
	6/26/2014	17.83	19.13	1.30	
	12/18/2014	17.90	19.30	1.40	
	3/18/2015	18.51	19.91	1.40	
	6/8/2015	18.24	18.93	0.69	
	9/15/2015		18.90	0.00	
	12/16/2015	18.69	18.70	0.01	
	6/6/2016	19.01	19.08	0.07	
	9/25/2016		17.40	0.00	
	10/28/2016		17.58	0.00	
	12/11/2016		18.45	0.00	
	1/21/2017		18.66	0.00	
	2/19/2017		18.82	0.00	
	3/14/2017		18.85	0.00	
	4/20/2017	18.95	19.00	0.05	
	6/6/2017	18.97	19.00	0.03	
	9/19/2017	18.18	18.40	0.22	
	12/6/2017		18.80	0.00	
	1/24/2018	18.95	19.00	0.05	
	2/21/2018	19.04	19.10	0.06	
	3/15/2018	19.06	19.11	0.05	
	6/6/2018	19.18	19.40	0.22	
	7/17/2018	20.34	20.74	0.40	
	9/24/2018	18.60	18.72	0.12	
	10/10/2018	18.80	18.83	0.03	
	12/11/2018	18.60	18.72	0.12	
	3/13/2019	19.15	19.25	0.10	
	6/26/2019		19.45	0.00	
	9/21/2019	19.45	19.80	0.35	
	12/3/2019	19.18	19.32	0.14	
	3/12/2020	18.60	18.70	0.10	
	5/20/2020	19.35	19.50	0.15	
	6/18/2020	19.50	19.68	0.18	
	8/13/2020	20.82	20.88	0.06	
	9/15/2020	19.95	20.05	0.10	
	11/12/2020	21.00	21.05	0.05	
	12/2/2020	20.20	20.30	0.10	
	3/24/2021		20.25	0.00	
	6/8/2021	20.88	21.22	0.34	
	8/5/2021		19.50	0.00	
	9/21/2021		18.99	0.00	
	12/2/2021		19.78	0.00	
	3/23/2022		21.38	0.00	
	6/1/2022		21.77	0.00	
	9/28/2022		20.58	0.00	
	12/7/2022		21.44	0.00	
BH-63	7/26/2012	19.71	20.05	0.34	28.45
	12/20/2012		20.06	0.00	
	6/19/2013	19.80	20.31	0.51	
	12/12/2013	18.83	19.55	0.72	
	6/26/2014	18.72	19.58	0.86	
	12/18/2014	18.80	20.05	1.25	
	3/18/2015	19.37	20.38	1.01	
	6/8/2015	19.08	19.36	0.28	
	9/15/2015	19.68	19.96	0.28	
	12/16/2015		19.55	0.00	
	6/6/2016	19.81	20.27	0.46	
	9/25/2016	17.98	18.38	0.40	
	10/28/2016	17.95	18.40	0.45	
	12/11/2016	19.28	19.58	0.30	
	1/21/2017	19.45	20.00	0.55	
	2/19/2017	19.57	20.18	0.61	
	3/14/2017	19.60	20.06	0.46	
	4/20/2017	19.70	20.40	0.70	
	6/6/2017	19.75	20.15	0.40	
	9/19/2017	18.88	19.14	0.26	
	12/6/2017	19.46	19.50	0.04	
	1/24/2018	19.65	20.43	0.78	
	2/21/2018	19.75	20.40	0.65	
	3/15/2018	19.78	20.33	0.55	
	6/6/2018	19.92	20.29	0.37	
	7/17/2018	20.34	20.74	0.40	
	9/24/2018	19.28	20.28	1.00	
	10/10/2018	18.53	18.87	0.34	
	12/11/2018	19.32	20.10	0.78	
	1/23/2019	19.67	20.40	0.73	
	3/13/2019	19.85	20.33	0.48	
	6/26/2019	20.10	20.60	0.50	
	9/21/2019	20.25	20.50	0.25	
	12/3/2019	19.90	20.90	1.00	
	3/12/2020	19.38	19.65	0.27	
	5/20/2020	20.02	20.33	0.31	
	6/18/2020	20.22	20.62	0.40	
	8/13/2020	20.48	20.93	0.45	
	9/15/2020	20.65	20.75	0.10	
	11/12/2020	20.75	20.85	0.10	
	12/2/2020	20.95	21.05	0.10	
	3/24/2021		21.00	0.00	
	6/8/2021	21.10	21.15	0.05	
	8/5/2021	20.09	20.55	0.46	
	9/21/2021	19.63	19.65	0.02	
	12/2/2021	20.42	20.43	0.01	
	3/23/2022		20.98	0.00	
	6/1/2022	t	21.22	0.00	
	9/28/2022	21.18	21.22	0.04	
	12/7/2022	21.00	21.14	0.14	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-64	7/26/2012	20.00	21.64	1.64	28.77
	12/20/2012	19.93	22.09	2.16	
	6/19/2013	20.07	22.40	2.33	
	12/12/2013	19.01	21.67	2.66	
	6/26/2014	18.91	21.72	2.81	
	12/18/2014	19.18	20.28	1.10	
	3/18/2015	19.85	21.02	1.17	
	6/8/2015	19.52	20.40	0.88	
	9/15/2015	20.20	20.57	0.37	
	12/16/2015	19.98	20.50	0.52	
	6/6/2016	20.18	21.76	1.58	
	9/25/2016	18.42	19.58	1.16	
	12/11/2016	19.72	20.38	0.66	
	1/21/2017	19.94	20.60	0.66	
	2/19/2017	20.08	20.64	0.56	
	3/14/2017	20.15	20.60	0.45	
	4/20/2017	20.20	21.00	0.80	
	6/6/2017	20.34	20.90	0.56	
	9/19/2017		19.48	0.00	
	12/6/2017	20.00	20.78	0.78	
	1/24/2018	20.10	21.10	1.00	
	2/21/2018	20.25	21.05	0.80	
	3/15/2018	20.24	21.03	0.79	
	6/6/2018	20.45	20.90	0.45	
	7/17/2018	20.54	21.92	1.38	
	9/24/2018	19.74	21.05	1.31	
	10/10/2018	20.20	20.80	0.60	
	12/11/2018	19.80	20.70	0.90	
	1/23/2019	20.05	21.25	1.20	
	3/13/2019	20.25	21.50	1.25	
	6/26/2019	20.52	21.80	1.28	
	9/21/2019	20.70	21.60	0.90	
	12/3/2019	20.32	21.56	1.24	
	3/12/2020	19.83	20.75	0.92	
	5/20/2020	20.47	21.47	1.00	
	6/18/2020	20.64	21.74	1.10	
	8/13/2020	20.92	21.90	0.98	
	9/15/2020	21.15	22.08	0.93	
	11/12/2020	21.25	21.90	0.65	
	12/2/2020	21.45	22.65	1.20	
	3/24/2021	21.45	22.20	0.75	
	6/8/2021	21.70	22.40	0.70	
	8/5/2021	20.65	21.70	1.05	
	9/21/2021	20.18	20.43	0.25	
	12/2/2021	20.98	21.44	0.46	
	3/23/2022	21.24	21.74	0.50	
	6/1/2022	21.68	21.98	0.30	
	9/28/2022	21.63	22.45	0.82	
	12/7/2022	21.58	22.15	0.57	
BH-66	7/26/2012	20.84	21.38	0.54	30.37
	12/20/2012	20.85	21.37	0.52	
	6/19/2013	20.92	21.53	0.61	
	12/12/2013	19.68	22.44	2.76	
	6/26/2014	19.56	22.58	3.02	
	12/18/2014	19.70	21.85	2.15	
	3/18/2015	20.34	22.57	2.23	
	6/8/2015	20.01	21.97	1.96	
	9/15/2015	20.82	21.32	0.50	
	12/16/2015	20.53	21.83	1.30	
	6/6/2016	21.01	21.36	0.35	
	9/25/2016	19.05	19.30	0.25	
	10/28/2016	19.91	21.20	1.29	
	12/11/2016	20.24	21.92	1.68	
	1/21/2017	20.60	21.40	0.80	
	2/19/2017	20.75	20.99	0.24	
	3/14/2017	20.84	21.15	0.31	
	4/20/2017	20.95	21.25	0.30	
	6/6/2017	20.84	21.32	0.48	
	9/19/2017	20.10	20.32	0.22	
	12/6/2017	20.55	22.30	1.75	
	1/24/2018	20.82	21.62	0.80	
	2/21/2018	20.95	21.35	0.40	
	3/15/2018	20.98	21.27	0.29	
	6/6/2018	21.13	21.73	0.60	
	7/17/2018	21.34	21.68	0.34	
	9/24/2018	20.55	20.66	0.11	
	10/10/2018	20.79	20.86	0.07	
	12/11/2018	20.40	21.80	1.40	
	1/23/2019	20.80	21.35	0.55	
	3/13/2019	21.00	21.35	0.35	
	6/26/2019	21.33	21.83	0.50	
	9/21/2019	21.48	21.85	0.37	
	12/3/2019	21.10	21.55	0.45	
	3/12/2020	20.60	21.22	0.62	
	5/20/2020	21.21	21.68	0.47	
	6/18/2020	21.42	22.07	0.65	
	8/13/2020	20.62	21.82	1.20	
	9/15/2020	21.70	22.80	1.10	
	11/12/2020	21.92	22.81	0.89	
	12/2/2020	21.98	23.66	1.68	
	3/24/2021	22.00	23.32	1.32	
	6/8/2021	21.98	22.98	1.00	
	8/5/2021	21.38	22.10	0.72	
	9/21/2021		21.02	0.00	
	12/2/2021	21.63	22.07	0.44	
	3/23/2022	21.03	22.20	1.17	
	6/1/2022	22.38	22.93	0.55	
	9/28/2022	21.83	22.19	0.36	
	12/7/2022	22.10	23.40	1.30	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-67	7/26/2012	20.11	20.85	0.74	26.50
	12/20/2012	20.07	21.04	0.97	
	6/19/2013	20.18	21.37	1.19	
	12/12/2013	19.21	20.08	0.87	
	6/26/2014	19.12	20.23	1.11	
	12/18/2014	19.27	19.97	0.70	
	3/18/2015	19.90	20.43	0.53	
	6/8/2015	19.57	19.86	0.29	
	9/15/2015	20.17	20.30	0.13	
	12/16/2015	20.01	20.07	0.06	
	6/6/2016	20.39	20.40	0.01	
	9/25/2016		21.59	0.00	
	10/28/2016		21.57	0.00	
	12/11/2016	19.78	20.08	0.30	
	1/21/2017	19.95	20.23	0.28	
	2/19/2017	20.07	20.27	0.20	
	3/14/2017	20.12	20.30	0.18	
	4/20/2017	20.25	20.40	0.15	
	6/6/2017	20.28	20.30	0.02	
	9/19/2017	19.40	19.52	0.12	
	12/6/2017	20.02	20.43	0.41	
	1/24/2018	20.20	20.40	0.20	
	2/21/2018		20.54	0.00	
	3/15/2018	22.30	22.32	0.02	
	6/6/2018		dry	0.00	
	7/17/2018		dry	0.00	
	9/24/2018		dry	0.00	
	10/10/2018		dry	0.00	
	12/11/2018	19.85	19.90	0.05	
	3/13/2019		dry	0.00	
	6/26/2019	20.60	20.88	0.28	
	9/21/2019	20.62	21.24	0.62	
	12/3/2019	20.40	20.85	0.45	
	3/12/2020	19.83	20.04	0.21	
	5/20/2020	20.58	21.00	0.42	
	6/18/2020	20.67	21.50	0.83	
	8/13/2020	20.83	22.20	1.37	
	9/15/2020	20.98	22.94	1.96	
	11/12/2020	21.15	22.45	1.30	
	12/2/2020	21.20	22.95	1.75	
	3/24/2021	21.34	22.50	1.16	
	6/8/2021	21.38	22.80	1.42	
	8/5/2021	20.80	20.92	0.12	
	9/21/2021	20.22	20.24	0.02	
	12/2/2021	20.95	21.20	0.25	
	3/23/2022	21.38	22.04	0.66	
	6/1/2022	21.64	22.07	0.43	
	9/28/2022	21.60	22.40	0.80	
	12/7/2022	21.48	22.20	0.72	
BH-80	7/26/2012	18.53	19.27	0.74	27.09
	12/20/2012	18.55	19.33	0.78	
	6/19/2013	18.60	19.63	1.03	
	12/12/2013	17.68	18.65	0.97	
	6/26/2014	17.59	18.60	1.01	
	12/18/2014	17.45	18.62	1.17	
	8/13/2015	18.29	19.02	0.73	
	6/8/2015	17.95	18.45	0.50	
	9/15/2015	18.53	19.00	0.47	
	12/16/2015	18.38	18.66	0.28	
	6/6/2016	18.81	18.82	0.01	
	9/25/2016		16.97	0.00	
	10/28/2016	17.95	17.96	0.01	
	12/11/2016		18.18	0.00	
	1/21/2017		18.38	0.00	
	2/19/2017		18.58	0.00	
	3/14/2017	18.54	18.62	0.08	
	4/20/2017	18.65	18.80	0.15	
	6/6/2017	19.02	19.40	0.38	
	9/19/2017	17.70	17.88	0.18	
	12/6/2017	18.40	18.70	0.30	
	1/24/2018	18.45	18.88	0.43	
	2/21/2018	18.65	18.95	0.30	
	3/15/2018	18.55	18.96	0.41	
	6/6/2018	18.70	19.04	0.34	
	7/17/2018	18.85	19.33	0.48	
	9/24/2018	18.30	18.55	0.25	
	10/10/2018	18.30	18.70	0.40	
	12/11/2018	18.10	18.55	0.45	
	3/13/2019	18.70	19.00	0.30	
	6/26/2019	18.90	19.00	0.10	
	9/21/2019	19.00	19.10	0.10	
	12/3/2019		18.88	0.00	
	3/12/2020		18.25	0.00	
	5/20/2020		18.88	0.00	
	6/18/2020		19.05	0.00	
	9/15/2020		19.50	0.00	
	12/2/2020		18.97	0.00	
	3/24/2021		19.80	0.00	
	6/8/2021		20.00	0.00	
	8/5/2021		20.01	0.00	
	9/21/2021		18.62	0.00	
	12/2/2021		19.02	0.00	
	3/23/2022		19.80	0.00	
	6/1/2022		20.12	0.00	
	9/28/2022		18.86	0.00	
	12/7/2022		19.02	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-88	7/26/2012	24.56	24.93	0.37	31.49
	12/20/2012	24.56	24.90	0.34	
	6/19/2013	24.68	25.18	0.50	
	12/12/2013	23.77	24.29	0.52	
	6/26/2014	23.57	24.02	0.45	
	12/18/2014	23.58	23.98	0.40	
	3/18/2015	24.29	24.62	0.33	
	6/9/2015	24.04	24.29	0.25	
	9/15/2015	24.50	24.60	0.10	
	12/16/2015		24.38	0.00	
	6/6/2016		24.94	0.00	
	9/25/2016		22.75	0.00	
	10/28/2016		23.74	0.00	
	12/11/2016		dry	0.00	
	1/21/2017		dry	0.00	
	2/19/2017		24.45	0.00	
	3/14/2017		25.15	0.00	
	4/20/2017		dry	0.00	
	6/6/2017		24.68	0.00	
	9/19/2017		23.88	0.00	
	12/6/2017		dry	0.00	
	1/24/2018		dry	0.00	
	2/21/2018		dry	0.00	
	3/15/2018		dry	0.00	
	6/6/2018		dry	0.00	
	7/17/2018		dry	0.00	
	9/24/2018		dry	0.00	
	10/10/2018		dry	0.00	
	12/11/2018		dry	0.00	
	3/13/2019		dry	0.00	
	6/26/2019		dry	0.00	
	9/21/2019		dry	0.00	
	12/3/2019		dry	0.00	
	3/12/2020		dry	0.00	
	5/20/2020		dry	0.00	
	6/18/2020		dry	0.00	
	9/15/2020		dry	0.00	
	12/2/2020		dry	0.00	
	3/24/2021		dry	0.00	
	6/8/2021		dry	0.00	
	8/5/2021		dry	0.00	
	9/21/2021		dry	0.00	
	12/2/2021		dry	0.00	
	3/23/2022		dry	0.00	
	6/1/2022		dry	0.00	
	9/28/2022		dry	0.00	
	12/7/2022		dry	0.00	
BH-91	7/26/2012	24.01	25.01	1.00	30.28
	12/20/2012	23.92	25.50	1.58	
	6/19/2013	23.01	26.01	3.00	
	12/12/2013	23.11	25.19	2.08	
	6/26/2014	22.94	24.81	1.87	
	12/18/2014	22.97	24.45	1.48	
	3/18/2015	23.68	25.08	1.40	
	6/9/2015	23.45	24.44	0.99	
	9/15/2015	24.00	24.40	0.40	
	12/16/2015	23.87	24.26	0.39	
	6/6/2016	24.22	24.69	0.47	
	9/25/2016		22.47	0.00	
	10/28/2016	23.28	23.40	0.12	
	12/11/2016	23.68	23.92	0.24	
	1/21/2017	21.90	22.04	0.14	
	2/19/2017	23.99	24.20	0.21	
	3/14/2017	24.04	24.18	0.14	
	4/20/2017	24.15	24.35	0.20	
	6/6/2017	24.25	24.35	0.10	
	9/19/2017	23.30	23.40	0.10	
	12/6/2017	23.98	24.40	0.42	
	1/24/2018	24.10	24.35	0.25	
	2/21/2018	20.20	20.32	0.12	
	3/15/2018		22.95	0.00	
	6/6/2018		24.38	0.00	
	7/17/2018	24.52	24.70	0.18	
	9/24/2018	23.50	23.87	0.37	
	10/10/2018	23.98	24.25	0.27	
	12/11/2018	23.85	23.98	0.13	
	3/13/2019	24.30	24.38	0.08	
	6/26/2019	24.55	24.60	0.05	
	9/21/2019	22.64	22.74	0.10	
	12/3/2019		24.40	0.00	
	3/12/2020		23.91	0.00	
	5/20/2020		24.45	0.00	
	6/18/2020		24.68	0.00	
	9/15/2020		25.03	0.00	
	12/2/2020		24.35	0.00	
	3/24/2021		25.32	0.00	
	6/8/2021		23.48	0.00	
	8/5/2021		dry	0.00	
	9/21/2021		24.22	0.00	
	12/2/2021		dry	0.00	
	3/23/2022		dry	0.00	
	6/1/2022		dry	0.00	
	9/28/2022		dry	0.00	
	12/7/2022		dry	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-103	7/26/2012	20.48	20.72	0.24	25.60
	12/20/2012	20.50	20.98	0.48	
	6/19/2013	20.38	22.35	1.97	
	12/12/2013	19.03	20.08	1.05	
	6/26/2014	18.97	20.94	1.97	
	12/18/2014	19.18	20.04	0.86	
	3/18/2015	19.82	20.44	0.62	
	6/8/2015	19.43	20.39	0.96	
	9/15/2015	20.08	20.12	0.04	
	12/16/2015	19.85	20.33	0.48	
	6/6/2016	20.29	20.44	0.15	
	9/25/2016		18.32	0.00	
	10/28/2016	19.23	19.55	0.32	
	12/11/2016		NM	0.00	
	1/21/2017	19.80	20.08	0.28	
	2/19/2017	19.95	20.18	0.23	
	3/14/2017		20.04	0.00	
	4/20/2017	20.15	20.35	0.20	
	6/6/2017	20.14	20.21	0.07	
	9/19/2017	19.25	19.35	0.10	
	12/6/2017	19.85	20.58	0.73	
	1/24/2018	20.02	20.78	0.76	
	2/21/2018	20.10	20.61	0.51	
	3/15/2018	20.35	20.50	0.15	
	6/6/2018	20.35	20.85	0.50	
	7/17/2018	21.30	22.38	1.08	
	9/24/2018	19.70	20.68	0.98	
	10/10/2018	19.92	20.22	0.30	
	12/11/2018	19.73	20.30	0.57	
	1/23/2019	20.03	20.73	0.70	
	3/13/2019	20.25	20.75	0.50	
	6/26/2019	20.40	21.32	0.92	
	9/21/2019	20.46	22.04	1.58	
	12/3/2019	20.30	20.75	0.45	
	3/12/2020	19.28	19.78	0.50	
	5/20/2020	20.40	20.62	0.22	
	6/18/2020	20.50	21.32	0.82	
	8/13/2020	20.61	21.60	0.99	
	9/15/2020	20.72	22.68	1.96	
	11/12/2020	20.87	22.51	1.64	
	12/2/2020	20.94	22.20	1.26	
	3/24/2021	21.25	21.80	0.55	
	6/8/2021	21.38	21.62	0.24	
	8/5/2021	20.48	21.08	0.60	
	9/21/2021	20.18	20.22	0.04	
	12/2/2021	20.82	21.02	0.20	
	3/23/2022	21.19	21.85	0.66	
	6/1/2022	21.38	22.10	0.72	
	9/28/2022	21.19	21.87	0.68	
	12/7/2022	21.20	21.63	0.43	
BH-104	7/26/2012	20.23	21.64	1.41	24.74
	12/20/2012	20.12	22.45	2.33	
	6/19/2013	20.21	22.61	2.40	
	12/12/2013	19.46	20.08	0.62	
	6/26/2014	19.38	20.99	1.61	
	12/18/2014	19.45	19.89	0.44	
	3/18/2015	20.21	20.38	0.17	
	6/8/2015	19.86	20.07	0.21	
	9/15/2015	20.37	20.89	0.52	
	12/16/2015	20.25	20.50	0.25	
	6/6/2016	20.23	22.29	2.06	
	9/25/2016	17.70	17.81	0.11	
	10/28/2016	19.65	19.71	0.06	
	12/11/2016	19.98	20.03	0.05	
	1/21/2017	20.20	20.28	0.08	
	2/19/2017	20.32	20.42	0.10	
	3/14/2017	20.40	20.55	0.15	
	4/20/2017	20.40	21.40	1.00	
	6/6/2017	20.56	20.97	0.41	
	9/19/2017	19.68	19.73	0.05	
	12/6/2017	20.38	20.45	0.07	
	1/24/2018	20.48	20.74	0.26	
	2/21/2018	20.60	20.78	0.18	
	3/15/2018	20.48	21.04	0.56	
	6/6/2018	20.58	21.08	0.50	
	7/17/2018	20.78	22.24	1.46	
	9/24/2018	20.05	20.45	0.40	
	10/10/2018	20.30	20.70	0.40	
	12/11/2018	20.12	20.50	0.38	
	3/13/2019	21.40	23.15	1.75	
	6/26/2019	20.78	21.12	0.34	
	9/21/2019	21.05	21.18	0.13	
	12/3/2019	20.65	21.06	0.41	
	3/12/2020	20.22	20.65	0.43	
	5/20/2020	20.78	21.24	0.46	
	6/18/2020	20.98	21.45	0.47	
	8/13/2020	21.20	21.84	0.64	
	9/15/2020	21.35	21.68	0.33	
	11/12/2020	21.53	21.68	0.15	
	12/2/2020	21.70	22.02	0.32	
	3/24/2021	21.72	22.05	0.33	
	6/8/2021	21.80	22.00	0.20	
	8/5/2021	20.95	21.43	0.48	
	9/21/2021		20.58	0.00	
	12/2/2021	21.25	21.30	0.05	
	3/23/2022	21.69	21.75	0.06	
	6/1/2022	21.1	21.94	0.00	
	9/28/2022	21.86	21.87	0.01	
	12/7/2022	21.75	22.11	0.36	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-107	7/26/2012	21.21	21.50	0.29	26.77
	12/20/2012	21.23	21.81	0.58	
	6/19/2013	20.28	21.35	1.07	
	12/12/2013	20.45	20.82	0.37	
	6/26/2014	20.28	21.23	0.95	
	12/18/2014	20.21	20.31	0.10	
	3/18/2015	21.43	22.05	0.62	
	6/8/2015	20.67	20.95	0.28	
	9/15/2015	21.10	22.25	1.15	
	12/16/2015	20.89	22.18	1.29	
	6/6/2016	21.28	22.34	1.06	
	9/25/2016	19.40	20.30	0.90	
	10/28/2016	20.40	20.44	0.04	
	12/11/2016	20.84	20.95	0.11	
	1/21/2017	21.02	21.27	0.25	
	2/19/2017	21.14	21.37	0.23	
	3/14/2017	21.15	21.62	0.47	
	4/20/2017	21.22	21.98	0.76	
	6/6/2017	21.30	21.70	0.40	
	9/19/2017		20.45	0.00	
	12/6/2017		21.10	0.00	
	1/24/2018	21.25	21.78	0.53	
	2/21/2018	21.30	21.77	0.47	
	3/15/2018	21.34	21.68	0.34	
	6/6/2018	21.51	21.55	0.04	
	7/17/2018	21.70	21.92	0.22	
	9/24/2018	20.93	20.99	0.06	
	10/10/2018	21.15	21.17	0.02	
	12/11/2018	20.98	20.99	0.01	
	3/13/2019	21.40	21.95	0.55	
	6/26/2019		21.70	0.00	
	9/21/2019	21.80	22.00	0.20	
	12/3/2019	21.50	21.85	0.35	
	3/12/2020		21.38	0.00	
	5/20/2020	22.20	22.28	0.08	
	6/18/2020	22.38	22.60	0.22	
	9/15/2020	22.58	23.47	0.89	
	11/12/2020	22.22	22.65	0.43	
	12/2/2020	22.08	23.28	1.20	
	3/24/2021	22.40	23.18	0.78	
	6/8/2021	22.40	23.58	1.18	
	8/5/2021	21.60	22.40	0.80	
	9/21/2021		21.32	0.00	
	12/2/2021	21.97	22.05	0.08	
	3/23/2022	22.42	22.62	0.20	
	6/1/2022	22.89	23.10	0.21	
	9/28/2022	22.49	23.08	0.59	
	12/7/2022	23.10	23.52	0.42	
BH-111	7/26/2012	21.36	22.90	1.54	27.14
	12/20/2012	21.38	23.19	1.81	
	6/19/2013	21.48	23.52	2.04	
	12/12/2013	20.73	21.63	0.90	
	6/26/2014	20.65	21.42	0.77	
	12/18/2014	20.61	20.96	0.35	
	3/18/2015	21.21	22.30	1.09	
	6/8/2015	20.94	21.71	0.77	
	9/15/2015	21.36	23.00	1.64	
	12/16/2015	21.26	22.30	1.04	
	6/6/2016	21.48	23.53	2.05	
	9/25/2016	19.78	20.02	0.24	
	10/28/2016	20.67	21.24	0.57	
	12/11/2016	21.10	21.80	0.70	
	1/21/2017	21.25	22.37	1.12	
	2/19/2017	21.35	22.60	1.25	
	3/14/2017	21.38	22.62	1.24	
	4/20/2017	21.47	22.93	1.46	
	6/6/2017	21.48	23.00	1.52	
	9/19/2017	20.78	21.05	0.27	
	12/6/2017	21.38	22.28	0.90	
	1/24/2018	21.48	22.88	1.40	
	2/21/2018	21.50	22.92	1.42	
	3/15/2018	21.53	22.95	1.42	
	6/6/2018	21.64	22.58	0.94	
	7/17/2018	21.80	23.48	1.68	
	9/24/2018	21.18	22.02	0.84	
	10/10/2018	21.30	22.23	0.93	
	12/11/2018	21.11	22.20	1.09	
	1/23/2019	21.48	21.74	0.26	
	3/13/2019	21.60	22.90	1.30	
	6/26/2019	21.90	23.08	1.18	
	9/21/2019	22.04	23.00	0.96	
	12/3/2019	21.72	23.07	1.35	
	3/12/2020	21.30	21.82	0.52	
	5/20/2020	21.80	22.80	1.00	
	6/18/2020	22.08	22.80	0.72	
	8/13/2020	22.32	23.21	0.89	
	9/15/2020	22.38	23.47	1.09	
	11/12/2020	22.58	23.37	0.79	
	12/2/2020	22.02	23.62	1.60	
	3/24/2021	22.80	23.37	0.57	
	6/8/2021	22.84	23.90	1.06	
	8/5/2021	22.03	22.44	0.41	
	9/21/2021		21.62	0.00	
	12/2/2021	22.30	22.48	0.18	
	3/23/2022	22.75	22.95	0.20	
	6/1/2022	23.00	23.15	0.15	
	9/28/2022	22.91	23.17	0.26	
	12/7/2022	22.90	23.24	0.34	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
BH-114	7/26/2012	20.85	21.29	0.44	27.44
	12/20/2012	20.66	22.55	1.89	
	6/19/2013	20.73	23.05	2.32	
	12/12/2013	20.10	20.50	0.40	
	6/26/2014	20.00	20.40	0.40	
	12/18/2014	19.91	19.98	0.07	
	3/18/2015	21.00	21.01	0.01	
	6/8/2015	20.27	20.65	0.00	
	9/15/2015	20.78	21.42	0.64	
	12/16/2015	20.63	21.10	0.47	
	6/6/2016	20.84	22.39	1.55	
	9/25/2016	18.93	19.18	0.25	
	10/28/2016	19.98	20.23	0.25	
	12/11/2016	20.48	20.60	0.12	
	1/21/2017	20.65	20.85	0.20	
	2/19/2017	20.80	21.08	0.28	
	3/14/2017	21.84	22.08	0.24	
	4/20/2017	20.92	21.38	0.46	
	6/6/2017	21.02	21.38	0.36	
	9/19/2017	17.03	17.24	0.21	
	12/6/2017		20.78	0.00	
	1/24/2018	20.90	21.40	0.50	
	2/21/2018	20.95	21.55	0.60	
	3/15/2018	21.49	21.68	0.19	
	6/6/2018	21.28	21.48	0.20	
	7/17/2018	21.20	22.28	1.08	
	9/24/2018	20.54	21.03	0.49	
	10/10/2018	20.77	21.03	0.26	
	12/11/2018	20.60	20.74	0.14	
	3/13/2019	21.05	21.75	0.70	
	6/26/2019	21.30	21.98	0.68	
	9/21/2019	21.41	21.92	0.51	
	12/3/2019	21.15	21.30	0.15	
	3/12/2020	20.80	21.09	0.29	
	5/20/2020	20.98	21.25	0.27	
	6/18/2020	21.38	21.72	0.34	
	8/13/2020	21.63	21.84	0.21	
	9/15/2020	21.75	22.14	0.39	
	11/12/2020	21.90	22.09	0.19	
	12/2/2020	21.90	22.02	0.12	
	3/24/2021	22.10	22.17	0.07	
	6/8/2021	22.18	22.44	0.26	
	8/5/2021		21.38	0.00	
	9/21/2021		20.78	0.00	
	12/2/2021		21.65	0.00	
	3/23/2022		22.05	0.00	
	6/1/2022	t	22.38	0.00	
	9/28/2022	22.18	22.22	0.04	
	12/7/2022		22.20	0.00	
MRW-2	6/19/2013	19.42	19.62	0.20	35.20
	12/12/2013	17.64	18.50	0.86	
	6/26/2014	17.63	17.76	0.13	
	12/18/2014	17.60	17.80	0.20	
	3/18/2015	18.25	18.60	0.35	
	6/8/2015	17.94	18.42	0.48	
	9/15/2015	18.40	18.99	0.59	
	12/16/2015	18.25	18.87	0.62	
	6/6/2016	18.65	19.44	0.79	
	9/25/2016	16.70	16.95	0.25	
	10/28/2016	17.61	17.80	0.19	
	12/11/2016	18.10	18.19	0.09	
	1/21/2017	18.30	18.38	0.08	
	2/19/2017	18.40	18.50	0.10	
	3/14/2017	18.48	18.52	0.04	
	4/20/2017	18.55	18.68	0.13	
	6/6/2017	18.57	18.67	0.10	
	9/19/2017		17.70	0.00	
	12/6/2017		18.40	0.00	
	1/24/2018	18.58	18.70	0.12	
	2/21/2018		18.75	0.00	
	3/15/2018		18.60	0.00	
	6/6/2018		20.46	0.00	
	7/17/2018	19.01	19.02	0.01	
	9/24/2018	18.20	18.28	0.08	
	10/10/2018	18.41	18.42	0.01	
	12/11/2018	18.20	18.28	0.08	
	3/13/2019		18.70	0.00	
	6/26/2019	18.95	19.00	0.05	
	9/21/2019		19.08	0.00	
	12/3/2019		18.75	0.00	
	3/12/2020		18.72	0.00	
	5/20/2020		18.80	0.00	
	6/18/2020	18.04	18.84	0.80	
	9/15/2020	19.20	19.28	0.08	
	11/12/2020		19.65	0.00	
	12/2/2020		18.75	0.00	
	3/24/2021		19.04	0.00	
	6/8/2021		19.80	0.00	
	8/5/2021		19.69	0.00	
	9/21/2021		18.28	0.00	
	12/2/2021		19.22	0.00	
	3/23/2022		19.65	0.00	
	6/1/2022		19.92	0.00	
	9/28/2022		19.84	0.00	
	12/7/2022		19.97	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
MRW-3	6/19/2013	19.10	20.02	0.92	34.98
	12/12/2013	17.44	18.26	0.82	
	6/26/2014	17.92	17.99	0.07	
	12/18/2014	17.39	17.45	0.06	
	3/18/2015	18.03	18.3	0.27	
	6/8/2015	17.64	18.06	0.42	
	9/15/2015	18.15	19.06	0.91	
	12/16/2015	18.01	18.8	0.79	
	6/6/2016	18.33	19.43	1.10	
	9/25/2016	16.42	17.00	0.58	
	10/28/2016	17.54	17.74	0.20	
	12/11/2016	17.90	18.02	0.12	
	1/21/2017	18.08	18.15	0.07	
	2/19/2017	18.22	18.32	0.10	
	3/14/2017	18.24	18.38	0.14	
	4/20/2017	18.35	18.5	0.15	
	6/6/2017	18.39	18.5	0.11	
	9/19/2017		17.48	0.00	
	12/6/2017		18.18	0.00	
	1/24/2018	18.32	18.50	0.18	
	2/21/2018		18.72	0.00	
	3/15/2018	18.38	18.61	0.23	
	6/6/2018		20.42	0.00	
	7/17/2018	17.63	17.64	0.01	
	9/24/2018	17.87	18.18	0.31	
	10/10/2018	18.18	18.23	0.05	
	12/11/2018	17.60	17.70	0.10	
	3/13/2019	18.45	18.90	0.45	
	6/26/2019	18.70	18.95	0.25	
	9/21/2019	18.85	18.98	0.13	
	12/3/2019	18.50	18.62	0.12	
	3/12/2020		18.02	0.00	
	5/20/2020		18.63	0.00	
	6/18/2020	18.80	18.92	0.12	
	9/15/2020		19.20	0.00	
	12/2/2020		18.54	0.00	
	3/24/2021		19.64	0.00	
	6/8/2021		19.70	0.00	
	8/5/2021		19.45	0.00	
	9/21/2021		18.33	0.00	
	12/2/2021		19.54	0.00	
	3/23/2022		19.92	0.00	
	6/1/2022		20.19	0.00	
	9/28/2022	19.63	19.65	0.02	
	12/7/2022		20.02	0.00	
MRW-4	6/19/2013	18.68	20.63	1.95	34.72
	12/12/2013	16.94	18.35	1.41	
	6/26/2014	16.69	18.22	1.53	
	12/18/2014	16.92	17.72	0.80	
	3/18/2015	17.52	18.57	1.05	
	6/8/2015	17.17	18.11	0.94	
	9/15/2015	17.85	18.2	0.35	
	12/16/2015	17.70	17.98	0.28	
	6/6/2016	17.91	19.05	1.14	
	9/25/2016	16.04	16.64	0.60	
	10/28/2016	17.09	17.32	0.23	
	12/11/2016	17.45	17.65	0.20	
	1/21/2017	17.7	17.8	0.10	
	2/19/2017	17.72	17.86	0.14	
	3/14/2017	17.2	17.55	0.35	
	4/20/2017	17.95	18.1	0.15	
	6/6/2017	17.99	18.03	0.04	
	9/19/2017		17.10	0.00	
	12/6/2017	17.78	17.98	0.20	
	1/24/2018	17.92	18.15	0.23	
	2/21/2018	18.00	18.12	0.12	
	3/15/2018	18.00	18.09	0.09	
	6/6/2018		18.14	0.00	
	7/17/2018	18.07	19.20	1.13	
	9/24/2018	17.58	17.93	0.35	
	10/10/2018	17.80	17.88	0.08	
	12/11/2018	17.60	17.70	0.10	
	3/13/2019	18.10	18.30	0.20	
	6/26/2019	18.35	18.40	0.05	
	9/21/2019	18.40	18.90	0.50	
	12/3/2019	18.15	18.38	0.23	
	3/12/2020	17.60	17.82	0.22	
	5/20/2020	18.15	18.18	0.03	
	6/18/2020	18.41	18.62	0.21	
	9/15/2020	18.78	19.18	0.40	
	11/12/2020	19.05	19.25	0.20	
	12/2/2020	19.05	20.01	0.96	
	3/24/2021	19.00	20.05	1.05	
	6/8/2021	19.12	19.82	0.70	
	8/5/2021	18.40	18.62	0.22	
	9/21/2021	17.97	17.98	0.01	
	12/2/2021	20.15	20.42	0.27	
	3/23/2022		19.18	0.00	
	6/1/2022	19.34	19.48	0.14	
	9/28/2022	19.29	19.33	0.04	
	12/7/2022		19.20	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
MRW-5 3638.48	6/19/2013	17.80	20.80	3.00	35.40
	12/12/2013	16.29	18.98	2.69	
	6/26/2014	16.59	16.73	0.14	
	12/18/2014	16.60	16.68	0.08	
	3/18/2015	17.20	17.50	0.30	
	6/8/2015	16.80	17.40	0.60	
	9/15/2015	17.37	18.15	0.78	
	12/16/2015	17.17	18.13	0.96	
	6/6/2016	17.46	19.08	1.62	
	9/25/2016	13.15	17.50	4.35	
	10/28/2016	16.63	17.16	0.53	
	12/11/2016	17.03	17.35	0.32	
	1/21/2017	17.28	17.50	0.22	
	2/19/2017	17.72	17.86	0.14	
	3/14/2017	17.87	17.92	0.05	
	4/20/2017	17.50	17.75	0.25	
	6/6/2017	17.54	17.71	0.17	
	9/19/2017	16.70	16.80	0.10	
	12/6/2017	17.35	17.55	0.20	
	1/24/2018	17.47	17.88	0.41	
	2/21/2018	17.55	17.88	0.33	
	3/15/2018	17.58	17.88	0.30	
	6/6/2018	17.72	17.84	0.12	
	7/17/2018	17.80	18.80	1.00	
	9/24/2018	17.02	18.02	1.00	
	10/10/2018	17.31	17.70	0.39	
	12/11/2018	17.15	17.40	0.25	
	3/13/2019	17.40	18.35	0.95	
	6/26/2019	17.85	18.60	0.75	
	9/21/2019	18.08	18.60	0.52	
	12/3/2019	17.70	18.20	0.50	
	3/12/2020	17.02	18.62	1.60	
	5/20/2020	17.60	18.04	0.44	
	6/18/2020	17.95	18.47	0.52	
	8/13/2020	18.18	19.23	1.05	
	9/15/2020	18.28	19.10	0.82	
	11/12/2020	18.42	19.12	0.70	
	12/2/2020	18.45	20.44	1.99	
	3/24/2021	18.66	19.29	0.63	
	6/8/2021	19.80	20.03	0.23	
	8/5/2021	17.90	18.92	1.02	
	9/21/2021	17.46	17.48	0.02	
	12/2/2021	19.96	20.02	0.06	
	3/23/2022	18.68	18.92	0.24	
	6/1/2022	18.97	19.05	0.08	
	9/28/2022	18.81	19.27	0.46	
	12/7/2022	18.74	19.15	0.41	
MRW-6	6/19/2013	20.08	20.30	0.22	33.43
	12/12/2013	16.59	16.82	0.23	
	6/26/2014	16.49	16.58	0.09	
	12/18/2014	16.51	16.61	0.10	
	3/18/2015	17.14	17.20	0.06	
	6/8/2015	16.77	16.90	0.13	
	9/15/2015		17.35	0.00	
	12/16/2015		17.20	0.00	
	6/6/2016	17.54	17.55	0.01	
	9/25/2016		15.64	0.00	
	10/28/2016		16.62	0.00	
	12/11/2016		16.95	0.00	
	1/21/2017		17.18	0.00	
	2/19/2017	17.3	17.32	0.02	
	3/14/2017		17.33	0.00	
	4/20/2017	18.44	18.45	0.01	
	6/6/2017	18.17	18.18	0.01	
	9/19/2017		16.60	0.00	
	12/6/2017	17.18	17.20	0.02	
	1/24/2018	16.90	17.02	0.12	
	2/21/2018		18.67	0.00	
	3/15/2018		17.52	0.00	
	6/6/2018		17.68	0.00	
	7/17/2018	17.80	18.09	0.29	
	9/24/2018		17.05	0.00	
	10/10/2018	17.75	17.76	0.01	
	12/11/2018	17.09	17.10	0.01	
	3/13/2019		17.60	0.00	
	6/26/2019		17.85	0.00	
	9/21/2019		17.97	0.00	
	12/3/2019		17.65	0.00	
	3/12/2020		17.08	0.00	
	5/20/2020		17.49	0.00	
	6/18/2020		17.91	0.00	
	9/15/2020		18.30	0.00	
	12/2/2020		17.76	0.00	
	3/24/2021		18.68	0.00	
	6/8/2021		18.78	0.00	
	8/5/2021		18.45	0.00	
	9/21/2021		17.88	0.00	
	12/2/2021		19.10	0.00	
	3/23/2022		19.54	0.00	
	6/1/2022		19.88	0.00	
	9/28/2022		19.56	0.00	
	12/7/2022		19.88	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
MRW-7	6/19/2013	19.40	19.41	0.01	33.20
	12/12/2013	16.10	16.12	0.02	
	6/26/2014	15.92	16.35	0.43	
	12/18/2014	16.04	16.14	0.10	
	3/18/2015	16.60	17.09	0.49	
	6/8/2015	16.23	16.62	0.39	
	9/15/2015	16.78	17.08	0.30	
	12/16/2015	16.60	17.21	0.61	
	6/6/2016	16.95	17.45	0.50	
	9/25/2016	15.29	15.61	0.32	
	10/28/2016	16.13	16.26	0.13	
	12/11/2016	16.45	16.62	0.17	
	1/21/2017	16.64	16.7	0.06	
	2/19/2017	16.80	16.87	0.07	
	3/14/2017	16.81	16.84	0.03	
	4/20/2017	16.95	17.00	0.05	
	6/6/2017	16.98	17.00	0.02	
	9/19/2017	16.10	16.14	0.04	
	12/6/2017	16.75	16.82	0.07	
	1/24/2018	16.90	17.02	0.12	
	2/21/2018		15.25	0.00	
	3/15/2018		17.25	0.00	
	6/6/2018		17.15	0.00	
	7/17/2018		17.2	0.00	
	9/24/2018		16.52	0.00	
	10/10/2018	16.69	16.7	0.01	
	12/11/2018	16.70	16.9	0.20	
	3/13/2019		17.05	0.00	
	6/26/2019		16.34	0.00	
	9/21/2019		16.65	0.00	
	12/3/2019		17.08	0.00	
	3/12/2020		16.57	0.00	
	5/20/2020		17.11	0.00	
	6/18/2020		17.43	0.00	
	9/15/2020	17.88	18.15	0.27	
	12/2/2020		17.18	0.00	
	3/24/2021		18.18	0.00	
	6/8/2021		18.28	0.00	
	8/5/2021		18.11	0.00	
	9/21/2021		17.67	0.00	
	12/2/2021		18.34	0.00	
	3/23/2022		18.63	0.00	
	6/1/2022		18.90	0.00	
	9/28/2022		18.43	0.00	
	12/7/2022		18.78	0.00	
MRW-14	6/19/2013	25.25	25.35	0.10	38.50
	12/12/2013	21.90	22.12	0.22	
	6/26/2014	21.69	21.89	0.20	
	12/18/2014	21.73	21.81	0.08	
	3/18/2015	22.39	22.56	0.17	
	6/8/2015	22.10	22.29	0.19	
	9/15/2015	22.55	22.8	0.25	
	12/16/2015		22.44	0.00	
	6/6/2016	22.81	22.93	0.12	
	9/25/2016		19.88	0.00	
	10/28/2016		21.29	0.00	
	12/11/2016		22.24	0.00	
	1/21/2017		23.45	0.00	
	2/19/2017		22.62	0.00	
	3/14/2017		22.6	0.00	
	4/20/2017		22.7	0.00	
	6/6/2017		22.7	0.00	
	9/19/2017		22.08	0.00	
	12/6/2017		22.62	0.00	
	1/24/2018		22.80	0.00	
	2/21/2018		23.03	0.00	
	3/15/2018		22.79	0.00	
	6/6/2018	23.90	23.93	0.03	
	7/17/2018	23.06	23.07	0.01	
	9/24/2018	TRACE	22.32	0.00	
	10/10/2018		22.70	0.00	
	12/11/2018		22.38	0.00	
	3/13/2019		22.66	0.00	
	6/26/2019		22.34	0.00	
	9/21/2019		23.30	0.00	
	12/3/2019		22.90	0.00	
	3/12/2020		22.19	0.00	
	5/20/2020		22.58	0.00	
	6/18/2020		23.16	0.00	
	9/15/2020		23.58	0.00	
	12/2/2020		22.85	0.00	
	3/24/2021		23.95	0.00	
	6/8/2021		24.08	0.00	
	8/5/2021		23.18	0.00	
	9/21/2021		22.88	0.00	
	12/2/2021		23.87	0.00	
	3/23/2022		24.12	0.00	
	6/1/2022		24.39	0.00	
	9/28/2022		24.21	0.00	
	12/7/2022		24.56	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
MW-1	7/26/2012		22.02	0.00	38.77
	12/20/2012		22.27	0.00	
	6/23/2013		22.32	0.00	
	12/12/2013		21.30	0.00	
	6/26/2014		21.10	0.00	
	12/18/2014		21.50	0.00	
	3/18/2015		22.08	0.00	
	6/9/2015		21.67	0.00	
	12/16/2015		22.01	0.00	
	6/6/2016		22.46	0.00	
	12/13/2016		21.82	0.00	
	6/7/2017		22.40	0.00	
	12/6/2017		22.20	0.00	
	3/15/2018		20.35	0.00	
	6/6/2018		22.48	0.00	
	9/24/2018		21.92	0.00	
	12/11/2018		21.95	0.00	
	3/13/2019		22.53	0.00	
	6/26/2019		22.68	0.00	
	9/21/2019		22.84	0.00	
	12/3/2019		22.55	0.00	
	3/14/2020		21.80	0.00	
	6/18/2020		22.87	0.00	
	9/15/2020		23.24	0.00	
	12/2/2020		23.41	0.00	
	3/24/2021		23.58	0.00	
	6/8/2021		23.82	0.00	
	9/21/2021		22.12	0.00	
	12/2/2021		23.04	0.00	
	3/23/2022		23.64	0.00	
	6/1/2022		23.80	0.00	
	9/28/2022		23.83	0.00	
	12/7/2022		23.80	0.00	
MW-3	7/26/2012		21.72	0.00	37.52
	12/20/2012		21.75	0.00	
	6/23/2013		21.10	0.00	
	12/12/2013		21.10	0.00	
	6/26/2014		20.97	0.00	
	12/18/2014		20.55	0.00	
	3/18/2015		21.42	0.00	
	6/9/2015		21.14	0.00	
	12/16/2015		21.48	0.00	
	6/6/2016		21.86	0.00	
	12/13/2016		21.27	0.00	
	6/7/2017		21.83	0.00	
	12/6/2017		21.58	0.00	
	3/15/2018		21.17	0.00	
	6/6/2018		21.98	0.00	
	9/24/2018		21.43	0.00	
	12/11/2018		21.54	0.00	
	3/13/2019		21.90	0.00	
	6/26/2019		22.11	0.00	
	9/21/2019		22.25	0.00	
	12/3/2019		24.95	0.00	
	3/14/2020		21.33	0.00	
	6/18/2020		22.14	0.00	
	9/15/2020		22.82	0.00	
	12/2/2020		22.85	0.00	
	3/24/2021		22.77	0.00	
	6/8/2021		22.97	0.00	
	9/21/2021		21.65	0.00	
	12/2/2021		22.33	0.00	
	3/23/2022		22.80	0.00	
	6/1/2022		23.00	0.00	
	9/28/2022		22.89	0.00	
	12/7/2022		22.81	0.00	
MW-5	7/26/2012		24.00	0.00	39.36
	12/20/2012		23.99	0.00	
	6/23/2013		21.36	0.00	
	12/12/2013		23.33	0.00	
	6/26/2014		23.13	0.00	
	12/18/2014		23.05	0.00	
	3/18/2015		23.69	0.00	
	6/9/2015		23.44	0.00	
	12/16/2015		23.68	0.00	
	6/6/2016		24.11	0.00	
	12/13/2016		23.50	0.00	
	6/7/2017		24.07	0.00	
	12/6/2017		23.87	0.00	
	3/15/2018		23.95	0.00	
	6/6/2018		24.19	0.00	
	9/24/2018		23.69	0.00	
	12/11/2018		23.67	0.00	
	3/13/2019		24.10	0.00	
	6/26/2019		24.32	0.00	
	9/21/2019		24.49	0.00	
	12/3/2019		24.14	0.00	
	3/14/2020		23.73	0.00	
	6/18/2020		24.40	0.00	
	9/15/2020		24.51	0.00	
	12/2/2020		24.66	0.00	
	3/24/2021		25.08	0.00	
	6/8/2021		25.30	0.00	
	9/21/2021		23.93	0.00	
	12/2/2021		24.63	0.00	
	3/23/2022		25.12	0.00	
	6/1/2022		25.33	0.00	
	9/28/2022		25.34	0.00	
	12/7/2022		25.30	0.00	

Appendix A- Historical Fluid Levels

HF Sinclair- North Monument

Lea County, New Mexico

Well ID	Date	DTP	DTW	Prod Thick	TD
		(ft-bmp)	(ft-bmp)	(feet)	(ft-bmp)
MW-6	7/26/2012		16.42	0.00	32.62
	12/20/2012		17.50	0.00	
	6/23/2013		19.78	0.00	
	12/12/2013		16.80	0.00	
	6/26/2014		16.63	0.00	
	12/18/2014		16.10	0.00	
	3/18/2015		17.11	0.00	
	6/8/2015		16.76	0.00	
	12/16/2015		17.18	0.00	
	6/6/2016		17.58	0.00	
	1/21/2017		16.92	0.00	
	6/7/2017		17.54	0.00	
	12/6/2017		17.21	0.00	
	3/15/2018		17.50	0.00	
	6/6/2018		17.72	0.00	
	9/24/2018		17.12	0.00	
	12/11/2018		17.12	0.00	
	3/13/2019		17.63	0.00	
	6/26/2019		17.81	0.00	
	9/21/2019		18.01	0.00	
	12/3/2019		17.68	0.00	
	3/14/2020		17.16	0.00	
	6/18/2020		17.88	0.00	
	9/15/2020		18.24	0.00	
	12/2/2020		18.39	0.00	
	3/24/2021		18.51	0.00	
	6/8/2021		18.79	0.00	
	9/21/2021		17.38	0.00	
	12/2/2021		18.03	0.00	
	3/23/2022		18.48	0.00	
	6/1/2022		18.74	0.00	
	9/28/2022		18.51	0.00	
	12/7/2022		18.40	0.00	
MW-7	7/26/2012		18.84	0.00	32.27
	12/20/2012		18.93	0.00	
	6/23/2013		19.08	0.00	
	12/12/2013		18.16	0.00	
	6/26/2014		17.93	0.00	
	12/18/2014		17.70	0.00	
	3/18/2015		18.59	0.00	
	6/9/2015		18.25	0.00	
	12/16/2015		18.62	0.00	
	6/6/2016		18.59	0.00	
	12/13/2016		18.35	0.00	
	6/7/2017		18.95	0.00	
	12/6/2017		18.67	0.00	
	3/15/2018		18.92	0.00	
	6/6/2018		19.16	0.00	
	9/24/2018		18.67	0.00	
	12/11/2018		18.55	0.00	
	3/13/2019		19.03	0.00	
	6/26/2019		19.24	0.00	
	9/21/2019		19.39	0.00	
	12/3/2019		19.04	0.00	
	3/14/2020		18.58	0.00	
	6/18/2020		19.24	0.00	
	9/15/2020		19.65	0.00	
	12/2/2020		19.80	0.00	
	3/24/2021		19.89	0.00	
	6/8/2021		20.12	0.00	
	9/21/2021		18.78	0.00	
	12/2/2021		19.42	0.00	
	3/23/2022		19.85	0.00	
	6/1/2022		20.10	0.00	
	9/28/2022		19.92	0.00	
	12/7/2022		19.82	0.00	

ft-bmp = feet-below measuring point

Appendix B

Summary of Historical Groundwater Data

Appendix B - Summary of Historical Groundwater Data
HF Sinclair- North Monument - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH_DRO (mg/L)	Depth to Water (bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-1 MP = 3,670.05	10/21/2002	<2	<2	<2	<6									
	12/27/2002	<2	<2	<2	<6									
	5/21/2003	<2	<2	<2	<6									
	10/15/2003	<2	<2	<2	<6									
	3/15/2004	<2	<2	<2	<6									
	10/8/2004	<2	<2	<2	<6									
	1/12/2005	<2	<2	<2	<6									
	10/24/2005	<2	<2	<2	<6									
	3/7/2006	<2	<2	<2	<6									
	6/27/2006	<2	<2	<2	<6									
	9/7/2006	<0.5	<0.5	<0.5	<1.0									
	12/19/2006	<0.5	<0.5	<0.5	<1.0									
	3/13/2007	<0.5	<0.5	<0.5	<1.0									
	6/21/2007	<0.5	<0.5	<0.5	<1.0									
	9/21/2007	<0.5	<0.5	<0.5	<1.0									
	12/6/2007	<0.5	<0.5	<0.5	<1.0									
	3/4/2008	<0.5	<0.5	<0.5	<1.0									
	6/3/2008	<0.5	<0.5	<0.5	<1.0									
	9/23/2008	<0.5	<0.5	<0.5	<1.0									
	12/22/2008	<0.5	<0.5	<0.5	<1.0									
	3/12/2009	<0.5	<0.5	<0.5	<1.0									
	6/23/2009	<1.0	<1.0	<1.0	<2.0									
	9/8/2009	<1.0	<1.0	<1.0	<2.0									
	12/17/2009	<1.0	<1.0	<1.0	<2.0									
	3/9/2010	<1.0	<1.0	<1.0	<1.5									
	6/16/2010	<1.0	<1.0	<1.0	<2.0									
	8/30/2010	<1.0	<1.0	<1.0	<2.0									
	12/6/2010	<1.0	<1.0	<1.0	<2.0									
	3/18/2011	<1.0	<1.0	<1.0	<2.0									
	6/23/2011	<1.0	<1.0	<1.0	<2.0									
	10/7/2011	<1.0	<1.0	<1.0	<2.0									
	12/8/2011	<1.0	<1.0	<1.0	<2.0									
	12/18/2012	<1.0	<2.0	<1.0	<2.0			22.27	3,647.78	20.1	0.954	0.5	6.77	-278
duplicate	6/23/2013	<1.0	<2.0	<1.0	<2.0			22.32	3,647.73	22.0	1.086	0.25	6.65	303.7
	6/23/2013	<1.0	<2.0	<1.0	<2.0			22.32	3,647.73	22.0	1.086	0.25	6.65	303.7
	12/12/2013	<1.0	<2.0	<1.0	<2.0			21.3	3,648.75	19.87	1.23	0.97	7.37	51
duplicate	6/26/2014	<1.0	<2.0	<1.0	<2.0			21.1	3,648.95	21.8	1.033	3.4	7.03	-62.6
	6/26/2014	<1.0	<2.0	<1.0	<2.0			21.1	3,648.95	21.8	1.033	3.4	7.03	-62.6
	12/11/2014	<1.0	<2.0	<1.0	<1.0	<0.10	0.098	21.5	3,648.55	19.1	1.062	1.15	6.95	96.5
duplicate	6/11/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	21.67	3,648.38	21.9	1.978	1.2	6.74	71.8
	12/15/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	22.01	3,648.04	16.9	1.084	1.54	7.13	212.1
	6/7/2016	<1.0	<2.0	<1.0	<1.0	<0.10	0.157	22.46	3,647.59	27.2	1.778	1.43	6.75	86.6
duplicate	12/13/2016	<1.0	<2.0	<1.0	<2.0	<0.06	0.125	21.82	3,648.23	19.4	1.37	2.43	7.47	74.8
	6/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.104	22.40	3,647.65	19.5	1.168	2.5	7.11	116.9
	6/6/2017	<1.0	<2.0	<1.0	<2.0	NA	NA	22.40	3,647.65	19.5	1.168	2.5	7.11	116.9
duplicate	12/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.202	22.20	3,647.85	17.5	1.098	2.66	6.97	106.3
	3/15/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0763	20.35	3,649.70	18.9	1.067	2.2	7.01	91.2
	3/15/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0761	20.35	3,649.70	18.9	1.067	2.2	7.01	91.2
duplicate	6/5/2018	<1.0	<2.0	<1.0	<2.0	0.075	<0.0751	22.48	3,647.57	23.2	1.003	1.9	7.22	101.6
	9/24/2018	<1.0	<2.0	<1.0	<2.0	<0.06	0.088	21.92	3,648.13	20.4	1.665	2.2	7.23	98.6
	12/11/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0757	21.95	3,648.10	18.1	1.223	2.44	7.07	44.3
duplicate	3/12/2019	<1.0	<2.0	<1.0	<2.0	<0.06	0.104	22.53	3,647.52	19.2	1.116	1.98	6.89	101.2
	6/29/2019	<1.0	<2.0	<1.0	<2.0	<0.06	0.094	22.68	3,647.37	22.9	1.324	2.13	7.29	99.7
	9/23/2019	<1.0	<2.0	<1.0	<2.0	<0.06	0.186	22.84	3,647.21	21.4	1.116	2.26	7.17	52.6
duplicate	12/3/2019	<1.0	<2.0	<1.0	<2.0	<0.06	0.096	22.55	3,647.50	18.6	1.228	2.02	7.2	110.3
	3/14/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	21.80	3,648.25	19.6	1.114	1.98	7.26	88.6
	6/18/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	22.87	3,647.18	22.7	1.306	2.33	7.09	99.6
duplicate	9/15/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	23.24	3,646.81	23.6	1.223	2.01	7.26	101.2
	12/2/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	23.41	3,646.64	19.2	1.016	1.88	7.07	67
	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.160	23.58	3,646.47	20.3	1.298	2.02	7.12	56.4
duplicate	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	23.82	3,646.23	22.8	1.116	2.13	7.23	93.7
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	22.12	3,647.93	23.4	1.223	2.22	7.08	88.6
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	23.04	3,647.01	21.8	1.312	1.98	7.33	102.1
duplicate	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	23.64	3,646.41	22.3	1.123	2.12	7.16	110.2
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	23.80	3,646.25	23.8	1.302	2.33	7.41	98.6
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	0.214	23.83	3,646.22	NM	NM	NM	NM	NM
duplicate	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	23.80	3,646.25	NM	NM	NM	NM	NM

Appendix B - Summary of Historical Groundwater Data
HF Sinclair- North Monument - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH_DRO (mg/L)	Depth to Water (bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-3 MP = 3,666.41	10/21/2002	<2	<2	<2	<6									
	12/27/2002	<2	<2	<2	<6									
	5/21/2003	<2	<2	<2	<6									
	10/15/2003	<2	<2	<2	<6									
	3/15/2004	10	<2	<2	<6									
	10/8/2004	19	<2	<2	<6									
	1/12/2005	43	<2	<2	<6									
	10/24/2005	80	<2	<2	<6									
	3/7/2006	25.7	<2.00	<2.00	7.1									
	6/27/2006	<2.00	<2.00	<2.00	<6.00									
	9/7/2006	8.2	<0.5	<0.5	<1.0									
	12/19/2006	23	<0.5	<0.5	<1.0									
	3/13/2007	35	<0.5	<0.5	<1.0									
	6/21/2007	1.6	<0.5	<0.5	<1.0									
	9/21/2007	<0.5	<0.5	<0.5	<1.0									
	12/6/2007	0.6	<0.5	<0.5	<1.0									
	3/4/2008	<0.5	<0.5	<0.5	<1.0									
	6/3/2008	<0.5	<0.5	<0.5	<1.0									
	9/23/2008	<0.5	<0.5	<0.5	<1.0									
	12/22/2008	<0.5	<0.5	<0.5	<1.0									
	3/12/2009	<0.5	<0.5	<0.5	<1.0									
	6/23/2009	<1.0	<1.0	<1.0	<2.0									
	9/8/2009	<1.0	<1.0	<1.0	<2.0									
	12/17/2009	<1.0	<1.0	<1.0	<2.0									
	3/9/2010	<1.0	<1.0	<1.0	<1.5									
	6/16/2010	<1.0	<1.0	<1.0	<2.0									
	8/30/2010	<1.0	<1.0	<1.0	<2.0									
	12/6/2010	<1.0	<1.0	<1.0	<2.0									
	3/18/2011	<1.0	<1.0	<1.0	<2.0									
	6/23/2011	<1.0	<1.0	<1.0	<2.0									
	10/7/2011	<1.0	<1.0	<1.0	<2.0									
	12/8/2011	<1.0	<1.0	<1.0	<2.0									
	12/18/2012	<1.0	<2.0	<1.0	<2.0			21.75	3,644.66	20.4	1.465	0.84	6.84	-391
	6/23/2013	<1.0	<2.0	<1.0	<2.0			21.10	3,645.31	21.4	1.691	1.4	6.66	184
	12/12/2013	<1.0	<2.0	<1.0	<2.0			21.75	3,644.66	19.87	1.23	0.97	7.37	51
duplicate	6/26/2014	<1.0	<2.0	<1.0	<2.0			16.55	3,649.86	22.4	1.426	1.1	7.74	9.8
	12/11/2014	<1.0	<2.0	<1.0	<1.0	<0.10	<0.09	20.55	3,645.86	19.16	1.478	1.21	6.73	-6.2
	12/11/2014	<1.0	<2.0	<1.0	<1.0	0.069	<0.09	20.55	3,645.86	19.16	1.478	1.21	6.73	-6.2
	6/11/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.09	23.99	3,642.42	25.93	1.534	0.36	6.82	-31.7
	12/15/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.104	21.48	3,644.93	17.75	1.535	1.2	7.05	56.9
	6/7/2016	<1.0	<2.0	<1.0	<1.0	<0.10	<0.09	21.86	3,644.55	22.96	1.583	2.44	7.31	74.8
	12/13/2016	<1.0	<2.0	<1.0	<2.0	<0.06	0.108	21.27	3,645.14	19.85	1.978	2.59	7.29	1.3
	6/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.092	21.83	3,644.58	19.3	1.563	3.79	7.07	92.2
	12/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.164	21.58	3,644.83	19.12	1.416	2.89	6.86	26.6
	3/15/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0758	21.17	3,645.24	20.6	1.302	3.06	6.93	-2
duplicate	6/5/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0752	21.98	3,644.43	23.6	1.466	1.96	7.11	89.6
	6/5/2018	<1.0	<2.0	<1.0	<2.0	0.070	<0.0765	21.98	3,644.43	23.6	1.466	1.96	7.11	89.6
	9/24/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0754	21.43	3,644.98	22.8	1.399	2.02	6.98	67.7
	9/24/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0766	21.43	3,644.98	22.8	1.399	2.02	6.98	67.7
duplicate	12/11/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0758	21.54	3,644.87	19.98	1.422	2.65	7.08	32.1
	3/12/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0754	21.90	3,644.51	21.7	1.298	2.76	7.13	77.2
	6/26/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0796	22.11	3,644.30	23.2	1.326	2.02	7.22	90.1
	9/22/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0741	22.25	3,644.16	22.6	1.402	1.92	6.92	44.6
	12/23/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0744	24.95	3,641.46	19.2	1.265	2.22	7.14	52.3
	3/14/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.151	21.33	3,645.08	21.4	1.299	2.54	7.07	88.6
	6/18/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	22.14	3,644.27	23.6	1.304	2.33	7.26	33.1
	9/15/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	22.82	3,643.59	22.9	1.505	1.88	7.01	89.6
	12/22/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	22.85	3,643.56	19.4	1.367	2.02	7.13	78.1
	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	22.77	3,643.64	20.6	1.229	2.44	7.2	88.6
	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	22.97	3,643.44	21.9	1.457	2.13	7.22	68.7
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.554	21.65	3,644.76	22.6	1.443	1.98	7.02	77.6
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	22.33	3,644.08	20.2	1.212	2.03	7.32	88.7
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	22.80	3,643.61	21.4	1.414	2.12	7.13	90.6
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	23.00	3,643.41	23.1	1.567	1.99	7.28	78.5
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	0.180	22.89	3,643.52	NM	NM	NM	NM	NM
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	22.81	3,643.60	NM	NM	NM	NM	NM

Appendix B - Summary of Historical Groundwater Data
HF Sinclair- North Monument - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH_DRO (mg/L)	Depth to Water (bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-5 MP = 3,670.43	12/30/2002	<2	<2	<2	<6									
	5/21/2003	<2	<2	<2	<6									
	10/15/2003	45	<2	<2	<6									
	11/6/2003	70	<2	<2	<6									
	3/16/2004	66	<2	<2	<6									
	10/8/2004	55	<2	<2	<6									
	1/12/2005	<2	<2	<2	<6									
	10/24/2005	<2	<2	<2	<6									
	3/7/2006	<2.00	<2.00	<2.00	<6.00									
	6/27/2006	<2.00	<2.00	<2.00	<6.00									
	9/7/2006	<0.5	<0.5	<0.5	<1.0									
	12/19/2006	<0.5	<0.5	<0.5	<1.0									
	3/13/2007	<0.5	<0.5	<0.5	<1.0									
	6/21/2007	<0.5	<0.5	<0.5	<1.0									
	9/21/2007	<0.5	<0.5	<0.5	<1.0									
	12/6/2007	<0.5	<0.5	<0.5	<1.0									
	3/4/2008	<0.5	<0.5	<0.5	<1.0									
	6/3/2008	<0.5	<0.5	<0.5	<1.0									
	9/23/2008	<0.5	<0.5	<0.5	<1.0									
	12/22/2008	<0.5	<0.5	<0.5	<1.0									
	3/12/2009	<0.5	<0.5	<0.5	<1.0									
	6/23/2009	<1.0	<1.0	<1.0	<2.0									
	9/8/2009	<1.0	<1.0	<1.0	<2.0									
	12/17/2009	<1.0	<1.0	<1.0	<2.0									
	3/9/2010	<1.0	<1.0	<1.0	<1.5									
	6/16/2010	<1.0	<1.0	<1.0	<2.0									
	8/30/2010	<1.0	<1.0	<1.0	<2.0									
	12/6/2010	<1.0	<1.0	<1.0	<2.0									
	3/18/2011	<1.0	<1.0	<1.0	<2.0									
	6/23/2011	<1.0	<1.0	<1.0	<2.0									
	10/7/2011	<1.0	<1.0	<1.0	<2.0									
	12/8/2011	<1.0	<1.0	<1.0	<2.0									
	12/18/2012	<1.0	<2.0	<1.0	<2.0			23.99	3,646.44	19.9	1.417	0.72	6.77	-322
duplicate	12/18/2012	<1.0	<2.0	<1.0	<2.0			23.99	3,646.44	19.9	1.417	0.72	6.77	-322
	6/23/2013	<1.0	<2.0	<1.0	<2.0			21.36	3,649.07	23.2	1.69	0.96	6.7	226.2
	12/12/2013	<1.0	<2.0	<1.0	<2.0			23.33	3,647.10	20.77	1.85	1.28	7.21	44.0
duplicate	6/26/2014	<1.0	<2.0	<1.0	<2.0			16.23	3,654.20	23.6	1.482	2.8	7.65	44.5
	12/11/2014	<1.0	<2.0	<1.0	<1.0	0.0622	<0.10	23.05	3,647.38	18.66	1.65	2.07	6.74	73.4
	6/11/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.09	19.78	3,650.65	26.84	1.711	0.42	6.78	-13.3
duplicate	6/11/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.09	19.78	3,650.65	26.84	1.711	0.42	6.78	-13.3
	12/15/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.104	23.68	3,646.75	17.66	1.645	1.34	7.05	195.1
	6/7/2016	<1.0	<2.0	<1.0	<1.0	<0.10	<0.106	24.11	3,646.32	24.97	1.894	1.12	7.54	37.1
duplicate	12/13/2016	<1.0	<2.0	<1.0	<2.0	<0.06	0.105	23.50	3,646.93	19.92	1.976	4.36	7.41	46.4
	12/13/2016	<1.0	<2.0	<1.0	<2.0	<0.06	<0.08	23.50	3,646.93	19.92	1.976	4.36	7.41	46.4
	6/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.114	24.07	3,646.36	19.39	1.549	1.8	7.09	127.9
duplicate	12/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0757	23.87	3,646.56	18.6	1.234	0.96	6.83	98.6
	12/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.112	23.87	3,646.56	18.6	1.234	0.96	6.83	98.6
	3/15/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0754	23.95	3,646.48	21.5	1.643	1.1	7.26	23.6
duplicate	6/5/2018	<1.0	<2.0	<1.0	<2.0	0.070	<0.0753	24.19	3,646.24	23.8	1.708	1.8	7.14	56.1
	9/24/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0752	23.69	3,646.74	20.7	1.687	1.01	7.06	44.4
	12/11/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0755	23.67	3,646.76	19.9	1.778	1.11	6.96	23.6
duplicate	3/12/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0751	24.10	3,646.33	19.9	1.676	0.88	7.12	88.6
	3/12/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0753	24.10	3,646.33	19.9	1.676	0.88	7.12	88.6
	8/28/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0791	24.32	3,646.11	22.6	1.381	1.34	7.22	74.5
duplicate	6/26/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0783	24.32	3,646.11	22.6	1.381	1.34	7.22	74.5
	9/22/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0747	24.49	3,645.94	21.8	1.778	0.9	6.87	33.6
	9/22/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0736	24.49	3,645.94	21.8	1.778	0.9	6.87	33.6
duplicate	12/3/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0790	24.14	3,646.29	20.1	1.543	1.13	7.01	101.6
	12/3/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0794	24.14	3,646.29	20.1	1.543	1.13	7.01	101.6
	3/14/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.150	23.73	3,646.70	21.6	1.226	1.26	6.92	98.6
duplicate	3/14/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	23.73	3,646.70	21.6	1.226	1.26	6.92	98.6
	6/18/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.150	24.40	3,646.03	22.3	1.607	1.32	7.18	55.6
duplicate	6/18/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	24.40	3,646.03	22.3	1.607	1.32	7.18	55.6
	9/15/2020	<1.0	<2.0	<1.0	<2.0	<0.06	0.262	24.51	3,645.92	23.8	1.404	1.21	7.29	89.7
duplicate	9/15/2020	<1.0	<2.0	<1.0	<2.0	<0.06	0.308	24.51	3,645.92	23.8	1.404	1.21	7.29	89.7
	12/2/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	24.66	3,645.77	20.2	1.386	1.33	7.06	102
duplicate	12/2/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.151	24.66	3,645.77	20.2	1.386	1.33	7.06	102
	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.150	25.08	3,645.35	21.6	1.229	1.1	6.98	99.7
duplicate	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	25.08	3,645.35	21.6	1.229	1.1	6.98	99.7
	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	25.30	3,645.13	22.4	1.587	1.45	7.11	104.7
duplicate	6/8/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	25.30	3,645.13	22.4	1.587	1.45	7.11	104.7
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.554	23.93	3,646.50	23.2	1.488	1.2	7.08	89.7
duplicate	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.555	23.93	3,646.50	23.2	1.488	1.2	7.08	89.7
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.153	24.63	3,645.80	20.7	1.345	1.11	7.12	97.6
duplicate	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.150	24.63	3,645.80	20.7	1.345	1.11	7.12	97.6
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.152	25.12	3,645.31	21.5	1.677	1.67	6.87	92.3
duplicate	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159	25.12	3,645.31	21.5	1.677	1.67	6.87	92.3
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159	25.33	3,645.10	22.8	1.499	1.44	7.06	103.2
duplicate	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	25.33	3,645.10	22.8	1.499	1.44	7.06	103.2
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.163	25.34	3,645.09	NM	NM	NM	NM	NM
duplicate	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	25.34	3,645.09	NM	NM	NM	NM	NM
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	25.30	3,645.13	NM	NM	NM	NM	NM
duplicate	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	25.30	3,645.13	NM	NM	NM	NM	NM
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	25.30	3,645.13	NM	NM	NM	NM	NM

Appendix B - Summary of Historical Groundwater Data
HF Sinclair- North Monument - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH_DRO (mg/L)	Depth to Water (bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-6 MP = 3,660.50	6/3/2008	2.7	1.3	49	53									
	9/23/2008	2.0	0.9	47	9.6									
	12/22/2008	2.0	0.6	28	3.1									
	3/12/2009	1.4	<0.5	18	2.2									
	6/23/2009	1.4	<1.0	19	<2.0									
	9/8/2009	2.2	<1.0	18	<2.0									
	12/17/2009	1.1	<1.0	12	<2.0									
	3/9/2010	<1.0	<1.0	17	<1.5									
	6/16/2010	1.0	<1.0	16	<2.0									
	8/30/2010	20	<1.0	31	<2.0									
	12/6/2010	7.3	<1.0	20	<2.0									
	3/18/2011	3.2	<1.0	16	2.5									
	6/23/2011	2.7	<1.0	25	<2.0									
	10/7/2011	1.7	<1.0	20	<2.0									
	12/8/2011	2.2	<1.0	27	<2.0									
	12/18/2012	2.56	<2.0	84.4	<2.0			17.50	3,643.00	21.3	1.053	0.55	6.67	-384
	6/23/2013	<1.0	<2.0	<1.0	<2.0			19.78	3,640.72	23.0	1.169	0.13	6.62	-87.4
	12/12/2013	4.74	<2.0	<1.0	<2.0			16.80	3,643.70	21.42	1.33	2.02	6.83	-124
	6/26/2014	<1.0	<2.0	<1.0	<2.0			16.02	3,644.48	21.3	0.98	1.3	6.78	-65.7
	12/11/2014	11.5	<2.0	0.35	<1.0	1.15	0.499	16.10	3,644.40	20.2	1.142	0.68	6.64	-79.8
	6/11/2015	2.28	<2.0	<1.0	<1.0	0.368	0.16	18.16	3,642.34	23.2	1.183	0.33	6.71	-84.34
	12/15/2015	1.16	<2.0	<1.0	<1.0	1.66	0.655	17.18	3,643.32	18.5	1.18	0.85	6.95	-10
	6/7/2016	0.610	<2.0	<1.0	<1.0	0.779	0.714	17.58	3,642.92	25.4	1.471	1.05	6.47	-82.4
	1/24/2017	8.25	<2.0	<1.0	<2.0	1.31	1.41	16.92	3,643.58	18.2	1.273	1.22	6.92	-54
	6/6/2017	2.61	<2.0	<1.0	<2.0	1.71	0.951	17.54	3,642.96	19.3	1.198	1.78	7.03	-5.5
	12/6/2017	3.69	<2.0	<1.0	<2.0	0.856	5.27	17.21	3,643.29	18.9	1.262	0.98	6.88	-1.2
	3/15/2018	1.84	<2.0	<1.0	<2.0	1.03	1.18	17.50	3,643.00	20.6	1.231	1.1	6.93	16.7
	6/5/2018	0.980	<2.0	<1.0	<2.0	1.07	1.30	17.72	3,642.78	24.3	1.065	0.89	7.14	-23.1
	9/24/2018	0.372	<2.0	<1.0	<2.0	1.04	3.09	17.12	3,643.38	22.5	1.187	1.2	7.07	-22
	12/11/2018	<1.0	<2.0	<1.0	<2.0	0.883	1.66	17.12	3,643.38	19.8	1.265	0.98	6.88	12.6
	3/12/2019	<1.0	<2.0	<1.0	<2.0	0.562	0.939	17.63	3,642.87	20.2	1.333	1.11	7.12	-12
	6/26/2019	<1.0	<2.0	<1.0	<2.0	0.977	0.567	17.81	3,642.69	23.9	1.132	1.23	7.18	-88
	9/22/2019	<1.0	<2.0	<1.0	<2.0	0.862	1.27	18.01	3,642.49	22.6	1.112	0.88	7.07	22.6
	12/3/2019	<1.0	<2.0	<1.0	<2.0	0.837	1.29	17.68	3,642.82	21.9	1.078	1.1	6.97	-18
	3/14/2020	<1.0	<2.0	<1.0	<2.0	0.775	1.08	17.16	3,643.34	20.6	1.206	0.92	7.22	-22
	6/18/2020	<1.0	<2.0	<1.0	<2.0	0.444	0.708	17.88	3,642.62	23.2	1.322	1.01	7.06	13.1
	9/15/2020	<1.0	<2.0	<1.0	<2.0	1.02	1.01	18.24	3,642.26	22.9	1.226	1.25	7.13	33.6
	12/2/2020	<1.0	<2.0	<1.0	<2.0	0.901	0.785	18.39	3,642.11	19.8	1.116	0.97	7.09	22.9
	3/24/2021	<1.0	<2.0	<1.0	<2.0	0.950	0.714	18.51	3,641.99	20.6	1.219	1.14	7.21	33.2
	6/8/2021	<1.0	<2.0	<1.0	<2.0	0.983	0.523	18.79	3,641.71	22.3	1.299	1.01	7.19	44.6
	9/21/2021	<1.0	<2.0	<1.0	<2.0	0.539	0.822	17.38	3,643.12	22.9	1.321	1.33	7.22	12.2
	12/2/2021	<1.0	<2.0	<1.0	<2.0	0.550	0.407	18.03	3,642.47	21.1	1.168	1.22	7.04	33.2
	3/23/2022	<1.0	<2.0	<1.0	<2.0	0.527	0.476	18.48	3,642.02	22.1	1.276	1.02	7.11	37.8
	6/1/2022	<1.0	<2.0	<1.0	<2.0	0.560	0.855	18.74	3,641.76	23.8	1.418	1.33	7.23	54.7
	9/28/2022	<1.0	<2.0	<1.0	<2.0	0.456	2.01	18.51	3,641.99	NM	NM	NM	NM	NM
	12/7/2022	<1.0	<2.0	<1.0	<2.0	0.441	0.567	18.40	3,642.10	NM	NM	NM	NM	NM

Appendix B - Summary of Historical Groundwater Data
HF Sinclair- North Monument - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-7 3,662.47	6/3/2008	0.9	0.6	1.5	1.7									
	9/23/2008	0.5	<0.5	0.8	1.9									
	12/22/2008	<0.5	<0.5	0.8	1									
	3/12/2009	<0.5	<0.5	0.9	1.6									
	6/23/2009	<1.0	<1.0	<1.0	<2.0									
	9/8/2009	<1.0	<1.0	1.4	<2.0									
	12/17/2009	<1.0	<1.0	1	<2.0									
	3/9/2010	<1.0	<1.0	<1.0	<1.5									
	6/16/2010	<1.0	<1.0	<1.0	<2.0									
	8/30/2010	1.7	<1.0	1.8	<2.0									
	12/6/2010	<1.0	<1.0	<1.0	<2.0									
	3/18/2011	<1.0	<1.0	<1.0	<2.0									
	6/23/2011	<1.0	<1.0	<1.0	<2.0									
	10/7/2011	<1.0	<1.0	<1.0	<2.0									
	12/8/2011	<1.0	<1.0	1.7	<2.0									
	12/18/2012	0.24	<2.0	<1.0	<2.0			18.93	3,643.54	19.9	0.856	0.47	6.77	-400
	6/23/2013	<1.0	<2.0	<1.0	<2.0			19.08	3,643.39	22.4	0.996	0.4	6.79	185.7
	12/12/2013	0.32	<2.0	0.37	<2.0			18.16	3,644.31	20.76	1.11	2.38	6.6	-73
	12/12/2013	0.31	<2.0	0.39	<2.0			18.16	3,644.31	20.76	1.11	2.38	6.6	-73
	6/26/2014	<1.0	<2.0	<1.0	<2.0			17.73	3,644.74	21.7	1.28	0.909	6.93	-18.4
	12/11/2014	0.400	<2.0	<1.0	<1.0	0.115	<0.10	17.70	3,644.77	20.42	0.974	1.22	6.76	-22.0
	12/11/2014	0.380	<2.0	<1.0	<1.0	0.073	<0.09	17.70	3,644.77	20.42	0.974	1.22	6.76	-22.0
	6/11/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	18.25	3,644.22	22.32	0.963	0.35	6.8	-1.1
	12/15/2015	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	18.62	3,643.85	18.22	0.966	0.42	7.11	52.3
	6/7/2016	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	18.59	3,643.88	26.16	1.408	0.9	7.76	-55.2
	12/13/2016	<1.0	<2.0	<1.0	<2.0	<0.06	0.127	18.35	3,644.12	20.1	1.26	2.1	7.42	19.8
	6/6/2017	<1.0	<2.0	<1.0	<2.0	<0.06	0.159	18.95	3,643.52	19.5	0.997	3.3	7.16	80.7
	12/6/2017	<1.0	<2.0	<1.0	<2.0	0.089	0.456	18.67	3,643.80	18.6	0.921	1.1	6.92	-11.6
	3/15/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0756	18.92	3,643.55	20.1	1.162	0.98	7.07	22.1
	6/5/2018	<1.0	<2.0	<1.0	<2.0	0.070	<0.0761	19.16	3,643.31	25.6	0.975	1.6	6.89	18.1
	9/24/2018	<1.0	<2.0	<1.0	<2.0	0.070	0.101	18.67	3,643.80	24.2	1.077	2.02	6.93	24.6
	12/11/2018	<1.0	<2.0	<1.0	<2.0	0.077	<0.0753	18.55	3,643.92	20.1	0.987	1.34	7.23	19.6
	12/11/2018	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0757	18.55	3,643.92	20.1	0.987	1.34	7.23	19.6
	3/12/2019	<1.0	<2.0	<1.0	<2.0	0.124	<0.0757	19.03	3,643.44	21.6	1.116	0.88	7.16	33.1
	6/26/2019	<1.0	<2.0	<1.0	<2.0	0.095	<0.0794	19.24	3,643.23	22.3	1.012	1.12	7.08	76.5
	9/22/2019	<1.0	<2.0	<1.0	<2.0	<0.06	0.154	19.39	3,643.08	24.2	0.976	1.86	6.94	33.4
	12/3/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.155	19.04	3,643.43	21.6	1.117	1.57	7.03	23.2
	3/14/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	18.58	3,643.99	20.9	0.992	0.98	7.2	64.3
	6/18/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	19.24	3,643.23	23.8	1.206	1.22	7.03	55.6
	9/15/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	19.65	3,642.82	24.6	0.982	1.01	7.14	44.3
	12/2/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	19.80	3,642.67	21.1	1.114	0.97	7.22	87.6
	3/24/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.152	19.89	3,642.58	20.3	1.198	1.1	7.08	56.4
	6/8/2021	<1.0	<2.0	<1.0	<2.0	0.101	<0.148	20.12	3,642.35	22.6	1.234	1.23	7.19	75.4
	9/21/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.555	18.78	3,643.69	23.6	1.387	1.18	7.23	44.4
	12/2/2021	<1.0	<2.0	<1.0	<2.0	<0.06	<0.155	19.42	3,643.05	21.8	1.637	1.02	7.22	56.7
	3/23/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.201	19.85	3,642.62	22.4	1.118	1.37	7.12	75.6
	6/1/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.156	20.10	3,642.37	23.1	1.543	1.27	7.07	66.8
	9/28/2022	<1.0	<2.0	<1.0	<2.0	<0.06	0.473	19.92	3,642.55	NM	NM	NM	NM	NM
	12/7/2022	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	19.82	3,642.65	NM	NM	NM	NM	NM
		5	1000	700	620	NE	NE							

BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard

µg/L = micrograms/Liter

mg/L = milligrams/Liter

ft-bmp = feet - below measuring point

ft-msl = feet - mean sea level

deg-C = degrees Celsius

mS/cm = milliSiemens/ centimeter

mV = millivolts

DO = Dissolved Oxygen

ORP = oxygen reduction potential

< = analyte not detected above reporting limit

BTEX = Benzene, Toluene, Ethylbenzene & Total Xylenes

BTEX analyzed by Method 8260C

TPH-GRO = total petroleum hydrocarbons- gasoline range organics

TPH-DRO = total petroleum hydrocarbons- diesel gasoline range organics

TPH-GRO analyzed by Method 8015V

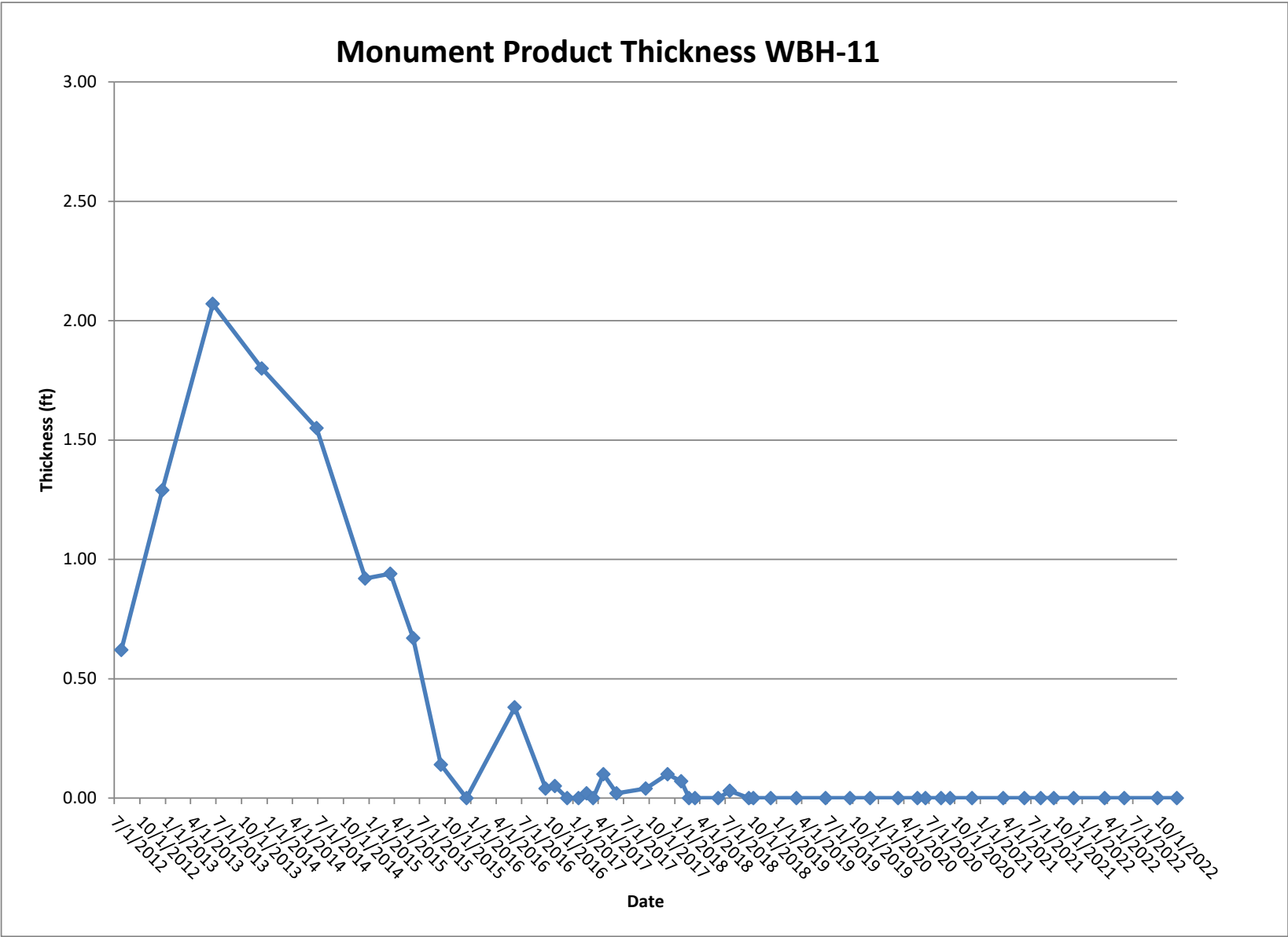
TPH-DRO analyzed by Method 8015D

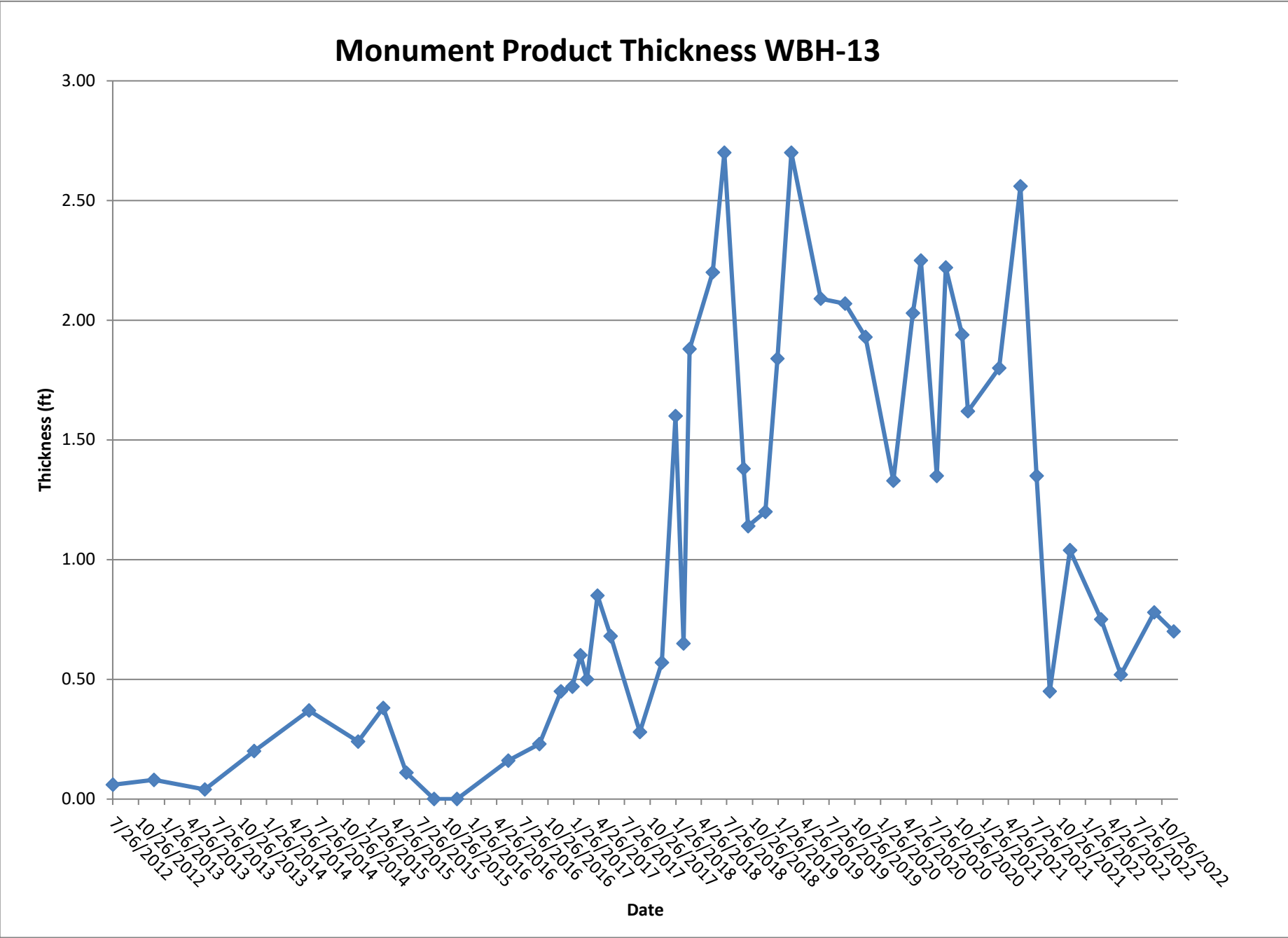
NA = not analyzed

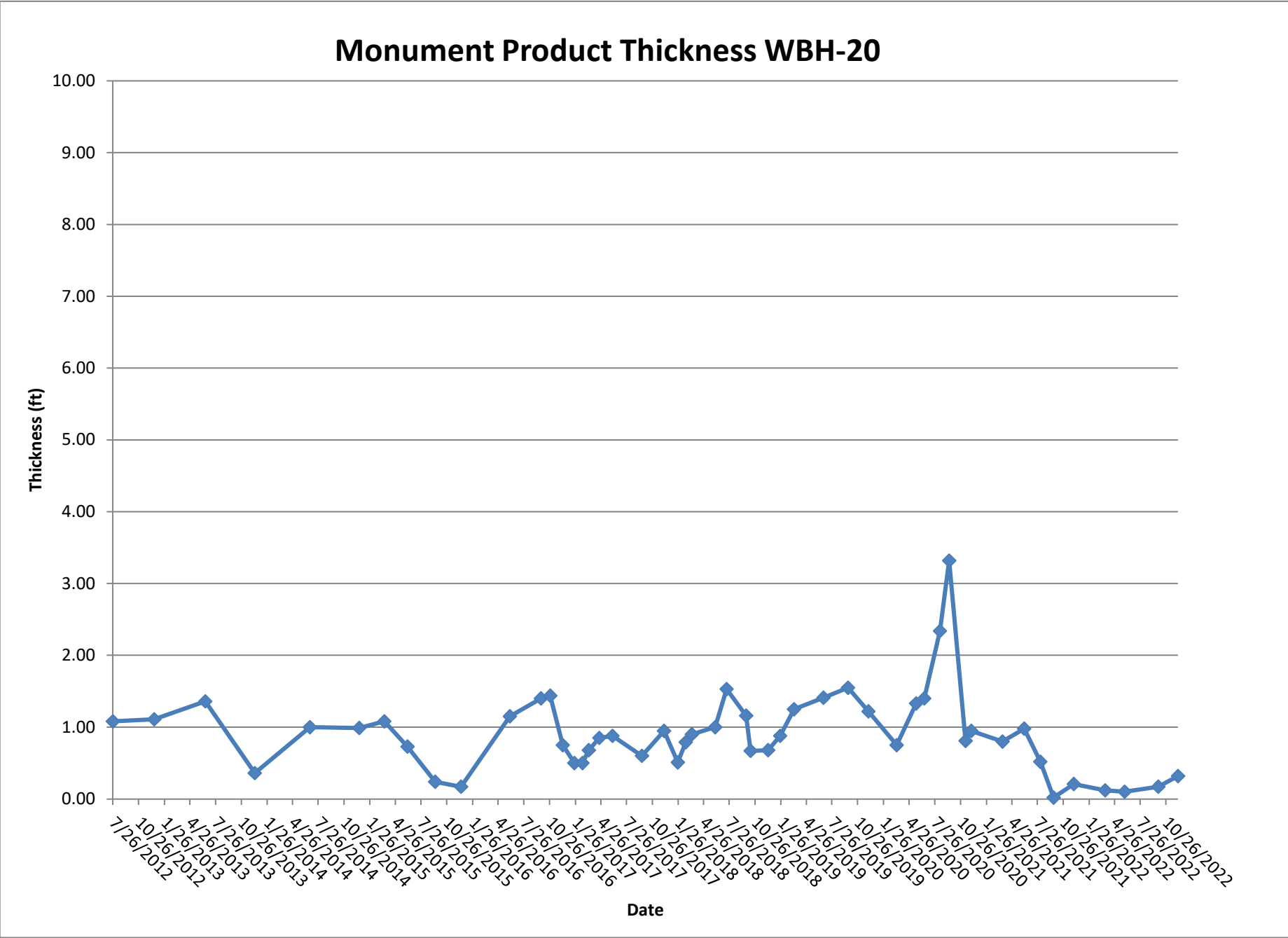
NE= Not Established

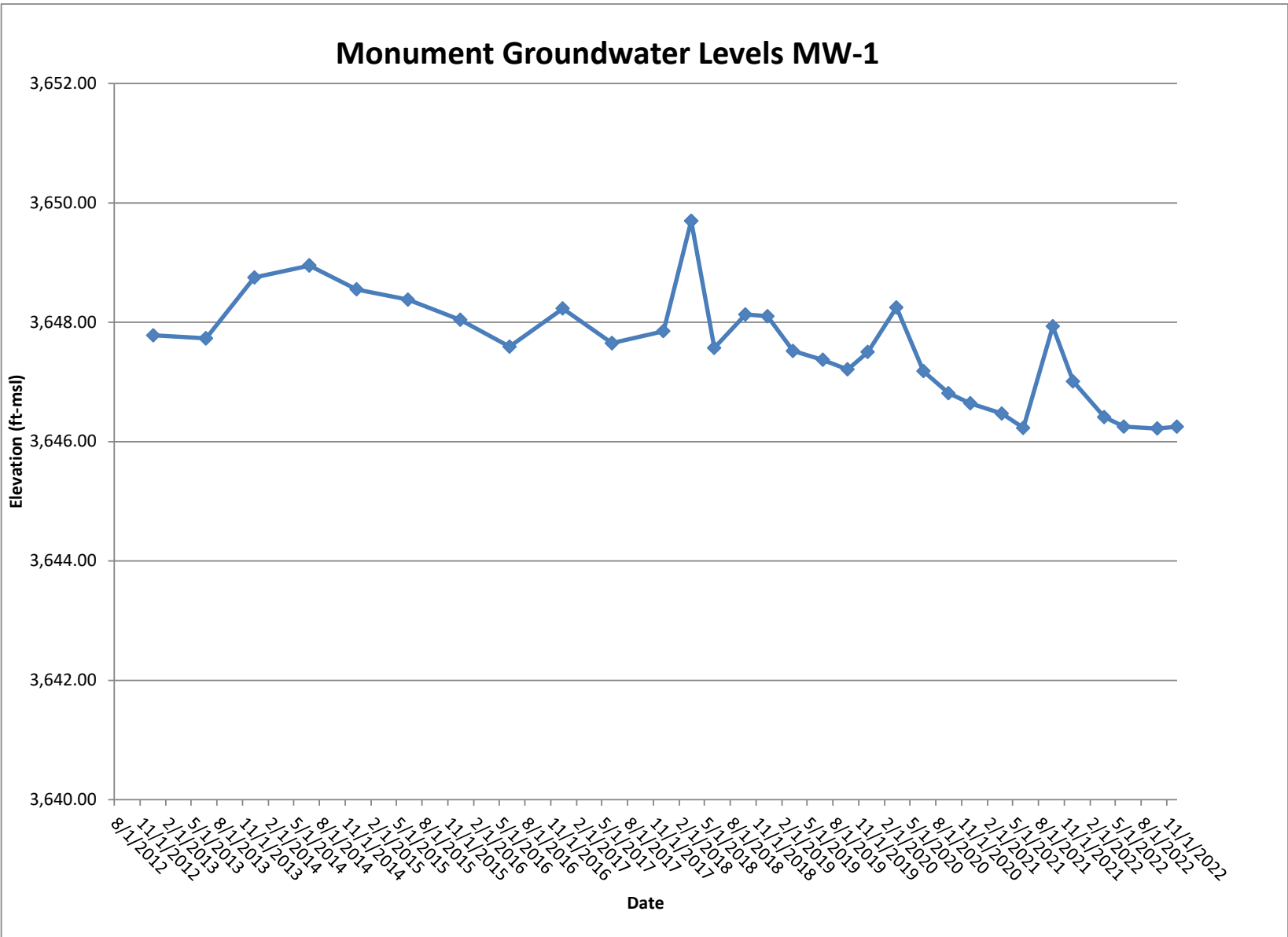
Appendix C

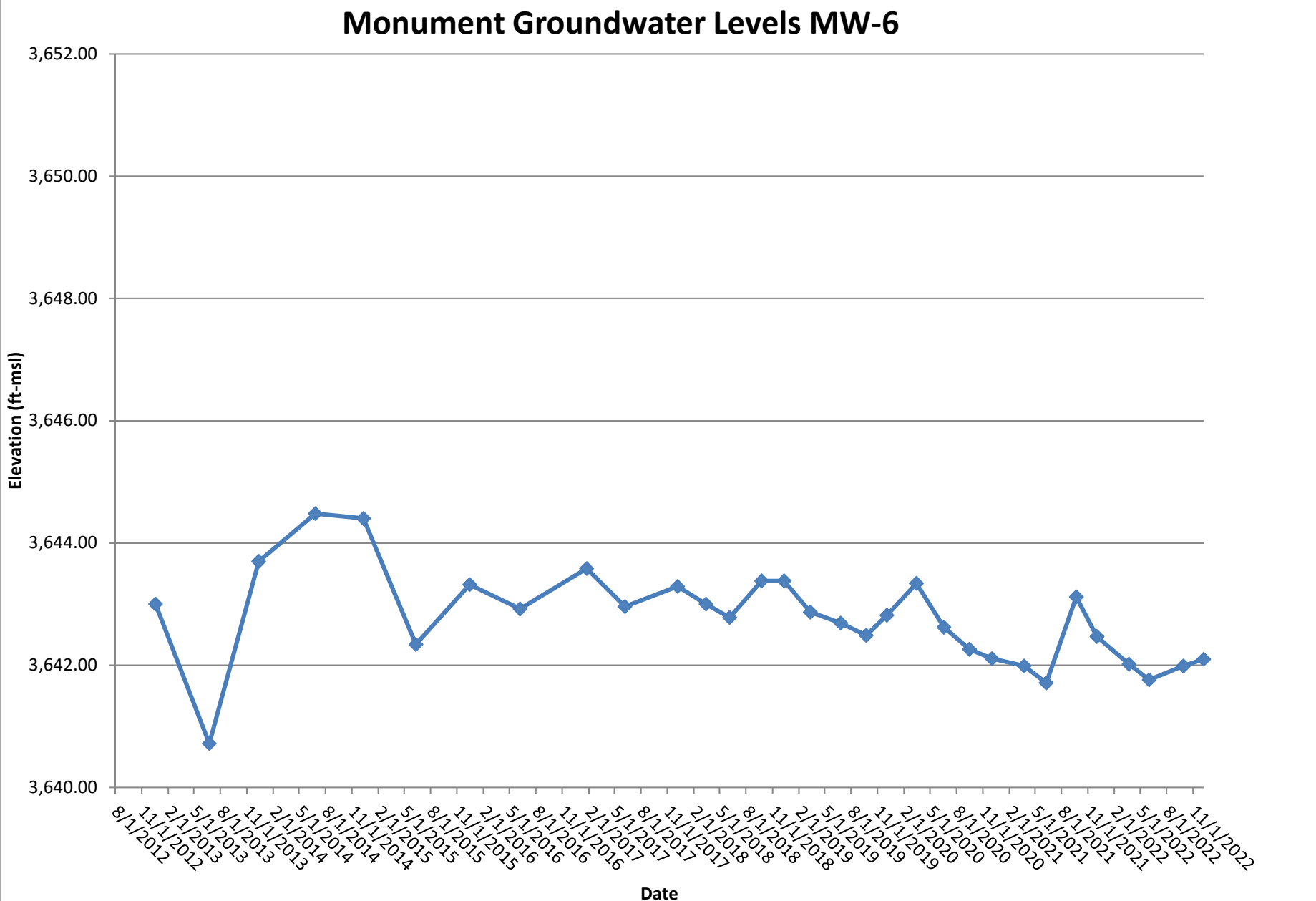
Graphs











Appendix D

Laboratory Reports



April 01, 2022

Brad Stephenson
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (720) 974-0935
FAX (432) 686-0186
RE: Monument

Order No.: 2203266

Dear Brad Stephenson:

DHL Analytical, Inc. received 7 sample(s) on 3/24/2022 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative and all estimated uncertainties of results are within method specifications.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-21-27



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Analytical Report 2203266	7
AnalyticalQCSummaryReport 2203266	14

CHAIN-OF-CUSTODY

PAGE 1 OF 1

[illegible]

Return

DHL COC REV 3 | MAR 2021

ORIGIN ID:H0BA (303) 941-6156	SHIP DATE: 23MAR22
GHD	ACTWGT: 44.65 LB
14998 W 6TH AVE STE 800	CAD: 6994246/SSFE2300
GOLDEN, CO 80401	DIMS: 23x13x14 IN
UNITED STATES US	BILL THIRD PARTY

TO

DHL

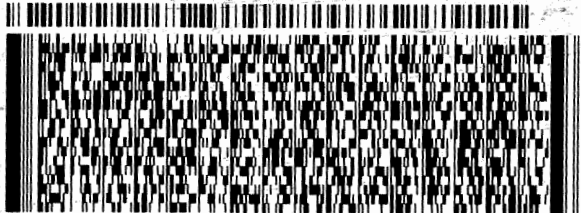
2300 DOUBLE CREEK DR.

ROUND ROCK TX 78664

(512) 388-8222 REF:

INU: DEPT:

PO:



FedEx
Express



THU - 24 MAR 10:30A

TRK# 2712 1068 1895

0201

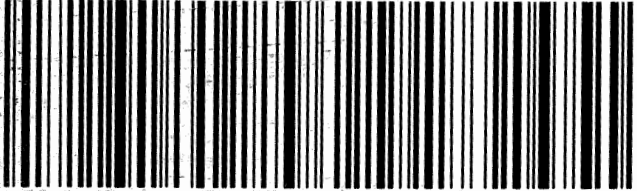
PRIORITY OVERNIGHT

AHS

78664

A8 BSMA

TX-US **AUS**



DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD

Date Received: 3/24/2022

Work Order Number 2203266

Received by: KAO

Checklist completed by: 

3/24/2022

Signature

Date

Reviewed by 

3/24/2022

Initials

Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☐	No ☒	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	5.5 °C
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: One VOA Vial for sample "Trip" broken in transit.

Corrective Action: Proceed with analysis using unbroken vials.

DHL Analytical, Inc.**Date:** 01-Apr-22

CLIENT: GHD
Project: Monument
Lab Order: 2203266

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition and Standard Methods.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For DRO Analysis, the recovery of surrogate Isopropylbenzene for six samples, Method Blank-104566, the Laboratory Control Spike and Laboratory Control Spike Duplicate (LCS/LCSD-104566) was below the method control limits. These are flagged accordingly in the Analytical Data Report and the QC Summary Report. The remaining surrogate for these samples was within method control limits. No further corrective action was taken.

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: MW-1
Lab ID: 2203266-01
Collection Date: 03/23/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.154	0.154	0.192		mg/L	1	03/30/22 03:50 PM
Surr: Isopropylbenzene	25.8	0	47-142	S	%REC	1	03/30/22 03:50 PM
Surr: Octacosane	74.0	0	51-124		%REC	1	03/30/22 03:50 PM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/22 01:33 PM
Surr: Tetrachlorethene	100	0	74-138		%REC	1	03/30/22 01:33 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 07:21 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 07:21 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 07:21 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 07:21 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 07:21 PM
Surr: 1,2-Dichloroethane-d4	103	0	72-119		%REC	1	03/29/22 07:21 PM
Surr: 4-Bromofluorobenzene	92.6	0	76-119		%REC	1	03/29/22 07:21 PM
Surr: Dibromofluoromethane	98.2	0	85-115		%REC	1	03/29/22 07:21 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/29/22 07:21 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: MW-3
Lab ID: 2203266-02
Collection Date: 03/23/22 01:45 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.156	0.156	0.194		mg/L	1	03/30/22 03:59 PM
Surr: Isopropylbenzene	27.8	0	47-142	S	%REC	1	03/30/22 03:59 PM
Surr: Octacosane	76.8	0	51-124		%REC	1	03/30/22 03:59 PM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/22 01:55 PM
Surr: Tetrachlorethene	103	0	74-138		%REC	1	03/30/22 01:55 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 07:48 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 07:48 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 07:48 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 07:48 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 07:48 PM
Surr: 1,2-Dichloroethane-d4	102	0	72-119		%REC	1	03/29/22 07:48 PM
Surr: 4-Bromofluorobenzene	93.6	0	76-119		%REC	1	03/29/22 07:48 PM
Surr: Dibromofluoromethane	99.2	0	85-115		%REC	1	03/29/22 07:48 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/29/22 07:48 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: MW-5
Lab ID: 2203266-03
Collection Date: 03/23/22 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.152	0.152	0.191		mg/L	1	03/30/22 04:08 PM
Surr: Isopropylbenzene	35.7	0	47-142	S	%REC	1	03/30/22 04:08 PM
Surr: Octacosane	72.4	0	51-124		%REC	1	03/30/22 04:08 PM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/22 02:17 PM
Surr: Tetrachlorethene	106	0	74-138		%REC	1	03/30/22 02:17 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 08:14 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 08:14 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 08:14 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 08:14 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 08:14 PM
Surr: 1,2-Dichloroethane-d4	101	0	72-119		%REC	1	03/29/22 08:14 PM
Surr: 4-Bromofluorobenzene	92.3	0	76-119		%REC	1	03/29/22 08:14 PM
Surr: Dibromofluoromethane	96.4	0	85-115		%REC	1	03/29/22 08:14 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/29/22 08:14 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: MW-5D
Lab ID: 2203266-04
Collection Date: 03/23/22 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.159	0.159	0.199		mg/L	1	03/30/22 04:17 PM
Surr: Isopropylbenzene	25.9	0	47-142	S	%REC	1	03/30/22 04:17 PM
Surr: Octacosane	72.0	0	51-124		%REC	1	03/30/22 04:17 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/22 02:40 PM
Surr: Tetrachlorethene	105	0	74-138		%REC	1	03/30/22 02:40 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 08:40 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 08:40 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 08:40 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 08:40 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 08:40 PM
Surr: 1,2-Dichloroethane-d4	102	0	72-119		%REC	1	03/29/22 08:40 PM
Surr: 4-Bromofluorobenzene	93.6	0	76-119		%REC	1	03/29/22 08:40 PM
Surr: Dibromofluoromethane	97.9	0	85-115		%REC	1	03/29/22 08:40 PM
Surr: Toluene-d8	99.8	0	81-120		%REC	1	03/29/22 08:40 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: MW-6
Lab ID: 2203266-05
Collection Date: 03/23/22 02:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	0.476	0.158	0.197		mg/L	1	03/30/22 04:26 PM
Surr: Isopropylbenzene	3.90	0	47-142	S	%REC	1	03/30/22 04:26 PM
Surr: Octacosane	72.2	0	51-124		%REC	1	03/30/22 04:26 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	0.527	0.0600	0.100		mg/L	1	03/30/22 03:02 PM
Surr: Tetrachlorethene	129	0	74-138		%REC	1	03/30/22 03:02 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 09:07 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 09:07 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 09:07 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 09:07 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 09:07 PM
Surr: 1,2-Dichloroethane-d4	103	0	72-119		%REC	1	03/29/22 09:07 PM
Surr: 4-Bromofluorobenzene	92.5	0	76-119		%REC	1	03/29/22 09:07 PM
Surr: Dibromofluoromethane	95.5	0	85-115		%REC	1	03/29/22 09:07 PM
Surr: Toluene-d8	97.6	0	81-120		%REC	1	03/29/22 09:07 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: MW-7
Lab ID: 2203266-06
Collection Date: 03/23/22 02:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.201	0.201	0.251		mg/L	1	03/30/22 04:36 PM
Surr: Isopropylbenzene	23.8	0	47-142	S	%REC	1	03/30/22 04:36 PM
Surr: Octacosane	73.1	0	51-124		%REC	1	03/30/22 04:36 PM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/22 03:25 PM
Surr: Tetrachlorethene	103	0	74-138		%REC	1	03/30/22 03:25 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 09:33 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 09:33 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 09:33 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 09:33 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 09:33 PM
Surr: 1,2-Dichloroethane-d4	99.1	0	72-119		%REC	1	03/29/22 09:33 PM
Surr: 4-Bromofluorobenzene	91.0	0	76-119		%REC	1	03/29/22 09:33 PM
Surr: Dibromofluoromethane	96.4	0	85-115		%REC	1	03/29/22 09:33 PM
Surr: Toluene-d8	99.5	0	81-120		%REC	1	03/29/22 09:33 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 01-Apr-22

CLIENT: GHD
Project: Monument
Project No: 11225604.06.01
Lab Order: 2203266

Client Sample ID: Trip
Lab ID: 2203266-07
Collection Date: 03/23/22
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/22 01:10 PM
Surr: Tetrachlorethene	97.7	0	74-138		%REC	1	03/30/22 01:10 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 03:52 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 03:52 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 03:52 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/22 03:52 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/22 03:52 PM
Surr: 1,2-Dichloroethane-d4	98.0	0	72-119		%REC	1	03/29/22 03:52 PM
Surr: 4-Bromofluorobenzene	93.9	0	76-119		%REC	1	03/29/22 03:52 PM
Surr: Dibromofluoromethane	94.7	0	85-115		%REC	1	03/29/22 03:52 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/29/22 03:52 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 01-Apr-22

CLIENT: GHD
 Work Order: 2203266
 Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_220330A

The QC data in batch 104566 applies to the following samples: 2203266-01C, 2203266-02C, 2203266-03C, 2203266-04C, 2203266-05C, 2203266-06C

Sample ID: MB-104566	Batch ID: 104566	TestNo: M8015D	Units: mg/L							
SampType: MBLK	Run ID: GC15_220330A	Analysis Date: 3/30/2022 3:23:38 PM	Prep Date: 3/28/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0315		0.1000		31.5	47	142			S
Surr: Octacosane	0.0730		0.1000		73.0	51	124			

Sample ID: LCS-104566	Batch ID: 104566	TestNo: M8015D	Units: mg/L							
SampType: LCS	Run ID: GC15_220330A	Analysis Date: 3/30/2022 3:32:42 PM	Prep Date: 3/28/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	0.738	0.100	1.250	0	59.0	50	114			
Surr: Isopropylbenzene	0.0276		0.1000		27.6	47	142			S
Surr: Octacosane	0.0742		0.1000		74.2	51	124			

Sample ID: LCSD-104566	Batch ID: 104566	TestNo: M8015D	Units: mg/L							
SampType: LCSD	Run ID: GC15_220330A	Analysis Date: 3/30/2022 3:41:45 PM	Prep Date: 3/28/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	0.760	0.100	1.250	0	60.8	50	114	2.98	30	
Surr: Isopropylbenzene	0.0236		0.1000		23.6	47	142	0	0	S
Surr: Octacosane	0.0736		0.1000		73.6	51	124	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAP certified

Page 1 of 3

CLIENT: GHD
Work Order: 2203266
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_220330A

The QC data in batch 104601 applies to the following samples: 2203266-01B, 2203266-02B, 2203266-03B, 2203266-04B, 2203266-05B, 2203266-06B, 2203266-07B

Sample ID: LCS-104601	Batch ID: 104601	TestNo: M8015V	Units: mg/L							
SampType: LCS	Run ID: GC4_220330A	Analysis Date: 3/30/2022 10:32:51 AM	Prep Date: 3/30/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.51	0.100	2.500	0	100	67	136			
Surr: Tetrachlorethene	0.351		0.4000		87.7	74	138			

Sample ID: LCSD-104601	Batch ID: 104601	TestNo: M8015V	Units: mg/L							
SampType: LCSD	Run ID: GC4_220330A	Analysis Date: 3/30/2022 10:55:05 AM	Prep Date: 3/30/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.58	0.100	2.500	0	103	67	136	2.68	30	
Surr: Tetrachlorethene	0.383		0.4000		95.7	74	138	0	0	

Sample ID: MB-104601	Batch ID: 104601	TestNo: M8015V	Units: mg/L							
SampType: MBLK	Run ID: GC4_220330A	Analysis Date: 3/30/2022 12:01:41 PM	Prep Date: 3/30/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.390		0.4000		97.6	74	138			

Sample ID: 2203266-01BMS	Batch ID: 104601	TestNo: M8015V	Units: mg/L							
SampType: MS	Run ID: GC4_220330A	Analysis Date: 3/30/2022 4:12:36 PM	Prep Date: 3/30/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.35	0.100	2.500	0	94.2	67	136			
Surr: Tetrachlorethene	0.338		0.4000		84.6	74	138			

Sample ID: 2203266-01BMSD	Batch ID: 104601	TestNo: M8015V	Units: mg/L							
SampType: MSD	Run ID: GC4_220330A	Analysis Date: 3/30/2022 4:35:04 PM	Prep Date: 3/30/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.53	0.100	2.500	0	101	67	136	7.40	30	
Surr: Tetrachlorethene	0.366		0.4000		91.4	74	138	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAP certified

CLIENT: GHD
Work Order: 2203266
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_220329A

The QC data in batch 104569 applies to the following samples: 2203266-01A, 2203266-02A, 2203266-03A, 2203266-04A, 2203266-05A, 2203266-06A, 2203266-07A

Sample ID: LCS-104569	Batch ID: 104569	TestNo: SW8260D	Units: mg/L							
SampType: LCS	Run ID: GCMS5_220329A	Analysis Date: 3/29/2022 1:28:00 PM	Prep Date: 3/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0246	0.00100	0.0232	0	106	81	122			
Ethylbenzene	0.0239	0.00100	0.0232	0	103	80	120			
m,p-Xylene	0.0480	0.00200	0.0464	0	103	80	120			
o-Xylene	0.0244	0.00100	0.0232	0	105	80	120			
Toluene	0.0233	0.00200	0.0232	0	100	80	120			
Surr: 1,2-Dichloroethane-d4	201		200.0		100	72	119			
Surr: 4-Bromofluorobenzene	187		200.0		93.6	76	119			
Surr: Dibromofluoromethane	192		200.0		95.9	85	115			
Surr: Toluene-d8	200		200.0		99.9	81	120			

Sample ID: LCSD-104569	Batch ID: 104569	TestNo: SW8260D	Units: mg/L							
SampType: LCSD	Run ID: GCMS5_220329A	Analysis Date: 3/29/2022 1:54:00 PM	Prep Date: 3/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0237	0.00100	0.0232	0	102	81	122	3.69	20	
Ethylbenzene	0.0230	0.00100	0.0232	0	99.4	80	120	3.75	20	
m,p-Xylene	0.0470	0.00200	0.0464	0	101	80	120	2.19	20	
o-Xylene	0.0236	0.00100	0.0232	0	102	80	120	3.23	20	
Toluene	0.0225	0.00200	0.0232	0	96.8	80	120	3.68	20	
Surr: 1,2-Dichloroethane-d4	196		200.0		98.2	72	119	0	0	
Surr: 4-Bromofluorobenzene	186		200.0		93.0	76	119	0	0	
Surr: Dibromofluoromethane	194		200.0		97.2	85	115	0	0	
Surr: Toluene-d8	201		200.0		101	81	120	0	0	

Sample ID: MB-104569	Batch ID: 104569	TestNo: SW8260D	Units: mg/L							
SampType: MBLK	Run ID: GCMS5_220329A	Analysis Date: 3/29/2022 3:25:00 PM	Prep Date: 3/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	196		200.0		98.0	72	119			
Surr: 4-Bromofluorobenzene	188		200.0		93.8	76	119			
Surr: Dibromofluoromethane	191		200.0		95.7	85	115			
Surr: Toluene-d8	203		200.0		101	81	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified



June 08, 2022

Brad Stephenson
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (720) 974-0935
FAX (432) 686-0186
RE: Monument

Order No.: 2206015

Dear Brad Stephenson:

DHL Analytical, Inc. received 7 sample(s) on 6/2/2022 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative and all estimated uncertainties of results are within method specifications.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-22-28



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2300 Double Creek Dr. Round Rock, TX 78664

Phone 512.388.8222

Web: www.dhlanalytical.comEmail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

PAGE 1 OF 1

CLIENT: <u>GAD</u>		DATE: <u>6/1/22</u>		LABORATORY USE ONLY	
ADDRESS: <u>ARJADA, CO</u>		PO#: _____		DHL WORKORDER #: <u>2206015</u>	
PHONE: <u>303941 6156</u> EMAIL: <u>BRAD.STEPHENSON</u>		PROJECT LOCATION OR NAME: <u>MONUMENT</u>			
DATA REPORTED TO: <u>STEPHENSON @ GAD.COM</u>		CLIENT PROJECT # <u>1225604</u>		COLLECTOR: <u>STEPHENSON</u>	
ADDITIONAL REPORT COPIES TO: <u>SCCOOP</u>					

Field Sample I.D.	Lab Use Only	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	PRESERVATION		# of Containers	ANALYSES		FIELD NOTES
							W=WATER L=LIQUID S=SOIL SO=SOLID	SE=SEDIMENT P=PAINT SL=SLUDGE		HCL HNO ₃ H ₂ SO ₄ NaOH ICE	Zn Acetate UNPRESERVED	
MW-1		01	6/1/22	1300								
MW-3		02	6	1315								
MW 5		03		1330								
MW 50		04		1400								
MW 6		05		1400								
MW 7		06	6/1/22	1415								
TRIP		07										

Relinquished By: (Sign) <u>[Signature]</u>	DATE/TIME <u>6/1/22 1500</u>	Received by: <u>TO FEDEX</u>	TURN AROUND TIME (CALL FIRST FOR RUSH) RUSH-1 DAY ☐ RUSH-2 DAY ☐ RUSH-3 DAY ☐ NORMAL ☐ OTHER ☐ DUE DATE _____	LABORATORY USE ONLY RECEIVING TEMP (°C): <u>2.7°C</u> THERM #: <u>78</u> CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED CARRIER: ☐ LSO ☒ FEDEX ☐ UPS ☐ COURIER ☐ OTHER ☐ HAND DELIVERED
Relinquished By: (Sign) <u>FeDEX</u>	DATE/TIME <u>6/2/22 0910</u>	Received by: <u>[Signature]</u>		
Relinquished By: (Sign) _____	DATE/TIME _____	Received by: _____		

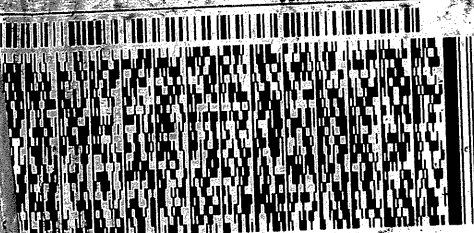
☐ DHL DISPOSAL @ 5.00 each☐ Return

DHL COC REV 3 | MAR 2021

GIN ID: H0BA (303) 941-6156	SHIP DATE: 01 JUN 22 ACTWT: 32.25 LB CAD: 6994246/SSFE2321 DIMS: 24x13x14 IN
88 W 6TH AVE STE 800 EN: CO 80401 ED STATES US	BILL: THIRD PARTY

HL ANALYTICAL
00 DOUBLE CREEK DR.
JND ROCK TX 78664

8222 REF DEPT:

 **FedEx**
Express



of 2
8 1004 6484
8 1004 6473 0201

BSMA

THU - 02 JUN 10:30A
PRIORITY OVERNIGHT
AHS
78664
TX - US AUS



DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD

Date Received: 6/2/2022

Work Order Number 2206015

Received by: KAO

Checklist completed by:


Signature

6/2/2022

Date

Reviewed by


Initials

6/2/2022

Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	2.7 °C
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Lab Order: 2206015

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition and Standard Methods.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: MW-1
Lab ID: 2206015-01
Collection Date: 06/01/22 01:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.156	0.156	0.196		mg/L	1	06/03/22 10:44 AM
Surr: Isopropylbenzene	51.8	0	25-124		%REC	1	06/03/22 10:44 AM
Surr: Octacosane	84.8	0	51-124		%REC	1	06/03/22 10:44 AM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/03/22 12:12 PM
Surr: Tetrachlorethene	99.9	0	74-138		%REC	1	06/03/22 12:12 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 10:29 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 10:29 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 10:29 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 10:29 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 10:29 PM
Surr: 1,2-Dichloroethane-d4	97.0	0	72-119		%REC	1	06/03/22 10:29 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	06/03/22 10:29 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	06/03/22 10:29 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	06/03/22 10:29 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: MW-3
Lab ID: 2206015-02
Collection Date: 06/01/22 01:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.156	0.156	0.195		mg/L	1	06/03/22 10:53 AM
Surr: Isopropylbenzene	48.1	0	25-124		%REC	1	06/03/22 10:53 AM
Surr: Octacosane	85.0	0	51-124		%REC	1	06/03/22 10:53 AM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/03/22 12:34 PM
Surr: Tetrachlorethene	102	0	74-138		%REC	1	06/03/22 12:34 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 10:53 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 10:53 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 10:53 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 10:53 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 10:53 PM
Surr: 1,2-Dichloroethane-d4	99.3	0	72-119		%REC	1	06/03/22 10:53 PM
Surr: 4-Bromofluorobenzene	98.8	0	76-119		%REC	1	06/03/22 10:53 PM
Surr: Dibromofluoromethane	104	0	85-115		%REC	1	06/03/22 10:53 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	06/03/22 10:53 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: MW-5
Lab ID: 2206015-03
Collection Date: 06/01/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.159	0.159	0.199		mg/L	1	06/03/22 11:02 AM
Surr: Isopropylbenzene	60.5	0	25-124		%REC	1	06/03/22 11:02 AM
Surr: Octacosane	81.4	0	51-124		%REC	1	06/03/22 11:02 AM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/03/22 12:57 PM
Surr: Tetrachlorethene	100	0	74-138		%REC	1	06/03/22 12:57 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 11:18 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 11:18 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 11:18 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 11:18 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 11:18 PM
Surr: 1,2-Dichloroethane-d4	98.2	0	72-119		%REC	1	06/03/22 11:18 PM
Surr: 4-Bromofluorobenzene	99.0	0	76-119		%REC	1	06/03/22 11:18 PM
Surr: Dibromofluoromethane	103	0	85-115		%REC	1	06/03/22 11:18 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	06/03/22 11:18 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: MW-5D
Lab ID: 2206015-04
Collection Date: 06/01/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.154	0.154	0.193		mg/L	1	06/03/22 11:11 AM
Surr: Isopropylbenzene	54.6	0	25-124		%REC	1	06/03/22 11:11 AM
Surr: Octacosane	87.5	0	51-124		%REC	1	06/03/22 11:11 AM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/03/22 01:18 PM
Surr: Tetrachlorethene	102	0	74-138		%REC	1	06/03/22 01:18 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 11:42 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 11:42 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 11:42 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 11:42 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 11:42 PM
Surr: 1,2-Dichloroethane-d4	96.6	0	72-119		%REC	1	06/03/22 11:42 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	06/03/22 11:42 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	06/03/22 11:42 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	06/03/22 11:42 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: MW-6
Lab ID: 2206015-05
Collection Date: 06/01/22 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	0.855	0.154	0.192		mg/L	1	06/03/22 11:20 AM
Surr: Isopropylbenzene	45.2	0	25-124		%REC	1	06/03/22 11:20 AM
Surr: Octacosane	90.2	0	51-124		%REC	1	06/03/22 11:20 AM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	0.560	0.0600	0.100		mg/L	1	06/03/22 01:41 PM
Surr: Tetrachlorethene	95.6	0	74-138		%REC	1	06/03/22 01:41 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/04/22 12:06 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/04/22 12:06 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/04/22 12:06 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/04/22 12:06 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/04/22 12:06 AM
Surr: 1,2-Dichloroethane-d4	95.4	0	72-119		%REC	1	06/04/22 12:06 AM
Surr: 4-Bromofluorobenzene	100	0	76-119		%REC	1	06/04/22 12:06 AM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	06/04/22 12:06 AM
Surr: Toluene-d8	103	0	81-120		%REC	1	06/04/22 12:06 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: MW-7
Lab ID: 2206015-06
Collection Date: 06/01/22 02:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.156	0.156	0.195		mg/L	1	06/03/22 11:29 AM
Surr: Isopropylbenzene	51.9	0	25-124		%REC	1	06/03/22 11:29 AM
Surr: Octacosane	82.2	0	51-124		%REC	1	06/03/22 11:29 AM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/03/22 02:03 PM
Surr: Tetrachlorethene	105	0	74-138		%REC	1	06/03/22 02:03 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/04/22 12:31 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/04/22 12:31 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/04/22 12:31 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/04/22 12:31 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/04/22 12:31 AM
Surr: 1,2-Dichloroethane-d4	96.2	0	72-119		%REC	1	06/04/22 12:31 AM
Surr: 4-Bromofluorobenzene	97.4	0	76-119		%REC	1	06/04/22 12:31 AM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	06/04/22 12:31 AM
Surr: Toluene-d8	101	0	81-120		%REC	1	06/04/22 12:31 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 08-Jun-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2206015

Client Sample ID: Trip
Lab ID: 2206015-07
Collection Date: 06/01/22
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/03/22 02:25 PM
Surr: Tetrachlorethene	94.1	0	74-138		%REC	1	06/03/22 02:25 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 01:08 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 01:08 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 01:08 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/03/22 01:08 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/03/22 01:08 PM
Surr: 1,2-Dichloroethane-d4	97.0	0	72-119		%REC	1	06/03/22 01:08 PM
Surr: 4-Bromofluorobenzene	100	0	76-119		%REC	1	06/03/22 01:08 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	06/03/22 01:08 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	06/03/22 01:08 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 08-Jun-22

CLIENT: GHD
 Work Order: 2206015
 Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_220603A

The QC data in batch 105650 applies to the following samples: 2206015-01C, 2206015-02C, 2206015-03C, 2206015-04C, 2206015-05C, 2206015-06C

Sample ID: MB-105650	Batch ID: 105650	TestNo: M8015D	Units: mg/L							
SampType: MBLK	Run ID: GC15_220603A	Analysis Date: 6/3/2022 10:05:36 AM	Prep Date: 6/2/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0419		0.1000		41.9	25	124			
Surr: Octacosane	0.0834		0.1000		83.4	51	124			

Sample ID: LCS-105650	Batch ID: 105650	TestNo: M8015D	Units: mg/L							
SampType: LCS	Run ID: GC15_220603A	Analysis Date: 6/3/2022 10:14:39 AM	Prep Date: 6/2/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	0.960	0.100	1.250	0	76.8	50	114			
Surr: Isopropylbenzene	0.0512		0.1000		51.2	25	124			
Surr: Octacosane	0.0863		0.1000		86.3	51	124			

Sample ID: LCSD-105650	Batch ID: 105650	TestNo: M8015D	Units: mg/L							
SampType: LCSD	Run ID: GC15_220603A	Analysis Date: 6/3/2022 10:23:43 AM	Prep Date: 6/2/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	0.942	0.100	1.250	0	75.4	50	114	1.89	30	
Surr: Isopropylbenzene	0.0358		0.1000		35.8	25	124	0	0	
Surr: Octacosane	0.0862		0.1000		86.2	51	124	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAP certified

Page 1 of 3

CLIENT: GHD
Work Order: 2206015
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_220603A

The QC data in batch 105663 applies to the following samples: 2206015-01B, 2206015-02B, 2206015-03B, 2206015-04B, 2206015-05B, 2206015-06B, 2206015-07B

Sample ID: LCS-105663	Batch ID: 105663	TestNo: M8015V	Units: mg/L							
SampType: LCS	Run ID: GC4_220603A	Analysis Date: 6/3/2022 10:09:29 AM	Prep Date: 6/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.78	0.100	2.500	0	111	67	136			
Surr: Tetrachlorethene	0.406		0.4000		102	74	138			

Sample ID: LCSD-105663	Batch ID: 105663	TestNo: M8015V	Units: mg/L							
SampType: LCSD	Run ID: GC4_220603A	Analysis Date: 6/3/2022 10:31:38 AM	Prep Date: 6/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.79	0.100	2.500	0	112	67	136	0.159	30	
Surr: Tetrachlorethene	0.412		0.4000		103	74	138	0	0	

Sample ID: MB-105663	Batch ID: 105663	TestNo: M8015V	Units: mg/L							
SampType: MBLK	Run ID: GC4_220603A	Analysis Date: 6/3/2022 11:38:20 AM	Prep Date: 6/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.385		0.4000		96.2	74	138			

Sample ID: 2206015-01BMS	Batch ID: 105663	TestNo: M8015V	Units: mg/L							
SampType: MS	Run ID: GC4_220603A	Analysis Date: 6/3/2022 6:47:25 PM	Prep Date: 6/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	1.99	0.100	2.500	0	79.5	67	136			
Surr: Tetrachlorethene	0.315		0.4000		78.7	74	138			

Sample ID: 2206015-01BMSD	Batch ID: 105663	TestNo: M8015V	Units: mg/L							
SampType: MSD	Run ID: GC4_220603A	Analysis Date: 6/3/2022 7:09:56 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.22	0.100	2.500	0	88.8	67	136	11.1	30	
Surr: Tetrachlorethene	0.334		0.4000		83.6	74	138	0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: GHD
Work Order: 2206015
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_220603A

The QC data in batch 105660 applies to the following samples: 2206015-01A, 2206015-02A, 2206015-03A, 2206015-04A, 2206015-05A, 2206015-06A, 2206015-07A

Sample ID: LCS-105660	Batch ID: 105660	TestNo: SW8260D	Units: mg/L							
SampType: LCS	Run ID: GCMS7_220603A	Analysis Date: 6/3/2022 10:40:00 AM	Prep Date: 6/2/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0273	0.00100	0.0232	0	118	81	122			
Ethylbenzene	0.0275	0.00100	0.0232	0	119	80	120			
m,p-Xylene	0.0553	0.00200	0.0464	0	119	80	120			
o-Xylene	0.0274	0.00100	0.0232	0	118	80	120			
Toluene	0.0273	0.00200	0.0232	0	118	80	120			
Surr: 1,2-Dichloroethane-d4	194		200.0		97.0	72	119			
Surr: 4-Bromofluorobenzene	197		200.0		98.6	76	119			
Surr: Dibromofluoromethane	202		200.0		101	85	115			
Surr: Toluene-d8	200		200.0		100	81	120			

Sample ID: MB-105660	Batch ID: 105660	TestNo: SW8260D	Units: mg/L							
SampType: MBLK	Run ID: GCMS7_220603A	Analysis Date: 6/3/2022 12:19:00 PM	Prep Date: 6/2/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	191		200.0		95.7	72	119			
Surr: 4-Bromofluorobenzene	206		200.0		103	76	119			
Surr: Dibromofluoromethane	204		200.0		102	85	115			
Surr: Toluene-d8	205		200.0		102	81	120			

Sample ID: SB-220603	Batch ID: 105660	TestNo: SW8260D	Units: mg/L							
SampType: SBLK	Run ID: GCMS7_220603A	Analysis Date: 6/3/2022 6:25:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	193		0							
Surr: 4-Bromofluorobenzene	203		0							
Surr: Dibromofluoromethane	207		0							
Surr: Toluene-d8	201		0							

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified



October 05, 2022

Brad Stephenson
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (720) 974-0935
FAX (432) 686-0186
RE: Monument

Order No.: 2209248

Dear Brad Stephenson:

DHL Analytical, Inc. received 7 sample(s) on 9/29/2022 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative and all estimated uncertainties of results are within method specifications.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-22-28



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CHAIN-OF-CUSTODY

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[illegible]

☐ DHL DISPOSAL @ 5.00 each

☐ **Return**

DHL COC REV 3 | MAR 2021

ORIGIN ID: H08A (303) 941-6156

GHD
14998 W 6TH AVE STE 800GOLDEN, CO 80401
UNITED STATES USSHIP DATE: 28SEP22
ACTWGT: 47.10 LB
CAD: 6994246/SSFE2322
DIMS: 25x14x15 IN

BILL THIRD PARTY

TO

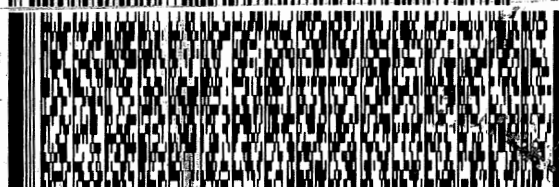
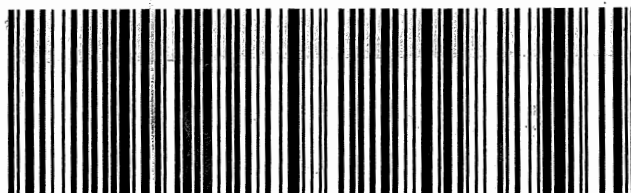
**DHL LABORATORIES
2300 DOULBE CREEK DR****ROUND ROCK TX 78664**

(512) 388-8222

REF:

INVT
PO:

DEPT:

**FedEx**
ExpressREL#
3785346TRK# 2785 2866 0799
0201**THU - 29 SEP 10:30A
PRIORITY OVERNIGHT****A8 BSMA****AHS
78664**TX-US **AUS**

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD

Date Received: 9/29/2022

Work Order Number 2209248

Received by: KAO

Checklist completed by:


Signature

9/29/2022

Date

Reviewed by


Initials

9/29/2022

Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	0.9 °C
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

DHL Analytical, Inc.**Date:** 05-Oct-22

CLIENT: GHD
Project: Monument
Lab Order: 2209248

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition, M8015D and M8015V.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For GRO analysis by method M8015V the surrogate recovery for sample MW-7 was slightly below control limits. This is flagged accordingly. This was confirmed by re-analysis. No further corrective actions were taken.

DHL Analytical, Inc.

Date: 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: MW-1
Lab ID: 2209248-01
Collection Date: 09/28/22 01:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	0.214	0.147	0.184		mg/L	1	09/30/22 12:12 PM
Surr: Isopropylbenzene	51.4	0	25-124		%REC	1	09/30/22 12:12 PM
Surr: Octacosane	89.3	0	51-124		%REC	1	09/30/22 12:12 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/03/22 01:29 PM
Surr: Tetrachlorethene	94.5	0	74-138		%REC	1	10/03/22 01:29 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 01:36 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 01:36 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 01:36 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 01:36 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 01:36 PM
Surr: 1,2-Dichloroethane-d4	95.5	0	72-119		%REC	1	09/29/22 01:36 PM
Surr: 4-Bromofluorobenzene	99.0	0	76-119		%REC	1	09/29/22 01:36 PM
Surr: Dibromofluoromethane	98.1	0	85-115		%REC	1	09/29/22 01:36 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	09/29/22 01:36 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: MW-3
Lab ID: 2209248-02
Collection Date: 09/28/22 01:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	0.180	0.156	0.195	J	mg/L	1	09/30/22 12:21 PM
Surr: Isopropylbenzene	55.3	0	25-124		%REC	1	09/30/22 12:21 PM
Surr: Octacosane	94.1	0	51-124		%REC	1	09/30/22 12:21 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/03/22 01:53 PM
Surr: Tetrachlorethene	75.9	0	74-138		%REC	1	10/03/22 01:53 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 04:37 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 04:37 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 04:37 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 04:37 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 04:37 PM
Surr: 1,2-Dichloroethane-d4	95.0	0	72-119		%REC	1	09/29/22 04:37 PM
Surr: 4-Bromofluorobenzene	99.2	0	76-119		%REC	1	09/29/22 04:37 PM
Surr: Dibromofluoromethane	98.0	0	85-115		%REC	1	09/29/22 04:37 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	09/29/22 04:37 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: MW-5
Lab ID: 2209248-03
Collection Date: 09/28/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.163	0.163	0.203		mg/L	1	09/30/22 12:30 PM
Surr: Isopropylbenzene	60.8	0	25-124		%REC	1	09/30/22 12:30 PM
Surr: Octacosane	93.4	0	51-124		%REC	1	09/30/22 12:30 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/03/22 04:59 PM
Surr: Tetrachlorethene	82.7	0	74-138		%REC	1	10/03/22 04:59 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:03 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:03 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 05:03 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:03 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 05:03 PM
Surr: 1,2-Dichloroethane-d4	96.9	0	72-119		%REC	1	09/29/22 05:03 PM
Surr: 4-Bromofluorobenzene	97.6	0	76-119		%REC	1	09/29/22 05:03 PM
Surr: Dibromofluoromethane	98.2	0	85-115		%REC	1	09/29/22 05:03 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/29/22 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: MW-5D
Lab ID: 2209248-04
Collection Date: 09/28/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.154	0.154	0.192		mg/L	1	09/30/22 12:39 PM
Surr: Isopropylbenzene	55.1	0	25-124		%REC	1	09/30/22 12:39 PM
Surr: Octacosane	91.3	0	51-124		%REC	1	09/30/22 12:39 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/03/22 05:22 PM
Surr: Tetrachlorethene	80.5	0	74-138		%REC	1	10/03/22 05:22 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:29 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:29 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 05:29 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:29 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 05:29 PM
Surr: 1,2-Dichloroethane-d4	96.6	0	72-119		%REC	1	09/29/22 05:29 PM
Surr: 4-Bromofluorobenzene	97.6	0	76-119		%REC	1	09/29/22 05:29 PM
Surr: Dibromofluoromethane	98.0	0	85-115		%REC	1	09/29/22 05:29 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/29/22 05:29 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: MW-6
Lab ID: 2209248-05
Collection Date: 09/28/22 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	2.01	0.171	0.214		mg/L	1	09/30/22 12:48 PM
Surr: Isopropylbenzene	68.7	0	25-124		%REC	1	09/30/22 12:48 PM
Surr: Octacosane	107	0	51-124		%REC	1	09/30/22 12:48 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	0.456	0.0600	0.100		mg/L	1	10/03/22 03:02 PM
Surr: Tetrachlorethene	74.4	0	74-138		%REC	1	10/03/22 03:02 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:55 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:55 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 05:55 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 05:55 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 05:55 PM
Surr: 1,2-Dichloroethane-d4	94.0	0	72-119		%REC	1	09/29/22 05:55 PM
Surr: 4-Bromofluorobenzene	100	0	76-119		%REC	1	09/29/22 05:55 PM
Surr: Dibromofluoromethane	98.0	0	85-115		%REC	1	09/29/22 05:55 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/29/22 05:55 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: MW-7
Lab ID: 2209248-06
Collection Date: 09/28/22 02:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	0.473	0.152	0.190		mg/L	1	09/30/22 12:57 PM
Surr: Isopropylbenzene	59.3	0	25-124		%REC	1	09/30/22 12:57 PM
Surr: Octacosane	101	0	51-124		%REC	1	09/30/22 12:57 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/03/22 05:45 PM
Surr: Tetrachlorethene	72.4	0	74-138	S	%REC	1	10/03/22 05:45 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 06:21 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 06:21 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 06:21 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 06:21 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 06:21 PM
Surr: 1,2-Dichloroethane-d4	94.5	0	72-119		%REC	1	09/29/22 06:21 PM
Surr: 4-Bromofluorobenzene	98.6	0	76-119		%REC	1	09/29/22 06:21 PM
Surr: Dibromofluoromethane	97.9	0	85-115		%REC	1	09/29/22 06:21 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	09/29/22 06:21 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 05-Oct-22

CLIENT: GHD
Project: Monument
Project No: 11225604
Lab Order: 2209248

Client Sample ID: Trip
Lab ID: 2209248-07
Collection Date: 09/28/22
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/03/22 12:43 PM
Surr: Tetrachlorethene	98.4	0	74-138		%REC	1	10/03/22 12:43 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 12:18 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 12:18 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 12:18 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 12:18 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/29/22 12:18 PM
Surr: 1,2-Dichloroethane-d4	94.4	0	72-119		%REC	1	09/29/22 12:18 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	09/29/22 12:18 PM
Surr: Dibromofluoromethane	96.3	0	85-115		%REC	1	09/29/22 12:18 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	09/29/22 12:18 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 05-Oct-22

CLIENT: GHD
 Work Order: 2209248
 Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_220930A

The QC data in batch 107179 applies to the following samples: 2209248-01C, 2209248-02C, 2209248-03C, 2209248-04C, 2209248-05C, 2209248-06C

Sample ID: MB-107179	Batch ID: 107179	TestNo: M8015D	Units: mg/L							
SampType: MBLK	Run ID: GC15_220930A	Analysis Date: 9/30/2022 11:08:02 AM	Prep Date: 9/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28 <0.0800 0.100

Surr: Isopropylbenzene

0.0737

0.1000

73.7

25

124

Surr: Octacosane

0.0871

0.1000

87.1

51

124

Sample ID: LCS-107179	Batch ID: 107179	TestNo: M8015D	Units: mg/L							
SampType: LCS	Run ID: GC15_220930A	Analysis Date: 9/30/2022 11:17:06 AM	Prep Date: 9/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28

1.18

0.100

1.250

0

94.7

50

114

Surr: Isopropylbenzene

0.0728

0.1000

72.8

25

124

Surr: Octacosane

0.0862

0.1000

86.2

51

124

Sample ID: LCSD-107179	Batch ID: 107179	TestNo: M8015D	Units: mg/L							
SampType: LCSD	Run ID: GC15_220930A	Analysis Date: 9/30/2022 11:26:09 AM	Prep Date: 9/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28

1.18

0.100

1.250

0

94.7

50

114

0.017

30

Surr: Isopropylbenzene

0.0772

0.1000

77.2

25

124

0

0

Surr: Octacosane

0.0896

0.1000

89.6

51

124

0

0

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAP certified

Page 1 of 4

CLIENT: GHD
Work Order: 2209248
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_221003A

The QC data in batch 107221 applies to the following samples: 2209248-01B, 2209248-02B, 2209248-03B, 2209248-04B, 2209248-05B, 2209248-06B, 2209248-07B

Sample ID: LCS-107221	Batch ID: 107221	TestNo: M8015V	Units: mg/L							
SampType: LCS	Run ID: GC4_221003A	Analysis Date: 10/3/2022 10:45:39 AM	Prep Date: 10/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.50	0.100	2.500	0	100	67	136			
Surr: Tetrachlorethene	0.353		0.4000		88.3	74	138			

Sample ID: LCSD-107221	Batch ID: 107221	TestNo: M8015V	Units: mg/L							
SampType: LCSD	Run ID: GC4_221003A	Analysis Date: 10/3/2022 11:10:20 AM	Prep Date: 10/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.65	0.100	2.500	0	106	67	136	5.83	30	
Surr: Tetrachlorethene	0.366		0.4000		91.5	74	138	0	0	

Sample ID: MB-107221	Batch ID: 107221	TestNo: M8015V	Units: mg/L							
SampType: MBLK	Run ID: GC4_221003A	Analysis Date: 10/3/2022 12:21:11 PM	Prep Date: 10/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.380		0.4000		95.1	74	138			

Sample ID: 2209248-06BMS	Batch ID: 107221	TestNo: M8015V	Units: mg/L							
SampType: MS	Run ID: GC4_221003A	Analysis Date: 10/3/2022 6:07:40 PM	Prep Date: 10/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.02	0.100	2.500	0	80.9	67	136			
Surr: Tetrachlorethene	0.313		0.4000		78.2	74	138			

Sample ID: 2209248-06BMSD	Batch ID: 107221	TestNo: M8015V	Units: mg/L							
SampType: MSD	Run ID: GC4_221003A	Analysis Date: 10/3/2022 6:30:04 PM	Prep Date: 10/3/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.29	0.100	2.500	0	91.6	67	136	12.4	30	
Surr: Tetrachlorethene	0.345		0.4000		86.2	74	138	0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: GHD
Work Order: 2209248
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_220929B

The QC data in batch 107184 applies to the following samples: 2209248-01A, 2209248-02A, 2209248-03A, 2209248-04A, 2209248-05A, 2209248-06A, 2209248-07A

Sample ID: LCS-107184	Batch ID: 107184	TestNo: SW8260D	Units: mg/L
SampType: LCS	Run ID: GCMS5_220929B	Analysis Date: 9/29/2022 10:34:00 AM	Prep Date: 9/29/2022

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0239	0.00100	0.0232	0	103	81	122			
Ethylbenzene	0.0238	0.00100	0.0232	0	103	80	120			
m,p-Xylene	0.0487	0.00200	0.0464	0	105	80	120			
o-Xylene	0.0244	0.00100	0.0232	0	105	80	120			
Toluene	0.0238	0.00200	0.0232	0	103	80	120			
Surr: 1,2-Dichloroethane-d4	188		200.0		93.8	72	119			
Surr: 4-Bromofluorobenzene	197		200.0		98.3	76	119			
Surr: Dibromofluoromethane	195		200.0		97.6	85	115			
Surr: Toluene-d8	203		200.0		102	81	120			

Sample ID: MB-107184	Batch ID: 107184	TestNo: SW8260D	Units: mg/L
SampType: MBLK	Run ID: GCMS5_220929B	Analysis Date: 9/29/2022 11:26:00 AM	Prep Date: 9/29/2022

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	193		200.0		96.3	72	119			
Surr: 4-Bromofluorobenzene	201		200.0		100	76	119			
Surr: Dibromofluoromethane	194		200.0		97.2	85	115			
Surr: Toluene-d8	204		200.0		102	81	120			

Sample ID: 2209190-01AMSD	Batch ID: 107184	TestNo: SW8260D	Units: mg/L
SampType: MSD	Run ID: GCMS5_220929B	Analysis Date: 9/29/2022 7:38:00 PM	Prep Date: 9/29/2022

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.246	0.0100	0.232	0	106	81	122	5.04	20	
Ethylbenzene	0.245	0.0100	0.232	0	106	80	120	2.62	20	
m,p-Xylene	0.501	0.0200	0.464	0	108	80	120	1.65	20	
o-Xylene	0.248	0.0100	0.232	0	107	80	120	3.18	20	
Toluene	0.247	0.0200	0.232	0	106	80	120	5.04	20	
Surr: 1,2-Dichloroethane-d4	1880		2000		94.1	72	119	0	0	
Surr: 4-Bromofluorobenzene	1970		2000		98.3	76	119	0	0	
Surr: Dibromofluoromethane	1950		2000		97.6	85	115	0	0	
Surr: Toluene-d8	2000		2000		100	81	120	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: GHD
Work Order: 2209248
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_220929B

Sample ID: SB-221004	Batch ID: 107184	TestNo: SW8260D	Units: mg/L							
SampType: SBLK	Run ID: GCMS5_220929B	Analysis Date: 10/4/2022 11:20:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	191		0							
Surr: 4-Bromofluorobenzene	196		0							
Surr: Dibromofluoromethane	194		0							
Surr: Toluene-d8	200		0							

Sample ID: 2209190-01AMS	Batch ID: 107184	TestNo: SW8260D	Units: mg/L							
SampType: MS	Run ID: GCMS5_220929B	Analysis Date: 10/4/2022 11:46:00 AM	Prep Date: 9/29/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.259	0.0100	0.232	0	112	81	122			
Ethylbenzene	0.252	0.0100	0.232	0	108	80	120			
m,p-Xylene	0.509	0.0200	0.464	0	110	80	120			
o-Xylene	0.256	0.0100	0.232	0	110	80	120			
Toluene	0.260	0.0200	0.232	0	112	80	120			
Surr: 1,2-Dichloroethane-d4	1880		2000		93.8	72	119			
Surr: 4-Bromofluorobenzene	1920		2000		96.0	76	119			
Surr: Dibromofluoromethane	1990		2000		99.4	85	115			
Surr: Toluene-d8	2000		2000		100	81	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified



December 19, 2022

Brad Stephenson
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (720) 974-0935
FAX (432) 686-0186
RE: Monument

Order No.: 2212067

Dear Brad Stephenson:

DHL Analytical, Inc. received 7 sample(s) on 12/8/2022 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative and all estimated uncertainties of results are within method specifications.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

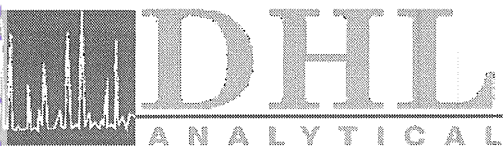
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-22-28



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2300 Double Creek Dr. Round Rock, TX 78664

Phone 512.388.8222

Web: www.dhlanalytical.comEmail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

PAGE 1 OF 1

CLIENT: GHD
 ADDRESS: LAKEWOOD, CO
 PHONE: 303 941 6156 EMAIL: STEPHENSON
 DATA REPORTED TO: B STEPHENSON
 ADDITIONAL REPORT COPIES TO: Cloud

PO#:

LABORATORY USE ONLY

DHL WORKORDER #: 2212067PROJECT LOCATION OR NAME: MonumentCLIENT PROJECT # 11225604

COLLECTOR:

Authorize 5% surcharge
for TRRP report?

☐ Yes ☐ No

Lab
Use
Only

W=WATER
L=LIQUID
S=SOIL
SO=SOLID

SE=SEDIMENT
P=PAINT
SL=SLUDGE

PRESERVATION

of Containers

HCL

HNO₃H₂SO₄NaOH ☐ Zn Acetate ☐ICE ☐ UNPRESERVED ☐

ANALYSES

BTEX ANALYSE ☐ [METHOD 8260]TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐GRO 8015 ☐ GRO 8016 ☐VOC 8260 ☐ VOC 624.1 ☐SVOC 8270 ☐ SVOC 625.1 ☐PAH 8270 ☐ HOLD PAH ☐PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐HERB 8321 ☐ T PHOS ☐ AMMONIA ☐METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐RCRA 8 ☐ TX11 ☐pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ANIONS 300 ☐ 9056 ☐TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐

FIELD NOTES

05:15 PM

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No		Lab Use Only	W=WATER L=LIQUID S=SOIL SO=SOLID		SE=SEDIMENT P=PAINT SL=SLUDGE		# of Containers	PRESERVATION						ANALYSES																			FIELD NOTES		
Field Sample I.D.		DHL Lab #	Collection Date	Collection Time	Matrix	Container Type		HCL	HNO ₃	H ₂ SO ₄	NaOH ☐ Zn Acetate ☐	ICE ☐ UNPRESERVED ☐	BTEX ANALYSE ☐ [METHOD 8260]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO 8015 ☐ GRO 8016 ☐ GRO 8017 ☐ GRO 8018 ☐	VOC 8260 ☐ VOC 624.1 ☐	SVOC 8270 ☐ SVOC 625.1 ☐	PAH 8270 ☐ HOLD PAH ☐	PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐	PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐	HERB 8321 ☐ T PHOS ☐ AMMONIA ☐	METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐	RCRA 8 ☐ TX11 ☐	pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	ANIONS 300 ☐ 9056 ☐	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐	TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐						
MW1	01	12/7/22	1300	W			8																												
MW3	02		1315	W			8																												
MW5	03		1330	W			8																												
MW5D	04		1330	W			8																												
MW6	05		1345	W			8																												
MW7	06	12/7/22	1400	W			8																												
TRIP	07						4																												

Relinquished By: (Sign)

DATE/TIME

Received by:

Relinquished By: (Sign)

DATE/TIME

Received by:

Relinquished By: (Sign)

DATE/TIME

Received by:

TURN AROUND TIME
(CALL FIRST FOR RUSH)

RUSH-1 DAY ☐ RUSH-2 DAY ☐RUSH-3 DAY ☐NORMAL ☐ OTHER ☐DUE DATE ☐

LABORATORY USE ONLY

RECEIVING TEMP (°C): 3.9°C THERM #: 78CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED

CARRIER: ☐ LSO ☒ FEDEX ☐ UPS ☐ COURIER ☐ OTHER
☐ HAND DELIVERED

☐ DHL DISPOSAL @ 5.00 each☐ Return

ORIGIN ID:H0BA (000) 000-0000

GHD
14998 W 6TH AVE STE 800GOLDEN, CO 80401
UNITED STATES USSHIP DATE: 07DEC22
ACTWGT: 35.40 LB
CAD: 6994246/SSFE2341
DIMS: 23x13x14 IN

BILL THIRD PARTY

Part # 156297-435 H0B EXP 02/23

TO DHL ANALYTICAL
DHL ANALYTICAL
2300 DOUBLE CREEK DR

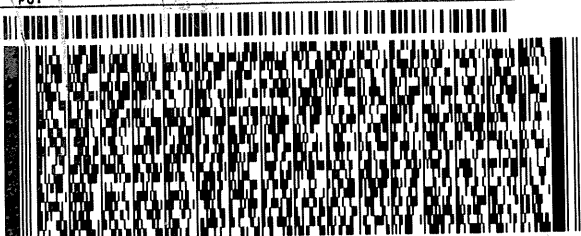
ROUND ROCK TX 78664

(612) 388-8222

REF:

INV:
PO:

DEPT:

FedEx
ExpressREL#
3785346

2 of 2

MPS# 3918 2659 2477

0263

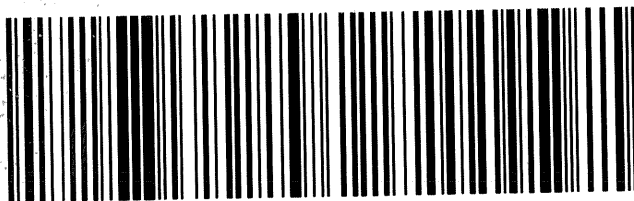
Mstr# 3918 2659 2466

0201

THU - 08 DEC 10:30A
PRIORITY OVERNIGHT**A8 BSMA**

78664

TX-US AUS



DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: GHD

Date Received: 12/8/2022

Work Order Number: 2212067

Received by: KAO

Checklist completed by:


 Signature

12/8/2022

Date

Reviewed by:


 Initials

12/8/2022

Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Cooler #	1		
Temp °C	3.9		
Seal Intact	NP		

Any No response must be detailed in the comments section below.

Client contacted: _____

Date contacted: _____

Person contacted: _____

Contacted by: _____

Regarding: _____

Comments: _____

Corrective Action: _____

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Lab Order: 2212067

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition and Standard Methods.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For GRO Analysis, the recovery of surrogate Tetrachloroethene for Sample MW5 was marginally below the method control limits. This is flagged accordingly in the Analytical Data Report. No further corrective action was taken.

For Volatiles Analysis, the recovery of surrogate 1,2-Dichloroethane-d4 for Sample MW7 was below the method control limits. This is flagged accordingly in the Analytical Data Report. The remaining surrogates for this sample were within method control limits. No further corrective action was taken.

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: MW1
Lab ID: 2212067-01
Collection Date: 12/07/22 01:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.153	0.153	0.191		mg/L	1	12/15/22 02:59 PM
Surr: Isopropylbenzene	80.1	0	25-124		%REC	1	12/15/22 02:59 PM
Surr: Octacosane	82.5	0	51-124		%REC	1	12/15/22 02:59 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/13/22 02:38 PM
Surr: Tetrachlorethene	97.3	0	74-138		%REC	1	12/13/22 02:38 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 07:56 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 07:56 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 07:56 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 07:56 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 07:56 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 07:56 PM
Surr: 1,2-Dichloroethane-d4	90.5	0	72-119		%REC	1	12/08/22 07:56 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	12/08/22 07:56 PM
Surr: Dibromofluoromethane	98.0	0	85-115		%REC	1	12/08/22 07:56 PM
Surr: Toluene-d8	99.9	0	81-120		%REC	1	12/08/22 07:56 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: MW3
Lab ID: 2212067-02
Collection Date: 12/07/22 01:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.147	0.147	0.183		mg/L	1	12/15/22 03:08 PM
Surr: Isopropylbenzene	73.7	0	25-124		%REC	1	12/15/22 03:08 PM
Surr: Octacosane	78.6	0	51-124		%REC	1	12/15/22 03:08 PM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/13/22 03:00 PM
Surr: Tetrachlorethene	98.8	0	74-138		%REC	1	12/13/22 03:00 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:22 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:22 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 08:22 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:22 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 08:22 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:22 PM
Surr: 1,2-Dichloroethane-d4	89.0	0	72-119		%REC	1	12/08/22 08:22 PM
Surr: 4-Bromofluorobenzene	99.2	0	76-119		%REC	1	12/08/22 08:22 PM
Surr: Dibromofluoromethane	97.1	0	85-115		%REC	1	12/08/22 08:22 PM
Surr: Toluene-d8	99.9	0	81-120		%REC	1	12/08/22 08:22 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: MW5
Lab ID: 2212067-03
Collection Date: 12/07/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.149	0.149	0.186		mg/L	1	12/15/22 03:18 PM
Surr: Isopropylbenzene	71.9	0	25-124		%REC	1	12/15/22 03:18 PM
Surr: Octacosane	80.8	0	51-124		%REC	1	12/15/22 03:18 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/13/22 05:36 PM
Surr: Tetrachlorethene	73.1	0	74-138	S	%REC	1	12/13/22 05:36 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:48 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:48 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 08:48 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:48 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 08:48 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 08:48 PM
Surr: 1,2-Dichloroethane-d4	85.4	0	72-119		%REC	1	12/08/22 08:48 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/08/22 08:48 PM
Surr: Dibromofluoromethane	96.0	0	85-115		%REC	1	12/08/22 08:48 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	12/08/22 08:48 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: MW5D
Lab ID: 2212067-04
Collection Date: 12/07/22 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D					Analyst: BTJ
TPH-DRO C10-C28	<0.149	0.149	0.187		mg/L	1	12/15/22 03:27 PM
Surr: Isopropylbenzene	75.8	0	25-124		%REC	1	12/15/22 03:27 PM
Surr: Octacosane	83.4	0	51-124		%REC	1	12/15/22 03:27 PM
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/13/22 05:58 PM
Surr: Tetrachlorethene	74.1	0	74-138		%REC	1	12/13/22 05:58 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:14 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:14 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 09:14 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:14 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 09:14 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:14 PM
Surr: 1,2-Dichloroethane-d4	83.7	0	72-119		%REC	1	12/08/22 09:14 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/08/22 09:14 PM
Surr: Dibromofluoromethane	95.7	0	85-115		%REC	1	12/08/22 09:14 PM
Surr: Toluene-d8	99.7	0	81-120		%REC	1	12/08/22 09:14 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: MW6
Lab ID: 2212067-05
Collection Date: 12/07/22 01:45 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	0.567	0.148	0.185		mg/L	1	12/15/22 03:36 PM
Surr: Isopropylbenzene	66.8	0	25-124		%REC	1	12/15/22 03:36 PM
Surr: Octacosane	78.1	0	51-124		%REC	1	12/15/22 03:36 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	0.441	0.0600	0.100		mg/L	1	12/13/22 06:20 PM
Surr: Tetrachlorethene	88.7	0	74-138		%REC	1	12/13/22 06:20 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:41 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:41 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 09:41 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:41 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 09:41 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 09:41 PM
Surr: 1,2-Dichloroethane-d4	80.6	0	72-119		%REC	1	12/08/22 09:41 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/08/22 09:41 PM
Surr: Dibromofluoromethane	96.6	0	85-115		%REC	1	12/08/22 09:41 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	12/08/22 09:41 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: MW7
Lab ID: 2212067-06
Collection Date: 12/07/22 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		M8015D		Analyst: BTJ			
TPH-DRO C10-C28	<0.148	0.148	0.185		mg/L	1	12/15/22 03:45 PM
Surr: Isopropylbenzene	68.9	0	25-124		%REC	1	12/15/22 03:45 PM
Surr: Octacosane	75.7	0	51-124		%REC	1	12/15/22 03:45 PM
TPH PURGEABLE BY GC - WATER		M8015V		Analyst: BTJ			
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/13/22 06:42 PM
Surr: Tetrachlorethene	81.0	0	74-138		%REC	1	12/13/22 06:42 PM
8260 WATER VOLATILES BY GC/MS		SW8260D		Analyst: JVR			
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 10:07 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 10:07 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 10:07 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 10:07 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 10:07 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 10:07 PM
Surr: 1,2-Dichloroethane-d4	67.1	0	72-119	S	%REC	1	12/08/22 10:07 PM
Surr: 4-Bromofluorobenzene	111	0	76-119		%REC	1	12/08/22 10:07 PM
Surr: Dibromofluoromethane	90.2	0	85-115		%REC	1	12/08/22 10:07 PM
Surr: Toluene-d8	104	0	81-120		%REC	1	12/08/22 10:07 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.**Date:** 19-Dec-22

CLIENT: GHD
Project: Monument
Project No: 1225604
Lab Order: 2212067

Client Sample ID: Trip
Lab ID: 2212067-07
Collection Date: 12/07/22
Matrix: TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH PURGEABLE BY GC - WATER		M8015V					Analyst: BTJ
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/13/22 12:47 PM
Surr: Tetrachlorethene	99.6	0	74-138		%REC	1	12/13/22 12:47 PM
8260 WATER VOLATILES BY GC/MS		SW8260D					Analyst: JVR
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 04:54 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 04:54 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 04:54 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 04:54 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/08/22 04:54 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/08/22 04:54 PM
Surr: 1,2-Dichloroethane-d4	94.2	0	72-119		%REC	1	12/08/22 04:54 PM
Surr: 4-Bromofluorobenzene	98.3	0	76-119		%REC	1	12/08/22 04:54 PM
Surr: Dibromofluoromethane	97.4	0	85-115		%REC	1	12/08/22 04:54 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	12/08/22 04:54 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 19-Dec-22

CLIENT: GHD
 Work Order: 2212067
 Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_221215A

The QC data in batch 108077 applies to the following samples: 2212067-01C, 2212067-02C, 2212067-03C, 2212067-04C, 2212067-05C, 2212067-06C

Sample ID: LCS-108077	Batch ID: 108077	TestNo: M8015D	Units: mg/L							
SampType: LCS	Run ID: GC15_221215A	Analysis Date: 12/15/2022 1:15:40 PM	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	0.991	0.100	1.250	0	79.2	50	114			
Surr: Isopropylbenzene	0.0683		0.1000		68.3	25	124			
Surr: Octacosane	0.0833		0.1000		83.3	51	124			

Sample ID: LCSD-108077	Batch ID: 108077	TestNo: M8015D	Units: mg/L							
SampType: LCSD	Run ID: GC15_221215A	Analysis Date: 12/15/2022 1:24:44 PM	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	0.939	0.100	1.250	0	75.1	50	114	5.33	30	
Surr: Isopropylbenzene	0.0865		0.1000		86.5	25	124	0	0	
Surr: Octacosane	0.0835		0.1000		83.5	51	124	0	0	

Sample ID: MB-108077	Batch ID: 108077	TestNo: M8015D	Units: mg/L							
SampType: MBLK	Run ID: GC15_221215A	Analysis Date: 12/15/2022 4:01:25 PM	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0803		0.1000		80.3	25	124			
Surr: Octacosane	0.0966		0.1000		96.6	51	124			

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAP certified

Page 1 of 4

CLIENT: GHD
Work Order: 2212067
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_221213A

The QC data in batch 108080 applies to the following samples: 2212067-01B, 2212067-02B, 2212067-03B, 2212067-04B, 2212067-05B, 2212067-06B, 2212067-07B

Sample ID: LCS-108080	Batch ID: 108080	TestNo: M8015V	Units: mg/L							
SampType: LCS	Run ID: GC4_221213A	Analysis Date: 12/13/2022 10:33:24 A	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.88	0.100	2.500	0	115	67	136			
Surr: Tetrachlorethene	0.354		0.4000		88.6	74	138			

Sample ID: LCSD-108080	Batch ID: 108080	TestNo: M8015V	Units: mg/L							
SampType: LCSD	Run ID: GC4_221213A	Analysis Date: 12/13/2022 10:55:45 A	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.98	0.100	2.500	0	119	67	136	3.35	30	
Surr: Tetrachlorethene	0.377		0.4000		94.2	74	138	0	0	

Sample ID: MB-108080	Batch ID: 108080	TestNo: M8015V	Units: mg/L							
SampType: MBLK	Run ID: GC4_221213A	Analysis Date: 12/13/2022 12:02:46 P	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.383		0.4000		95.7	74	138			

Sample ID: 2212067-03BMS	Batch ID: 108080	TestNo: M8015V	Units: mg/L							
SampType: MS	Run ID: GC4_221213A	Analysis Date: 12/13/2022 7:04:37 PM	Prep Date: 12/13/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.04	0.100	2.500	0	81.4	67	136			
Surr: Tetrachlorethene	0.305		0.4000		76.2	74	138			

Sample ID: 2212067-03BMSD		Batch ID: 108080		TestNo: M8015V		Units: mg/L					
SampType: MSD		Run ID: GC4_221213A		Analysis Date: 12/13/2022 7:27:28 PM		Prep Date: 12/13/2022					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	2.49	0.100	2.500	0	99.6	67	136	20.1	30	
Surr: Tetrachlorethene	0.353		0.4000		88.4	74	138	0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: GHD
Work Order: 2212067
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_221208A

The QC data in batch 108041 applies to the following samples: 2212067-01A, 2212067-02A, 2212067-03A, 2212067-04A, 2212067-05A, 2212067-06A, 2212067-07A

Sample ID: LCS-108041	Batch ID: 108041	TestNo: SW8260D	Units: mg/L
SampType: LCS	Run ID: GCMS5_221208A	Analysis Date: 12/8/2022 2:30:00 PM	Prep Date: 12/8/2022

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0256	0.00100	0.0232	0	110	81	122			
Ethylbenzene	0.0254	0.00100	0.0232	0	110	80	120			
m,p-Xylene	0.0519	0.00200	0.0464	0	112	80	120			
o-Xylene	0.0262	0.00100	0.0232	0	113	80	120			
Toluene	0.0260	0.00200	0.0232	0	112	80	120			
Total Xylenes	0.0781	0.00100	0.0696	0	112	80	120			
Surr: 1,2-Dichloroethane-d4	182		200.0		90.8	72	119			
Surr: 4-Bromofluorobenzene	193		200.0		96.3	76	119			
Surr: Dibromofluoromethane	199		200.0		99.4	85	115			
Surr: Toluene-d8	196		200.0		97.8	81	120			

Sample ID: MB-108041	Batch ID: 108041	TestNo: SW8260D	Units: mg/L
SampType: MBLK	Run ID: GCMS5_221208A	Analysis Date: 12/8/2022 4:02:00 PM	Prep Date: 12/8/2022

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Total Xylenes	<0.000300	0.00100								
Surr: 1,2-Dichloroethane-d4	185		200.0		92.4	72	119			
Surr: 4-Bromofluorobenzene	203		200.0		102	76	119			
Surr: Dibromofluoromethane	191		200.0		95.6	85	115			
Surr: Toluene-d8	199		200.0		99.7	81	120			

Sample ID: SB-221209	Batch ID: 108041	TestNo: SW8260D	Units: mg/L
SampType: SBLK	Run ID: GCMS5_221208A	Analysis Date: 12/9/2022 2:16:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Total Xylenes	<0.000300	0.00100	0							
Surr: 1,2-Dichloroethane-d4	188		0							
Surr: 4-Bromofluorobenzene	196		0							
Surr: Dibromofluoromethane	192		0							

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: GHD
Work Order: 2212067
Project: Monument

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_221208A

Sample ID: SB-221209		Batch ID: 108041		TestNo: SW8260D		Units: mg/L					
SampType: SBLK		Run ID: GCMS5_221208A		Analysis Date: 12/9/2022 2:16:00 PM		Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8		206		0							

Sample ID: 2212072-06AMS	Batch ID: 108041	TestNo: SW8260D	Units: mg/L							
SampType: MS	Run ID: GCMS5_221208A	Analysis Date: 12/9/2022 4:00:00 PM	Prep Date: 12/8/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0256	0.00100	0.0232	0	110	81	122			
Ethylbenzene	0.0265	0.00100	0.0232	0	114	80	120			
m,p-Xylene	0.0540	0.00200	0.0464	0	116	80	120			
o-Xylene	0.0270	0.00100	0.0232	0	117	80	120			
Toluene	0.0259	0.00200	0.0232	0	112	80	120			
Total Xylenes	0.0810	0.00100	0.0696	0	116	80	120			
Surr: 1,2-Dichloroethane-d4	176		200.0		88.2	72	119			
Surr: 4-Bromofluorobenzene	193		200.0		96.5	76	119			
Surr: Dibromofluoromethane	180		200.0		90.2	85	115			
Surr: Toluene-d8	203		200.0		102	81	120			

Sample ID: 2212072-06AMSD	Batch ID: 108041	TestNo: SW8260D	Units: mg/L							
SampType: MSD	Run ID: GCMS5_221208A	Analysis Date: 12/9/2022 4:27:00 PM	Prep Date: 12/8/2022							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0242	0.00100	0.0232	0	104	81	122	5.70	20	
Ethylbenzene	0.0251	0.00100	0.0232	0	108	80	120	5.47	20	
m,p-Xylene	0.0513	0.00200	0.0464	0	111	80	120	5.12	20	
o-Xylene	0.0256	0.00100	0.0232	0	110	80	120	5.38	20	
Toluene	0.0244	0.00200	0.0232	0	105	80	120	6.33	20	
Total Xylenes	0.0769	0.00100	0.0696	0	110	80	120	5.20	20	
Surr: 1,2-Dichloroethane-d4	184		200.0		92.0	72	119	0	0	
Surr: 4-Bromofluorobenzene	195		200.0		97.3	76	119	0	0	
Surr: Dibromofluoromethane	189		200.0		94.3	85	115	0	0	
Surr: Toluene-d8	201		200.0		101	81	120	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAP certified

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 201416

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID:
	15694
	Action Number:
	201416
Action Type:	
[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)	

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Site Status for 2022 Reviewed on behalf of HF Sinclair Corporation: Content Satisfactory 1. Continue to monitor groundwater wells and analyze for BTEX, TPH-GRO, DRO, on quarterly basis throughout 2023. 2 Conduct an evaluation for the remainder of crude oil and submit a scope of work plan to NMOCD based on how to mitigate the remainder of NAPL. 3. Continue to submit Site Status Reports with the 2023 Site Report to be submitted to NMOCD by or before April 1, 2024.	8/14/2023