REVIEWED
By Mike Buchanan at 3:35 pm, Jul 26, 2024

Site Status Report for 2023

Hobbs Tank 5201 Release AP-113
Lea County, New Mexico

HF Sinclair Corporation

March 20, 2024

Review of the Site Status Report for the Hobbs Tank 5201 Release AP-113: content satisfactory
1. Continue to conduct air sparging as prescribed on HTRW-1.
2. Use EFR every two weeks on wells RW-1, HTRW-1, HTRW-2 and HTRW-3
3 Continue the use of an ORC sock in RW-1, HTRW-1 and HTRW-3.
4. Continue to conduct groundwater monitoring per the work plan quarterly and semi-annually. If insufficient groundwater does not allow for a sufficient volume in the sample, deeper drilling or a new well replacement may be necessary as sampling events must be consecutive per rule 30. 19.15.30 NMAC
5. Sample RW-1 if needed per report.
6. Submit the 2024 annual report to OCD by April 1, 2025.

→ The Power of Commitment

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1. Introduction

This 2023 status report is submitted by GHD Services Inc. (GHD), on behalf of HF Sinclair Corporation for the Hobbs Tank 5201 Release, AP-113, (Site), located in Lea County, New Mexico (Figure 1). The C-141 notification for the release was submitted to the New Mexico Oil Conservation District (NMOCD) on July 22, 2004, and the Abatement Plan for the site was submitted in October 2012. This report includes the status of groundwater monitoring and remediation at the Site for the period from March 2022 to December 2023.

1.1 Site Background

On July 22, 2004, a leak of an unknown volume of crude oil was discovered in a 6-inch pipeline from the crude oil truck unloading rack at storage tank 5201 (Figure 2). The line was exposed and clamped, and the section was replaced, immediately. Petroleum-stained soil from the release was immediately excavated in an area that covered approximately 4 feet by 20 feet by 18 feet deep. Additional staining observed close to the tank was not excavated due to the proximity of the tank and fear of compromising the 1930 vintage tank's structural integrity. No fluid was observed during the excavation.

1.2 Site Setting

The Site is located approximately 3.5 miles south of Hobbs, New Mexico on County Road 61 in the NW ¼ of the NW ¼ of Section 22, Township 19 South, and Range 38 East in Lea County, New Mexico (32° 39.079' N, 103°8.530' W). The topography at the Site is relatively flat and the average elevation is 3,595 feet mean sea level (Figure 1). The Site is located on property within the Holly Energy Partners tank farm, which is on property owned by Enterprise Products and is surrounded by fencing with access controlled by a locked gate. The surrounding area contains crude oil storage tanks, pipelines, and open rangeland.

1.3 Site Geology and Hydrogeology

The surface soil encountered at the Site are silty to fine sands approximately 10 feet thick. This surface soil is consistent with the surface soil description (Quaternary sediment) for this physiographic province. The rock types encountered below this surface layer at the Site are indurated (hardened) calcium carbonate intervals of variable thickness locally referred to as "caliche", fine grained sand, sandstone with caliche and the saturated zone consisting of fractured sandstone.

Groundwater in the area of the Site is primarily produced from the Ogallala aquifer. The Ogallala Formation unconformably overlies the Triassic age Dockum group. The Dockum group consists of red shale and sandstone and is commonly referred to as "red beds". The red beds can exceed 1,000 feet in thickness in this region and may produce small amounts of poor-quality water at the bottom of the formation.

The regional groundwater flow direction in the Ogallala is toward the southeast and follows the Triassic subcrop surface. Groundwater quality is good with total dissolved solids (TDS) concentrations typically below 1,000 mg/L. Recharge primarily occurs via infiltration from precipitation events.

Groundwater at the Site is found in fractured sandstone consistent with the Ogallala aquifer. The depth to groundwater at the Site is approximately 50 feet below ground surface (ft-bgs). The groundwater flow is towards the east southeast and the groundwater gradient is approximately 0.001ft/ft.

1.4 Summary of Site Conditions

Safety and Environmental Solutions Inc. (SESI) installed six groundwater monitoring wells, one recovery well and advanced seven boreholes shortly after the release to characterize the release and recover the released crude oil in the area of the tank. Five boreholes and two monitoring wells were installed inside of the berm area in 2004. The first

borehole was completed as a 2-inch monitor well (MW-1), adjacent to the leak location. Two monitoring wells, MW-2 and MW-3 were installed outside the bermed area in 2004, down-gradient of the release. A 4-inch recovery well (RW-1) was installed in the area near the tank and MW-1 in 2004. In 2010, two additional monitoring wells were installed, MW-4, outside the bermed area and MW-5, up gradient and inside the bermed area (Figure 2).

SESI monitored groundwater conditions and recovered crude oil from wells MW-1 and RW-1 from 2004 to 2011. In 2004, crude oil was initially measured in MW 1 at approximately 6 feet thick. In the recovery well, RW-1, the initial (2004) product thickness was measured at 2.75 feet. Crude oil was not found in any other areas of the Site. In 2005, outside the tank berm area and approximately 200 feet southeast from the release point, benzene was detected in the down gradient area in monitor well MW-2 at a concentration of 72 micrograms per liter (µg/L), which is above the New Mexico Water Quality Control Commission (NMWQCC) standard of 5 µg/L. Benzene has not been detected above the standard in this well or in any other monitoring wells located down gradient and outside the berm area since 2005.

In June 2013, four recovery wells were installed by GHD within the berm area and near the release area to delineate the crude oil and to recover crude oil (Figure 2). In September 2013, a crude oil only recovery system with remote access was installed with oil only skimmer pumps in well RW-1 and recovery wells, HTRW-1, and HTRW-3. This system was used until March 2015 when only negligible amounts of recoverable oil were remaining in the area. Since 2015, Enhanced Fluid Recovery (EFR) using a vacuum truck has been used to recover crude oil from wells MW-1, RW-1, HTRW-1, and HTRW-3. Oil absorbent socks have been used in these wells when EFR was not used or during the time between EFR events. EFR was conducted at wells RW-1, HTRW-1 and HTRW-3 in 2022 and 2023.

Appendix A contains information on fluid levels and crude oil thickness since 2012. Wells MW-1 and RW-1 contained measurable oil sporadically from 2012 to March 2019. HTRW-1 contained measurable oil sporadically from 2013 to October 2016. Wells HTRW-2 and HTRW-4 have never showed any measurable oil. HTRW-3 had shown measurable oil from 2013 to 2020 and none has been measured in this well since June 2020 (Appendix A).

1.5 Site Conceptual Model

The Site is located in an area of multiple crude oil gathering lines and storage tanks and 2 miles west of Highway 18 and three miles south of Hobbs, New Mexico. The entire site is fenced, and access is restricted for people and cattle. The closest residences are approximately 0.5 miles northeast of the Site (Figure 1). The closest drinking water well (L08890) is located approximately 900 feet to the southeast of the Site. This well was sampled for hydrocarbons following the discovery of the release and was not impacted by the release (Stage 1/Stage 2 Abatement Plan, November 2012, CRA). Another well (l08279) is located approximately 1900 ft northeast from the site was sampled in March 2019 and showed no detections of any inorganic or hydrocarbon constituents above state standards.

Groundwater at the Site is found at approximately 50 ft bgs and the groundwater flow direction is towards the southeast at an average gradient of approximately 0.001 feet/foot (ft/ft). One monitoring well (MW-5) is located up gradient of the release area and four monitoring wells are located down gradient of the release. The dissolved phase hydrocarbon concentrations in groundwater at these locations have been below the NMWQCC standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX) since 2005. The impacts to groundwater, from the release, appear to be limited to the immediate area of the leak located near the tank. Recovery well HTRW-1 has had detections of benzene. In December 2019, the benzene concentration (the only constituent above state NMWQCC standards) in this well was 57.5 µg/L, in December 2020 the benzene concentration was 626 µg/L and in December 2021 benzene was detected below the standard at 2.49 µg/L. For 2022 and 2023 concentrations of benzene have been below the standard on five occasions (Table 1).

The primary chemicals of concern are hydrocarbon constituents that have dissolved from the released crude oil. The NMWQCC standards for hydrocarbons in groundwater for this Site are:

- 5 µg/L for benzene
- 1000 µg/L for toluene
- 700 µg/L for ethylbenzene
- 620 µg/L for total xylenes

The polycyclic aromatic hydrocarbons (PAHs) analyses for all sampled wells showed no detections of any PAHs above the laboratory lower method reporting limit for five consecutive sampling events conducted from March 2018 to March 2019.

Groundwater samples were analyzed for TDS, chloride and RCRA metals, which included arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver for all sampled wells in 2014, 2016, 2017, 2019 and 2020. The analyses showed none of these constituents were above state standards in 2019 and 2020.

There is no threat to the environment or to drinking water wells located in the area caused by the release and any remaining impacts. Dissolved phase hydrocarbons have only been detected in the immediate area of the release and not down-gradient of the release. Other constituents, PAHs and RCRA metals, that may be associated with the released oil have not been detected consistently within the berm area near the release or outside the berm area and down-gradient of the release above state standards. Crude oil has not been measured in any wells since June 2020 and the only well that has shown detections of benzene above the standard is recovery well HTRW-1, which has not contained measurable crude oil since 2016.

2. Site Activities

Groundwater monitoring was conducted at the Site by GHD for 2022 in March, June, September, and December and for 2023 in March, May, September, and November. The groundwater monitoring included measurement of fluid levels in all monitoring wells and the recovery wells, and collection of groundwater samples for laboratory analysis for BTEX, total petroleum hydrocarbons gasoline range organics (TPH-GRO), and total petroleum hydrocarbons diesel range organics (TPH-DRO) per the work plan. Remediation activities for HTRW-1 have included EFR using a vacuum truck, Oxygen Release Compound (ORC®) socks (regenesis.com) and air injection and for wells RW-1 and HTRW-3 remediation has included EFR using a vacuum truck, and the placement of ORC® socks.

3. Groundwater Monitoring Procedures and Results

For this reporting period, fluid levels were measured in all monitoring wells and recovery wells at the Site in 2022 and 2023. Groundwater samples were collected on a semiannual basis from the monitor wells MW-4, and MW-5, and from recovery well HTRW-1, quarterly as per the work plan. Groundwater samples were not collected from monitoring wells MW-2 and MW-3 in 2022 and 2023, as the wells were dry or contained an insufficient amount of water for sample acquisition. Well RW-1 was sampled in September 2023 to access the groundwater quality and to guide remediation efforts in the area down-gradient of the tank and the release area. Wells MW-1, HTRW-2, HTRW-3 and HTRW-4 were not sampled in 2022 and 2023 as pre the work plan. Appendix A shows historical fluid levels from 2012 to December 2023. Table 1 summarizes hydrocarbon analytical results for 2022 and 2023. Appendix B summarizes historical analytical results from August 2004 to December 2023.

Prior to purging the wells and obtaining groundwater samples with a disposable bailer, fluid levels were measured in the wells that have historically contained crude oil using an oil/water level indicator. The groundwater samples were analyzed for BTEX by Method 8260 and for TPH-GRO and TPH-DRO by Method 8015. Groundwater samples were immediately placed into the appropriate laboratory provided containers and placed in an ice chilled cooler for transport to the DHL laboratory, Round Rock, Texas under chain of custody procedures.

March 2022

In March 2022, crude oil was not measured in any of the Site wells (Appendix A).

Water levels measured in March 2022 were similar to water levels measured in December 2021. Monitoring wells MW-2 and MW-3 were measured as dry. For the March 2022 monitoring period, the groundwater flow (Figure 4) was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in March 2021).

The March 2022 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Only well HTRW-1 was sampled this quarter. The March 2022 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

– Benzene was detected above the NMWQCC standard in well HTRW 1 at 585 µg/L.
– Ethylbenzene, toluene, and total xylenes were not detected in well HTRW-1 above the NMWQCC standards.
– TPH-GRO was detected at 1.28 mg/L and TPH-DRO was not detected above the laboratory lower reporting limit of 0.153 mg/L in well HTRW-1.

June 2022

In June 2022, crude oil was not measured in any of the wells during this quarter (Appendix A).

Water levels measured in June 2022 were slightly lower than water levels measured in March 2022 and wells MW-2 and MW-3 remained dry. For the June 2022 monitoring period, the groundwater flow was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in June 2021), as previously observed (Figure 5).

The June 2022 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Wells MW-4, MW-5, and HTRW-1 were sampled this quarter. The June 2022 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

– Benzene was detected below the NMWQCC standard in well HTRW 1 at 1.53 µg/L.
– Ethylbenzene, toluene, and total xylenes were not detected in well HTRW-1 above the NMWQCC standards.
– TPH-GRO and TPH-DRO were not detected in well HTRW-1 above the laboratory lower reporting limits.

The concentrations of dissolved hydrocarbons in groundwater during the June 2022 monitoring period were not detected in wells above the NMWQCC standards inside (MW-5) and outside (MW-4) the berm area (Figure 12).

September 2022

In September 2022, crude oil was not measured in any of the wells during this quarter (Appendix A).

Water levels measured in September 2022 were approximately 0.20 feet lower than water levels measured in June 2022 and wells MW-2 and MW-3 were dry. For the September 2022 monitoring period the groundwater flow (Figure 6) was towards the east with a gradient of 0.002 ft/ft (0.001 ft/ft in September 2020).

The September 2022 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Only well HTRW-1 was sampled this quarter and wells MW-4 and MW-5 were not sampled this quarter. The September 2022 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

– Benzene was detected below the NMWQCC standard in well HTRW-1 at 0.429 µg/L.
– Toluene, ethyl benzene and total xylenes were not detected above the NMWQCC standards in HTRW-1.
– TPH-GRO was not detected above the lower laboratory limit of 0.06 mg/L and TPH-DRO was detected at 0.321 mg/L in well HTRW-1.

December 2022

In December 2022, crude oil was not measured in any of the wells during this quarter (Appendix A).

Water levels measured in December 2022 were generally 0.10 feet lower than water levels measured in September 2022. For the December 2022 monitoring period the groundwater flow (Figure 7) was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in December 2021).

The December 2022 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. The December 2022 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

– None of the BTEX constituents were detected above the NMWQCC standards in wells HTRW-1, MW-4 and MW-5.
– TPH-GRO and TPH-DRO were not detected above the lower laboratory reporting limits in wells MW-4, MW-5, and HTRW-1.

Concentrations of dissolved hydrocarbons in groundwater during the December 2022 monitoring period were not detected in wells above the NMWQCC standards inside and outside the berm area (Figure 12).

March 2023

In March 2023, crude oil was not measured in any of the Site wells (Appendix A).

Water levels measured in March 2023 were lower than water levels measured in December 2022. Monitoring wells MW-2 and MW-3 were measured as dry. For the March 2023 monitoring period, the groundwater flow (Figure 8) was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in March 2022).

The March 2023 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Only well HTRW-1 was sampled this quarter. The March 2023 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

– Benzene was detected above the NMWQCC standard in well HTRW-1 at 21.5 µg/L in the original sample and 7.99 µg/L in the duplicate sample.
– Ethylbenzene, toluene, and total xylenes were not detected in well HTRW-1 above the NMWQCC standards.
– TPH-GRO was detected at 0.223 mg/L in the original sample and 0.189 mg/L in the duplicate sample for well HTRW-1.
– TPH-DRO was detected at 0.285 mg/L in the original sample and 0.282 mg/L in the duplicate sample for HTRW-1.

May 2023

In May 2023, crude oil was not measured in any of the wells during this quarter (Appendix A).

Water levels measured in May 2023 were similar to the water levels measured in March 2023 and wells MW-2 and MW-3 remained dry. For the May 2023 monitoring period, the groundwater flow was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in June 2022), as previously observed (Figure 9).

The May 2023 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Wells MW-4, MW-5 and HTRW-1 were sampled this quarter. The May 2023 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

– Benzene was detected above the NMWQCC standard in well HTRW-1 at 10.5 µg/L in the original sample and 10.2 µg/L in the duplicate sample.
– Ethylbenzene, toluene, and total xylenes were not detected in well HTRW-1 above the NMWQCC standards.
– TPH-GRO was detected in well HTRW-1 at 0.129 mg/L in the original sample and at less than 0.06 mg/L in the duplicate sample.

- TPH-DRO was at less than 0.149 mg/L in the original sample and 0.153 mg/L in the duplicate sample for well HTRW-1.
- None of the BETX constituents were detected above the standards and TPH-GRO and TPH-DRO were not detected above the lower laboratory limits in wells MW-4 and MW-5.

Concentrations of dissolved hydrocarbons in groundwater during the May 2023 monitoring period were not detected in wells above the NMWQCC standards outside the berm area (Figure 12).

September 2023

In September 2023, crude oil was not measured in any of the wells during this quarter (Appendix A).

Water levels measured in September 2023 were approximately 0.20 to 0.50 feet lower than water levels measured in May 2023 and wells MW-2 and MW-3 were dry. For the September 2023 monitoring period the groundwater flow (Figure 10) was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in September 2022). Due to MW-1 being dry for the last 8 quarters, a groundwater sample was collected from adjacent recovery well RW-1 in September 2023 to evaluate groundwater conditions immediately down gradient (i.e., east) of Tank 5201. RW-1 is not a monitoring well, but a 4-inch recovery well that was installed to recover the released crude oil in the area of the tank (crude oil has not been measured in RW-1 since March 2019).

The September 2023 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Wells MW-4, MW-5 HTRW-1, and RW-1 were sampled this quarter. The September 2023 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

- Benzene was detected in well HTRW 1 at 4.60 µg/L in the original sample and 5.81 µg/L in the duplicate sample.
- Toluene, ethyl benzene and total xylenes were not detected above the NMWQCC standards in HTRW-1.
- TPH-GRO was detected in well HTRW-1 at 0.081 mg/L in the original sample and 0.075 mg/L in the duplicate sample.
- TPH-DRO was not detected in well HTRW-1 above the lower laboratory limit in both original and duplicate samples.
- None of the BETX constituents were detected above the standards and TPH-GRO and TPH-DRO were not detected above the lower laboratory limits in wells MW-4 and MW-5.
- Benzene was detected above the standard in the investigative sample for the recovery well RW-1 at 77.3 µg/L. Toluene, ethylbenzene, and total xylenes were not detected above the standards in RW-1. TPH-GRO was not detected above the lower laboratory limit and TPH-DRO was detected at 0.607 mg/L in this well.

November 2023

In November 2023, crude oil was not measured in any of the wells during this quarter (Appendix A).

Water levels measured in November 2023 were similar to water levels measured in September 2023. For the November monitoring period the groundwater flow (Figure 11) was towards the east with a gradient of 0.001 ft/ft (0.001 ft/ft in December 2022).

The November 2023 hydrocarbon concentrations for each sampled well are shown in Table 1, Figure 12 and in Appendix B. Wells MW-2 and MW-3 were not sampled due to insufficient water in the wells. Only well HTRW-1 was sampled this quarter. The November 2023 laboratory report is contained Appendix D.

The analytical results for this monitoring period are summarized as follows:

- Benzene was detected below the NMWQCC standard in well HTRW-1 at 3.50 µg/L in the original sample and at 3.60 µg/L in the duplicate sample.
- Toluene, ethyl benzene and total xylenes were not detected above the NMWQCC standards in HTRW-1.
- TPH-GRO and TPH-DRO were not detected above the lower laboratory reporting limits in well HTRW-1.

4. QA/QC Results

Quality Assurance/Quality Control (QA/QC) measures were followed according to the abatement plan. A summary of the QA/QC analytical results for 2023 is presented in Table 2.

In March 2023, QA/QC samples included a trip blank, and a duplicate groundwater sample obtained at well HTRW-1. There were no hydrocarbon detections in the trip blank. For the duplicate sample, there was a 46% difference in the results for benzene and toluene, 25% difference in the results for ethylbenzene, a 29% difference in the results for total xylenes, 8% difference in the results for TPH-GRO and a less than 1% difference in the results for TPH-DRO.

In May 2023, QA/QC samples included a trip blank, and a duplicate groundwater sample obtained at well HTRW-1. There were no hydrocarbon detections in the trip blank. For the duplicate sample, there was a 1.5% difference in the results for benzene, 2.5% difference in the results for toluene, 6% difference in the results for ethylbenzene, a 1% difference in the results for total xylenes, 37% difference in the results for TPH-GRO and a 1% difference in the results for TPH-DRO.

In September 2023, QA/QC samples included a trip blank, and a duplicate groundwater sample obtained at well HTRW-1. There were no hydrocarbon detections in the trip blank. For the duplicate sample, here was a 11.6% difference in the results for benzene, 11% difference in the results for toluene, 48% difference in the results for ethylbenzene, a 3% difference in the results for total xylenes, 3.5% difference in the results for TPH-GRO and a 0% difference in the results for TPH-DRO.

In November 2023, QA/QC samples included a trip blank, and a duplicate groundwater sample obtained at well HTRW-1. There were no hydrocarbon detections in the trip blank. For the duplicate sample, there were no differences in the results for benzene, toluene, ethylbenzene, total xylenes, TPH-GRO and TPH-DRO.

Each cooler containing the groundwater samples was shipped to the laboratory with a temperature blank and a laboratory prepared trip blank. The trip blank samples were analyzed for BTEX and TPH-GRO. 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, except the data obtained in March. All other data is suitable for use in this report.

5. Remediation Status

EFR was used to recover the released crude oil from December 2015 to 2018 and oil absorbent socks were used periodically for any de minimus remaining oil. Since 2018, EFR has been used on wells RW-1, HTRW-1, and HTRW-3 and on occasion used on well HTRW-2 to remove dissolved phase hydrocarbons and any de minimus oil.

In addition to EFR, remediation activities for HTRW-1 have included use of Cool-Ox (calcium peroxide), ORC® socks, and air sparging. Five gallons of Cool-Ox were poured into HTRW-1 on December 8, 2022, primarily to clean the well of any residual crude oil and to reduce hydrocarbon concentrations. An air sparging system was installed in 2021 for well HTRW-1 with air being pumped into the well continuously. The ORC® socks were installed in wells HTRW-1, RW-1 and HTRW-3 in March 2023.

For 2024, ORC® socks will continue to be used on wells RW-1, and HTRW-3 and EFR will be used biweekly on these wells. For well, HTRW-1, EFR will continue to be used biweekly in 2024, and the ORC® socks and air sparging will continue to be maintained throughout 2024.

6. Conclusions and Recommendations

The remedial approach for the impacted area was to remove the crude oil to a negligible amount, to enhance biodegradation in the area where crude oil was measured and to reduce hydrocarbon concentrations. The crude oil thickness from the release has declined to none measured due to removal of the crude oil by pumping, the use of EFR and oil absorbent socks. The use of EFR has also been used to remove impacted water and to stimulate biodegradation by increasing the dissolved oxygen. The use of EFR, air sparging and use of the ORC® socks in HTRW-1 was primarily to promote biodegradation by increasing dissolved oxygen and secondarily to reduce hydrocarbons by volatizing the hydrocarbons with the air sparging. The use of these remediation methods on this well has shown benzene concentrations can be reduced from a high of 1620 µg/L in 2017 to below the standard, presently.

The dissolved phase hydrocarbon concentrations in well HTRW-1 have been declining with five out of the last eight quarters showing detections of benzene below the NMWQCC standard (Table 1). The present remedial approach demonstrates that benzene can be reduced to below the standard at HTRW-1. The use of EFR was reduced and air sparging equipment was not working properly for HTRW-1 from November 2022 to August 2023. Benzene concentrations increased during this time period in this well. ORC® socks were deployed in the release area wells in March 2023 and the frequency of EFR was increased in the area and adequate oxygen stimulation was increased in HTRW-1 in September 2023. As a result, benzene was reduced in HTRW-1 to below the standard in December 2023 (Table 1 and Figure 14).

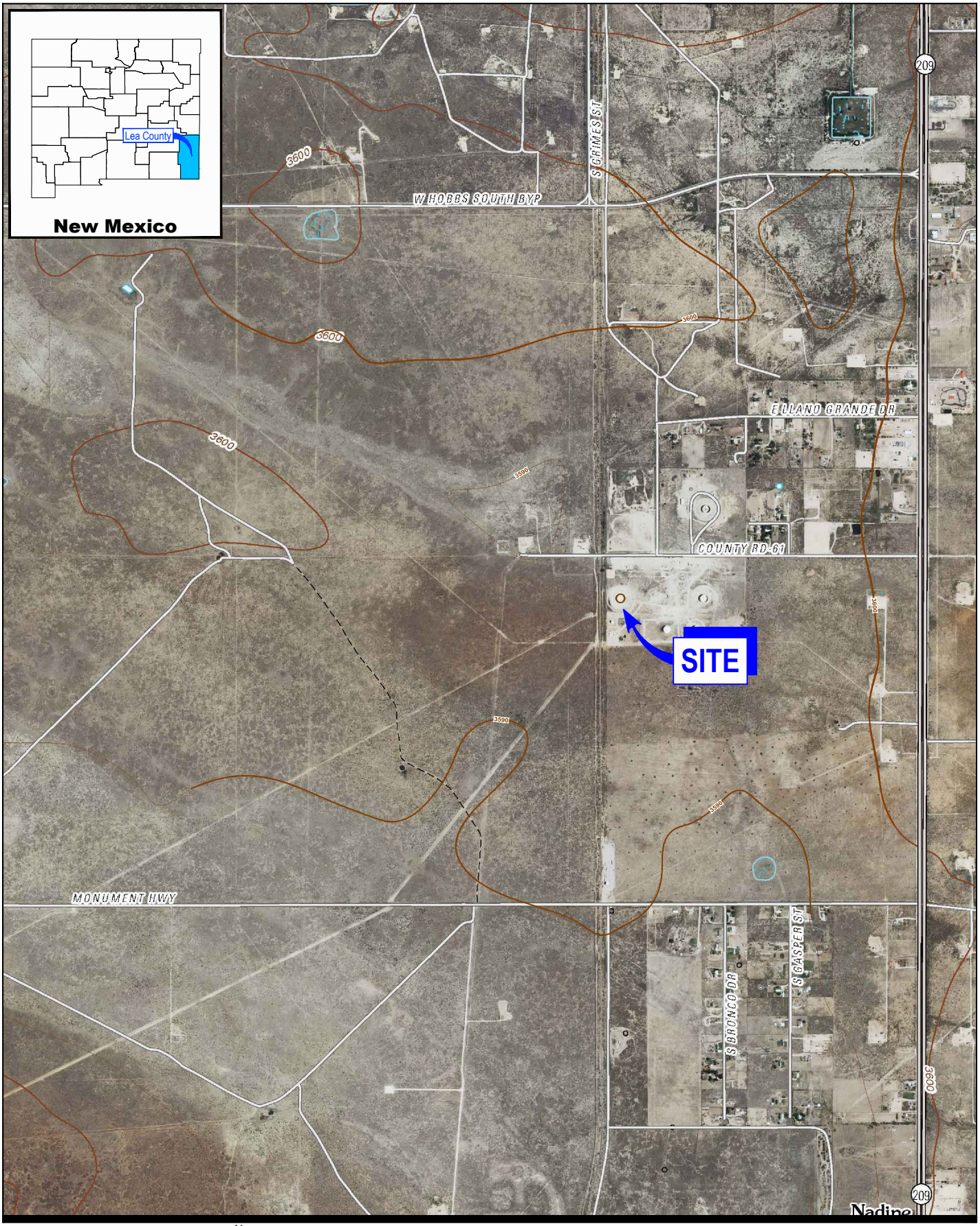
There has been no measurable crude oil in any of the Site wells since June 2020. Hydrocarbon concentrations, specifically benzene, fluctuated in well HTRW-1 during 2022 and 2023 and sporadically exceeded the NMWQCC standard for benzene. Overall, benzene concentrations have decreased in HTRW-1 because of Site remediation efforts, which have included EFR, ORC® socks, air sparging. Concentrations of dissolved hydrocarbons in groundwater during this reporting period and since 2005 were not detected in wells above the NMWQCC standards outside the berm area (Figure 12). However, in the immediate area of the release groundwater is still impacted as shown in the laboratory results for well RW-1 that showed benzene above the standard. The sampling of well RW-1 was to obtain information to guide remediation efforts and is not presently scheduled to be sampled in 2024. In conclusion, the remedial efforts for the reduction of dissolved hydrocarbon constituents in the area will continue to include EFR, and ORC® socks and air sparging for well HTRW-1 only.

Recommendations for 2024 include the following;

- Continue air sparging on a continuous basis in well HTRW-1.
- Continue use of EFR every two weeks on wells RW-1, HTRW-1, HTRW-2, and HTRW-3.
- Continue use of Oxygen Release Compound (ORC®) socks on an annual basis in wells RW-1, HTRW-1 and HTRW-3.
- Continue groundwater monitoring as per the work plan; sampling HTRW-1 quarterly and wells MW-2, MW-3, MW-4 and MW-5 semiannually if sufficient water is available in these wells.
- Sample well RW-1 if additional remedial information is needed.

All groundwater samples will continue to be analyzed for BTEX, GRO and DRO. The remedial strategy for site closure is based on the current NMWQCC and NMOCD requirements. To close the Site with no further action, the crude oil would have to be removed separately from groundwater (19.15.17.13 NMAC), which has not been measured in any of the Site wells since June 2020. None of the down-gradient wells have had any hydrocarbons above the NMWQCC standards since 2005. While well RW-1 is not a monitoring well, a groundwater sample collected from this well in 2023 indicated the presence of a benzene concentration above the NMWQCCC standard. It is recommended remediation will be continued at well RW-1 during 2023 to further reduce remaining hydrocarbon concentrations. Since September 2021, there have been seven out of ten quarters with no detections of benzene above the state standard in well HTRW-1.

Figures



0 1000 2000 ft

1" = 2000 ft

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

Project No. **12604310**
Date **February 2024**

SITE LOCATION MAP

FIGURE 1

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Plot Date: 08 February 2024 9:50 PM

Data Source: USGS 7.5 Minute Quad "Hobbs West and Hobbs East, New Mexico"
Lat/Long: 32.6549° North, 103.1382° West

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

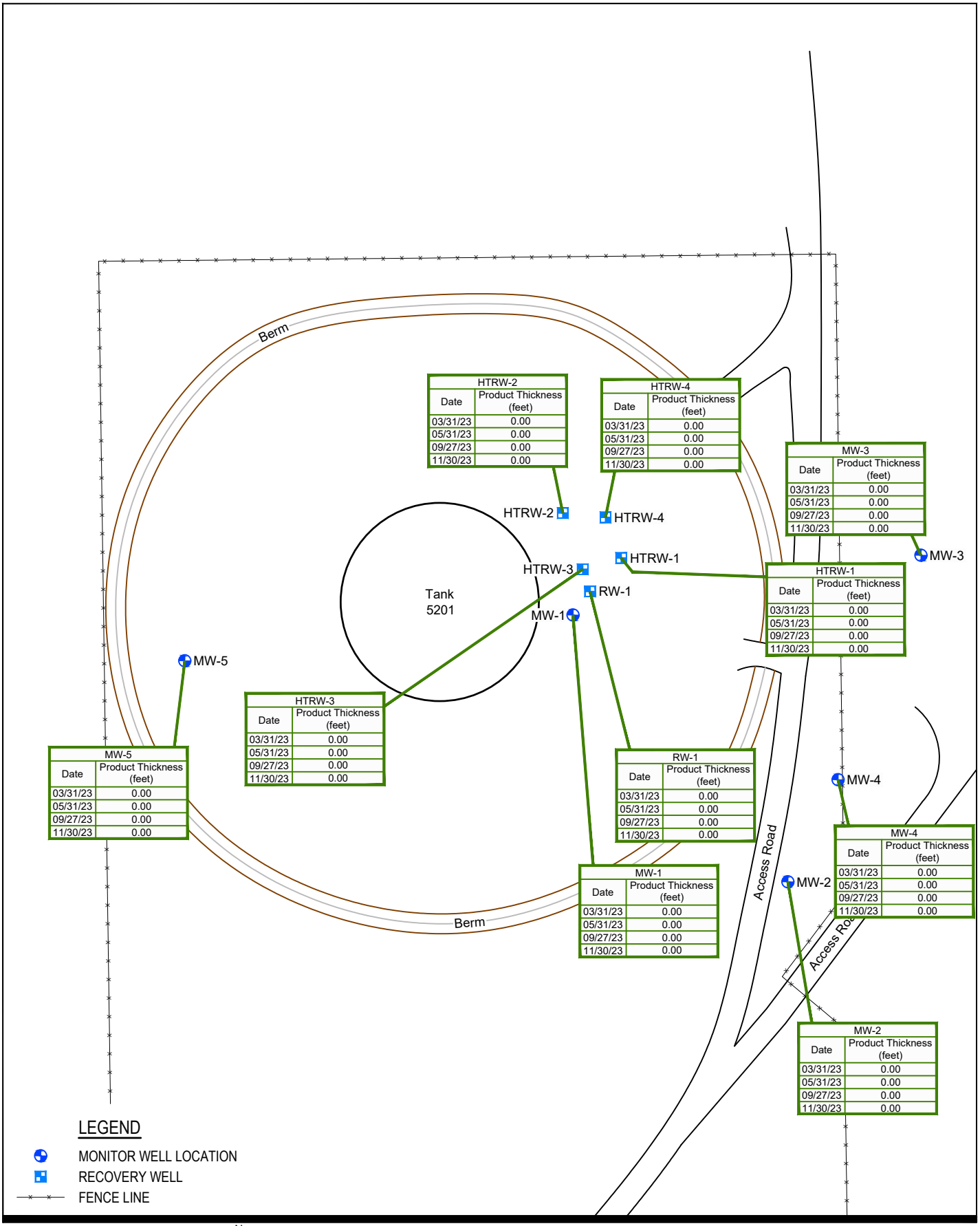
Project No. **12604310**
Date **February 2024**

SITE MAP

FIGURE 2

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 08 February 2024 9:49 PM

Data Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation
Lat/Long: 32.6549° North, 103.1382° West



HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

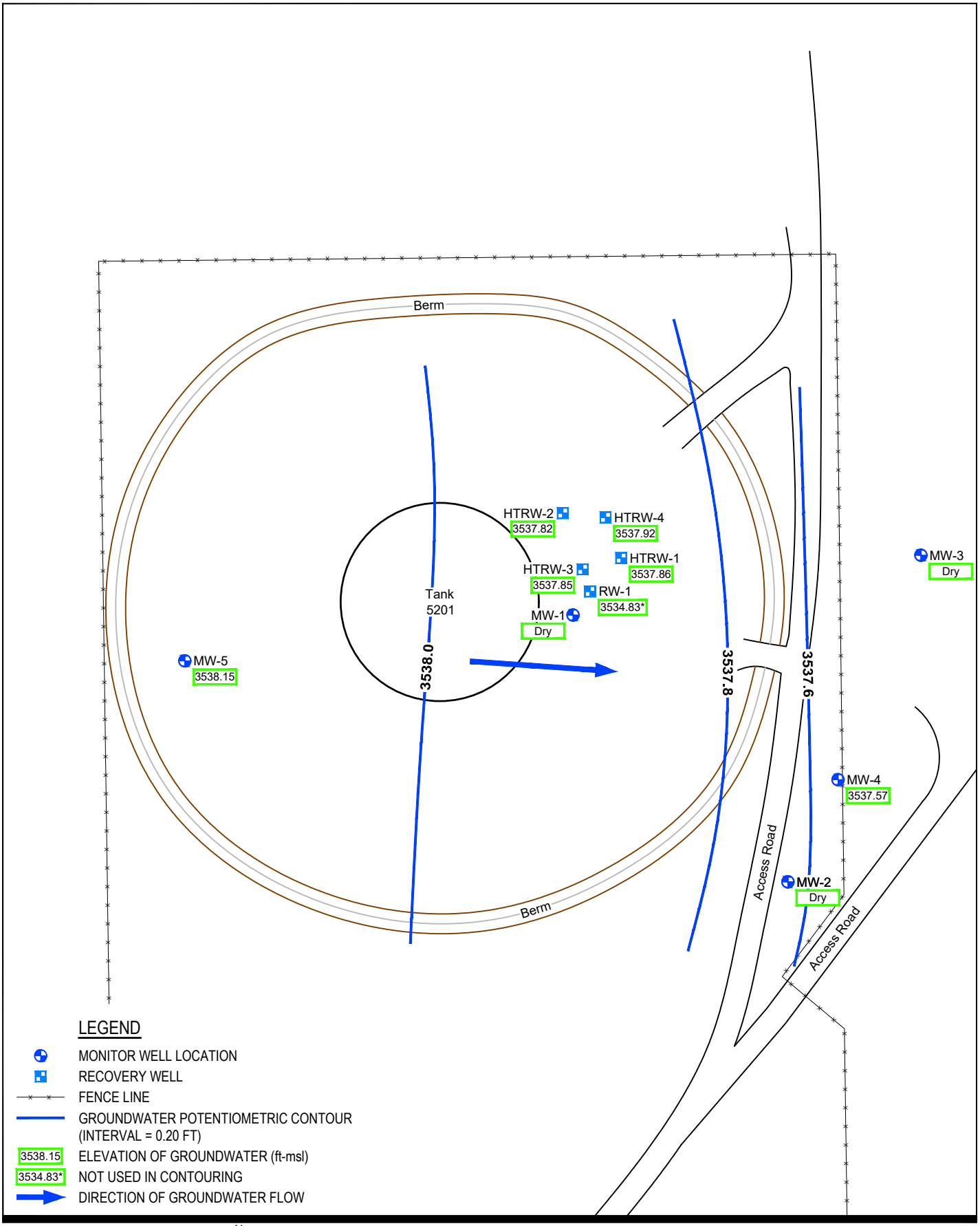
Project No. **12604310**
Date **February 2024**

PRODUCT THICKNESS MAP - MARCH 2023 TO DECEMBER 2023

FIGURE 3

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 08 February 2024 9:49 PM

Lat/Long: 32.6549° North, 103.1382° West



HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

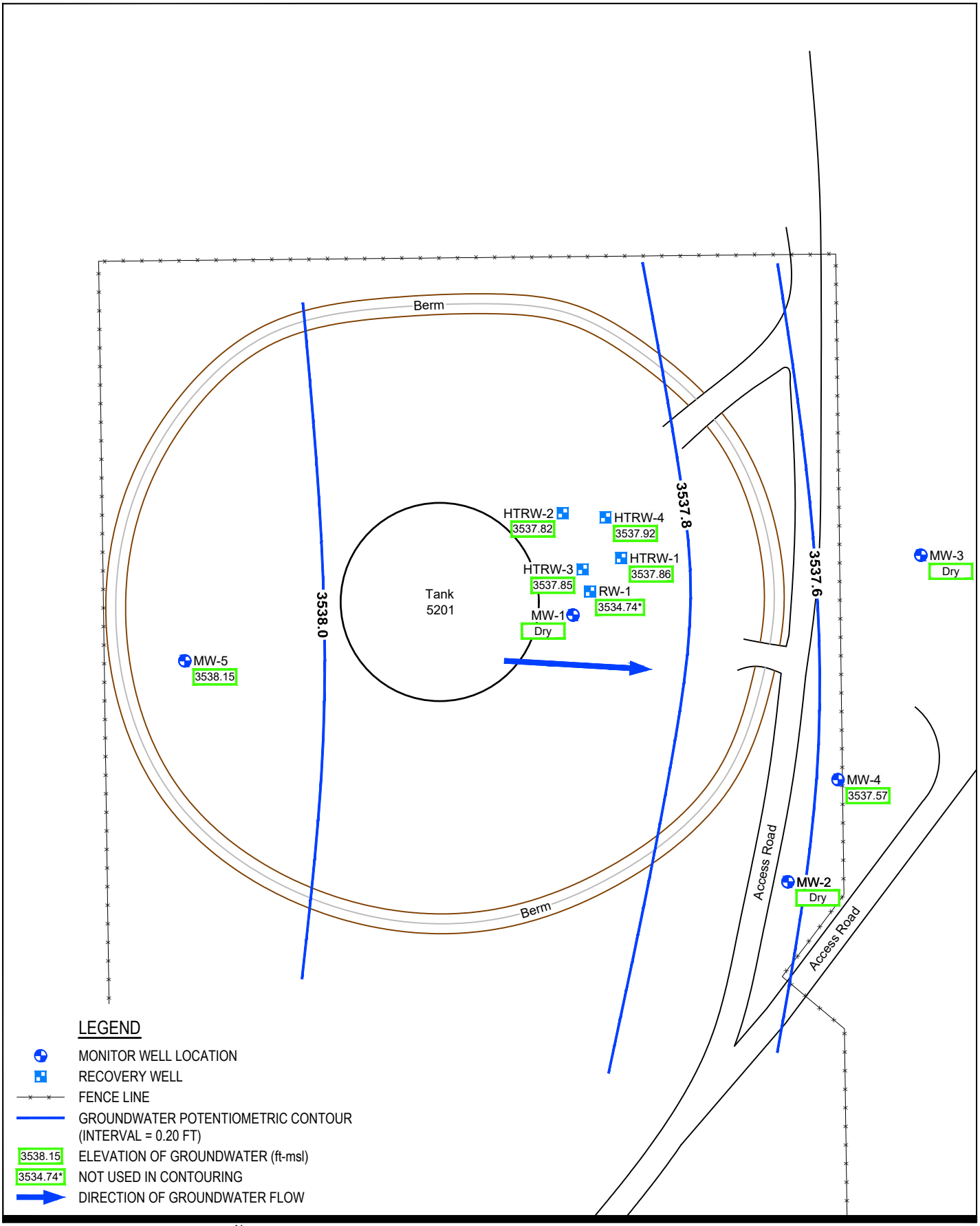
Project No. **12604310**
Date **February 2024**

GROUNDWATER SURFACE MAP - MARCH 2022

FIGURE 4

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 08 February 2024 9:47 PM

Lat/Long: 32.6549° North, 103.1382° West



0 40 80 ft

1" = 80 ft

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

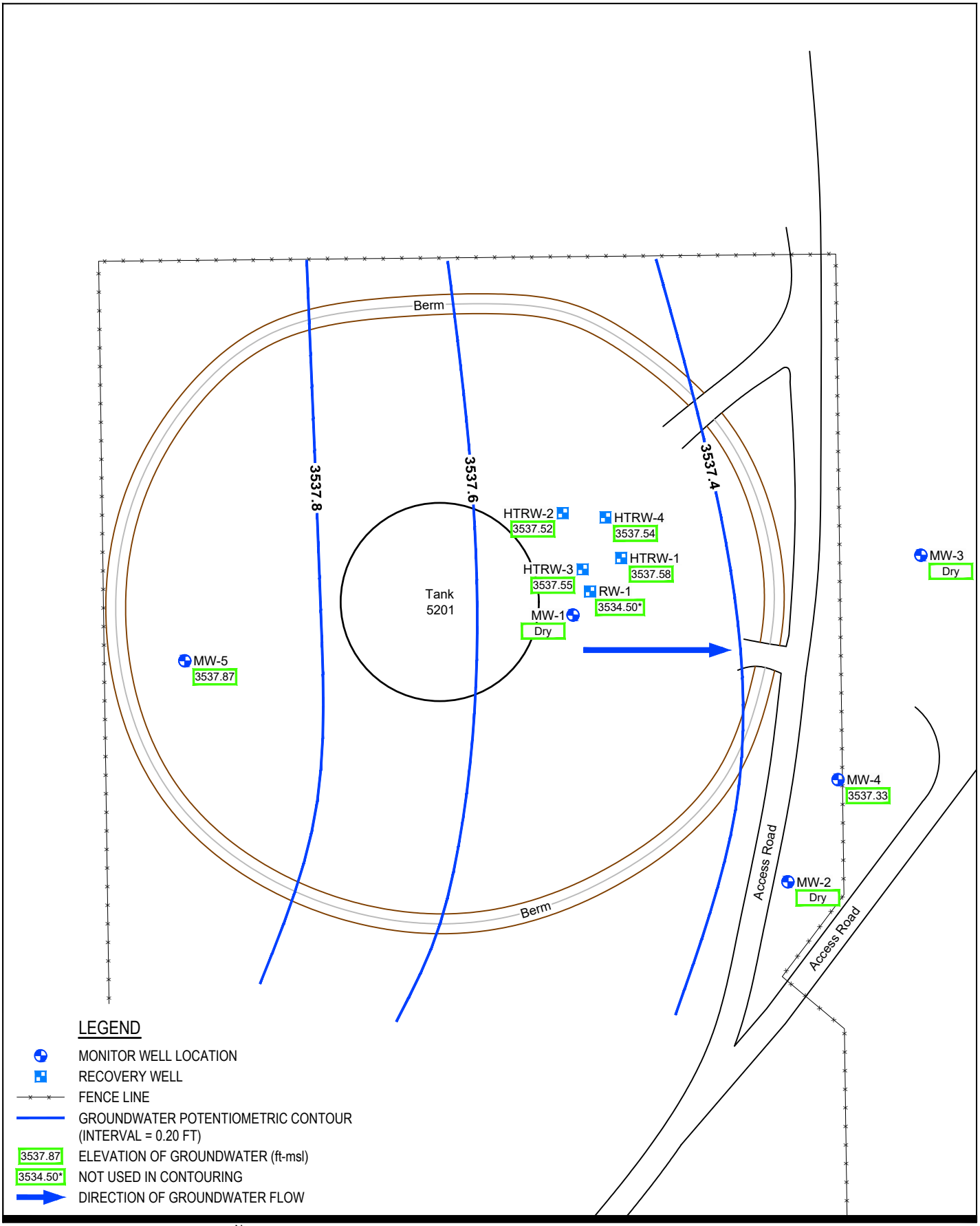
Project No. **12604310**
Date **March 2024**

GROUNDWATER SURFACE MAP - JUNE 2022

FIGURE 5

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 20 March 2024 1:01 PM

Lat/Long: 32.6549° North, 103.1382° West



LEGEND

- MONITOR WELL LOCATION
- RECOVERY WELL
- FENCE LINE
- GROUNDWATER POTENTIOMETRIC CONTOUR (INTERVAL = 0.20 FT)
- 3537.87 ELEVATION OF GROUNDWATER (ft-msl)
- 3534.50* NOT USED IN CONTOURING
- DIRECTION OF GROUNDWATER FLOW

0 ## #####

##########

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

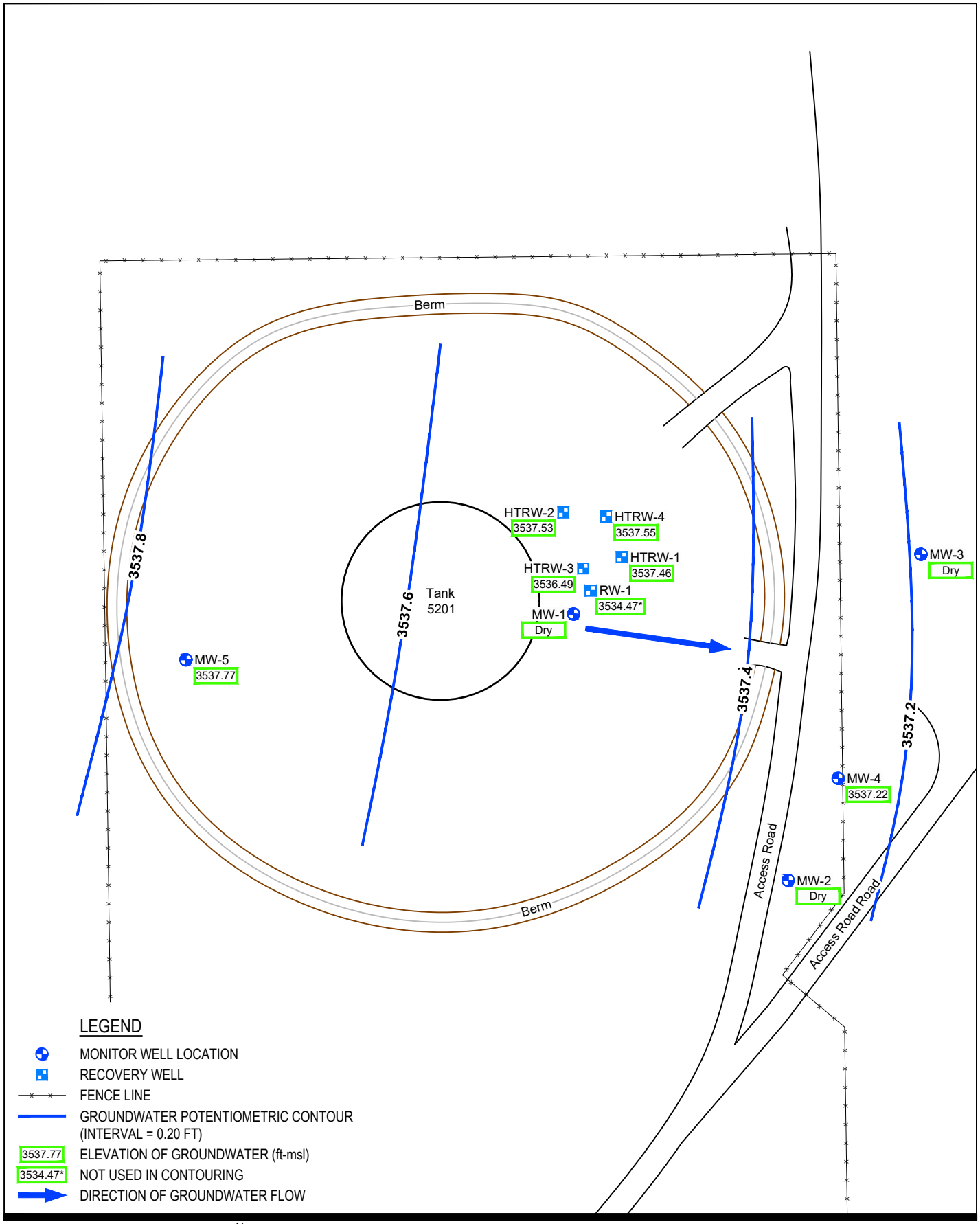
GROUNDWATER SURFACE MAP - SEPTEMBER 2022

Project No. **12604310**
Date **February 2024**

FIGURE 6

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 08 February 2024 9:46 PM

Lat/Long: 32.6549° North, 103.1382° West



HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

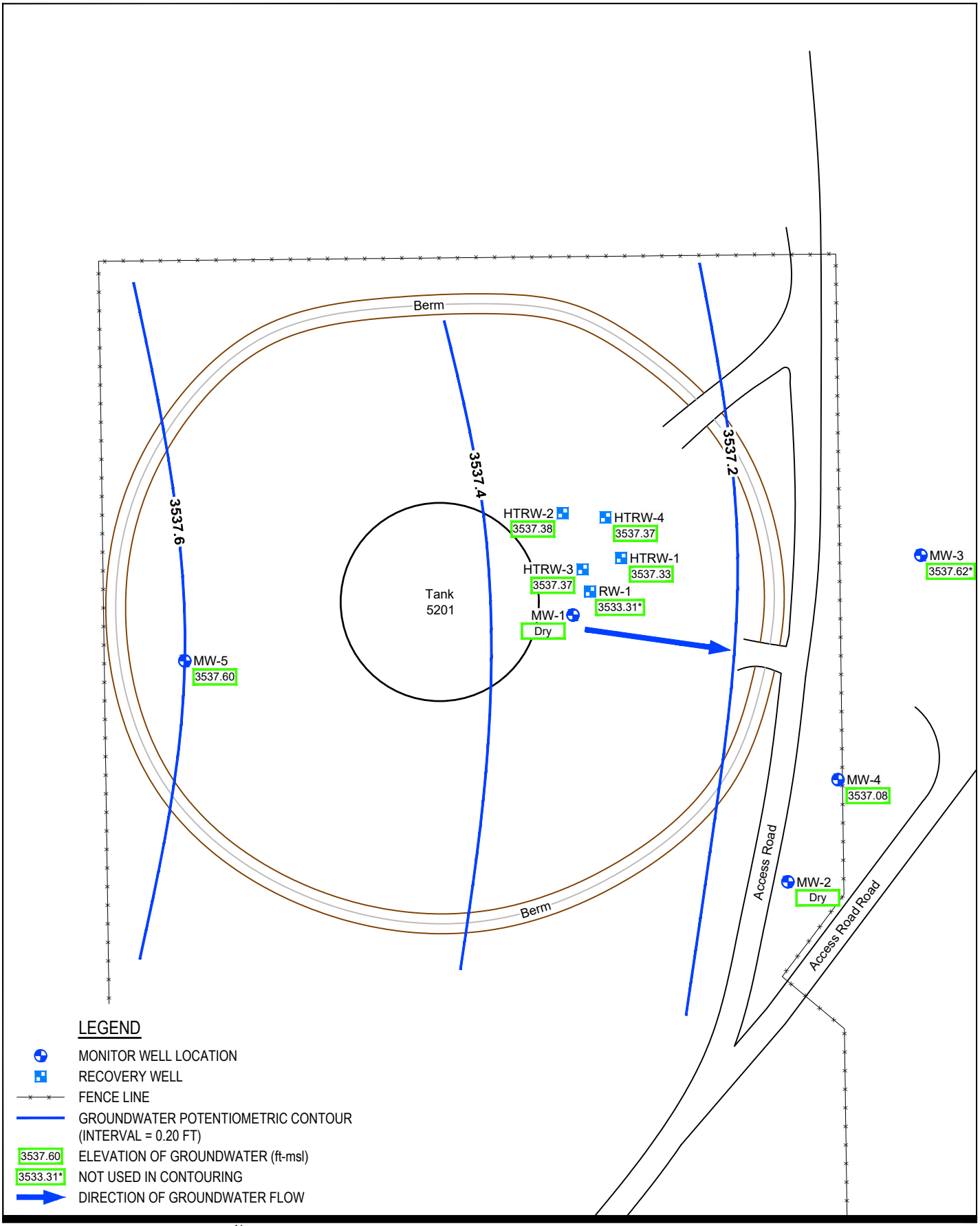
Project No. **12604310**
Date **February 2024**

GROUNDWATER SURFACE MAP - DECEMBER 2022

FIGURE 7

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 08 February 2024 9:46 PM

Lat/Long: 32.6549° North, 103.1382° West



0 40 80 ft

1" = 80 ft

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

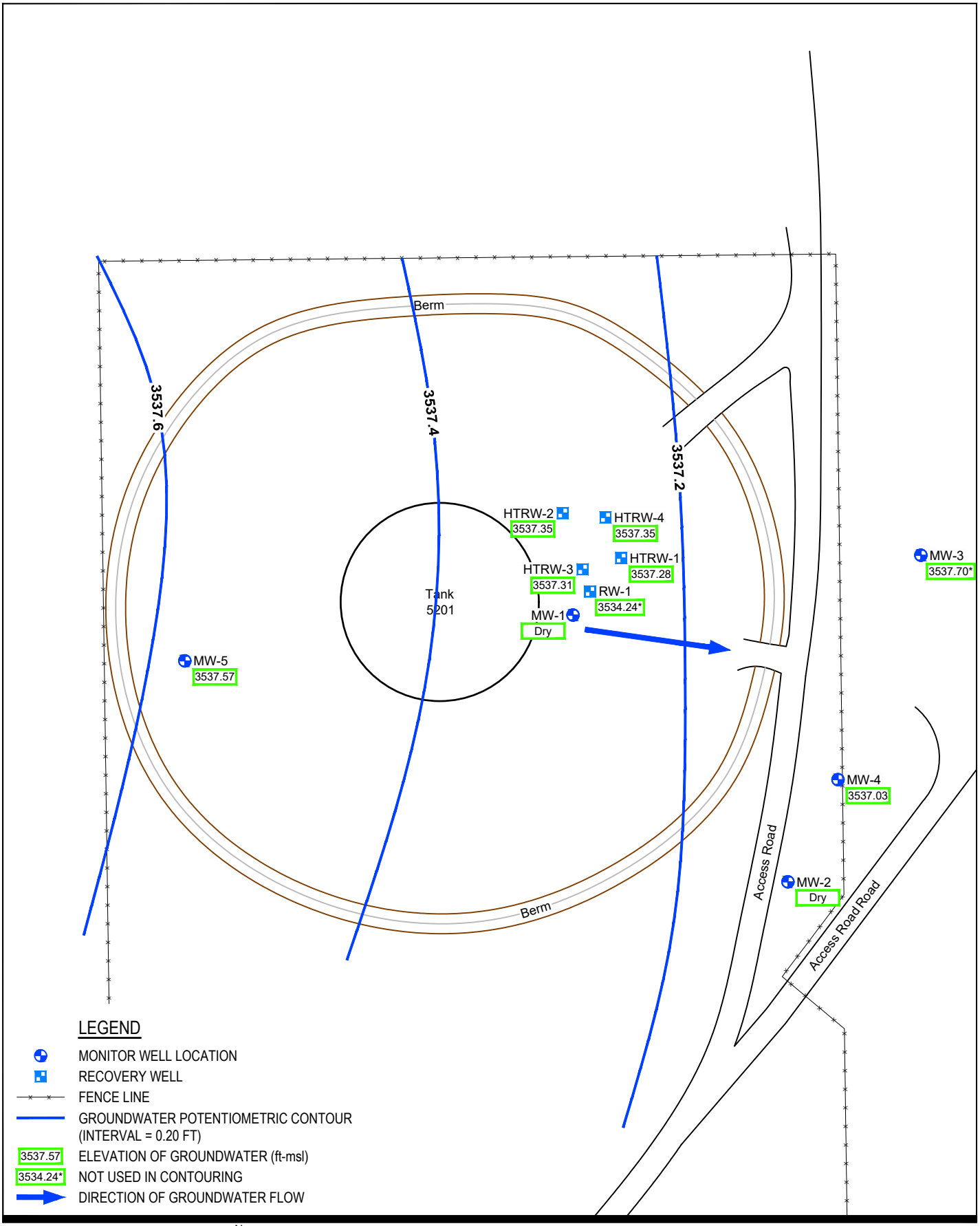
GROUNDWATER SURFACE MAP - MARCH 2023

Project No. **12604310**
Date **March 2024**

FIGURE 8

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 20 March 2024 12:42 PM

Lat/Long: 32.6549° North, 103.1382° West



LEGEND

- MONITOR WELL LOCATION
- RECOVERY WELL
- FENCE LINE
- GROUNDWATER POTENTIOMETRIC CONTOUR (INTERVAL = 0.20 FT)
- 3537.57 ELEVATION OF GROUNDWATER (ft-msl)
- 3534.24* NOT USED IN CONTOURING
- DIRECTION OF GROUNDWATER FLOW

0 40 80 ft

1" = 80 ft

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

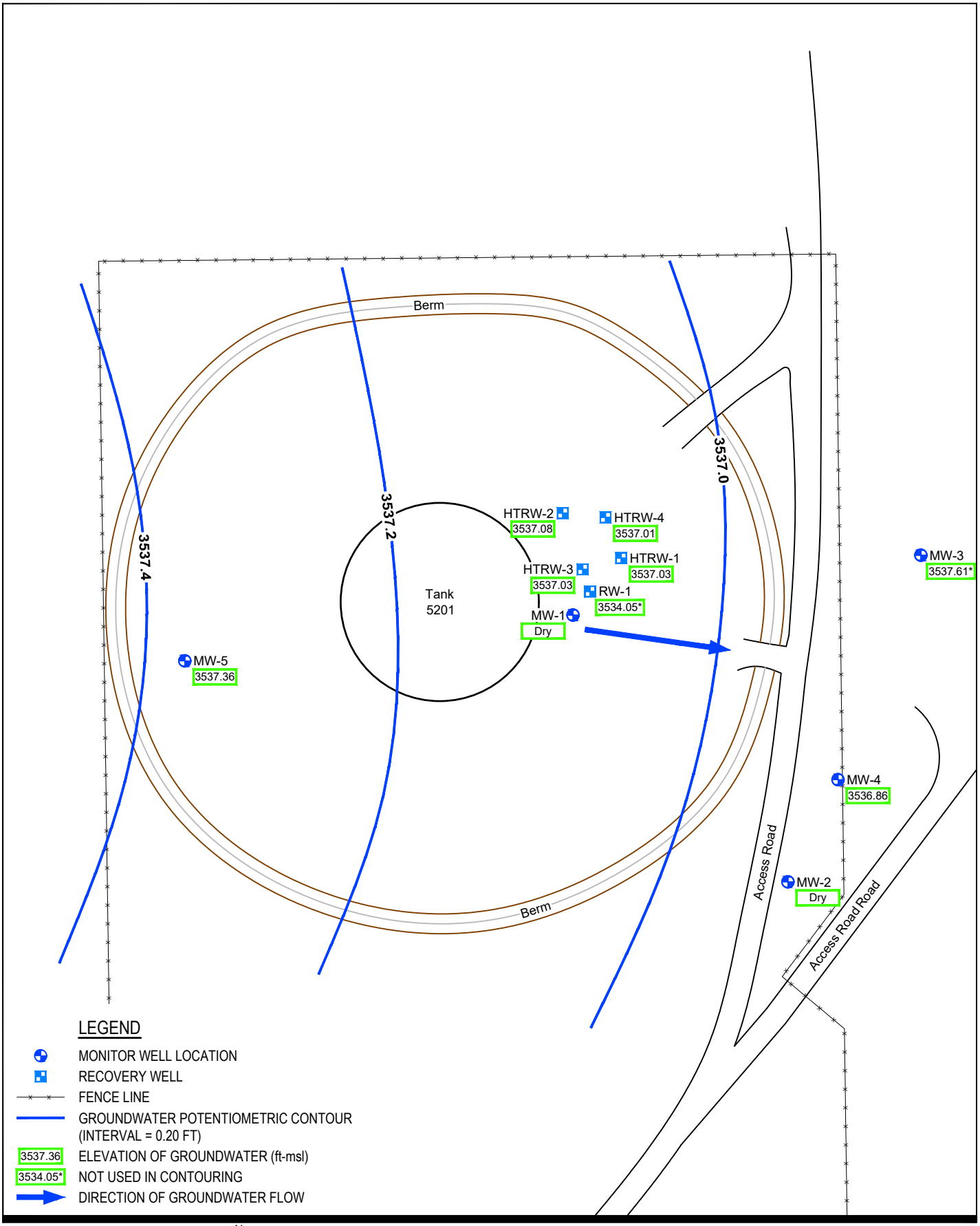
GROUNDWATER SURFACE MAP - MAY 2023

Project No. **12604310**
Date **February 2024**

FIGURE 9

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 14 February 2024 2:28 PM

Lat/Long: 32.6549° North, 103.1382° West



0 40 80 ft

1" = 80 ft

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

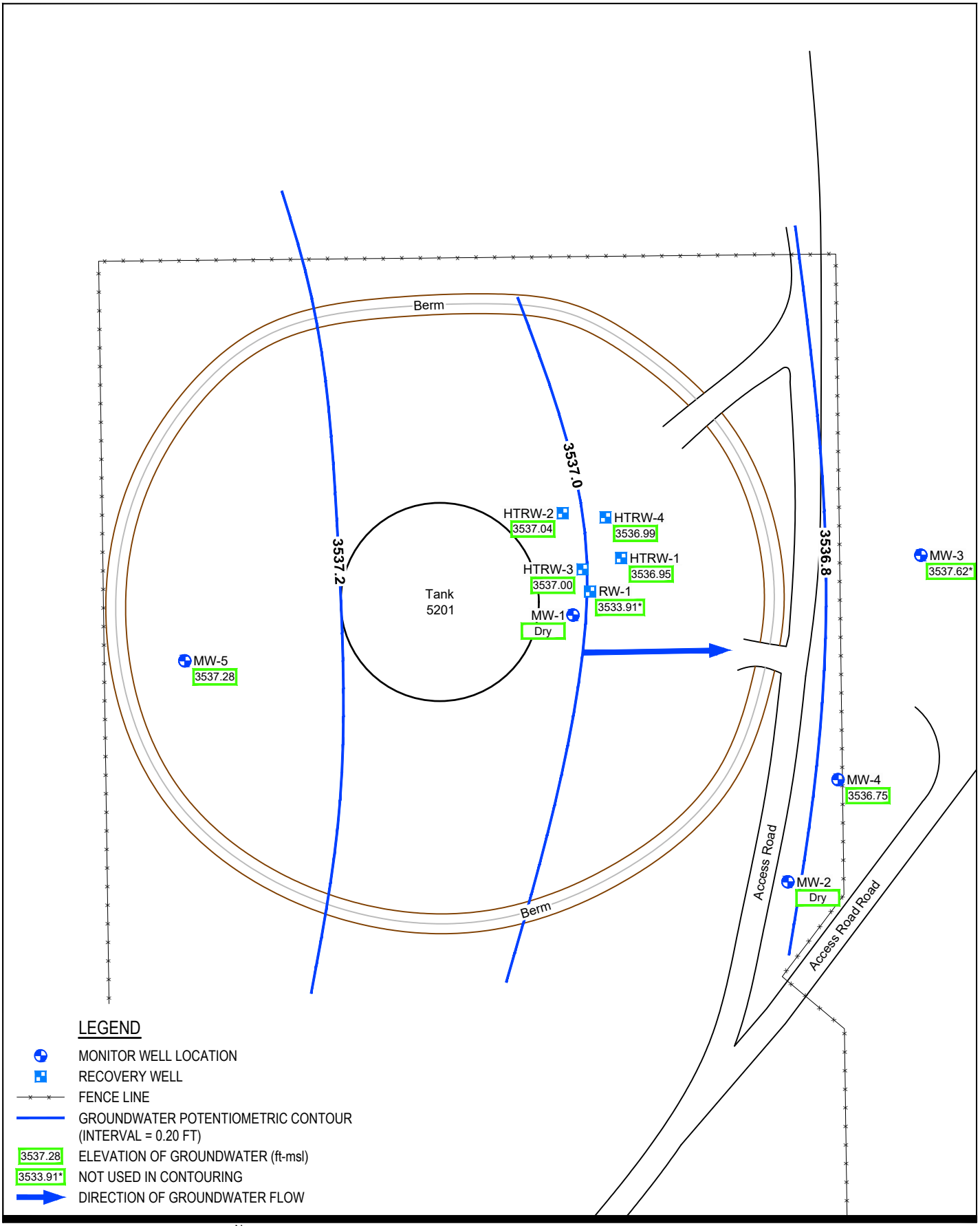
GROUNDWATER SURFACE MAP - SEPTEMBER 2023

Project No. **12604310**
Date **February 2024**

FIGURE 10

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 14 February 2024 2:28 PM

Lat/Long: 32.6549° North, 103.1382° West



LEGEND

- MONITOR WELL LOCATION
- RECOVERY WELL
- FENCE LINE
- GROUNDWATER POTENTIOMETRIC CONTOUR (INTERVAL = 0.20 FT)
- 3537.28 ELEVATION OF GROUNDWATER (ft-msl)
- 3533.91* NOT USED IN CONTOURING
- DIRECTION OF GROUNDWATER FLOW

0 40 80 ft

1" = 80 ft

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

N

GHD

HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

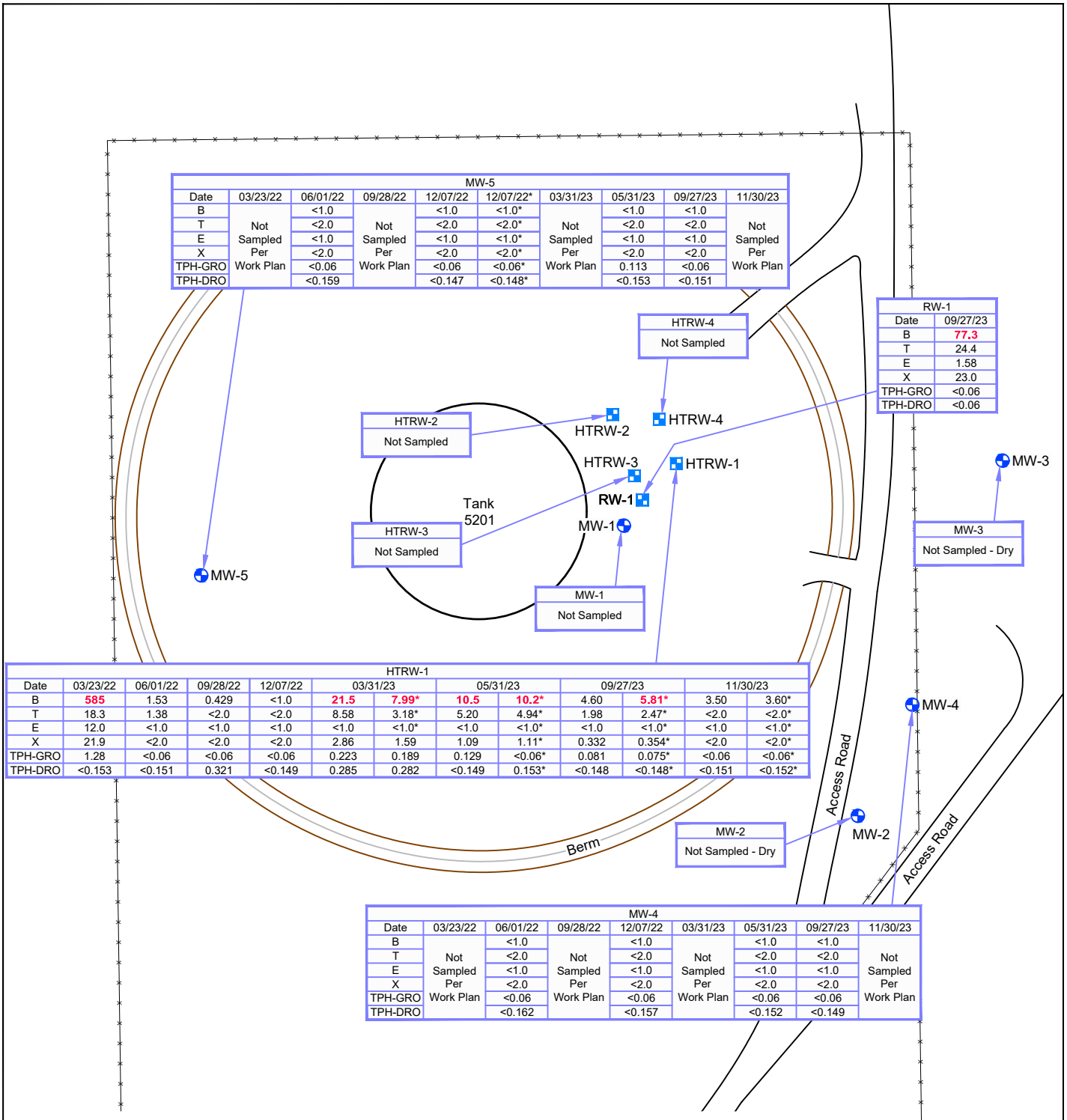
GROUNDWATER SURFACE MAP - NOVEMBER 2023

Project No. **12604310**
Date **March 2024**

FIGURE 11

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 20 March 2024 12:29 PM

Lat/Long: 32.6549° North, 103.1382° West



HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

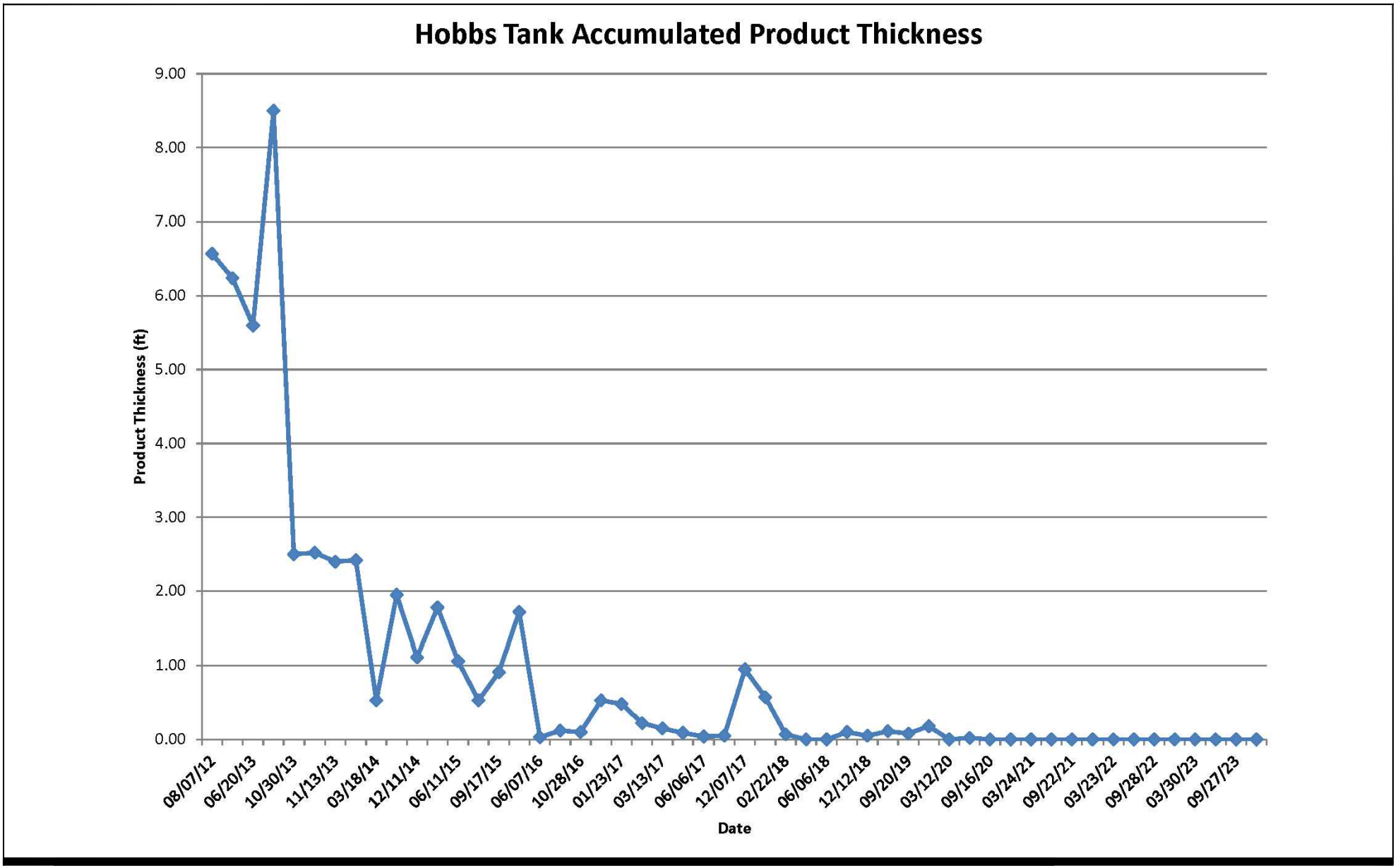
Project No. **12604310**
Date **March 2024**

ANALYTICAL MAP FOR MARCH 2022 TO NOVEMBER 2023

FIGURE 12

Filename: \\ghdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot Date: 20 March 2024 1:10 PM

Lat/Long: 32.6549° North, 103.1382° West



GHD

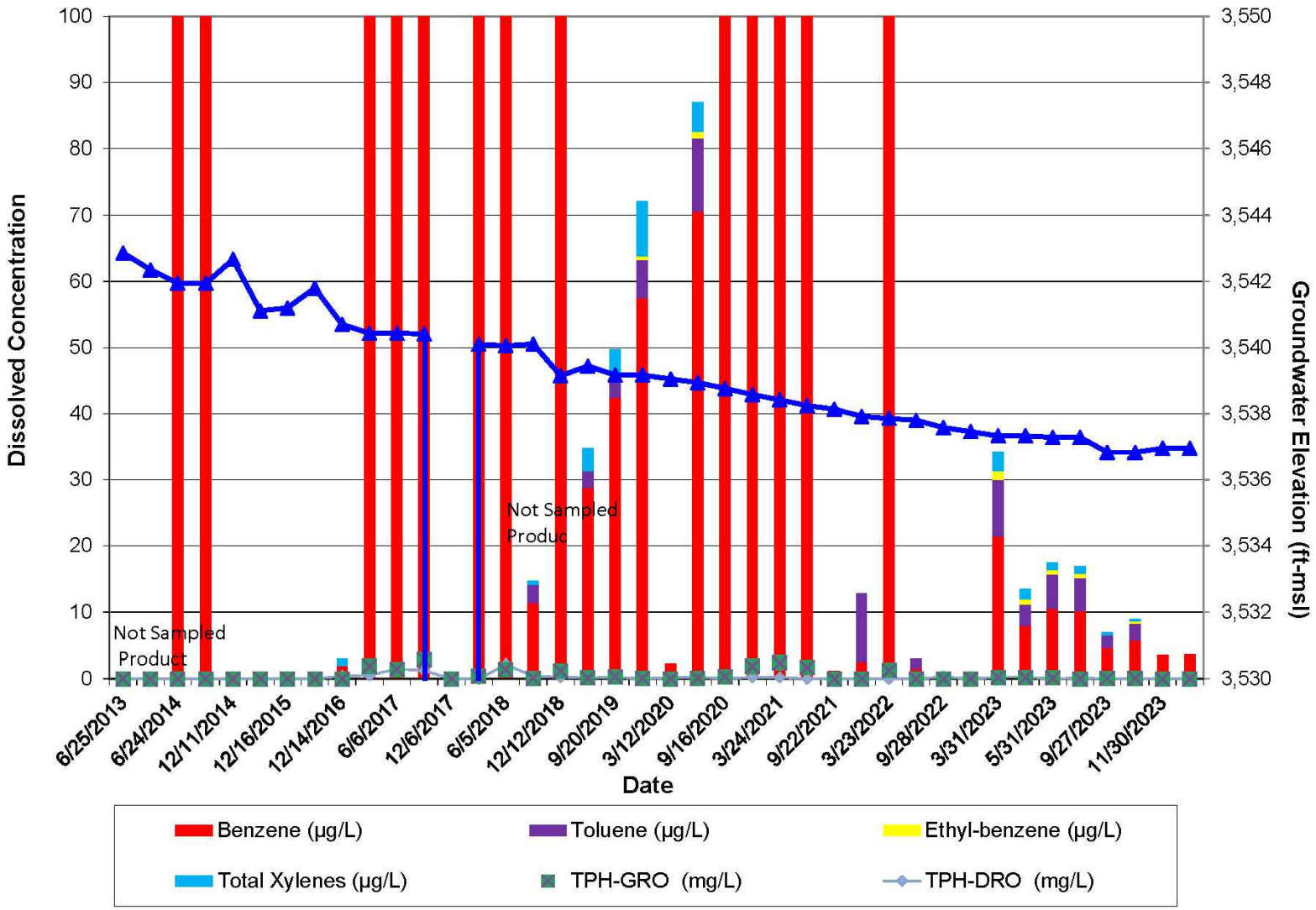
HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

SITE TOTAL ACCUMULATED
CRUDE OIL THICKNESS

Project No. 12604310
Date February 2024

FIGURE 13

Filename: \\ohdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg



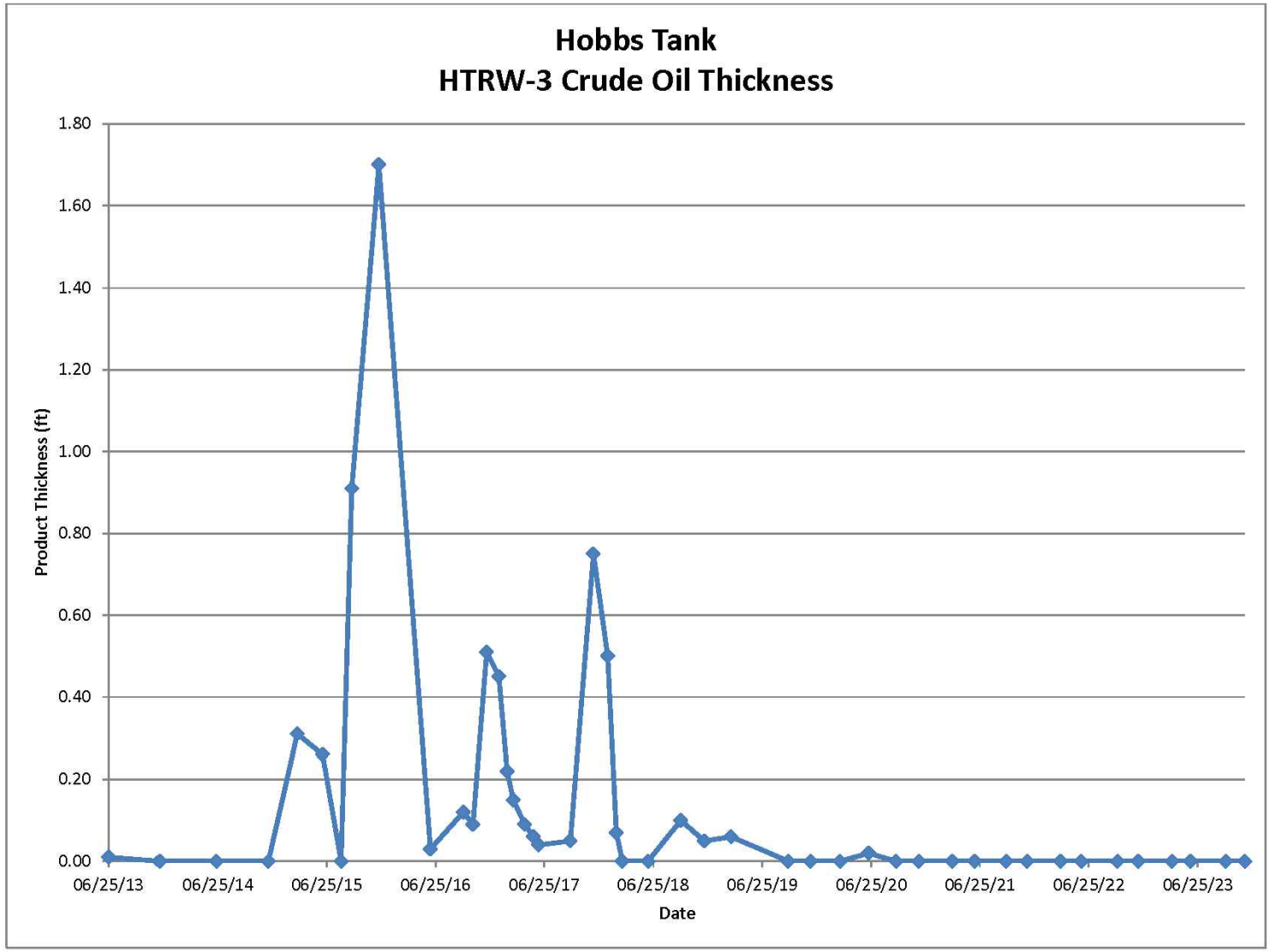
HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

HYDROCARBON CONCENTRATIONS
FOR HTRW-1

Project No. 12604310
Date February 2024

FIGURE 14

Filename: \\ohdnetghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg



HF SINCLAIR
HOBBS, NEW MEXICO
HOBBS STATION TANK 5201

Project No. **12604310**
Date **February 2024**

CRUDE OIL THICKNESS FOR HTRW-3

FIGURE 15

Filename: \\ohdnet\ghd\US\Golden\Projects\562\12604310\Digital_Design\ACAD\Figures\RPT001\12604310-GHD-00-00-RPT-EN-D101_DL-001.dwg

Tables

Table 1 **Summary of Groundwater Hydrocarbon Results for 2022/2023**
HF Sinclair - Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (ft)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)
NMWQCC Groundwater Standards		5	1000	700	620	NE	NE			
MW-1	03/23/22	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	06/01/22	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	12/07/22	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	05/31/23	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	09/27/23	NS	NS	NS	NS	NS	NS	0.00	dry	dry
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	dry	dry
MW-2	03/23/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	06/01/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	09/28/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	12/07/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	03/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	05/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	09/27/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	11/30/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
MW-3	03/23/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	06/01/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	09/28/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	12/07/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	dry	dry
	03/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	53.19	3,537.62
	05/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	53.11	3,537.70
	09/27/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	53.20	3,537.61
	11/30/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	0.00	53.19	3,537.62
MW-4	03/23/22	NS	NS	NS	NS	NS	NS	0.00	53.28	3,537.57
	06/01/22	<1.0	<2.0	<1.0	<2.0	<0.06	<0.162	0.00	53.30	3,537.55
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	53.52	3,537.33
	12/07/22	<1.0	<2.0	<1.0	<2.0	<0.06	<0.157	0.00	53.63	3,537.22
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	53.77	3,537.08
	05/31/23	<1.0	<2.0	<1.0	<2.0	<0.06	<0.152	0.00	53.82	3,537.03
	09/27/23	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	0.00	53.99	3,536.86
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	54.10	3,536.75
MW-5	03/23/22	NS	NS	NS	NS	NS	NS	0.00	54.51	3,538.15
	06/01/22	<1.0	<2.0	<1.0	<2.0	<0.06	<0.159	0.00	54.60	3,538.08
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	54.67	3,537.87
	12/07/22	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	0.00	54.88	3,537.77
duplicate	12/07/22	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	0.00	54.98	3,537.77
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	54.98	3,537.60
	05/31/23	<1.0	<2.0	<1.0	<2.0	0.113	<0.153	0.00	55.15	3,537.57
	09/27/23	<1.0	<2.0	<1.0	<2.0	<0.06	<0.151	0.00	55.18	3,537.36
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	55.39	3,537.28
HTRW-1	03/23/22	585	18.3	12.0	21.9	1.28	<0.153	0.00	50.28	3,537.86
	06/01/22	1.53	1.38	<1.0	<2.0	<0.06	<0.151	0.00	50.34	3,537.80
	09/28/22	0.429	<2.0	<1.0	<2.0	<0.06	0.321	0.00	50.56	3,537.58
	12/07/22	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	0.00	50.68	3,537.46
	03/31/23	21.5	8.58	<1.0	2.86	0.223	0.285	0.00	50.81	3,537.33
duplicate	03/31/23	7.99	3.18	<1.0	1.59	0.189	0.282	0.00	50.81	3,537.33
	05/31/23	10.5	5.20	<1.0	1.09	0.129	<0.149	0.00	50.86	3,537.28
duplicate	05/31/23	10.2	4.94	<1.0	1.11	<0.06	0.153	0.00	50.86	3,537.28
	09/27/23	4.60	1.98	<1.0	0.332	0.081	<0.148	0.00	51.11	3,537.03
duplicate	09/27/23	5.81	2.47	<1.0	0.354	0.075	<0.148	0.00	51.11	3,537.03
	11/30/23	3.50	<2.0	<1.0	<2.0	<0.06	<0.151	0.00	51.19	3,536.95
duplicate	11/30/23	3.60	<2.0	<1.0	<2.0	<0.06	<0.152	0.00	51.19	3,536.95
HTRW-2	03/23/22	NS	NS	NS	NS	NS	NS	0.00	49.69	3,537.82
	06/01/22	NS	NS	NS	NS	NS	NS	0.00	49.76	3,537.75
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	49.99	3,537.52
	12/07/22	NS	NS	NS	NS	NS	NS	0.00	49.98	3,537.53
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	50.13	3,537.38
	05/31/23	NS	NS	NS	NS	NS	NS	0.00	50.16	3,537.35
	09/27/23	NS	NS	NS	NS	NS	NS	0.00	50.43	3,537.08
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	50.47	3,537.04

Table 1 **Summary of Groundwater Hydrocarbon Results for 2022/2023**
HF Sinclair - Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (ft)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)
NMWQCC Groundwater Standards		5	1000	700	620	NE	NE			
HTRW-3	03/23/22	NS	NS	NS	NS	NS	NS	0.00	50.90	3,537.85
	06/01/22	NS	NS	NS	NS	NS	NS	0.00	51.05	3,537.70
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	51.20	3,537.55
	12/07/22	NS	NS	NS	NS	NS	NS	0.00	52.26	3,536.49
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	51.38	3,537.37
	05/31/23	NS	NS	NS	NS	NS	NS	0.00	51.44	3,537.31
	09/27/23	NS	NS	NS	NS	NS	NS	0.00	51.72	3,537.03
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	51.75	3,537.00
HTRW-4	03/23/22	NS	NS	NS	NS	NS	NS	0.00	50.65	3,537.92
	06/01/22	NS	NS	NS	NS	NS	NS	0.00	50.78	3,537.79
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	51.03	3,537.54
	12/07/22	NS	NS	NS	NS	NS	NS	0.00	51.02	3,537.55
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	51.20	3,537.37
	05/31/23	NS	NS	NS	NS	NS	NS	0.00	51.22	3,537.35
	09/27/23	NS	NS	NS	NS	NS	NS	0.00	51.56	3,537.01
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	51.58	3,536.99
RW-1	03/23/22	NS	NS	NS	NS	NS	NS	0.00	54.26	3,534.83
	06/01/22	NS	NS	NS	NS	NS	NS	0.00	54.35	3,534.74
	09/28/22	NS	NS	NS	NS	NS	NS	0.00	54.59	3,534.50
	12/07/22	NS	NS	NS	NS	NS	NS	0.00	54.62	3,534.47
	03/31/23	NS	NS	NS	NS	NS	NS	0.00	55.78	3,533.31
	05/31/23	NS	NS	NS	NS	NS	NS	0.00	54.85	3,534.24
	09/27/23	77.3	24.4	1.58	23.0	<0.06	0.697	0.00	55.04	3,534.05
	11/30/23	NS	NS	NS	NS	NS	NS	0.00	55.18	3,533.91

Notes:
BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard
µg/L = microgram per liter
< = Not detected above indicated level
ft-bmp - feet-below measuring point
ft-msl - feet-mean sea level
NSP - Not Sampled Product
NS - Not Sampled per Work Plan
NA - Not Analyzed
NE - Not Established
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics
BTEX analyzed by Method SW8260C
TPH-GRO analyzed by Method 8015V
TPH-DRO analyzed by Method 8015D

Table 2 Summary of Groundwater QA/QC Results for 2023
HF Sinclair - Hobbs Tank 5201 - Lea County, New Mexico

Well No.	Date Sampled	Laboratory Analytical Results					
		Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)
NMWQC Groundwater Standards		**5**	**1000**	**700**	**620**	**NE**	**NE**
HTRW-1	03/31/23	**21.5**	8.58	1.30	2.86	0.223	0.285
	03/31/23	**7.99**	3.18	0.783	1.59	0.189	0.282
	% Difference	45.81	45.92	24.82	28.54	8.25	0.53
HTRW-1	05/31/23	**10.5**	5.20	0.728	1.09	0.129	<0.149
	05/31/23	**10.2**	4.94	0.645	1.11	<0.06	0.153
	% Difference	1.45	2.56	6.05	0.91	36.51	1.32
HTRW-1	09/27/23	4.60	1.98	<1.0	0.332	0.081	<0.148
	09/27/23	**5.81**	2.47	0.345	0.354	0.075	<0.148
	% Difference	11.62	11.01	48.70	3.21	3.46	0.00
HTRW-1	11/30/23	3.50	<2.0	<1.0	<2.0	<0.06	<0.151
	11/30/23	3.60	<2.0	<1.0	<2.0	<0.06	<0.152
	% Difference	0.08	0.00	0.00	0.00	0.00	0.00
Trip Blank	03/31/23	<1.0	<2.0	<1.0	<1.0	<0.06	NA
Trip Blank	05/31/23	<1.0	<2.0	<1.0	<1.0	<0.06	NA
Trip Blank	09/27/23	<1.0	<2.0	<1.0	<1.0	<0.06	NA
Trip Blank	11/30/23	<1.0	<2.0	<1.0	<1.0	<0.06	NA

Notes:
(µg/L) = micrograms per liter
mg/L= micrograms per liter
< = Not detected above indicated level
NE - Not Estalished
NA - Not Analyzed
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
BTEX analyzed by Method EPA 8260C
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Oganics
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Oganics
TPH-GRO analyzed by Method 8015V
TPH-DRO analyzed by Method 8015D
Mercury analyzed by Method SW7470A
Chloride, Nitrate and Sulfate analyzed by Method E300
Bicarbonate analyzed by Method M2320B
TDS analyzed by Method M2540C
All other metals analyzed by Method SW6020A

Appendices

Appendix A

Summary of Historical Fluid Levels (August 2012 – November 2023)

Appendix A Summary of Fluid Levels
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Well ID/MP Elevation	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod. Thick (ft)	TD (ft-bmp)	Groundwater Elevation (ft-msl)	Corrected Groundwater Elevation[1] (ft-msl)	Totalizer (gals)
RW-1	08/07/12	48.06	51.01	2.95	58.19	3538.08	3,540.23	
3589.09	12/20/12	48.47	51.48	3.01		3537.61	3,539.81	
TD = 58.60	06/20/13	48.89	51.65	2.76		3537.44	3,539.45	
	08/23/13	49.05	51.95	2.90		3537.14	3,539.26	0
	10/30/13					0.00	3,589.09	
	11/02/13							9.7
	11/13/13							9.9
	12/11/13	49.69	49.70	0.01		3539.39	3,539.40	10.0
	03/18/14		49.92	0.00		3539.17	3,539.17	11.1
	06/19/14	50.19	50.20	0.01		3538.89	3,538.90	13.1
	12/11/14	50.41	50.47	0.06		3538.62	3,538.66	
	03/18/15	50.60	50.73	0.13		3538.36	3,538.45	
	06/11/15	trace	50.75	0.00		3538.34	3538.34	
	08/12/15		50.93	0.00		3538.16	3,538.16	
	09/17/15		51.02	0.00		3538.07	3,538.07	
	12/17/15	trace	50.92	0.00		3538.17	3538.17	
	06/07/16		51.32	0.00		3537.77	3,537.77	
	09/26/16		50.98	0.00		3538.11	3,538.11	
	10/28/16		50.96	0.00		3538.13	3,538.13	
	12/13/16		51.46	0.00		3537.63	3,537.63	
	01/23/17		51.55	0.00		3537.54	3,537.54	
	02/20/17		51.65	0.00		3537.44	3,537.44	
	03/13/17		51.60	0.00		3537.49	3,537.49	
	04/20/17		51.61	0.00		3537.48	3,537.48	
	06/06/17		51.71	0.00		3537.38	3,537.38	
	09/20/17		51.79	0.00		3537.30	3,537.30	
	12/07/17		51.91	0.00		3537.18	3,537.18	
	01/24/18	51.99	52.04	0.05		3537.05	3,537.09	
	02/22/18		52.06	0.00		3537.03	3,537.03	
	03/14/18		52.06	0.00		3537.03	3,537.03	
	06/06/18		51.25	0.00		3537.84	3,537.84	
	09/24/18		52.48	0.00		3536.61	3,536.61	
	12/12/18		52.48	0.00		3536.61	3,536.61	
	03/12/19	52.64	52.66	0.02		3536.43	3,536.44	
	09/20/19		52.95	0.00		3536.14	3,536.14	
	12/04/19		53.10	0.00		3535.99	3,535.99	
	03/12/20		53.19	0.00		3535.90	3,535.90	
	06/16/20		53.30	0.00		3535.79	3,535.79	
	09/16/20		53.43	0.00		3535.66	3,535.66	
	12/02/20		53.76	0.00		3535.33	3,535.33	
	03/24/21		53.72	0.00		3535.37	3,535.37	
	06/08/21		53.78	0.00		3535.31	3,535.31	
	09/22/21		53.89	0.00		3535.20	3,535.20	
	12/01/21		54.07	0.00		3535.02	3,535.02	
	03/23/22		54.26	0.00		3534.83	3,534.83	
	06/01/22		54.35	0.00		3534.74	3,534.74	
	09/28/22		54.59	0.00		3534.50	3,534.50	
	12/07/22		54.62	0.00		3534.47	3,534.47	
	03/30/23		55.78	0.00		3533.31	3,533.31	
	05/31/23		54.85	0.00		3534.24	3,534.24	
	09/27/23		55.04	0.00		3534.05	3,534.05	
	11/30/23		55.18	0.00		3533.91	3,533.91	
MW-1	08/07/12	47.88	51.50	3.62	52.59	3540.55	3,543.19	
3592.05	12/20/12	48.32	51.55	3.23		3540.50	3,542.86	
TD = 53.26	06/20/13	48.68	51.50	2.82		3540.55	3,542.61	
	10/30/13	48.96	51.53	2.57		3540.52	3,542.40	
	11/02/13	49.04	51.54	2.50		3540.51	3,542.34	
	11/13/13	49.06	51.58	2.52		3540.47	3,542.31	
	12/11/13	49.15	51.55	2.40		3540.50	3,542.25	
	06/19/14	49.65	51.59	1.94		3540.46	3,541.88	
	12/11/14	50.26	51.26	1.00		3540.79	3,541.52	
	03/18/15	50.39	51.71	1.32		3540.34	3541.30	
	06/11/15		50.66	0.00		3541.39	3541.39	
	08/12/15	50.79	51.32	0.53		3540.73	3541.12	
	09/17/15		51.12	0.00		3540.93	3540.93	
	12/17/15		50.87	0.00		3541.18	3541.18	
	06/07/16		51.22	0.00		3540.83	3540.83	
	09/26/16		50.90	0.00		3541.15	3541.15	
	10/28/16		50.92	0.00		3541.13	3541.13	
	12/13/16	51.38	51.40	0.02		3540.65	3540.66	
	01/23/17	51.49	51.52	0.03		3540.53	3540.55	
	02/20/17		51.55	0.00		3540.50	3540.50	
	03/13/17		51.58	0.00		3540.47	3540.47	
	04/20/17		51.65	0.00		3540.40	3540.40	
	06/06/17		51.72	0.00		3540.33	3540.33	
	09/20/17		51.73	0.00		3540.32	3540.32	
	12/07/17	51.83	52.03	0.20		3540.02	3540.17	
	01/24/18	51.98	52.00	0.02		3540.05	3540.06	
	02/22/18		52.52	0.00		3539.53	3539.53	
	03/14/18		52.60	0.00		3539.45	3539.45	
	06/06/18		52.20	0.00		3539.85	3539.85	
	09/24/18		52.35	0.00		3539.70	3539.70	
	12/12/18		52.37	0.00		3539.68	3539.68	
	03/12/19	52.65	52.68	0.03		3539.37	3539.39	
	09/20/19	53.00	53.08	0.08		3538.97	3539.03	
	12/04/19	53.10	53.28	0.18		3538.77	3538.90	
	03/12/20	53.10	53.17	0.07		3538.88	3538.93	
	06/16/20		53.20	0.00		3538.85	3538.85	
	09/16/20		53.19	0.00		3538.86	3538.86	
	12/02/20		53.32	0.00		3538.73	3538.73	
	03/24/21		dry	0.00		dry	dry	
	06/08/21		dry	0.00		dry	dry	
	09/22/21		dry	0.00		dry	dry	
	12/01/21		dry	0.00		dry	dry	
	03/23/22		dry	0.00		dry	dry	
	06/01/22		dry	0.00		dry	dry	
	09/28/22		dry	0.00		dry	dry	
	12/07/22		dry	0.00		dry	dry	
	03/30/23		dry	0.00		dry	dry	
	05/31/23		dry	0.00		dry	dry	
	09/27/23		dry	0.00		dry	dry	
	11/30/23		dry	0.00		dry	dry	

Appendix A Summary of Fluid Levels
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Well ID/MP Elevation	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod. Thick (ft)	TD (ft-bmp)	Groundwater Elevation (ft-msl)	Corrected Groundwater Elevation[1] (ft-msl)	Totalizer (gals)
MW-2	08/07/12		47.44	0.00	52.42	3543.41		
3590.85	12/20/12		47.90	0.00		3542.95		
TD = 52.65	06/25/13		48.27	0.00		3542.58		
	12/11/13		48.74	0.00		3542.11		
	06/19/14		49.19	0.00		3541.66		
	12/11/14		49.40	0.00		3541.45		
	03/18/15		49.63	0.00		3541.22		
	06/11/15		49.75	0.00		3541.10		
	12/16/15		49.91	0.00		3540.94		
	06/07/16		50.32	0.00		3540.53		
	12/13/16		50.34	0.00		3540.51		
	06/06/17		50.67	0.00		3540.18		
	09/20/17		50.67	0.00		3540.18		
	12/07/17		50.91	0.00		3539.94		
	03/14/18		51.00	0.00		3539.85		
	06/06/18		51.22	0.00		3539.63		
	09/24/18		51.38	0.00		3539.47		
	12/12/18		51.50	0.00		3539.35		
	03/12/19		51.62	0.00		3539.23		
	09/20/19		51.87	0.00		3538.98		
	12/04/19		51.95	0.00		3538.90		
	03/12/20		52.05	0.00		3538.80		
	06/16/20		52.16	0.00		3538.69		
	09/16/20		52.38	0.00		3538.47		
	12/02/20		52.40	0.00		3538.45		
	03/24/21		dry	0.00		dry		
	06/08/21		dry	0.00		dry		
	09/22/21		dry	0.00		dry		
	12/01/21		dry	0.00		dry		
	03/23/22		dry	0.00		dry		
	06/01/22		dry	0.00		dry		
	09/28/22		dry	0.00		dry		
	12/07/22		dry	0.00		dry		
	03/30/23		dry	0.00		dry		
	05/31/23		dry	0.00		dry		
	09/27/23		dry	0.00		dry		
	11/30/23		dry	0.00		dry		
MW-3	08/07/12		47.43	0.00	53.20	3543.38		
3590.81	12/20/12		47.87	0.00		3542.94		
TD = 53.30	06/25/13		48.28	0.00		3542.53		
	12/11/13		48.73	0.00		3542.08		
	06/19/14		49.20	0.00		3541.61		
	12/11/14		49.41	0.00		3541.40		
	03/18/15		49.63	0.00		3541.18		
	06/11/15		49.78	0.00		3541.03		
	12/16/15		49.96	0.00		3540.85		
	06/07/16		50.33	0.00		3540.48		
	12/13/16		50.38	0.00		3540.43		
	06/06/17		50.68	0.00		3540.13		
	09/20/17		50.43	0.00		3540.38		
	12/07/17		50.91	0.00		3539.90		
	03/14/18		51.03	0.00		3539.78		
	06/06/18		51.24	0.00		3539.57		
	09/24/18		51.43	0.00		3539.38		
	12/12/18		51.55	0.00		3539.26		
	03/12/19		51.62	0.00		3539.19		
	09/20/19		51.88	0.00		3538.93		
	12/04/19		51.98	0.00		3538.83		
	03/12/20		52.10	0.00		3538.71		
	06/16/20		52.20	0.00		3538.61		
	09/16/20		52.39	0.00		3538.42		
	12/02/20		52.58	0.00		3538.23		
	03/24/21		52.70	0.00		3538.11		
	06/08/21		dry	0.00		dry		
	09/22/21		dry	0.00		dry		
	12/01/21		52.98	0.00		3537.83		
	03/23/22		dry	0.00		dry		
	06/01/22		dry	0.00		dry		
	09/28/22		dry	0.00		dry		
	12/07/22		dry	0.00		dry		
	03/30/23		53.19	0.00		3537.62		
	05/31/23		53.11	0.00		3537.70		
	09/27/23		53.20	0.00		3537.61		
	11/30/23		53.19	0.00		3537.62		
MW-4	08/07/12		47.44	0.00	62.58	3543.41		
3590.85	12/20/12		47.89	0.00		3542.96		
TD = 62.96	06/25/13		48.27	0.00		3542.58		
	12/11/13		48.72	0.00		3542.13		
	06/19/14		49.18	0.00		3541.67		
	12/11/14		49.45	0.00		3541.40		
	03/18/15		49.61	0.00		3541.24		
	06/11/15		49.80	0.00		3541.05		
	12/16/15		49.95	0.00		3540.90		
	06/07/16		50.32	0.00		3540.53		
	12/13/16		50.38	0.00		3540.47		
	06/06/17		50.68	0.00		3540.17		
	09/20/17		50.68	0.00		3540.17		
	12/07/17		50.91	0.00		3539.94		
	03/14/18		51.02	0.00		3539.83		
	06/06/18		51.24	0.00		3539.61		
	09/24/18		51.41	0.00		3539.44		
	12/12/18		51.44	0.00		3539.41		
	03/12/19		51.59	0.00		3539.26		
	09/20/19		51.92	0.00		3538.93		
	12/04/19		51.95	0.00		3538.90		
	03/12/20		52.06	0.00		3538.79		
	06/16/20		52.17	0.00		3538.68		
	09/16/20		52.32	0.00		3538.53		
	12/02/20		52.49	0.00		3538.36		
	03/24/21		52.66	0.00		3538.19		
	06/08/21		52.81	0.00		3538.04		
	09/22/21		52.94	0.00		3537.91		
	12/01/21		53.27	0.00		3537.58		
	03/23/22		53.28	0.00		3537.57		
	06/01/22		53.30	0.00		3537.55		
	09/28/22		53.52	0.00		3537.33		
	12/07/22		53.63	0.00		3537.22		
	03/30/23		53.77	0.00		3537.08		
	05/31/23		53.82	0.00		3537.03		
	09/27/23		53.99	0.00		3536.86		
	11/30/23		54.10	0.00		3536.75		

Appendix A Summary of Fluid Levels
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Well ID/MP Elevation	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod. Thick (ft)	TD (ft-bmp)	Groundwater Elevation (ft-msl)	Corrected Groundwater Elevation[1] (ft-msl)	Totalizer (gals)
MW-5	08/07/12		48.83	0.00	58.82	3543.92		
3592.75	12/20/12		49.26	0.00		3543.49		
TD = 58.93	06/25/13		49.64	0.00		3543.11		
	12/11/13		50.09	0.00		3542.66		
	06/19/14		50.53	0.00		3542.22		
	12/11/14		50.76	0.00		3541.99		
	03/18/15		50.99	0.00		3541.76		
	06/11/15		51.12	0.00		3541.63		
	12/17/15		51.33	0.00		3541.42		
	06/07/16		51.68	0.00		3541.07		
	12/13/16		51.76	0.00		3540.99		
	06/06/17		52.08	0.00		3540.67		
	09/20/17		52.07	0.00		3540.68		
	12/07/17		52.30	0.00		3540.45		
	03/14/18		52.38	0.00		3540.37		
	06/06/18		52.58	0.00		3540.17		
	09/24/18		52.50	0.00		3540.25		
	12/12/18		52.54	0.00		3540.21		
	03/12/19		52.97	0.00		3539.78		
	09/20/19		53.22	0.00		3539.53		
	12/04/19		53.34	0.00		3539.41		
	03/12/20		53.40	0.00		3539.35		
	06/16/20		53.58	0.00		3539.17		
	09/16/20		53.69	0.00		3539.06		
	12/02/20		53.91	0.00		3538.84		
	03/24/21		54.05	0.00		3538.70		
	06/08/21		54.25	0.00		3538.50		
	09/22/21		54.29	0.00		3538.46		
	12/01/21		54.51	0.00		3538.24		
	03/23/22		54.60	0.00		3538.15		
	06/01/22		54.67	0.00		3538.08		
	09/28/22		~~54.88~~	0.00		3537.87		
	12/07/22		54.98	0.00		3537.77		
	03/30/23		55.15	0.00		3537.60		
	05/31/23		55.18	0.00		3537.57		
	09/27/23		55.39	0.00		3537.36		
	11/30/23		55.47	0.00		3537.28		
HTRW-1	06/25/13	45.27	45.28	0.01	60.10	3542.86	3,542.87	
3588.14	12/11/13	45.78	45.79	0.01		3542.35	3,542.36	
TD = 57.59	06/19/14		46.19	0.00		3541.95	3,541.95	
	12/11/14	45.46	45.51	0.05		3542.63	3,542.67	
	03/18/15	46.64	46.66	0.02		3541.48	3,541.49	
	06/11/15	46.81	47.61	0.80		3540.53	3,541.11	
	08/12/15		46.91	0.00		3541.23	3,541.23	
	09/17/15		46.98	0.00		3541.16	3,541.16	
	12/17/15	46.93	46.95	0.02		3541.19	3,541.20	
	06/07/16		46.34	0.00		3541.80	3,541.80	
	09/26/16		46.97	0.00		3541.17	3,541.17	
	10/28/16	46.94	46.95	0.01		3541.19	3,541.20	
	12/13/16		47.44	0.00		3540.70	3,540.70	
	01/23/17		47.58	0.00		3540.56	3,540.56	
	02/20/17		47.68	0.00		3540.46	3,540.46	
	03/13/17		47.62	0.00		3540.52	3,540.52	
	04/20/17		47.67	0.00		3540.47	3,540.47	
	06/06/17		47.71	0.00		3540.43	3,540.43	
	09/20/17		47.72	0.00		3540.42	3,540.42	
	12/07/17		NM	NM		NM	NM	
	01/24/18		48.04	0.00		3540.10	3,540.10	
	02/22/18		48.08	0.00		3540.06	3,540.06	
	03/14/18		48.03	0.00		3540.11	3,540.11	
	06/06/18		48.22	0.00		3539.92	3,539.92	
	09/24/18		48.45	0.00		3539.69	3,539.69	
	12/12/18		48.99	0.00		3539.15	3,539.15	
	03/12/19		48.70	0.00		3539.44	3,539.44	
	09/20/19		48.97	0.00		3539.17	3,539.17	
	12/04/19		48.97	0.00		3539.17	3,539.17	
	03/12/20		49.09	0.00		3539.05	3,539.05	
	06/16/20		49.20	0.00		3538.94	3,538.94	
	09/16/20		49.38	0.00		3538.76	3,538.76	
	12/02/20		49.56	0.00		3538.58	3,538.58	
	03/24/21		49.72	0.00		3538.42	3,538.42	
	06/08/21		49.90	0.00		3538.24	3,538.24	
	09/22/21		50.00	0.00		3538.14	3,538.14	
	12/01/21		50.22	0.00		3537.92	3,537.92	
	03/23/22		50.28	0.00		3537.86	3,537.86	
	06/01/22		50.34	0.00		3537.80	3,537.80	
	09/28/22		50.56	0.00		3537.58	3,537.58	
	12/07/22		50.68	0.00		3537.46	3,537.46	
	03/30/23		50.81	0.00		3537.33	3,537.33	
	05/31/23		50.86	0.00		3537.28	3,537.28	
	09/27/23		51.11	0.00		3537.03	3,537.03	
	11/30/23		51.19	0.00		3536.95	3,536.95	

Appendix A Summary of Fluid Levels
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Well ID/MP Elevation	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod. Thick (ft)	TD (ft-bmp)	Groundwater Elevation (ft-msl)	Corrected Groundwater Elevation[1] (ft-msl)	Totalizer (gals)
HTRW-2	06/25/13		44.60	0.00	60.14	3542.91		
3587.51	12/11/13		45.05	0.00		3542.46		
TD = 57.92	06/19/14		45.52	0.00		3541.99		
	12/11/14		45.79	0.00		3541.72		
	03/18/15		45.95	0.00		3541.56		
	06/11/15		46.05	0.00		3541.46		
	08/12/15		46.22	0.00		3541.29		
	09/17/15		46.30	0.00		3541.21		
	12/17/15		46.25	0.00		3541.26		
	06/07/16		46.66	0.00		3540.85		
	09/26/16		46.20	0.00		3541.31		
	10/28/16		46.18	0.00		3541.33		
	12/13/16		46.74	0.00		3540.77		
	01/23/17		46.90	0.00		3540.61		
	02/20/17		46.88	0.00		3540.63		
	03/13/17		46.93	0.00		3540.58		
	04/20/17		46.96	0.00		3540.55		
	06/06/17		47.03	0.00		3540.48		
	09/20/17		47.08	0.00		3540.43		
	12/07/17		47.25	0.00		3540.26		
	01/24/18		48.68	0.00		3538.83		
	02/22/18		47.38	0.00		3540.13		
	03/14/18		48.42	0.00		3539.09		
	06/06/18		47.56	0.00		3539.95		
	09/24/18		47.77	0.00		3539.74		
	12/12/18		47.79	0.00		3539.72		
	03/12/19		48.01	0.00		3539.50		
	09/20/19		48.28	0.00		3539.23		
	12/04/19		48.35	0.00		3539.16		
	03/12/20		48.47	0.00		3539.04		
	06/16/20		48.59	0.00		3538.92		
	09/16/20		48.68	0.00		3538.83		
	12/02/20		48.89	0.00		3538.62		
	03/24/21		49.10	0.00		3538.41		
	06/08/21		49.23	0.00		3538.28		
	09/22/21		49.34	0.00		3538.17		
	12/01/21		49.56	0.00		3537.95		
	03/23/22		49.69	0.00		3537.82		
	06/01/22		49.76	0.00		3537.75		
	09/28/22		49.99	0.00		3537.52		
	12/07/22		49.98	0.00		3537.53		
	03/30/23		50.13	0.00		3537.38		
	05/31/23		50.16	0.00		3537.35		
	09/27/23		50.43	0.00		3537.08		
	11/30/23		50.47	0.00		3537.04		

Appendix A Summary of Fluid Levels
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Well ID/MP Elevation	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod. Thick (ft)	TD (ft-bmp)	Groundwater Elevation (ft-msl)	Corrected Groundwater Elevation[1] (ft-msl)	Totalizer (gals)
HTRW-3	06/25/13	45.87	45.88	0.01	60.14	3542.87	3,542.88	
3588.75	12/11/13	46.32	46.33			3542.42	3,542.43	
TD = 57.92	06/19/14		46.79	0.00		3541.96	3,541.96	
	12/11/14		47.03	0.00		3541.72	3,541.72	
	03/18/15	47.19	47.50	0.31		3541.25	3,541.48	
	06/11/15	47.35	47.61	0.26		3541.14	3,541.33	
	08/12/15		47.60	0.00		3541.15	3,541.15	
	09/17/15	47.47	48.38	0.91		3540.37	3,541.03	
	12/17/15	47.30	49.00	1.70		3539.75	3,540.99	
	06/07/16	47.81	47.84	0.03		3540.91	3,540.93	
	09/26/16	47.48	47.60	0.12		3541.15	3,541.24	
	10/28/16	47.46	47.55	0.09		3541.20	3,541.27	
	12/13/16	47.97	48.48	0.51		3540.27	3,540.64	
	01/23/17	48.10	48.55	0.45		3540.20	3,540.53	
	02/20/17	48.28	48.50	0.22		3540.25	3,540.41	
	03/13/17	48.20	48.35	0.15		3540.40	3,540.51	
	04/20/17	48.22	48.31	0.09		3540.44	3,540.51	
	05/19/17	48.24	48.30	0.06		3540.45	3,540.49	
	06/06/17	48.31	48.35	0.04		3540.40	3,540.43	
	09/20/17	48.31	48.36	0.05		3540.39	3,540.43	
	12/07/17	48.60	49.35	0.75		3539.40	3,539.95	
	01/24/18	48.54	49.04	0.50		3539.71	3,540.08	
	02/22/18	48.68	48.75	0.07		3540.00	3,540.05	
	03/14/18		48.68	0.00		3540.07	3,540.07	
	06/06/18		48.88	0.00		3539.87	3,539.87	
	09/24/18	49.08	49.18	0.10		3539.57	3,539.64	
	12/12/18	48.08	48.13	0.05		3540.62	3,540.66	
	03/12/19	49.29	49.35	0.06		3539.40	3,539.44	
	09/20/19		49.60	0.00		3539.15	3,539.15	
	12/04/19		49.75	0.00		3539.00	3,539.00	
	03/12/20		49.89	0.00		3538.86	3,538.86	
	06/16/20	49.90	49.92	0.02		3538.83	3,538.84	
	09/16/20		50.08	0.00		3538.67	3,538.67	
	12/02/20		50.24	0.00		3538.51	3,538.51	
	03/24/21		50.32	0.00		3538.43	3,538.43	
	06/08/21		50.46	0.00		3538.29	3,538.29	
	09/22/21		50.55	0.00		3538.20	3,538.20	
	12/01/21		50.81	0.00		3537.94	3,537.94	
	03/23/22		50.90	0.00		3537.85	3,537.85	
	06/01/22		51.05	0.00		3537.70	3,537.70	
	09/28/22		51.20	0.00		3537.55	3,537.55	
	12/07/22		52.26	0.00		3536.49	3,536.49	
	03/30/23		51.38	0.00		3537.37	3,537.37	
	05/31/23		51.44	0.00		3537.31	3,537.31	
	09/27/23		51.72	0.00		3537.03	3,537.03	
	11/30/23		51.75	0.00		3537.00	3,537.00	
HTRW-4	06/25/13		45.68	0.00	60.16	3542.89		
3588.57	12/11/13		46.13	0.00		3542.44		
TD =	06/19/14		46.59	0.00		3541.98		
	12/11/14		46.85	0.00		3541.72		
	03/18/15		47.03	0.00		3541.54		
	06/11/15		47.11	0.00		3541.46		
	08/12/15		47.31	0.00		3541.26		
	09/17/15		47.35	0.00		3541.22		
	12/17/15		47.32	0.00		3541.25		
	06/07/16		47.70	0.00		3540.87		
	09/26/16		47.58	0.00		3540.99		
	10/28/16		47.55	0.00		3541.02		
	12/13/16		47.79	0.00		3540.78		
	01/23/17		47.95	0.00		3540.62		
	02/20/17		47.97	0.00		3540.60		
	03/13/17		47.98	0.00		3540.59		
	04/20/17		48.03	0.00		3540.54		
	06/06/17		48.09	0.00		3540.48		
	09/20/17		48.19	0.00		3540.38		
	12/07/17		48.30	0.00		3540.27		
	01/24/18		48.40	0.00		3540.17		
	02/22/18		48.43	0.00		3540.14		
	03/14/18		48.58	0.00		3539.99		
	06/06/18		48.64	0.00		3539.93		
	09/24/18		48.78	0.00		3539.79		
	12/12/18		48.48	0.00		3540.09		
	03/12/19		49.05	0.00		3539.52		
	09/20/19		49.38	0.00		3539.19		
	12/04/19		49.92	0.00		3538.65		
	03/12/20		49.55	0.00		3539.02		
	06/16/20		49.68	0.00		3538.89		
	09/16/20		49.82	0.00		3538.75		
	12/02/20		50.01	0.00		3538.56		
	03/24/21		50.11	0.00		3538.46		
	06/08/21		50.35	0.00		3538.22		
	09/22/21		50.38	0.00		3538.19		
	12/01/21		50.66	0.00		3537.91		
	03/23/22		50.65	0.00		3537.92		
	06/01/22		50.78	0.00		3537.79		
	09/28/22		51.03	0.00		3537.54		
	12/07/22		51.02	0.00		3537.55		
	03/30/23		51.20	0.00		3537.37		
	05/31/23		51.22	0.00		3537.35		
	09/27/23		51.56	0.00		3537.01		
	11/30/23		51.58	0.00		3536.99		

Notes:
DTP - depth to product
DTW - depth to water
TD - total depth
ft - feet
ft-bmp - feet-below measuring point
ft-msl - feet-mean sea level
gals - gallons
[1] groundwater elevation corrected for 0.73 specific gavity

Appendix B

Summary of Historical Groundwater Analytical Results

Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
MW-2	08/23/04	26	4	5	14	49	NA	NA	0.00	43.45	3,547.40					
3590.85	01/11/05	72	<2	<2	15	87	NA	NA	0.00	43.02	3,547.83					
	03/08/06	<2	<2	<2	<6	<2	NA	NA	0.00	43.44	3,547.41					
	07/11/06	7.0	<2	<2	16	23	NA	NA	0.00	43.69	3,547.16					
	09/07/06	4.2	1.9	<0.5	3.2	9.3	NA	NA	0.00	43.64	3,547.21					
	12/19/06	2.1	1.0	0.9	4.3	8.3	NA	NA	0.00	43.83	3,547.02					
	03/13/07	<0.5	0.6	1.2	2.3	4.1	NA	NA	0.00	44.04	3,546.81					
	06/21/07	0.8	0.7	<0.5	3.8	5.3	NA	NA	0.00	44.11	3,546.74					
	09/21/07	1.4	1.1	<0.5	3.2	5.7	NA	NA	0.00	43.87	3,546.98					
	12/07/07	1.4	1.0	0.9	3.5	6.8	NA	NA	0.00	44.17	3,546.68					
	03/04/08	1.4	0.8	1.8	3.3	7.3	NA	NA	0.00	44.27	3,546.58					
	06/03/08	1.7	0.9	1.5	2.1	6.2	NA	NA	0.00	44.42	3,546.43					
	09/23/08	1.2	<0.5	0.6	3.8	5.6	NA	NA	0.00	44.69	3,546.16					
	12/18/08	1.0	0.8	<0.5	1.2	3.0	NA	NA	0.00	45.82	3,545.03					
	03/16/09	0.9	0.7	<0.5	2.9	4.5	NA	NA	0.00	44.98	3,545.87					
	06/23/09	1.2	<1.0	<1.0	<2.0	1.2	NA	NA	0.00	45.12	3,545.73					
	09/08/09	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.29	3,545.56					
	12/17/09	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.50	3,545.35					
	03/09/10	<1.0	<1.0	<1.0	<1.5	<1.0	NA	NA	0.00	45.70	3,545.15					
	06/16/10	<1.0	<1.0	<1.0	2.5	2.5	NA	NA	0.00	45.85	3,545.00					
	09/01/10	1.0	<1.0	<1.0	<2.0	1.0	NA	NA	0.00	45.82	3,545.03					
	12/06/10	1.6	<1.0	<1.0	<2.0	1.6	NA	NA	0.00	46.05	3,544.80					
	03/18/11	1.3	<1.0	14	2.9	18.2	NA	NA	0.00	46.18	3,544.67					
	06/23/11	1.1	<1.0	26	3.2	30.3	NA	NA	0.00	46.40	3,544.45					
	10/07/11	1.2	<1.0	14	<2.0	15.2	NA	NA	0.00	46.75	3,544.10					
	12/08/11	1.4	<1.0	5.7	3.6	10.7	NA	NA	0.00	46.91	3,543.94					
	08/07/12	<1.0	< 5.0	< 5.0	< 15	< 15	NA	NA	0.00	47.44	3,543.41	30.34	1.615	0.05	6.48	-125.9
	12/20/12	<1.0	<2.0	<1.0	<2.0	<1.0	NA	NA	0.00	47.90	3,542.95	17.51	1.094	0.74	6.85	-254.0
	06/25/13	<1.0	<2.0	<1.0	<2.0	<1.0	NA	NA	0.00	48.27	3,542.58	22.10	1.249	0.30	6.76	-60.6
	12/11/13	1.02	<2.0	<1.0	<2.0	<1.0	NA	NA	0.00	48.74	3,542.11	21.11	1.27	1.51	7.14	-117.0
	06/25/14	<1.0	<2.0	<1.0	1.43		NA	NA	0.00	49.19	3,541.66	19.94	1.078	1.19	6.89	-66.5
	12/11/14	<1.0	<2.0	<1.0	<1.0		<0.50	0.534	0.00	49.40	3,541.45	18.67	1.192	0.58	6.60	-102.3
	06/11/15	<1.0	<2.0	<1.0	<1.0		<0.10	0.337	0.00	49.75	3,541.10	35.49	1.265	2.20	6.75	-100.1
	12/16/15	<1.0	<2.0	<1.0	<1.0		0.141	0.678	0.00	49.91	3,540.94	18.56	1.274	0.75	6.94	-76.7
	06/09/16	<1.0	<2.0	<1.0	<1.0		<0.06	5.53	0.00	50.32	3,540.53	20.52	4.885	2.80	6.63	29.0
	12/14/16	<1.0	<2.0	<1.0	<1.0		0.097	5.53	0.00	50.34	3,540.51	18.90	2.171	2.37	7.61	-72.8
	06/06/17	<1.0	<2.0	<1.0	<2.0		0.105	4.98	0.00	50.67	3,540.18	22.15	1.549	1.85	6.85	-55.9
	09/19/17	<1.0	<2.0	<1.0	<2.0		0.093	2.74	0.00	50.67	3,540.18	22.80	1.627	0.96	6.71	-71.3
	12/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.795	0.00	50.91	3,539.94	19.01	2.887	1.21	7.01	-44.3
	03/14/18	<1.0	<2.0	<1.0	<2.0		0.101	1.91	0.00	51.00	3,539.85	21,11	1.403	0.98	6.87	-13.3
	06/05/18	<1.0	<2.0	<1.0	<2.0		0.140	1.89	0.00	51.22	3,539.63	22.85	1.787	1.07	6.93	-56.2
	09/24/18	<1.0	<2.0	<1.0	<2.0		<0.06	2.33	0.00	51.38	3,539.47	22.55	2.011	1.57	7.16	-33.6
	12/12/18	<1.0	<2.0	<1.0	<2.0		<0.06	2.56	0.00	51.50	3,539.35	19.83	2.334	1.33	7.22	-39.0
	03/12/19	<1.0	<2.0	<1.0	<2.0		0.091	NA	0.00	51.62	3,539.23	20.04	1.906	1.04	7.07	-60.8
	09/20/19	<1.0	<2.0	<1.0	<2.0		<0.06	NA	0.00	51.87	3,538.98	21.66	2.112	1.26	6.96	-26.3
	12/04/19	<1.0	<2.0	<1.0	<2.0		<0.06	NA	0.00	51.95	3,538.90	19.92	1.883	1.11	7.12	-45.6
	03/12/20	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	52.05	3,538.80	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	06/16/20	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	52.16	3,538.69	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	09/16/20	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	52.38	3,538.47	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	12/02/20	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	52.40	3,538.45	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	03/24/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	06/08/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	09/22/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	12/01/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	03/23/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	06/01/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	09/28/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	12/07/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	03/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	05/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	09/27/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	11/30/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry

Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
MW-3	08/23/04	<2	<2	<2	<6	<2	NA	NA	0.00	43.50	3,547.31					
3590.81	01/11/05	<2	<2	<2	<6	<2	NA	NA	0.00	42.93	3,547.88					
	03/08/06	<2	<2	<2	<6	<2	NA	NA	0.00	43.35	3,547.46					
	07/11/06	<2	<2	<2	<6	<2	NA	NA	0.00	43.63	3,547.18					
	09/07/06	<0.5	<0.5	<0.5	<1	<0.5	NA	NA	0.00	43.61	3,547.20					
	12/19/06	<0.5	<0.5	<0.5	<1	<0.5	NA	NA	0.00	43.76	3,547.05					
	03/13/07	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	43.97	3,546.84					
	06/21/07	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.03	3,546.78					
	09/21/07	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	43.83	3,546.98					
	12/07/07	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.11	3,546.70					
	03/04/08	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.32	3,546.49					
	06/03/08	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.35	3,546.46					
	09/23/08	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.65	3,546.16					
	12/18/08	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.77	3,546.04					
	03/16/09	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	0.00	44.92	3,545.89					
	06/23/09	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.08	3,545.73					
	09/08/09	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.24	3,545.57					
	12/17/09	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.44	3,545.37					
	03/09/10	<1.0	<1.0	<1.0	<1.5	<1.0	NA	NA	0.00	45.66	3,545.15					
	06/16/10	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.80	3,545.01					
	09/01/10	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.80	3,545.01					
	12/06/10	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.00	3,544.81					
	03/18/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.14	3,544.67					
	06/23/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.38	3,544.43					
	10/07/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.72	3,544.09					
	12/08/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.87	3,543.94					
	08/07/12	< 5.0	< 5.0	< 5.0	< 15	< 15	NA	NA	0.00	47.43	3,543.38	30.29	1.875	0.72	5.80	109.3
	12/20/12	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	47.87	3,542.94	17.39	1.108	1.28	6.87	-269.0
duplicate	12/20/12	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	47.87	3,542.94	17.39	1.108	1.28	6.87	-269.0
	06/25/13	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	48.28	3,542.53	20.80	1.453	1.98	6.60	204.9
	12/11/13	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	48.73	3,542.08	19.80	1.540	4.40	6.76	152.0
duplicate	12/11/13	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	48.73	3,542.08	19.80	1.540	4.40	6.76	152.0
	06/24/14	<1.0	<2.0	<1.0	1.61		NA	NA	0.00	49.20	3,541.61	22.28	1.242	2.94	6.78	0.2
	12/11/14	<1.0	<2.0	<1.0	<1.0		<0.10	0.135	0.00	49.41	3,541.40	17.74	1.196	2.51	6.66	69.0
	06/11/15	<1.0	<2.0	<1.0	<1.0		<0.10	<0.10	0.00	49.78	3,541.03	24.41	1.240	1.10	6.63	27.7
	12/16/15	<1.0	<2.0	<1.0	<1.0		<0.10	<0.102	0.00	49.96	3,540.85	16.75	1.229	2.22	6.86	126.0
	06/09/16	<1.0	<2.0	<1.0	<1.0		<0.06	<0.08	0.00	50.33	3,540.48	25.68	1.227	2.17	7.79	36.8
	12/14/16	<1.0	<2.0	<1.0	<1.0		<0.06	0.262	0.00	50.38	3,540.43	19.92	1.767	2.16	7.61	46.7
	06/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.358	0.00	50.68	3,540.13	23.66	1.109	3.80	6.93	64.5
	09/19/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.122	0.00	50.43	3,540.38	19.70	1.213	1.87	6.66	137.8
	12/06/17	<1.0	<2.0	<1.0	<2.0		0.073	0.668	0.00	50.91	3,539.90	17.60	1.102	1.62	6.79	76.5
	03/14/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.184	0.00	51.03	3,539.78	20.30	1.206	1.97	7.01	89.3
	06/05/18	<1.0	<2.0	<1.0	<2.0		0.100	0.221	0.00	51.24	3,539.57	24.89	1.369	2.69	6.92	111.2
	09/24/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.220	0.00	51.43	3,539.38	22.96	1.308	2.07	7.18	102.3
	12/12/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.224	0.00	51.55	3,539.26	20.13	1.198	1.85	6.88	91.2
	03/12/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.164	0.00	51.62	3,539.19	20.65	1.306	1.98	7.12	110.0
	09/20/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.225	0.00	51.88	3,538.93	21.87	1.398	2.11	7.44	88.6
	12/04/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.203	0.00	51.98	3,538.83	19.92	1.265	1.89	7.59	101.6
	03/12/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.190	0.00	52.10	3,538.71	20.86	1.065	2.02	7.02	78.7
	06/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.151	0.00	52.20	3,538.61	23.88	1.309	2.88	7.33	99.2
	09/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.222	0.00	52.39	3,538.42	22.64	1.562	1.76	7.24	120.6
	12/02/20	<1.0	<2.0	<1.0	<2.0		<0.06	NA	0.00	52.58	3,538.23	20.03	1.112	1.85	7.12	110.6
	03/24/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	06/08/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	09/22/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	12/01/21	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	03/23/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	06/01/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	09/28/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	12/07/22	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	dry	dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	03/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	53.19	3,537.62	NS	NS	NS	NS	NS
	05/31/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	53.11	3,537.70	NS	NS	NS	NS	NS
	09/27/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	53.20	3,537.61	NS	NS	NS	NS	NS
	11/30/23	NS-Dry	NS-Dry	NS-Dry	NS-Dry		NS-Dry	NS-Dry	0.00	53.19	3,537.62	NS	NS	NS	NS	NS

Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
MW-4	06/16/10	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	45.82	3,545.03					
3590.85	09/01/10	3.3	<1.0	<1.0	<2.0	3.3	NA	NA	0.00	45.81	3,545.04					
	12/06/10	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.01	3,544.84					
	03/18/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.16	3,544.69					
	06/23/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.40	3,544.45					
	10/07/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.74	3,544.11					
	12/08/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	46.88	3,543.97					
	08/07/12	< 5.0	< 5.0	< 5.0	< 15	< 15	NA	NA	0.00	47.44	3,543.41	28.73	1.457	0.12	6.45	1.3
	12/20/12	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	47.89	3,542.96	18.18	1.149	0.61	6.83	-238.0
	06/25/13	<1.0	<2.0	<1.0	<2.0	<1.0	NA	NA	0.00	48.27	3,542.58	21.30	1.306	0.14	6.70	129.8
	12/11/13	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	48.72	3,542.13	20.75	1.32	1.26	7.20	-2.0
	06/24/14	1.07	<2.0	<1.0	<1.0		NA	NA	0.00	49.18	3,541.67	22.22	1.168	1.07	6.75	-13.3
	12/11/14	<1.0	<2.0	<1.0	<1.0		<0.10	1.72	0.00	49.45	3,541.40	18.59	8.387	0.15	6.35	64.5
	06/11/15	<1.0	<2.0	<1.0	<1.0		<0.10	2.81	0.00	49.80	3,541.05	28.13	8.394	3.14	6.61	44.6
duplicate	06/11/15	<1.0	<2.0	<1.0	<1.0		<0.10	2.51	0.00	49.80	3,541.05	28.13	8.394	3.14	6.61	44.6
	12/16/15	<1.0	<2.0	<1.0	<1.0		<0.10	2.66	0.00	49.95	3,540.90	18.80	6.176	0.60	6.91	86.2
	06/09/16	<1.0	<2.0	<1.0	<1.0		<0.06	3.22	0.00	50.32	3,540.53	27.40	2.949	2.59	6.99	1.6
	12/14/16	<1.0	<2.0	<1.0	<1.0		<0.06	2.37	0.00	50.38	3,540.47	19.14	4.317	2.29	7.74	53.1
duplicate	12/14/16	<1.0	<2.0	<1.0	<1.0		<0.06	2.02	0.00	50.38	3,540.47	19.14	4.317	2.29	7.74	53.1
	06/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	1.50	0.00	50.68	3,540.17	22.60	1.68	0.42	6.98	71.9
	09/19/17	<1.0	<2.0	<1.0	<2.0		<0.06	1.73	0.00	50.68	3,540.17	21.70	2.014	1.94	6.91	23.5
	12/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	1.79	0.00	50.91	3,539.94	18.10	1.751	0.89	7.16	11.3
	03/14/18	3.31	<2.0	<1.0	<2.0		<0.06	0.357	0.00	51.02	3,539.83	20.60	2.342	1.23	6.77	55.4
	06/05/18	<1.0	<2.0	<1.0	<2.0		0.092	0.329	0.00	51.24	3,539.61	24.50	2.867	2.65	6.82	68.6
	09/24/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.200	0.00	51.41	3,539.44	23.65	2.436	1.86	7.04	75.6
	12/12/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.098	0.00	51.44	3,539.41	19.26	1.982	1.21	6.94	29.2
	03/12/19	<1.0	<2.0	<1.0	<2.0		0.061	0.101	0.00	51.59	3,539.26	20.88	2.467	1.77	7.06	56.0
	09/20/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.183	0.00	51.92	3,538.93	23.67	2,223	2.43	6.98	42.3
	12/04/19	<1.0	<2.0	<1.0	<2.0		<0.06	<0.150	0.00	51.95	3,538.90	20.11	2.116	1.63	7.11	32.0
	03/12/20	<1.0	<2.0	<1.0	<2.0		<0.06	<0.146	0.00	52.06	3,538.79	21.60	2.228	1.92	6.89	43.6
	06/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	<0.147	0.00	52.17	3,538.68	23.66	2.549	2.11	7.21	65.6
	09/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	<0.149	0.00	52.32	3,538.53	22.96	2.011	2.06	7.01	43.8
	12/02/20	<1.0	<2.0	<1.0	<2.0		<0.06	<0.151	0.00	52.49	3,538.36	21.04	2.198	1.88	6.92	65.4
	03/24/21	<1.0	<2.0	<1.0	<2.0		<0.06	<0.151	0.00	52.66	3,538.19	20.35	3.445	2.33	7.16	76.4
	06/08/21	NS	NS	NS	NS		NS	NS	0.00	52.81	3,538.04	NS	NS	NS	NS	NS
	09/22/21	NS	NS	NS	NS		NS	NS	0.00	52.94	3,537.91	NS	NS	NS	NS	NS
	12/01/21	<1.0	<2.0	<1.0	<2.0		<0.06	0.179	0.00	53.27	3,537.58	19.88	3.226	2.10	7.16	88.4
	03/23/22	NS	NS	NS	NS		NS	NS	0.00	53.28	3,537.57	NS	NS	NS	NS	NS
	06/01/22	<1.0	<2.0	<1.0	<2.0		<0.06	<0.162	0.00	53.30	3,537.55	20,97	2.559	1.92	7.07	90.8
	09/28/22	NS	NS	NS	NS		NS	NS	0.00	53.52	3,537.33	21.05	3.112	2.33	7.12	90.8
	12/07/22	<1.0	<2.0	<1.0	<2.0		<0.06	<0.157	0.00	53.63	3,537.22	NM	NM	NM	NM	NM
	03/31/23	NS	NS	NS	NS		NS	NS	0.00	53.77	3,537.08	NM	NM	NM	NM	NM
	05/31/23	<1.0	<2.0	<1.0	<2.0		<0.06	<0.152	0.00	53.82	3,537.03	NM	NM	NM	NM	NM
	09/27/23	<1.0	<2.0	<1.0	<2.0		<0.06	<0.149	0.00	53.99	3,536.86	NM	NM	NM	NM	NM
	11/30/23	NS	NS	NS	NS		NS	NS	0.00	54.10	3,536.75	NM	NM	NM	NM	NM

Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
MW-5	03/18/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	47.61	3,545.14					
3592.75	06/23/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	47.83	3,544.92					
	10/07/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	48.17	3,544.58					
	12/08/11	<1.0	<1.0	<1.0	<2.0	<1.0	NA	NA	0.00	48.31	3,544.44					
	08/07/12	< 5.0	< 5.0	< 5.0	<15	< 15	NA	NA	0.00	48.83	3,543.92	27.30	0.775	4.84	6.01	115.9
	12/20/12	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	49.26	3,543.49	17.49	0.633	4.70	7.04	-187.0
	06/25/13	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	49.64	3,543.11	22.20	0.848	4.60	6.63	181.1
	12/11/13	<1.0	<2.0	<1.0	<2.0	<2.0	NA	NA	0.00	50.09	3,542.66	19.35	0.801	4.79	7.37	86.0
	06/25/14	<1.0	<2.0	<1.0	1.13		NA	NA	0.00	50.53	3,542.22	20.39	0.782	3.54	6.91	39.2
	12/11/14	<1.0	<2.0	<1.0	<1.0		<0.10	<0.102	0.00	50.76	3,541.99	18.61	0.888	6.35	6.11	103.6
	06/11/15	<1.0	<2.0	<1.0	<1.0		<0.10	<0.10	0.00	51.12	3,541.63	29.58	0.882	6.63	6.72	40.4
	12/16/15	<1.0	<2.0	<1.0	<1.0		<0.10	0.115	0.00	51.33	3,541.42	17.09	0.910	5.79	7.16	129.1
	06/09/16	<1.0	<2.0	<1.0	<1.0		<0.06	<0.08	0.00	51.68	3,541.07	26.69	1.099	6.03	6.55	59.9
	12/14/16	<1.0	<2.0	<1.0	<1.0		<0.06	0.194	0.00	51.76	3,540.99	19.03	1.361	5.93	7.72	79.5
	06/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.162	0.00	52.08	3,540.67	19.10	0.905	5.75	6.78	127.2
	09/19/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.132	0.00	52.07	3,540.68	20.70	1.001	4.04	6.81	59.8
	12/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.425	0.00	52.30	3,540.45	17.90	0.768	3.92	7.08	33.2
duplicate	12/06/17	<1.0	<2.0	<1.0	<2.0		<0.06	0.467	0.00	52.30	3,540.45	17.90	0.768	3.92	7.08	33.2
	03/14/18	<1.0	<2.0	<1.0	<2.0		<0.06	<0.0756	0.00	52.38	3,540.37	20.10	0.901	4.11	6.76	65.4
	06/05/18	<1.0	<2.0	<1.0	<2.0		0.081	0.155	0.00	52.58	3,540.17	25.60	1.162	4.76	6.96	123.0
duplicate	06/05/18	<1.0	<2.0	<1.0	<2.0		0.097	0.137	0.00	52.58	3,540.17	25.60	1.162	4.76	6.96	123.0
	09/24/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.111	0.00	52.50	3,540.25	24.66	0.913	3.88	7.24	102.2
duplicate	09/24/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.136	0.00	52.50	3,540.25	24.66	0.913	3.88	7.24	102.2
	12/12/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.157	0.00	52.54	3,540.21	18.87	1.012	4.23	7.11	55.6
duplicate	12/12/18	<1.0	<2.0	<1.0	<2.0		<0.06	0.148	0.00	52.54	3,540.21	18.87	1.012	4.23	7.11	55.6
	03/12/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.178	0.00	52.97	3,539.78	20.18	1.123	3.65	7.02	88.0
duplicate	03/12/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.157	0.00	52.97	3,539.78	20.18	1.123	3.65	7.02	88.0
	09/20/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.223	0.00	53.22	3,539.53	23.98	0.889	4.11	7.16	112.0
duplicate	09/20/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.230	0.00	53.22	3,539.53	23.98	0.889	4.11	7.16	112.0
	12/04/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.171	0.00	53.34	3,539.41	20.18	0.987	3.97	7.02	99.6
duplicate	12/04/19	<1.0	<2.0	<1.0	<2.0		<0.06	0.168	0.00	53.34	3,539.41	20.18	0.987	3.97	7.02	99.6
	03/12/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.235	0.00	53.40	3,539.35	21.20	1.115	4.01	7.11	102.0
duplicate	03/12/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.190	0.00	53.40	3,539.35	21.20	1.115	4.01	7.11	102.0
	06/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	<0.148	0.00	53.58	3,539.17	23.40	1.233	4.26	6.92	123.0
duplicate	06/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.166	0.00	53.58	3,539.17	23.40	1.233	4.26	6.92	123.0
	09/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.156	0.00	53.69	3,539.06	21.96	1.002	3.84	7.27	89.6
duplicate	09/16/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.173	0.00	53.69	3,539.06	21.96	1.002	3.84	7.27	89.6
	12/02/20	<1.0	<2.0	<1.0	<2.0		<0.06	0.178	0.00	53.91	3,538.84	20.86	1.246	2.96	7.08	112.0
	03/24/21	<1.0	<2.0	<1.0	<2.0		<0.06	0.281	0.00	54.05	3,538.70	21.22	1.388	3.03	7.03	98.7
duplicate	03/24/21	<1.0	<2.0	<1.0	<2.0		<0.06	0.162	0.00	54.05	3,538.70	21.22	1.388	3.03	7.03	98.7
	06/08/21	NS	NS	NS	NS		NS	NS	0.00	54.25	3,538.50	NS	NS	NS	NS	NS
	09/22/21	NS	NS	NS	NS		NS	NS	0.00	54.29	3,538.46	NS	NS	NS	NS	NS
	12/01/21	<1.0	<2.0	<1.0	<2.0		<0.06	<0.147	0.00	54.51	3,538.24	20.86	0.998	3.24	7.18	119.0
duplicate	12/01/21	<1.0	<2.0	<1.0	<2.0		<0.06	<0.147	0.00	54.51	3,538.24	20.86	0.998	3.24	7.18	119.0
	03/23/22	NS	NS	NS	NS		NS	NS	0.00	54.60	3,538.15	NS	NS	NS	NS	NS
	06/01/22	<1.0	<2.0	<1.0	<2.0		<0.06	<0.159	0.00	54.67	3,538.08	21.44	1.234	2.94	7.23	102.0
	09/28/22	NS	NS	NS	NS		NS	NS	0.00	54.88	3,537.87	22.03	1.488	3.12	7.07	122.1
	12/07/22	<1.0	<2.0	<1.0	<2.0		<0.06	<0.147	0.00	54.98	3,537.77	NM	NM	NM	NM	NM
duplicate	12/07/22	<1.0	<2.0	<1.0	<2.0		<0.06	<0.148	0.00	54.98	3,537.77	NM	NM	NM	NM	NM
	03/31/23	NS	NS	NS	NS		NS	NS	0.00	55.15	3,537.60	NM	NM	NM	NM	NM
	05/31/23	<1.0	<2.0	<1.0	<2.0		0.113	<0.153	0.00	55.18	3,537.57	NM	NM	NM	NM	NM
	09/27/23	<1.0	<2.0	<1.0	<2.0		<0.06	<0.151	0.00	55.39	3,537.36	NM	NM	NM	NM	NM
	11/30/23	NS	NS	NS	NS		NS	NS	0.00	55.47	3,537.28	NM	NM	NM	NM	NM

Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
HTRW-1	06/25/13	NSP	NSP	NSP	NSP	NSP	NA	NA	0.00	45.28	3,542.87					
3588.14	12/11/13	NSP	NSP	NSP	NSP	NSP	NA	NA	0.01	45.79	3,542.36					
	6/24/14	910	48.7	89.1	70.0		NA	NA	0.01	46.19	3,541.95	21.90	1.533	1.37	6.77	-108.5
duplicate	6/24/14	922	49.0	88.8	69.2		NA	NA	0.00	46.19	3,541.95	21.90	1.533	1.37	6.77	-108.5
	12/11/14	NSP	NSP	NSP	NSP		NSP	NSP	0.05	45.51	3,542.67	NSP	NSP	NSP	NSP	NSP
	06/11/15	NSP	NSP	NSP	NSP		NSP	NSP	0.80	47.61	3,541.11	NSP	NSP	NSP	NSP	NSP
	12/16/15	NSP	NSP	NSP	NSP		NSP	NSP	0.02	46.95	3,541.20	NSP	NSP	NSP	NSP	NSP
	06/09/16	NSP	NSP	NSP	NSP		NSP	NSP	0.00	46.34	3,541.80	NM	NM	NM	NM	NM
	12/14/16	1.97	<0.6	<0.3	0.943		<0.06	0.432	0.00	47.44	3,540.70	19.34	1.72	2.34	7.58	60.8
	06/06/17	774	21.9	1.90	57.6		1.85	0.549	0.00	47.71	3,540.43	21.12	1.014	1.71	6.91	71.7
duplicate	06/06/17	694	13.8	1.37	47.2		1.43	1.49	0.00	47.71	3,540.43	21.12	1.014	1.71	6.91	71.7
	09/19/17	1620	76.1	17.1	82.6		2.88	1.23	0.00	47.72	3,540.42	21.7	0.693	1.7	6.93	-45.4
	12/06/17	NS	NS	NS	NS	NS	NS	NS	0.00	NM	NM	NS	NS	NS	NS	NS
	03/14/18	102	<2.0	<1.0	8.16		0.360	<0.0754	0.00	48.03	3,540.10	20.6	0.892	1.92	7.23	-11.5
	06/05/18	163	40.0	2.03	34.2		1.40	2.17	0.00	48.22	3,540.06	22.1	0.989	1.87	6.89	22.3
	09/24/18	11.4	2.78	<3.0	0.564		0.109	0.406	0.00	48.45	3,540.11	21.6	1.106	1.98	6.92	11.6
	12/12/18	377	20.5	1.07	20.7		1.15	0.240	0.00	48.99	3,539.15	19.03	0.979	2.12	7.01	22.9
	03/12/19	28.8	2.6	<3.0	3.48		0.139	0.154	0.00	48.70	3,539.44	20.8	0.979	2.04	7.18	10.6
	09/20/19	42.4	3.07	0.413	3.84		0.318	0.263	0.00	48.97	3,539.17	21.6	0.889	1.96	6.98	-22
	12/04/19	57.5	5.82	0.559	8.27		0.118	<0.148	0.00	48.97	3,539.17	19.2	1.021	1.88	7.01	9.66
	03/12/20	2.28	<2.0	<1.0	<2.0		<0.06	0.222	0.00	49.09	3,539.05	20.6	0.926	1.92	7.26	60.5
	06/16/20	70.6	11.0	0.960	4.46		0.116	0.288	0.00	49.20	3,538.94	23.4	1.115	2.01	7.33	44.6
	09/16/20	135	7.3	0.382	9.86		0.308	<0.149	0.00	49.38	3,538.76	22.7	1.226	1.94	7.45	10.8
	12/02/20	626	53.3	2.23	66.0		1.79	0.256	0.00	49.56	3,538.58	21.2	1.101	1.87	7.33	35.6
	03/24/21	849	124	3.53	56.8		2.36	0.204	0.00	49.72	3,538.42	20.8	0.966	2.11	7.26	54.8
	06/08/21	765	86.3	2.20	46.1		1.70	<0.147	0.00	49.90	3,538.24	22.3	1.074	2.02	7.11	44.7
	09/22/21	1.20	<2.0	<1.0	<2.0		<0.06	<0.551	0.00	50.00	3,538.14	23.1	1.226	1.92	7.2	60.6
	12/01/21	2.49	10.4	<1.0	<2.0		<0.06	<0.152	0.00	50.22	3,537.92	22.8	1.119	2.33	7.19	55.8
	03/23/22	585	18.3	12.0	21.9		1.28	<0.153	0.00	50.28	3,537.86	20.4	1.228	1.09	7.06	10.2
	06/01/22	1.53	1.38	<1.0	<2.0		<0.06	<0.151	0.00	50.34	3,537.80	21.6	1.387	1.12	7.21	22.3
	09/28/22	0.429	<2.0	<1.0	<2.0		<0.06	0.321	0.00	50.56	3,537.58	22.9	1,.438	2.13	7.18	54.3
	12/07/22	<1.0	<2.0	<1.0	<2.0		<0.06	<0.149	0.00	50.68	3,537.46	NM	NM	NM	NM	NM
	03/31/23	21.5	8.58	1.30	2.86		0.223	0.285	0.00	50.81	3,537.33	NM	NM	NM	NM	NM
duplicate	03/31/23	7.99	3.18	0.783	1.59		0.189	0.282	0.00	50.81	3,537.33	NM	NM	NM	NM	NM
	05/31/23	10.5	5.20	0.728	1.09		0.129	<0.149	0.00	50.86	3,537.28	NM	NM	NM	NM	NM
duplicate	05/31/23	10.2	4.94	0.645	1.11		<0.06	0.153	0.00	50.86	3,537.28	NM	NM	NM	NM	NM
	09/27/23	4.60	1.98	<1.0	0.332		0.081	<0.148	0.00	51.11	3,537.03	NM	NM	NM	NM	NM
duplicate	09/27/23	5.81	2.47	0.345	0.354		0.075	<0.148	0.00	51.11	3,537.03	NM	NM	NM	NM	NM
	11/30/23	3.50	<2.0	<1.0	<2.0		<0.06	<0.151	0.00	51.19	3,536.95	NM	NM	NM	NM	NM
duplicate	11/30/23	3.60	<2.0	<1.0	<2.0		<0.06	<0.152	0.00	51.19	3,536.95	NM	NM	NM	NM	NM
HTRW-2	6/25/13	62.3	21.4	4.4	13.0	101.1	NA	NA	0.00	44.60	3,542.91	21.70	1.233	2.80	6.81	180.2
3587.51	12/11/13	530	35.9	12.4	33.4	611.7	NA	NA	0.00	45.05	3,542.46	20.08	1.43	1.07	7.34	-2.00
	6/24/14	748	47.6	59.2	84.0		NA	NA	0.00	45.52	3,541.99	19.88	1.536	0.68	6.86	-128.9
	12/11/14	722	135	36.4	129		2.0	0.253	0.00	45.79	3,541.72	17.13	1.444	0.41	6.67	-89.1
	06/11/15	875	28.7	35.3	29.3		1.24	0.354	0.00	46.05	3,541.46	21.95	1.937	2.82	6.06	-43.3
	12/16/15	503	<20.0	18.9	<10.0		1.01	0.144	0.00	46.25	3,541.26	17.01	1.523	0.69	7.07	-69.4
	06/09/16	863	6.35	60.6	6.87		2.03	1.05	0.00	46.66	3,540.85	NM	NM	NM	NM	NM
	12/14/16	322	7.32	33.3	5.66		0.128	0.461	0.00	46.74	3,540.77	18.65	1.732	1.39	7.73	10.1
	06/06/17	342	4.05	2.81	17.9		0.901	0.332	0.00	47.03	3,540.48	18.81	1.035	4.62	6.75	107.4
	09/19/17	NS	NS	NS	NS	NS	NS	NS	0.00	47.08	3,540.43	NS	NS	NS	NS	NS
	12/06/17	NS	NS	NS	NS	NS	NS	NS	0.00	47.25	3,540.26	NS	NS	NS	NS	NS
	03/14/18	NS	NS	NS	NS	NS	NS	NS	0.00	48.42	3,539.09	NS	NS	NS	NS	NS
	06/05/18	NS	NS	NS	NS	NS	NS	NS	0.00	47.56	3,539.95	NS	NS	NS	NS	NS
	09/24/18	NS	NS	NS	NS	NS	NS	NS	0.00	47.77	3,539.74	NS	NS	NS	NS	NS
	12/12/18	NS	NS	NS	NS	NS	NS	NS	0.00	47.79	3,539.72	NS	NS	NS	NS	NS
	03/12/19	NS	NS	NS	NS	NS	NS	NS	0.00	48.01	3,539.50	NS	NS	NS	NS	NS
	09/20/19	NS	NS	NS	NS	NS	NS	NS	0.00	48.28	3,539.23	NS	NS	NS	NS	NS
	12/04/19	NS	NS	NS	NS	NS	NS	NS	0.00	48.35	3,539.16	NS	NS	NS	NS	NS
	03/12/20	NS	NS	NS	NS	NS	NS	NS	0.00	48.47	3,539.04	NS	NS	NS	NS	NS
	06/16/20	NS	NS	NS	NS	NS	NS	NS	0.00	48.59	3,538.92	NS	NS	NS	NS	NS
	09/16/20	NS	NS	NS	NS	NS	NS	NS	0.00	48.68	3,538.83	NS	NS	NS	NS	NS
	12/02/20	NS	NS	NS	NS	NS	NS	NS	0.00	48.89	3,538.62	NS	NS	NS	NS	NS
	03/24/21	NS	NS	NS	NS	NS	NS	NS	0.00	49.10	3,538.41	NS	NS	NS	NS	NS
	06/08/21	NS	NS	NS	NS	NS	NS	NS	0.00	49.23	3,538.28	NS	NS	NS	NS	NS
	09/22/21	NS	NS	NS	NS	NS	NS	NS	0.00	49.34	3,538.17	NS	NS	NS	NS	NS
	12/01/21	NS	NS	NS	NS	NS	NS	NS	0.00	49.56	3,537.95	NS	NS	NS	NS	NS
	03/23/22	NS	NS	NS	NS	NS	NS	NS	0.00	49.69	3,537.82	NS	NS	NS	NS	NS
	06/01/22	NS	NS	NS	NS	NS	NS	NS	0.00	49.76	3,537.75	NS	NS	NS	NS	NS
	09/28/22	NS	NS	NS	NS	NS	NS	NS	0.00	49.99	3,537.52	NS	NS	NS	NS	NS
	12/07/22	NS	NS	NS	NS	NS	NS	NS	0.00	49.98	3,537.53	NS	NS	NS	NS	NS
	03/31/23	NS	NS	NS	NS	NS	NS	NS	0.00	50.13	3,537.38	NS	NS	NS	NS	NS
	05/31/23	NS	NS	NS	NS	NS	NS	NS	0.00	50.16	3,537.35	NS	NS	NS	NS	NS
	09/27/23	NS	NS	NS	NS	NS	NS	NS	0.00	50.43	3,537.08	NS	NS	NS	NS	NS
	11/30/23	NS	NS	NS	NS	NS	NS	NS	0.00	50.47	3,537.04	NS	NS	NS	NS	NS

Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
HTRW-3	6/25/13	NSP	NSP	NSP	NSP	NSP	NA	NA	0.01	45.88	3,542.88					
3588.75	12/11/13	NSP	NSP	NSP	NSP	NSP	NA	NA	0.00	46.33	3,542.43					
	6/24/14	3090	1220	450	520		NA	NA	0.00	46.79	3,541.96	21.17	1.56	0.75	6.70	-160.1
	12/11/14	3760	1750	466	632		12.2	1.31	0.00	47.03	3,541.72	17.26	1.684	0.33	6.59	-209.1
	06/11/15	NSP	NSP	NSP	NSP		NSP	NSP	0.26	47.61	3,541.33	NSP	NSP	NSP	NSP	NSP
	12/16/15	NSP	NSP	NSP	NSP		NSP	NSP	1.70	49.00	3,540.99	NSP	NSP	NSP	NSP	NSP
	06/09/16	NSP	NSP	NSP	NSP		NSP	NSP	0.03	47.84	3,540.93	NSP	NSP	NSP	NSP	NSP
	12/14/16	NSP	NSP	NSP	NSP		NSP	NSP	0.51	48.48	3,540.64	NSP	NSP	NSP	NSP	NSP
	06/06/17	NSP	NSP	NSP	NSP		NSP	NSP	0.04	48.35	3,540.43	NSP	NSP	NSP	NSP	NSP
	09/19/17	NSP	NSP	NSP	NSP		NSP	NSP	0.05	48.36	3,540.43	NSP	NSP	NSP	NSP	NSP
	12/06/17	NSP	NSP	NSP	NSP		NSP	NSP	0.75	49.35	3,539.95	NSP	NSP	NSP	NSP	NSP
	03/14/18	NSP	NSP	NSP	NSP		NSP	NSP	0.00	48.68	3,540.07	NSP	NSP	NSP	NSP	NSP
	06/05/18	NSP	NSP	NSP	NSP		NSP	NSP	0.00	48.88	3,539.87	NSP	NSP	NSP	NSP	NSP
	09/24/18	NSP	NSP	NSP	NSP		NSP	NSP	0.10	49.18	3,539.64	NSP	NSP	NSP	NSP	NSP
	12/12/18	NSP	NSP	NSP	NSP		NSP	NSP	0.05	48.13	3,540.66	NSP	NSP	NSP	NSP	NSP
	03/12/19	NSP	NSP	NSP	NSP		NSP	NSP	0.06	49.35	3,539.44	NSP	NSP	NSP	NSP	NSP
	09/20/19	NSP	NSP	NSP	NSP		NSP	NSP	0.00	49.60	3,539.15	NSP	NSP	NSP	NSP	NSP
	12/04/19	NSP	NSP	NSP	NSP		NSP	NSP	0.00	49.75	3,539.00	NSP	NSP	NSP	NSP	NSP
	03/12/20	NS	NS	NS	NS		NS	NS	0.00	49.89	3,538.86	NS	NS	NS	NS	NS
	06/16/20	NSP	NSP	NSP	NSP		NSP	NSP	0.02	49.92	3,538.84	NSP	NSP	NSP	NSP	NSP
	09/16/20	NS	NS	NS	NS		NS	NS	0.00	50.08	3,538.67	NS	NS	NS	NS	NS
	12/02/20	NS	NS	NS	NS		NS	NS	0.00	50.24	3,538.51	NS	NS	NS	NS	NS
	03/24/21	NS	NS	NS	NS		NS	NS	0.00	50.32	3,538.43	NS	NS	NS	NS	NS
	06/08/21	NS	NS	NS	NS		NS	NS	0.00	50.46	3,538.29	NS	NS	NS	NS	NS
	09/22/21	NS	NS	NS	NS		NS	NS	0.00	50.55	3,538.20	NS	NS	NS	NS	NS
	12/01/21	NS	NS	NS	NS		NS	NS	0.00	50.81	3,537.94	NS	NS	NS	NS	NS
	03/23/22	NS	NS	NS	NS		NS	NS	0.00	50.90	3,537.85	NS	NS	NS	NS	NS
	06/01/22	NS	NS	NS	NS		NS	NS	0.00	51.05	3,537.70	NS	NS	NS	NS	NS
	09/28/22	NS	NS	NS	NS		NS	NS	0.00	51.20	3,537.55	NS	NS	NS	NS	NS
	12/07/22	NS	NS	NS	NS		NS	NS	0.00	52.26	3,536.49	NS	NS	NS	NS	NS
	03/31/23	NS	NS	NS	NS		NS	NS	0.00	51.38	3,537.37	NS	NS	NS	NS	NS
	05/31/23	NS	NS	NS	NS		NS	NS	0.00	51.44	3,537.31	NS	NS	NS	NS	NS
	09/27/23	NS	NS	NS	NS		NS	NS	0.00	51.72	3,537.03	NS	NS	NS	NS	NS
	11/30/23	NS	NS	NS	NS		NS	NS	0.00	51.75	3,537.00	NS	NS	NS	NS	NS

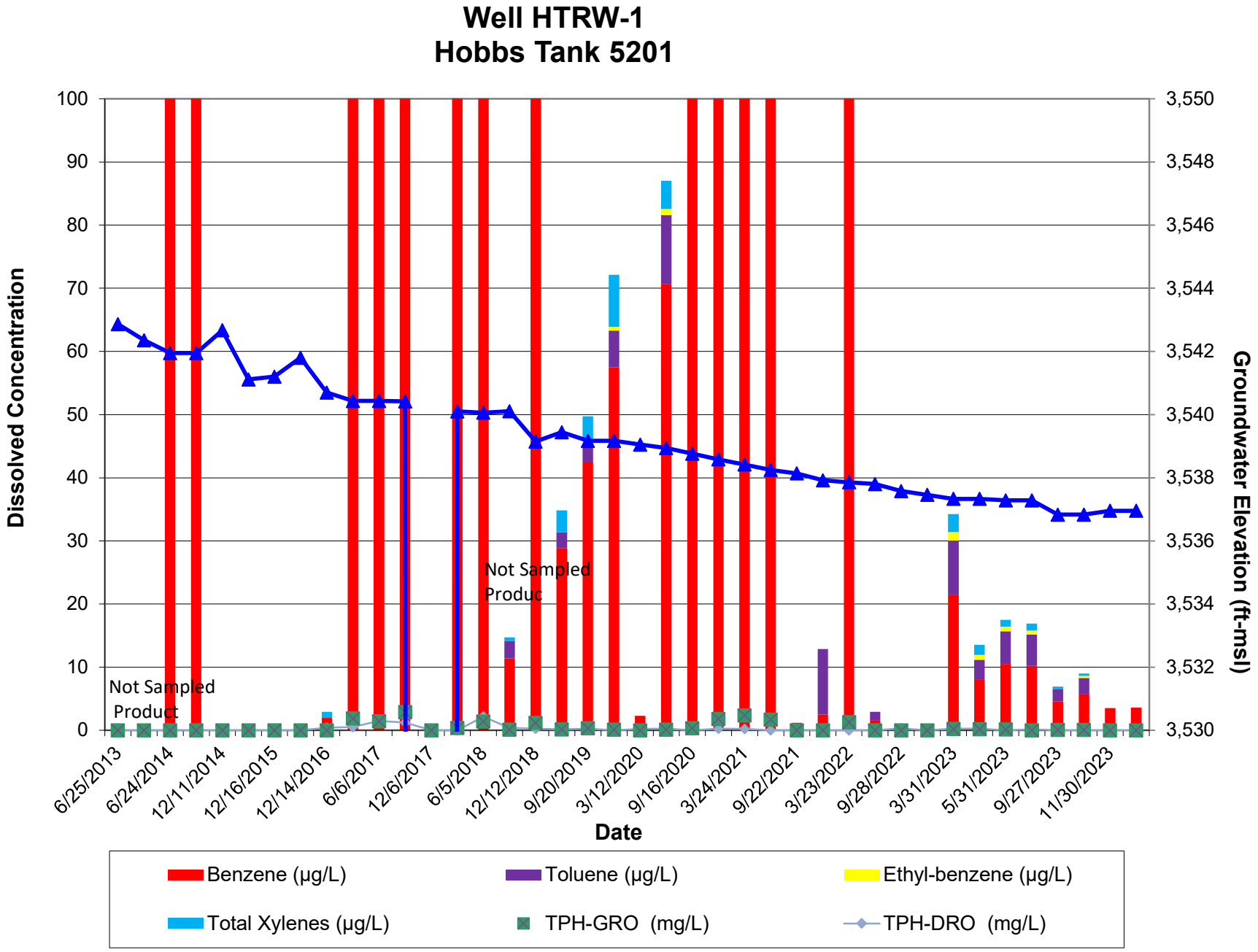
Appendix B Summary of Historical Groundwater Analytical Results and Field Parameters
HF Sinclair- Hobbs Tank 5201 - Lea County, New Mexico

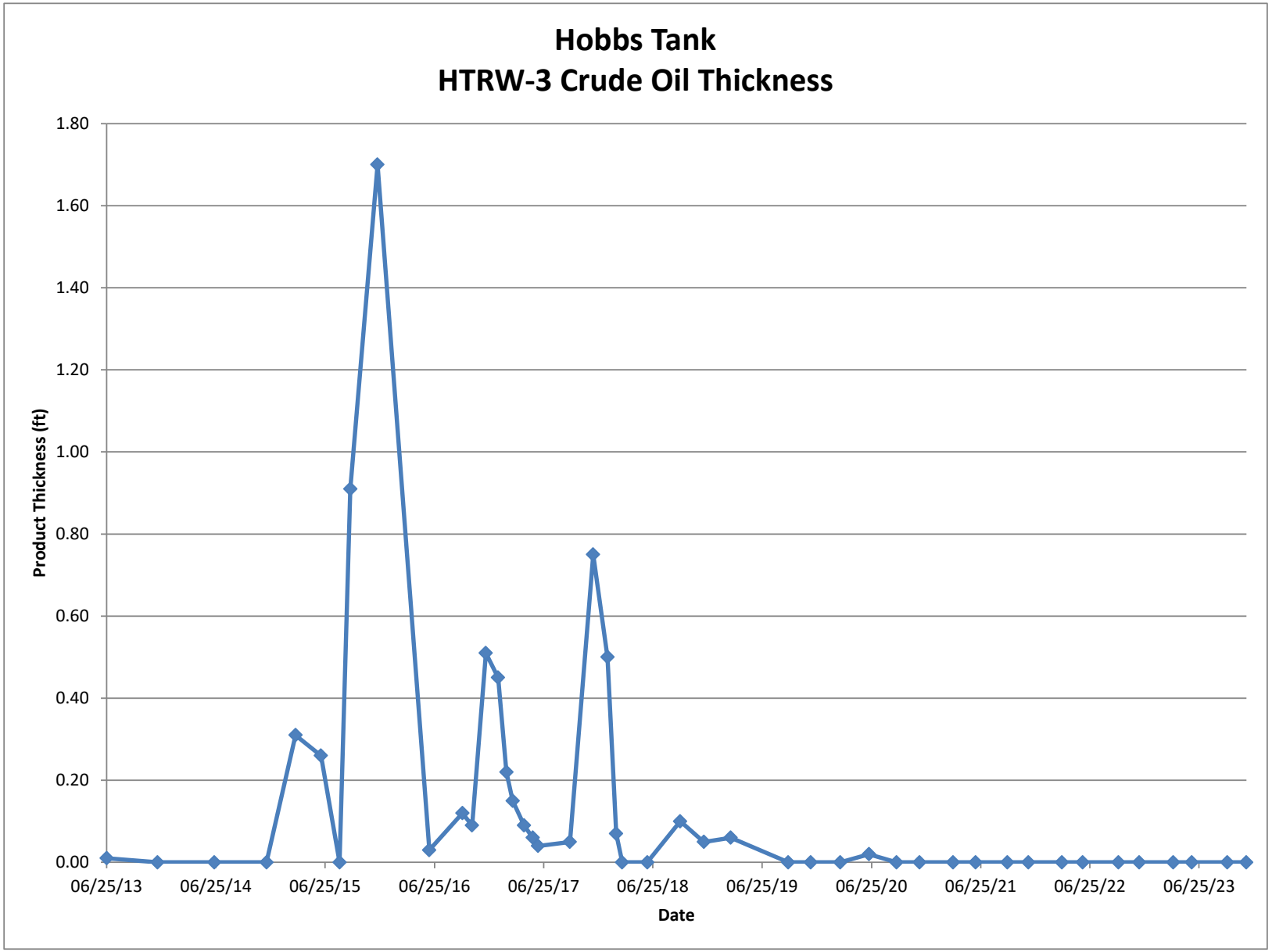
Monitor Well ID/ MP Elevation	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Product Thickness (feet)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
NMWQCC Groundwater Standard		5	1000	700	620	--	NE	NE								
HTRW-4	6/25/13	87.4	49.4	32.5	52.8	222.1	NA	NA	0.00	45.68	3,542.89	22.30	0.96	2.04	6.87	190.9
3588.57	12/11/13	951	157	88.1	219	1414.7	NA	NA	0.00	46.13	3,542.44	20.41	1.44	0.95	7.5	-144
	6/24/14	1720	698	253	436		NA	NA	0.00	46.59	3,541.98	21.9	1.751	1.16	7.01	-96.1
	12/11/14	1590	288	126	277		4.03	0.643	0.00	46.85	3,541.72	16.54	1.581	0.15	6.81	-190.5
	06/11/15	1490	29.2	111	29.9		2.16	0.365	0.00	47.11	3,541.46	23.87	1.486	0.68	6.92	-183.2
	12/16/15	NS	NS	NS	NS	NS	NS	NS	0.00	47.32	3,541.25	NS	NS	NS	NS	NS
	06/09/16	834	11.7	35.9	17.8		1.60	1.10	0.00	47.70	3,540.87	22.27	1.559	1.93	6.78	-117
	12/14/16	3800	29.6	16.2	46.1		1.31	0.951	0.00	47.79	3,540.78	19.01	1.937	1.48	7.96	-74.01
	06/06/17	564	6.20	3.62	57.8		1.97	0.736	0.00	48.09	3,540.48	18.92	1.092	1.77	6.97	-50.9
	09/19/17	NS	NS	NS	NS	NS	NS	NS	0.00	48.19	3,540.38	NS	NS	NS	NS	NS
	12/06/17	NS	NS	NS	NS	NS	NS	NS	0.00	48.30	3,540.27	NS	NS	NS	NS	NS
	03/14/18	NS	NS	NS	NS	NS	NS	NS	0.00	48.58	3,539.99	NS	NS	NS	NS	NS
	06/05/18	NS	NS	NS	NS	NS	NS	NS	0.00	48.64	3,539.93	NS	NS	NS	NS	NS
	09/24/18	NS	NS	NS	NS	NS	NS	NS	0.00	48.78	3,539.79	NS	NS	NS	NS	NS
	12/12/18	NS	NS	NS	NS	NS	NS	NS	0.00	48.48	3,540.09	NS	NS	NS	NS	NS
	03/12/19	NS	NS	NS	NS	NS	NS	NS	0.00	49.05	3,539.52	NS	NS	NS	NS	NS
	09/20/19	NS	NS	NS	NS	NS	NS	NS	0.00	49.38	3,539.19	NS	NS	NS	NS	NS
	12/04/19	NS	NS	NS	NS	NS	NS	NS	0.00	49.92	3,538.65	NS	NS	NS	NS	NS
	03/12/20	NS	NS	NS	NS	NS	NS	NS	0.00	49.55	3,539.02	NS	NS	NS	NS	NS
	06/16/20	NS	NS	NS	NS	NS	NS	NS	0.00	49.68	3,538.89	NS	NS	NS	NS	NS
	09/16/20	NS	NS	NS	NS	NS	NS	NS	0.00	49.82	3,538.75	NS	NS	NS	NS	NS
	12/02/20	NS	NS	NS	NS	NS	NS	NS	0.00	50.01	3,538.56	NS	NS	NS	NS	NS
	03/24/21	NS	NS	NS	NS	NS	NS	NS	0.00	50.11	3,538.46	NS	NS	NS	NS	NS
	06/08/21	NS	NS	NS	NS	NS	NS	NS	0.00	50.35	3,538.22	NS	NS	NS	NS	NS
	09/22/21	NS	NS	NS	NS	NS	NS	NS	0.00	50.38	3,538.19	NS	NS	NS	NS	NS
	12/01/21	NS	NS	NS	NS	NS	NS	NS	0.00	50.66	3,537.91	NS	NS	NS	NS	NS
	03/23/22	NS	NS	NS	NS	NS	NS	NS	0.00	50.65	3,537.92	NS	NS	NS	NS	NS
	06/01/22	NS	NS	NS	NS	NS	NS	NS	0.00	50.78	3,537.79	NS	NS	NS	NS	NS
	09/28/22	NS	NS	NS	NS	NS	NS	NS	0.00	51.03	3,537.54	NS	NS	NS	NS	NS
	12/07/22	NS	NS	NS	NS	NS	NS	NS	0.00	51.02	3,537.55	NS	NS	NS	NS	NS
	03/31/23	NS	NS	NS	NS	NS	NS	NS	0.00	51.20	3,537.37	NS	NS	NS	NS	NS
	05/31/23	NS	NS	NS	NS	NS	NS	NS	0.00	51.22	3,537.35	NS	NS	NS	NS	NS
	09/27/23	NS	NS	NS	NS	NS	NS	NS	0.00	51.56	3,537.01	NS	NS	NS	NS	NS
	11/30/23	NS	NS	NS	NS	NS	NS	NS	0.00	51.58	3,536.99	NS	NS	NS	NS	NS
RW-1	03/23/22	NS	NS	NS	NS	NS	NS	NS	0.00	48.47	3537.86	NM	NM	NM	NM	NM
	06/01/22	NS	NS	NS	NS	NS	NS	NS	0.00	48.59	3537.80	NM	NM	NM	NM	NM
	09/28/22	NS	NS	NS	NS	NS	NS	NS	0.00	48.68	3537.58	NM	NM	NM	NM	NM
	12/07/22	NS	NS	NS	NS	NS	NS	NS	0.00	48.89	3537.46	NM	NM	NM	NM	NM
	03/31/23	NS	NS	NS	NS	NS	NS	NS	0.00	49.10	3537.33	NM	NM	NM	NM	NM
	05/31/23	NS	NS	NS	NS	NS	NS	NS	0.00	49.23	3537.28	NM	NM	NM	NM	NM
	09/27/23	77.3	24.4	1.58	23.0	126.3	<0.06	0.697	0.00	49.34	3537.03	NM	NM	NM	NM	NM
	11/30/23	NS	NS	NS	NS	NS	NS	NS	0.00	49.56	3536.95	NM	NM	NM	NM	NM

Notes:
BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard
µg/L = microgram per liter
mg/L= micrograms per liter
< = Not detected above laboratory reporting limit
ft-bmp - feet-below measuring point
ft-msl - feet-mean sea level
deg-C - degrees-Celcius
mS/cm - milliSiemens per centimeter
mV - millivolts
NSP - Not Sampled Product
MP - Measuring Point
NS - Not Sampled
NA- Not analyzed
NE - Not Established
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Oganics
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Oganics
BTEX analyzed by Method 8260C
TPH-GRO analyzed by Method 8015V
TPH-DRO analyzed by Method 8015D

Appendix C

Graphs





Appendix D

Groundwater Laboratory Reports

April 13, 2023

Erin Sullivan
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (303) 325-4425
FAX

Order No.: 2304001

RE: Hobbs Tank

Dear Erin Sullivan:

DHL Analytical, Inc. received 3 sample(s) on 4/1/2023 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,

John DuPont
General Manager

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

Table of Contents

Company Name/Address:
GHD- Denver, CO

1141 Lima Street
Aurora, CO 80010

Billing Information:
Jeffrey Cloud
2055 Niagara Falls Blvd
Niagara Falls, NY 14304

Report to: **Erin Sullivan**

Email To: **erin.sullivan@ghd.com;jeffrey.cloud@ghd.com**

Project Description: **Holly Frontier Tank 5201**

City/State Collected: Hobbs N.M

Please Circle: PT MT CT ET

Phone: **303-325-4425**

Client Project # **12604310**

Lab Project # **CRADCO-12604310**

Collected by (print): Erin Sullivan

Site/Facility ID # Hobbs Tank

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day Std

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace PEOPLE ADVANCING SCIENCE
2304001
MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **CRADCO**
Template: **T225845**
Prelogin: **P985184**
PM: **134- Mark W. Beasley**
PB: 3/6/23 MW
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRONMLVI 40mlAmb-HCl-BT	V8260TPHKS 40mlAmb-HCl	BTEX	Remarks	Sample # (lab only)
HTRW-1	G	GW	—	3/31/23	0913	~~7~~	X	X			01
DUP-1	G	GW	—	3/31/22	—	7	X	X			02
Trip Blank	—		—	—	—	1		~~X~~	X		03

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Attn: John Dupont
Custody Seal intact

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

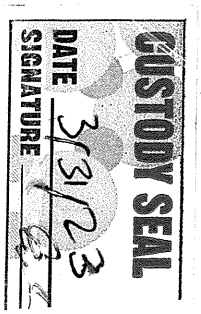
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	3/31/23	12:44	FEDEX
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	4-1-23	10:50Am	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.9 °C Bottles Received:

If preservation required by Login: Date/Time

Date: Time: Hold: Condition: NCF / OK



ORIGIN ID:HOBA (303) 325-4425
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 31MAR23
ACTWGT: 29.70 LB
CAD: 6994246/SSFE2401
DIMS: 19x14x13 IN
BILL THIRD PARTY

TO DHL ANALYTICAL LABS
DHL ANALYTICAL LABS
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF:
INV:
PO: DEPT:

FedEx Express
REL# 3785346

TRK# 0201 3964 7254 6055

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BSMA

78664
TX-US AUS

Part # 156297-435 HARB EXP 02/23

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: GHD

Date Received: 4/1/2023

Work Order Number: 2304001

Received by: CF

Checklist completed by: _____ 4/3/2023 (Signature / Date)

Reviewed by: SH 4/3/2023 (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 ☐	
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 2.9

Seal Intact Y

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

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

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *13-Apr-23*

CLIENT: GHD
Project: Hobbs Tank
Lab Order: 2304001

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: *13-Apr-23*

CLIENT: GHD
Project: Hobbs Tank
Lab Order: 2304001

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2304001-01	HTRW-1		03/31/23 09:13 AM	4/1/2023
2304001-02	Dup-1		03/31/23	4/1/2023
2304001-03	Trip Blank		03/31/23	4/1/2023

DHL Analytical, Inc.

Date: *13-Apr-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-1
Project:	Hobbs Tank	**Lab ID:**	2304001-01
Project No:	12604310	**Collection Date:**	03/31/23 09:13 AM
Lab Order:	2304001	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.285	0.148	0.185		mg/L	1	04/10/23 01:44 PM
Surr: Isopropylbenzene	60.3	0	25-124		%REC	1	04/10/23 01:44 PM
Surr: Octacosane	87.2	0	51-124		%REC	1	04/10/23 01:44 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.223	0.0600	0.100		mg/L	1	04/10/23 01:49 PM
Surr: Tetrachlorethene	92.7	0	74-138		%REC	1	04/10/23 01:49 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	0.0215	0.000300	0.00100		mg/L	1	04/03/23 07:09 PM
Ethylbenzene	0.00130	0.000300	0.00100		mg/L	1	04/03/23 07:09 PM
m,p-Xylene	0.00180	0.000600	0.00200	J	mg/L	1	04/03/23 07:09 PM
o-Xylene	0.00106	0.000300	0.00100		mg/L	1	04/03/23 07:09 PM
Toluene	0.00858	0.000600	0.00200		mg/L	1	04/03/23 07:09 PM
Total Xylenes	0.00286	0.000300	0.00100		mg/L	1	04/03/23 07:09 PM
Surr: 1,2-Dichloroethane-d4	98.3	0	72-119		%REC	1	04/03/23 07:09 PM
Surr: 4-Bromofluorobenzene	108	0	76-119		%REC	1	04/03/23 07:09 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	04/03/23 07:09 PM
Surr: Toluene-d8	105	0	81-120		%REC	1	04/03/23 07:09 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: *13-Apr-23*

CLIENT:	GHD	**Client Sample ID:**	Dup-1
Project:	Hobbs Tank	**Lab ID:**	2304001-02
Project No:	12604310	**Collection Date:**	03/31/23
Lab Order:	2304001	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.282	0.148	0.185		mg/L	1	04/10/23 01:53 PM
Surr: Isopropylbenzene	64.8	0	25-124		%REC	1	04/10/23 01:53 PM
Surr: Octacosane	97.7	0	51-124		%REC	1	04/10/23 01:53 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.189	0.0600	0.100		mg/L	1	04/10/23 02:12 PM
Surr: Tetrachlorethene	96.9	0	74-138		%REC	1	04/10/23 02:12 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	0.00799	0.000300	0.00100		mg/L	1	04/03/23 07:35 PM
Ethylbenzene	0.000783	0.000300	0.00100	J	mg/L	1	04/03/23 07:35 PM
m,p-Xylene	0.00102	0.000600	0.00200	J	mg/L	1	04/03/23 07:35 PM
o-Xylene	0.000562	0.000300	0.00100	J	mg/L	1	04/03/23 07:35 PM
Toluene	0.00318	0.000600	0.00200		mg/L	1	04/03/23 07:35 PM
Total Xylenes	0.00159	0.000300	0.00100		mg/L	1	04/03/23 07:35 PM
Surr: 1,2-Dichloroethane-d4	100	0	72-119		%REC	1	04/03/23 07:35 PM
Surr: 4-Bromofluorobenzene	106	0	76-119		%REC	1	04/03/23 07:35 PM
Surr: Dibromofluoromethane	98.7	0	85-115		%REC	1	04/03/23 07:35 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	04/03/23 07:35 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: *13-Apr-23*

CLIENT:	GHD	**Client Sample ID:**	Trip Blank
Project:	Hobbs Tank	**Lab ID:**	2304001-03
Project No:	12604310	**Collection Date:**	03/31/23
Lab Order:	2304001	**Matrix:**	TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	04/03/23 06:43 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	04/03/23 06:43 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	04/03/23 06:43 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	04/03/23 06:43 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	04/03/23 06:43 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	04/03/23 06:43 PM
Surr: 1,2-Dichloroethane-d4	99.7	0	72-119		%REC	1	04/03/23 06:43 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	04/03/23 06:43 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	04/03/23 06:43 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	04/03/23 06:43 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: *13-Apr-23*

CLIENT: GHD
Work Order: 2304001
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_230410A

The QC data in batch 109597 applies to the following samples: 2304001-01C, 2304001-02C

Sample ID: **MB-109597** Batch ID: **109597** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_230410A** Analysis Date: **4/10/2023 11:12:22 AM** Prep Date: **4/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0554		0.1000		55.4	25	124			
Surr: Octacosane	0.0875		0.1000		87.5	51	124			

Sample ID: **LCS-109597** Batch ID: **109597** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_230410A** Analysis Date: **4/10/2023 11:21:14 AM** Prep Date: **4/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.10	0.100	1.250	0	88.2	50	114			
Surr: Isopropylbenzene	0.0853		0.1000		85.3	25	124			
Surr: Octacosane	0.0904		0.1000		90.4	51	124			

Sample ID: **LCSD-109597** Batch ID: **109597** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_230410A** Analysis Date: **4/10/2023 11:30:05 AM** Prep Date: **4/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.992	0.100	1.250	0	79.4	50	114	10.6	30	
Surr: Isopropylbenzene	0.0836		0.1000		83.6	25	124	0	0	
Surr: Octacosane	0.0878		0.1000		87.8	51	124	0	0	

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

CLIENT: GHD
Work Order: 2304001
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_230410A

The QC data in batch 109629 applies to the following samples: 2304001-01B, 2304001-02B

Sample ID: **LCS-109629**	Batch ID: **109629**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_230410A**	Analysis Date: **4/10/2023 11:22:53 AM**	Prep Date: **4/10/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.95	0.100	2.500	0	118	67	136			
Surr: Tetrachlorethene	0.409		0.4000		102	74	138			

Sample ID: **LCSD-109629**	Batch ID: **109629**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_230410A**	Analysis Date: **4/10/2023 11:46:05 AM**	Prep Date: **4/10/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.97	0.100	2.500	0	119	67	136	0.881	30	
Surr: Tetrachlorethene	0.417		0.4000		104	74	138	0	0	

Sample ID: **MB-109629**	Batch ID: **109629**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_230410A**	Analysis Date: **4/10/2023 12:54:46 PM**	Prep Date: **4/10/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.419		0.4000		105	74	138			

Sample ID: **2304001-01BMS**	Batch ID: **109629**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_230410A**	Analysis Date: **4/10/2023 2:45:41 PM**	Prep Date: **4/10/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.66	0.100	2.500	0.2234	97.4	67	136			
Surr: Tetrachlorethene	0.397		0.4000		99.3	74	138			

Sample ID: **2304001-01BMSD**	Batch ID: **109629**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_230410A**	Analysis Date: **4/10/2023 3:07:37 PM**	Prep Date: **4/10/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.81	0.100	2.500	0.2234	103	67	136	5.46	30	
Surr: Tetrachlorethene	0.407		0.4000		102	74	138	0	0	

Qualifiers:

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

CLIENT: GHD
Work Order: 2304001
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_230403A

The QC data in batch 109547 applies to the following samples: 2304001-01A, 2304001-02A, 2304001-03A

Sample ID: **LCS-109547** Batch ID: **109547** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_230403A** Analysis Date: **4/3/2023 3:40:00 PM** Prep Date: **4/3/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0269	0.00100	0.0232	0	116	81	122			
Ethylbenzene	0.0259	0.00100	0.0232	0	112	80	120			
m,p-Xylene	0.0518	0.00200	0.0464	0	112	80	120			
o-Xylene	0.0260	0.00100	0.0232	0	112	80	120			
Toluene	0.0269	0.00200	0.0232	0	116	80	120			
Total Xylenes	0.0778	0.00100	0.0696	0	112	80	120			
Surr: 1,2-Dichloroethane-d4	193		200.0		96.5	72	119			
Surr: 4-Bromofluorobenzene	200		200.0		100	76	119			
Surr: Dibromofluoromethane	195		200.0		97.3	85	115			
Surr: Toluene-d8	196		200.0		98.2	81	120			

Sample ID: **2303360-02AMS** Batch ID: **109547** TestNo: **SW8260D** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_230403A** Analysis Date: **4/3/2023 4:06:00 PM** Prep Date: **4/3/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0235	0.00100	0.0232	0	101	81	122			
Ethylbenzene	0.0222	0.00100	0.0232	0	95.9	80	120			
m,p-Xylene	0.0450	0.00200	0.0464	0	96.9	80	120			
o-Xylene	0.0223	0.00100	0.0232	0	96.3	80	120			
Toluene	0.0233	0.00200	0.0232	0	100	80	120			
Total Xylenes	0.0673	0.00100	0.0696	0	96.7	80	120			
Surr: 1,2-Dichloroethane-d4	197		200.0		98.6	72	119			
Surr: 4-Bromofluorobenzene	203		200.0		101	76	119			
Surr: Dibromofluoromethane	194		200.0		97.0	85	115			
Surr: Toluene-d8	197		200.0		98.7	81	120			

Sample ID: **2303360-02AMSD** Batch ID: **109547** TestNo: **SW8260D** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_230403A** Analysis Date: **4/3/2023 4:32:00 PM** Prep Date: **4/3/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0232	0.00100	0.0232	0	100	81	122	1.16	20	
Ethylbenzene	0.0223	0.00100	0.0232	0	96.1	80	120	0.242	20	
m,p-Xylene	0.0440	0.00200	0.0464	0	94.7	80	120	2.30	20	
o-Xylene	0.0222	0.00100	0.0232	0	95.6	80	120	0.732	20	
Toluene	0.0230	0.00200	0.0232	0	99.0	80	120	1.43	20	
Total Xylenes	0.0661	0.00100	0.0696	0	95.0	80	120	1.77	20	
Surr: 1,2-Dichloroethane-d4	192		200.0		96.2	72	119	0	0	
Surr: 4-Bromofluorobenzene	203		200.0		101	76	119	0	0	
Surr: Dibromofluoromethane	194		200.0		97.2	85	115	0	0	
Surr: Toluene-d8	196		200.0		98.1	81	120	0	0	

Qualifiers:

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

CLIENT: GHD
Work Order: 2304001
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_230403A

Sample ID: **MB-109547** Batch ID: **109547** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_230403A** Analysis Date: **4/3/2023 5:24:00 PM** Prep Date: **4/3/2023**

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	193		200.0		96.3	72	119			
Surr: 4-Bromofluorobenzene	214		200.0		107	76	119			
Surr: Dibromofluoromethane	200		200.0		99.9	85	115			
Surr: Toluene-d8	208		200.0		104	81	120			

Qualifiers:

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

DHL ANALYTICAL

June 15, 2023

Erin Sullivan
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (303) 325-4425
FAX

Order No.: 2306002

RE: HF Sinclair - Tank

Dear Erin Sullivan:

DHL Analytical, Inc. received 5 sample(s) on 6/1/2023 for the analyses presented in the following report.

Revision Number 1 for Work Order 2306002: This revision consists of changing the identification of one sample, per the client's request. Please replace the original Data Report with this revision.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-23-29

Table of Contents

2306002

Company Name/Address:	Billing Information:	Pres Chk	Analysis / Container / Preservative	Chain of Custody Page ___ of ___
GHD- Denver, CO 1526 Cole Blvd, Suite 275 Lakewood, CO 80401	Jeffrey Cloud 2055 Niagara Falls Blvd Niagara Falls, NY 14304			Pace PEOPLE ADVANCING SCIENCE (WHL) MT JULIET, TN 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Report to: Brad Stephenson / Erin Sullivan

Email To: Brad.Stephenson@ghd.com;Erin.Sullivan@ghd.c

Project Description: ~~Holly Energy~~ - Tank HF Sinclair

City/State Collected: Hobbs, NM

Please Circle: PT (MT) CT ET

Phone: 303-941-6156

Client Project #: ~~11225604~~ 12604310

Lab Project #: ~~GRADCO-11225604~~

Collected by (print): Erin Sullivan

Site/Facility ID #: HF Sinclair - Tank

P.O. #:

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
- ___ Same Day
- ___ Next Day
- ___ Two Day
- ___ Three Day
- ___ Five Day
- ___ 5 Day (Rad Only)
- ___ 10 Day (Rad Only)

Quote #

Date Results Needed: Standard

SDG #

Table #

Acctnum: **CRADCO**

Template: **T219165**

Prelogin: **P960869**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	~~DRONM 8021 NoPres~~	~~GRO NoPres~~ GRO	~~M6010 NoPres~~	V8260BTEX ~~NoPres~~	Remarks	Sample # (lab only)
MW-4	G	~~GSS~~	–	5/31/23	1307	8	X	X		X		01
MW-5	G	~~GSS~~	–	5/31/23	1417	8	X	X		X		02
HTRW-1	G	GW	–	5/31/23	1440	8	X	X		X		03
HTRW-10	G	GW	–	5/31/23	–	8	X	X		X		04
Trip Blank	–	–		–	–	2		X		X		05

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other________

Remarks: no cust. seals

pH _______ Temp _______

Flow _______ Other _______

Samples returned via: ___ UPS X FedEx ___ Courier ________

Tracking #

Sample Receipt Checklist
- COC Seal Present/Intact: __NP __Y __N
- COC Signed/Accurate: __Y __N
- Bottles arrive intact: __Y __N
- Correct bottles used: __Y __N
- Sufficient volume sent: __Y __N

If Applicable
- VOA Zero Headspace: __Y __N
- Preservation Correct/Checked: __Y __N
- RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		
Erin Sullivan	5/31/23	1555	FEDEX	Trip Blank Received: Yes / No HCL / MeoH TBR	
Fedex	6/1/23	0900	[signature]	Temp: 4.1 °C therm#78 Bottles Received:	If preservation required by Login: Date/Time
			Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

ORIGIN ID:HOBA (303) 325-4425

GHD
14998 W 6TH AVE STE 800

GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 31MAY23
ACTWGT: 48.00 LB
CAD: 6994246/SSFE2421
DIMS: 25x15x15 IN

BILL THIRD PARTY

Part # 156297-435

TO **REF# 12604310**
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF:
INV:
PO: DEPT:

FedEx Express

E

J232023040501uv

THU - 01 JUN 10:30A
PRIORITY OVERNIGHT
AHS

TRK# 0201 **3990 3111 4149**

78664

A8 BSMA

TX-US **AUS**

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: GHD Date Received: 6/1/2023

Work Order Number: 2306002 Received by: GLK

Checklist completed by: Signature 6/1/2023 Date Reviewed by: GL Initials 6/1/2023 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 4.1

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:

Page 1 of 1

DHL Analytical, Inc. **Date:** *12-Jun-23*

CLIENT: GHD
Project: HF Sinclair - Tank
Lab Order: 2306002

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: *15-Jun-23*

CLIENT: GHD
Project: HF Sinclair - Tank
Lab Order: 2306002

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2306002-01	MW-4		05/31/23 01:07 PM	6/1/2023
2306002-02	MW-5		05/31/23 02:17 PM	6/1/2023
2306002-03	HTRW-1		05/31/23 02:40 PM	6/1/2023
2306002-04	HTRW-1D		05/31/23	6/1/2023
2306002-05	Trip Blank		05/31/23	6/1/2023

DHL Analytical, Inc.

Date: *15-Jun-23*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	HF Sinclair - Tank	**Lab ID:**	2306002-01
Project No:	12604310	**Collection Date:**	05/31/23 01:07 PM
Lab Order:	2306002	**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	0.190		mg/L	1	06/09/23 12:37 PM
Surr: Isopropylbenzene	63.0	0	25-124		%REC	1	06/09/23 12:37 PM
Surr: Octacosane	93.8	0	51-124		%REC	1	06/09/23 12:37 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/06/23 12:46 PM
Surr: Tetrachlorethene	96.2	0	74-138		%REC	1	06/06/23 12:46 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 04:53 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 04:53 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/01/23 04:53 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 04:53 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/01/23 04:53 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 04:53 PM
Surr: 1,2-Dichloroethane-d4	89.0	0	72-119		%REC	1	06/01/23 04:53 PM
Surr: 4-Bromofluorobenzene	94.0	0	76-119		%REC	1	06/01/23 04:53 PM
Surr: Dibromofluoromethane	99.1	0	85-115		%REC	1	06/01/23 04:53 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	06/01/23 04:53 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: *15-Jun-23*

CLIENT:	GHD	**Client Sample ID:**	MW-5
Project:	HF Sinclair - Tank	**Lab ID:**	2306002-02
Project No:	12604310	**Collection Date:**	05/31/23 02:17 PM
Lab Order:	2306002	**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	0.190		mg/L	1	06/09/23 12:46 PM
Surr: Isopropylbenzene	38.5	0	25-124		%REC	1	06/09/23 12:46 PM
Surr: Octacosane	96.3	0	51-124		%REC	1	06/09/23 12:46 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.113	0.0600	0.100		mg/L	1	06/06/23 01:08 PM
Surr: Tetrachlorethene	92.6	0	74-138		%REC	1	06/06/23 01:08 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 05:19 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 05:19 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/01/23 05:19 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 05:19 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/01/23 05:19 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 05:19 PM
Surr: 1,2-Dichloroethane-d4	88.0	0	72-119		%REC	1	06/01/23 05:19 PM
Surr: 4-Bromofluorobenzene	94.6	0	76-119		%REC	1	06/01/23 05:19 PM
Surr: Dibromofluoromethane	98.5	0	85-115		%REC	1	06/01/23 05:19 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	06/01/23 05:19 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: *15-Jun-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-1
Project:	HF Sinclair - Tank	**Lab ID:**	2306002-03
Project No:	12604310	**Collection Date:**	05/31/23 02:40 PM
Lab Order:	2306002	**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	06/09/23 12:55 PM
Surr: Isopropylbenzene	37.8	0	25-124		%REC	1	06/09/23 12:55 PM
Surr: Octacosane	93.5	0	51-124		%REC	1	06/09/23 12:55 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.129	0.0600	0.100		mg/L	1	06/06/23 01:30 PM
Surr: Tetrachlorethene	92.7	0	74-138		%REC	1	06/06/23 01:30 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.0105	0.000300	0.00100		mg/L	1	06/01/23 05:45 PM
Ethylbenzene	0.000728	0.000300	0.00100	J	mg/L	1	06/01/23 05:45 PM
m,p-Xylene	0.000612	0.000600	0.00200	J	mg/L	1	06/01/23 05:45 PM
o-Xylene	0.000476	0.000300	0.00100	J	mg/L	1	06/01/23 05:45 PM
Toluene	0.00520	0.000600	0.00200		mg/L	1	06/01/23 05:45 PM
Total Xylenes	0.00109	0.000300	0.00100		mg/L	1	06/01/23 05:45 PM
Surr: 1,2-Dichloroethane-d4	90.0	0	72-119		%REC	1	06/01/23 05:45 PM
Surr: 4-Bromofluorobenzene	94.6	0	76-119		%REC	1	06/01/23 05:45 PM
Surr: Dibromofluoromethane	99.5	0	85-115		%REC	1	06/01/23 05:45 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	06/01/23 05:45 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: *15-Jun-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-1D
Project:	HF Sinclair - Tank	**Lab ID:**	2306002-04
Project No:	12604310	**Collection Date:**	05/31/23
Lab Order:	2306002	**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	J	mg/L	1	06/09/23 01:04 PM
Surr: Isopropylbenzene	38.9	0	25-124		%REC	1	06/09/23 01:04 PM
Surr: Octacosane	94.6	0	51-124		%REC	1	06/09/23 01:04 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/06/23 01:52 PM
Surr: Tetrachlorethene	96.7	0	74-138		%REC	1	06/06/23 01:52 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.0102	0.000300	0.00100		mg/L	1	06/01/23 06:11 PM
Ethylbenzene	0.000645	0.000300	0.00100	J	mg/L	1	06/01/23 06:11 PM
m,p-Xylene	0.000601	0.000600	0.00200	J	mg/L	1	06/01/23 06:11 PM
o-Xylene	0.000506	0.000300	0.00100	J	mg/L	1	06/01/23 06:11 PM
Toluene	0.00494	0.000600	0.00200		mg/L	1	06/01/23 06:11 PM
Total Xylenes	0.00111	0.000300	0.00100		mg/L	1	06/01/23 06:11 PM
Surr: 1,2-Dichloroethane-d4	87.0	0	72-119		%REC	1	06/01/23 06:11 PM
Surr: 4-Bromofluorobenzene	94.7	0	76-119		%REC	1	06/01/23 06:11 PM
Surr: Dibromofluoromethane	98.3	0	85-115		%REC	1	06/01/23 06:11 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	06/01/23 06:11 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: *15-Jun-23*

CLIENT:	GHD	**Client Sample ID:**	Trip Blank
Project:	HF Sinclair - Tank	**Lab ID:**	2306002-05
Project No:	12604310	**Collection Date:**	05/31/23
Lab Order:	2306002	**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	06/06/23 12:23 PM
Surr: Tetrachlorethene	93.3	0	74-138		%REC	1	06/06/23 12:23 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 02:42 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 02:42 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/01/23 02:42 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 02:42 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/01/23 02:42 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 02:42 PM
Surr: 1,2-Dichloroethane-d4	96.4	0	72-119		%REC	1	06/01/23 02:42 PM
Surr: 4-Bromofluorobenzene	106	0	76-119		%REC	1	06/01/23 02:42 PM
Surr: Dibromofluoromethane	96.9	0	85-115		%REC	1	06/01/23 02:42 PM
Surr: Toluene-d8	107	0	81-120		%REC	1	06/01/23 02:42 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:** *12-Jun-23*

CLIENT: GHD
Work Order: 2306002
Project: HF Sinclair - Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_230609A

The QC data in batch 110481 applies to the following samples: 2306002-01C, 2306002-02C, 2306002-03C, 2306002-04C

Sample ID: **MB-110481** Batch ID: **110481** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_230609A** Analysis Date: **6/9/2023 12:10:57 PM** Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0494		0.1000		49.4	25	124			
Surr: Octacosane	0.0925		0.1000		92.5	51	124			

Sample ID: **LCS-110481** Batch ID: **110481** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_230609A** Analysis Date: **6/9/2023 12:19:49 PM** Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.16	0.100	1.250	0	93.1	50	114			
Surr: Isopropylbenzene	0.0414		0.1000		41.4	25	124			
Surr: Octacosane	0.0902		0.1000		90.2	51	124			

Sample ID: **LCSD-110481** Batch ID: **110481** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_230609A** Analysis Date: **6/9/2023 12:28:40 PM** Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.16	0.100	1.250	0	92.9	50	114	0.303	30	
Surr: Isopropylbenzene	0.0404		0.1000		40.4	25	124	0	0	
Surr: Octacosane	0.0900		0.1000		90.0	51	124	0	0	

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

CLIENT: GHD
Work Order: 2306002
Project: HF Sinclair - Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_230606A

The QC data in batch 110511 applies to the following samples: 2306002-01B, 2306002-02B, 2306002-03B, 2306002-04B, 2306002-05B

Sample ID: **LCS-110511**	Batch ID: **110511**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_230606A**	Analysis Date: **6/6/2023 10:31:26 AM**	Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.52	0.100	2.500	0	101	67	136			
Surr: Tetrachlorethene	0.323		0.4000		80.6	74	138			

Sample ID: **LCSD-110511**	Batch ID: **110511**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_230606A**	Analysis Date: **6/6/2023 10:53:41 AM**	Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.60	0.100	2.500	0	104	67	136	3.01	30	
Surr: Tetrachlorethene	0.349		0.4000		87.2	74	138	0	0	

Sample ID: **MB-110511**	Batch ID: **110511**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_230606A**	Analysis Date: **6/6/2023 12:00:59 PM**	Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.354		0.4000		88.4	74	138			

Sample ID: **2306002-01BMS**	Batch ID: **110511**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_230606A**	Analysis Date: **6/6/2023 2:15:01 PM**	Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.70	0.100	2.500	0	108	67	136			
Surr: Tetrachlorethene	0.424		0.4000		106	74	138			

Sample ID: **2306002-01BMSD**	Batch ID: **110511**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_230606A**	Analysis Date: **6/6/2023 2:37:00 PM**	Prep Date: **6/6/2023**

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	2.75	30	
Surr: Tetrachlorethene	0.429		0.4000		107	74	138	0	0	

Qualifiers:

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

CLIENT: GHD
Work Order: 2306002
Project: HF Sinclair - Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_230601A

The QC data in batch 110447 applies to the following samples: 2306002-01A, 2306002-02A, 2306002-03A, 2306002-04A, 2306002-05A

Sample ID: **LCS-110447** Batch ID: **110447** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_230601A** Analysis Date: **6/1/2023 12:49:00 PM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0203	0.00100	0.0232	0	87.6	81	122			
Ethylbenzene	0.0223	0.00100	0.0232	0	95.9	80	120			
m,p-Xylene	0.0435	0.00200	0.0464	0	93.7	80	120			
o-Xylene	0.0221	0.00100	0.0232	0	95.3	80	120			
Toluene	0.0208	0.00200	0.0232	0	89.8	80	120			
Total Xylenes	0.0656	0.00100	0.0696	0	94.3	80	120			
Surr: 1,2-Dichloroethane-d4	199		200.0		99.7	72	119			
Surr: 4-Bromofluorobenzene	196		200.0		98.2	76	119			
Surr: Dibromofluoromethane	191		200.0		95.5	85	115			
Surr: Toluene-d8	214		200.0		107	81	120			

Sample ID: **MB-110447** Batch ID: **110447** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_230601A** Analysis Date: **6/1/2023 1:50:00 PM** Prep Date: **6/1/2023**

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	192		200.0		96.1	72	119			
Surr: 4-Bromofluorobenzene	209		200.0		105	76	119			
Surr: Dibromofluoromethane	196		200.0		97.8	85	115			
Surr: Toluene-d8	212		200.0		106	81	120			

Sample ID: **SB-230602** Batch ID: **110447** TestNo: **SW8260D** Units: **mg/L**
SampType: **SBLK** Run ID: **GCMS5_230601A** Analysis Date: **6/2/2023 11:07:00 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							
Total Xylenes	<0.000300	0.00100	0							
Surr: 1,2-Dichloroethane-d4	174		0							
Surr: 4-Bromofluorobenzene	193		0							
Surr: Dibromofluoromethane	195		0							
Surr: Toluene-d8	205		0							

Qualifiers:

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

CLIENT: GHD
Work Order: 2306002
Project: HF Sinclair - Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_230601A

Sample ID: **2305324-01AMS** Batch ID: **110447** TestNo: **SW8260D** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_230601A** Analysis Date: **6/2/2023 11:32:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.228	0.0100	0.232	0	98.2	81	122			
Ethylbenzene	0.249	0.0100	0.232	0	107	80	120			
m,p-Xylene	0.500	0.0200	0.464	0	108	80	120			
o-Xylene	0.257	0.0100	0.232	0	111	80	120			
Toluene	0.240	0.0200	0.232	0	103	80	120			
Total Xylenes	0.757	0.0100	0.696	0	109	80	120			
Surr: 1,2-Dichloroethane-d4	1820		2000		91.0	72	119			
Surr: 4-Bromofluorobenzene	1870		2000		93.6	76	119			
Surr: Dibromofluoromethane	1980		2000		98.8	85	115			
Surr: Toluene-d8	2040		2000		102	81	120			

Sample ID: **2305324-01AMSD** Batch ID: **110447** TestNo: **SW8260D** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_230601A** Analysis Date: **6/2/2023 11:58:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.245	0.0100	0.232	0	105	81	122	7.15	20	
Ethylbenzene	0.261	0.0100	0.232	0	112	80	120	4.54	20	
m,p-Xylene	0.527	0.0200	0.464	0	114	80	120	5.30	20	
o-Xylene	0.271	0.0100	0.232	0	117	80	120	5.15	20	
Toluene	0.258	0.0200	0.232	0	111	80	120	7.58	20	
Total Xylenes	0.798	0.0100	0.696	0	115	80	120	5.25	20	
Surr: 1,2-Dichloroethane-d4	1730		2000		86.4	72	119	0	0	
Surr: 4-Bromofluorobenzene	1860		2000		92.9	76	119	0	0	
Surr: Dibromofluoromethane	1960		2000		98.2	85	115	0	0	
Surr: Toluene-d8	2010		2000		101	81	120	0	0	

Qualifiers:

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

DHL ANALYTICAL

October 09, 2023

Erin Sullivan
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (303) 325-4425
FAX:

Order No.: 2309223

RE: Hobbs Tank

Dear Erin Sullivan:

DHL Analytical, Inc. received 6 sample(s) on 9/28/2023 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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-23-29

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: HF Sinclair
ADDRESS:
PHONE: 303-325-4425 EMAIL: Erin.Sullivan@ghd.com
DATA REPORTED TO:
ADDITIONAL REPORT COPIES TO:

DATE: 9/27/23
PO#:
PROJECT LOCATION OR NAME: Hobbs, New Mexico 12604310
CLIENT PROJECT #
COLLECTOR:

LAB USE ONLY
DHL WORKORDER #: 2309223

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

W=WATER L=LIQUID S=SOLID SO=SOLID SE=SEDIMENT P=PAINT SL=SLUDGE

Field Sample I.D.	Lab Use Only DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION: HCL ☐ H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐ Zn Acetate ☐	ICE ☐ UNPRESERVED ☐	ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8260]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO 8015 ☐ DRO 8015 ☐	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
MW-4	01	9/27/23	1151	W		8						X		X															
MW-5	02	9/27	1107	W		8						X		X															
RW-1	03		0944	W		8						X		X															
HTRW-1	04		1040	W		8						X		X															
HTRW-10	05		—	W		8						X		X															
TRIP BLANK	06		—	W		4						X																	

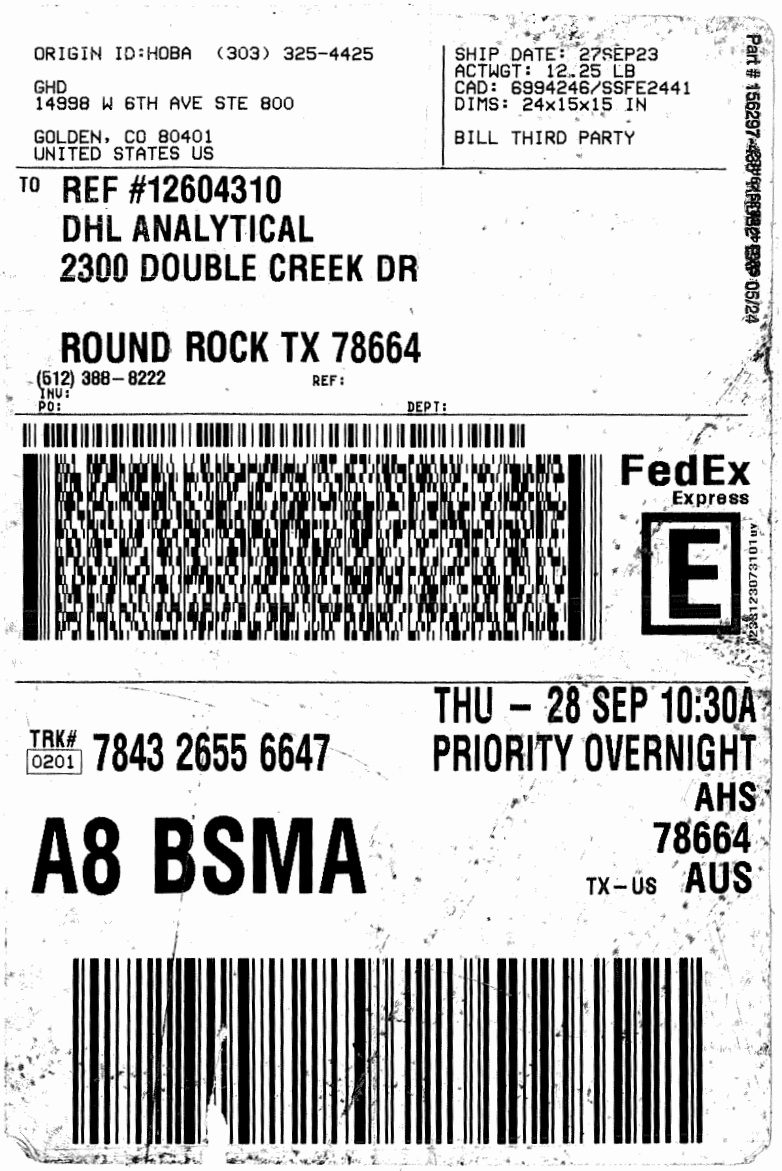
Relinquished By: (Sign) Erin Sullivan DATE/TIME 9/27/23 13:45 Received by: FEDEX
Relinquished By: (Sign) Fed Ex DATE/TIME 9/28/23 0835 Received by:
Relinquished By: (Sign) DATE/TIME Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐
RUSH-3 DAY☐
NORMAL ☐ OTHER ☐
DUE DATE _____ ☐

LAB USE ONLY **THERMO #:** 78
RECEIVING TEMP (°C): 0.4
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☒ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☒ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

DHL COC REV 4 | MAR 2023



ORIGIN ID:HOBA (303) 325-4425
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 27SEP23
ACTWGT: 12.25 LB
CAD: 6994246/SSFE2441
DIMS: 24x15x15 IN
BILL THIRD PARTY

TO REF #12604310
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7843 2655 6647

THU - 28 SEP 10:30A
PRIORITY OVERNIGHT
AHS
78664
TX-US AUS

A8 BSMA

CUSTODY SEAL
DATE 9/26/23
SIGNATURE

DHL ANALYTICAL

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: GHD

Date Received: 9/28/2023

Work Order Number: 2309223

Received by: EL

Checklist completed by: _____ 9/28/2023
Signature | Date

Reviewed by: DL 9/28/2023
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 ☐	
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 0.4

Seal Intact Y

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

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

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *09-Oct-23*

CLIENT: GHD
Project: Hobbs Tank
Lab Order: 2309223

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 Volatiles Analysis, the recovery of surrogate Dibromofluoromethane for Sample MW-4 was slightly above 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.

For Volatiles Analysis, the recovery of Toluene for the Matrix Spike (2309223-05 MS) was slightly above the method control limits. This is flagged accordingly in the QC Summary Report. This compound was within method control limits in the associated LCS/MSD. No further corrective action was taken.

DHL Analytical, Inc.

Date: *09-Oct-23*

CLIENT: GHD
Project: Hobbs Tank
Lab Order: 2309223

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2309223-01	MW-4		09/27/23 11:51 AM	09/28/2023
2309223-02	MW-5		09/27/23 11:07 AM	09/28/2023
2309223-03	RW-1		09/27/23 09:44 AM	09/28/2023
2309223-04	HTRW-1		09/27/23 10:40 AM	09/28/2023
2309223-05	HTRW-10		09/27/23	09/28/2023
2309223-06	Trip Blank		09/27/23	09/28/2023

DHL Analytical, Inc.

Date: *09-Oct-23*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs Tank	**Lab ID:**	2309223-01
Project No:	12604310	**Collection Date:**	09/27/23 11:51 AM
Lab Order:	2309223	**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	09/29/23 01:57 PM
Surr: Isopropylbenzene	39.6	0	25-124		%REC	1	09/29/23 01:57 PM
Surr: Octacosane	77.6	0	51-124		%REC	1	09/29/23 01:57 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/04/23 01:59 PM
Surr: Tetrachlorethene	79.7	0	74-138		%REC	1	10/04/23 01:59 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 02:40 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 02:40 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 02:40 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 02:40 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 02:40 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 02:40 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119		%REC	1	09/28/23 02:40 PM
Surr: 4-Bromofluorobenzene	91.0	0	76-119		%REC	1	09/28/23 02:40 PM
Surr: Dibromofluoromethane	117	0	85-115	S	%REC	1	09/28/23 02:40 PM
Surr: Toluene-d8	95.0	0	81-120		%REC	1	09/28/23 02:40 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: *09-Oct-23*

CLIENT:	GHD	**Client Sample ID:**	MW-5
Project:	Hobbs Tank	**Lab ID:**	2309223-02
Project No:	12604310	**Collection Date:**	09/27/23 11:07 AM
Lab Order:	2309223	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.151	0.151	0.189		mg/L	1	09/29/23 02:05 PM
Surr: Isopropylbenzene	42.1	0	25-124		%REC	1	09/29/23 02:05 PM
Surr: Octacosane	75.6	0	51-124		%REC	1	09/29/23 02:05 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/04/23 02:22 PM
Surr: Tetrachlorethene	76.4	0	74-138		%REC	1	10/04/23 02:22 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 03:06 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 03:06 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 03:06 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 03:06 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 03:06 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 03:06 PM
Surr: 1,2-Dichloroethane-d4	102	0	72-119		%REC	1	09/28/23 03:06 PM
Surr: 4-Bromofluorobenzene	92.6	0	76-119		%REC	1	09/28/23 03:06 PM
Surr: Dibromofluoromethane	115	0	85-115		%REC	1	09/28/23 03:06 PM
Surr: Toluene-d8	95.4	0	81-120		%REC	1	09/28/23 03:06 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: *09-Oct-23*

CLIENT:	GHD	**Client Sample ID:**	RW-1
Project:	Hobbs Tank	**Lab ID:**	2309223-03
Project No:	12604310	**Collection Date:**	09/27/23 09:44 AM
Lab Order:	2309223	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.697	0.151	0.188		mg/L	1	09/29/23 02:14 PM
Surr: Isopropylbenzene	40.8	0	25-124		%REC	1	09/29/23 02:14 PM
Surr: Octacosane	82.1	0	51-124		%REC	1	09/29/23 02:14 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	10/04/23 02:46 PM
Surr: Tetrachlorethene	77.9	0	74-138		%REC	1	10/04/23 02:46 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.0773	0.000300	0.00100		mg/L	1	09/28/23 03:32 PM
Ethylbenzene	0.00158	0.000300	0.00100		mg/L	1	09/28/23 03:32 PM
m,p-Xylene	0.0126	0.000600	0.00200		mg/L	1	09/28/23 03:32 PM
o-Xylene	0.0103	0.000300	0.00100		mg/L	1	09/28/23 03:32 PM
Toluene	0.0244	0.000600	0.00200		mg/L	1	09/28/23 03:32 PM
Total Xylenes	0.0230	0.000300	0.00100		mg/L	1	09/28/23 03:32 PM
Surr: 1,2-Dichloroethane-d4	99.7	0	72-119		%REC	1	09/28/23 03:32 PM
Surr: 4-Bromofluorobenzene	91.6	0	76-119		%REC	1	09/28/23 03:32 PM
Surr: Dibromofluoromethane	113	0	85-115		%REC	1	09/28/23 03:32 PM
Surr: Toluene-d8	95.7	0	81-120		%REC	1	09/28/23 03:32 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *09-Oct-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-1
Project:	Hobbs Tank	**Lab ID:**	2309223-04
Project No:	12604310	**Collection Date:**	09/27/23 10:40 AM
Lab Order:	2309223	**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	09/29/23 02:23 PM
Surr: Isopropylbenzene	39.8	0	25-124		%REC	1	09/29/23 02:23 PM
Surr: Octacosane	80.2	0	51-124		%REC	1	09/29/23 02:23 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0808	0.0600	0.100	J	mg/L	1	10/04/23 03:09 PM
Surr: Tetrachlorethene	78.8	0	74-138		%REC	1	10/04/23 03:09 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.00460	0.000300	0.00100		mg/L	1	09/28/23 03:58 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 03:58 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 03:58 PM
o-Xylene	0.000332	0.000300	0.00100	J	mg/L	1	09/28/23 03:58 PM
Toluene	0.00198	0.000600	0.00200	J	mg/L	1	09/28/23 03:58 PM
Total Xylenes	0.000332	0.000300	0.00100	J	mg/L	1	09/28/23 03:58 PM
Surr: 1,2-Dichloroethane-d4	102	0	72-119		%REC	1	09/28/23 03:58 PM
Surr: 4-Bromofluorobenzene	91.6	0	76-119		%REC	1	09/28/23 03:58 PM
Surr: Dibromofluoromethane	113	0	85-115		%REC	1	09/28/23 03:58 PM
Surr: Toluene-d8	95.9	0	81-120		%REC	1	09/28/23 03:58 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: *09-Oct-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-10
Project:	Hobbs Tank	**Lab ID:**	2309223-05
Project No:	12604310	**Collection Date:**	09/27/23
Lab Order:	2309223	**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	09/29/23 02:32 PM
Surr: Isopropylbenzene	35.0	0	25-124		%REC	1	09/29/23 02:32 PM
Surr: Octacosane	70.6	0	51-124		%REC	1	09/29/23 02:32 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0754	0.0600	0.100	J	mg/L	1	10/04/23 03:32 PM
Surr: Tetrachlorethene	84.2	0	74-138		%REC	1	10/04/23 03:32 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.00581	0.000300	0.00100		mg/L	1	09/28/23 04:24 PM
Ethylbenzene	0.000345	0.000300	0.00100	J	mg/L	1	09/28/23 04:24 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 04:24 PM
o-Xylene	0.000354	0.000300	0.00100	J	mg/L	1	09/28/23 04:24 PM
Toluene	0.00247	0.000600	0.00200		mg/L	1	09/28/23 04:24 PM
Total Xylenes	0.000354	0.000300	0.00100	J	mg/L	1	09/28/23 04:24 PM
Surr: 1,2-Dichloroethane-d4	100	0	72-119		%REC	1	09/28/23 04:24 PM
Surr: 4-Bromofluorobenzene	92.7	0	76-119		%REC	1	09/28/23 04:24 PM
Surr: Dibromofluoromethane	114	0	85-115		%REC	1	09/28/23 04:24 PM
Surr: Toluene-d8	95.8	0	81-120		%REC	1	09/28/23 04:24 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: *09-Oct-23*

CLIENT:	GHD	**Client Sample ID:**	Trip Blank
Project:	Hobbs Tank	**Lab ID:**	2309223-06
Project No:	12604310	**Collection Date:**	09/27/23
Lab Order:	2309223	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 01:21 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 01:21 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 01:21 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 01:21 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/28/23 01:21 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	09/28/23 01:21 PM
Surr: 1,2-Dichloroethane-d4	101	0	72-119		%REC	1	09/28/23 01:21 PM
Surr: 4-Bromofluorobenzene	93.5	0	76-119		%REC	1	09/28/23 01:21 PM
Surr: Dibromofluoromethane	115	0	85-115		%REC	1	09/28/23 01:21 PM
Surr: Toluene-d8	94.4	0	81-120		%REC	1	09/28/23 01:21 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:** *09-Oct-23*

CLIENT: GHD
Work Order: 2309223
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_230929A

The QC data in batch 112368 applies to the following samples: 2309223-01C, 2309223-02C, 2309223-03C, 2309223-04C, 2309223-05C

Sample ID: **MB-112368** Batch ID: **112368** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_230929A** Analysis Date: **9/29/2023 1:30:27 PM** Prep Date: **9/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0349		0.1000		34.9	25	124			
Surr: Octacosane	0.0782		0.1000		78.2	51	124			

Sample ID: **LCS-112368** Batch ID: **112368** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_230929A** Analysis Date: **9/29/2023 1:39:19 PM** Prep Date: **9/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.850	0.100	1.250	0	68.0	50	114			
Surr: Isopropylbenzene	0.0362		0.1000		36.2	25	124			
Surr: Octacosane	0.0763		0.1000		76.3	51	124			

Sample ID: **LCSD-112368** Batch ID: **112368** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_230929A** Analysis Date: **9/29/2023 1:48:11 PM** Prep Date: **9/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.807	0.100	1.250	0	64.5	50	114	5.22	30	
Surr: Isopropylbenzene	0.0319		0.1000		31.9	25	124	0	0	
Surr: Octacosane	0.0743		0.1000		74.3	51	124	0	0	

Qualifiers:	B	Analyte detected in the associated Method Blank	DF	Dilution Factor	
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit	Page 1 of 4
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits	
	RL	Reporting Limit	S	Spike Recovery outside control limits	
	J	Analyte detected between SDL and RL	N	Parameter not NELAP certified	

CLIENT: GHD
Work Order: 2309223
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_231004A

The QC data in batch 112405 applies to the following samples: 2309223-01B, 2309223-02B, 2309223-03B, 2309223-04B, 2309223-05B

Sample ID: **LCS-112405**	Batch ID: **112405**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_231004A**	Analysis Date: **10/4/2023 11:03:23 AM**	Prep Date: **10/4/2023**

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			
Surr: Tetrachlorethene	0.352		0.4000		87.9	74	138			

Sample ID: **LCSD-112405**	Batch ID: **112405**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_231004A**	Analysis Date: **10/4/2023 11:26:35 AM**	Prep Date: **10/4/2023**

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	0.185	30	
Surr: Tetrachlorethene	0.354		0.4000		88.4	74	138	0	0	

Sample ID: **MB-112405**	Batch ID: **112405**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_231004A**	Analysis Date: **10/4/2023 12:34:34 PM**	Prep Date: **10/4/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.329		0.4000		82.2	74	138			

Sample ID: **2309223-01BMS**	Batch ID: **112405**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_231004A**	Analysis Date: **10/4/2023 3:55:56 PM**	Prep Date: **10/4/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.34	0.100	2.500	0	93.5	67	136			
Surr: Tetrachlorethene	0.338		0.4000		84.4	74	138			

Sample ID: **2309223-01BMSD**	Batch ID: **112405**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_231004A**	Analysis Date: **10/4/2023 4:17:07 PM**	Prep Date: **10/4/2023**

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	7.12	30	
Surr: Tetrachlorethene	0.351		0.4000		87.8	74	138	0	0	

Qualifiers:

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

CLIENT: GHD
Work Order: 2309223
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_230928A

The QC data in batch 112351 applies to the following samples: 2309223-01A, 2309223-02A, 2309223-03A, 2309223-04A, 2309223-05A, 2309223-06A

Sample ID: **LCS-112351** Batch ID: **112351** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_230928A** Analysis Date: **9/28/2023 11:28:00 AM** Prep Date: **9/28/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0221	0.00100	0.0232	0	95.5	81	122			
Ethylbenzene	0.0207	0.00100	0.0232	0	89.3	80	120			
m,p-Xylene	0.0415	0.00200	0.0464	0	89.5	80	120			
o-Xylene	0.0198	0.00100	0.0232	0	85.3	80	120			
Toluene	0.0223	0.00200	0.0232	0	96.2	80	120			
Total Xylenes	0.0613	0.00100	0.0696	0	88.1	80	120			
Surr: 1,2-Dichloroethane-d4	195		200.0		97.6	72	119			
Surr: 4-Bromofluorobenzene	176		200.0		87.9	76	119			
Surr: Dibromofluoromethane	226		200.0		113	85	115			
Surr: Toluene-d8	183		200.0		91.7	81	120			

Sample ID: **MB-112351** Batch ID: **112351** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_230928A** Analysis Date: **9/28/2023 12:29:00 PM** Prep Date: **9/28/2023**

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	201		200.0		100	72	119			
Surr: 4-Bromofluorobenzene	186		200.0		93.0	76	119			
Surr: Dibromofluoromethane	228		200.0		114	85	115			
Surr: Toluene-d8	190		200.0		95.0	81	120			

Sample ID: **2309223-05AMS** Batch ID: **112351** TestNo: **SW8260D** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_230928A** Analysis Date: **9/28/2023 4:50:00 PM** Prep Date: **9/28/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.566	0.0200	0.464	0	122	81	122			
Ethylbenzene	0.520	0.0200	0.464	0	112	80	120			
m,p-Xylene	1.03	0.0400	0.928	0	111	80	120			
o-Xylene	0.488	0.0200	0.464	0	105	80	120			
Toluene	0.564	0.0400	0.464	0	122	80	120			S
Total Xylenes	1.52	0.0200	1.39	0	109	80	120			
Surr: 1,2-Dichloroethane-d4	4000		4000		100	72	119			
Surr: 4-Bromofluorobenzene	3540		4000		88.5	76	119			
Surr: Dibromofluoromethane	4520		4000		113	85	115			

Qualifiers:

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

CLIENT: GHD
Work Order: 2309223
Project: Hobbs Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_230928A

Sample ID: **2309223-05AMS**	Batch ID: **112351**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **MS**	Run ID: **GCMS5_230928A**	Analysis Date: **9/28/2023 4:50:00 PM**	Prep Date: **9/28/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	3740		4000		93.6	81	120			

Sample ID: **2309223-05AMSD**	Batch ID: **112351**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **MSD**	Run ID: **GCMS5_230928A**	Analysis Date: **9/28/2023 5:16:00 PM**	Prep Date: **9/28/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.505	0.0200	0.464	0	109	81	122	11.5	20	
Ethylbenzene	0.466	0.0200	0.464	0	100	80	120	11.0	20	
m,p-Xylene	0.931	0.0400	0.928	0	100	80	120	10.1	20	
o-Xylene	0.449	0.0200	0.464	0	96.7	80	120	8.44	20	
Toluene	0.509	0.0400	0.464	0	110	80	120	10.4	20	
Total Xylenes	1.38	0.0200	1.39	0	99.1	80	120	9.59	20	
Surr: 1,2-Dichloroethane-d4	3960		4000		99.1	72	119	0	0	
Surr: 4-Bromofluorobenzene	3590		4000		89.8	76	119	0	0	
Surr: Dibromofluoromethane	4460		4000		112	85	115	0	0	
Surr: Toluene-d8	3730		4000		93.3	81	120	0	0	

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

DHL ANALYTICAL

December 12, 2023

Erin Sullivan
GHD
14998 W 6th Ave #800
Golden, CO 80401
TEL: (303) 325-4425
FAX:

Order No.: 2312004

RE: HF Sinclair Tank

Dear Erin Sullivan:

DHL Analytical, Inc. received 3 sample(s) on 12/1/2023 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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-23-29

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: www.dhlanalytical.com
Email: login@dhlanalytical.com

CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 2135 South Loop 250 West Midland, Texas 79703
PHONE: (303) 325-4425 EMAIL: erin.sullivan@ghd.com
DATA REPORTED TO: Erin Sullivan
ADD'L REPORT COPIES TO: Brad.Stephenson@ghd.com

DATE: 11/30/23
PO#:

LAB USE ONLY
DHL WORKORDER # 2312004

PROJECT LOCATION OR NAME: HF Sinclair Tank
CLIENT PROJECT #: HF Sinclair - Hobbs
COLLECTOR: Erin Sullivan

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

PRESERVATIVES
#/L
 # = Number Bottles
L = Preserve Code
N = HNO3 S = H2SO4 H = HCL O = NaOH Z = NaOH-ZN P = H3PO4 X = None/Ice

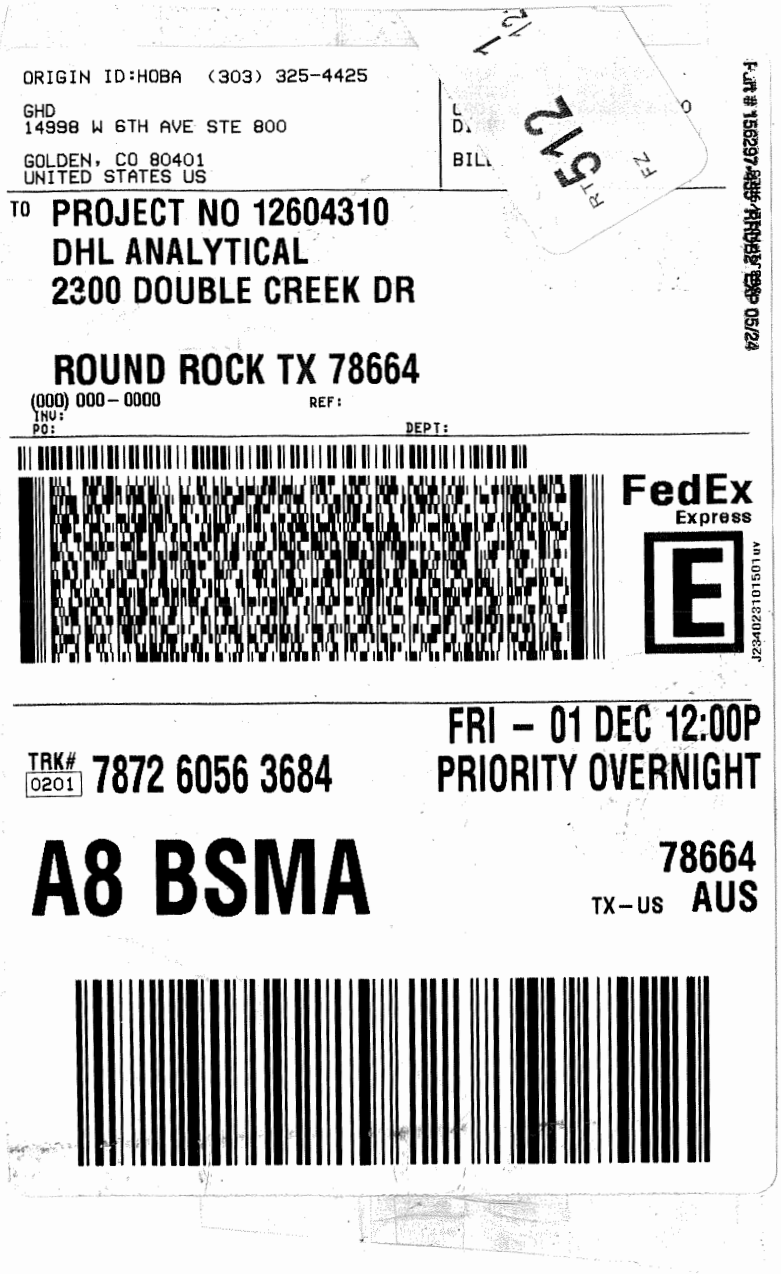
Field Sample I.D.	Lab Use Only / DHL Lab #	Collection Date	Collection Time	Matrix	# of Containers	DRO	8260-MBTEX	GRO WATER	FIELD NOTES
HTRW-1	01	11/30	1042	AQUEOUS	8	2/X	3/X	3/X	
HTRW-10	02	11/30	1042	AQUEOUS	8	2/X	3/X	3/X	
~~Trip Blank~~				~~AQUEOUS~~	~~8~~	~~2/X~~	~~3/X~~	~~3/X~~	
Trip Blank	03	—	—	AQUEOUS	8	2/X	3/X	3/X	
				AQUEOUS	8	2/X	3/X	3/X	
				AQUEOUS	8	2/X	3/X	3/X	
				AQUEOUS	8	2/X	3/X	3/X	

Relinquished By: (Sign) Erin Sullivan — DATE/TIME 11/30/23 12:55 — Received By: Fedex
Relinquished By: (Sign) Fedex — DATE/TIME 12/1/23 0954 — 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 _____ ☐

LAB USE ONLY
RECEIVING TEMP (°C) 1.1°C THERMO #: 78
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES/NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☑ INTACT ☐ NOT USED
CARRIER:
☐ LSO ☑ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ DHL DISPOSAL @ $10.00 each



ORIGIN ID:HOBA (303) 325-4425

GHD
14998 W 6TH AVE STE 800

GOLDEN, CO 80401
UNITED STATES US

TO PROJECT NO 12604310
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(000) 000-0000 REF:
INV:
PO: DEPT:

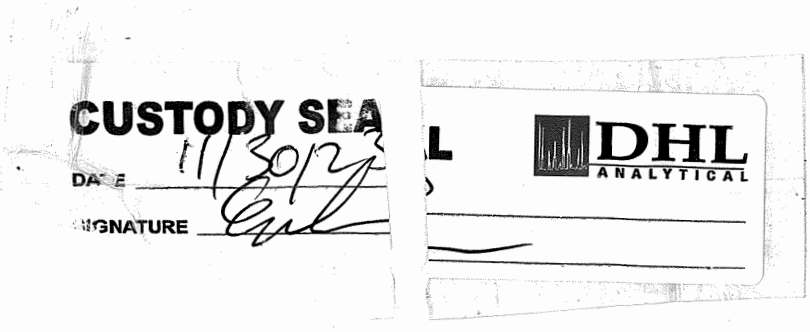
FedEx Express

FRI - 01 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7872 6056 3684

A8 BSMA

78664
TX-US AUS



CUSTODY SEA
DATE 11/30/23
SIGNATURE

DHL ANALYTICAL

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: GHD

Date Received: 12/1/2023

Work Order Number: 2312004

Received by: KAO

Checklist completed by: _____ 12/1/2023 (Signature / Date)

Reviewed by: SN 12/1/2023 (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 ☐		
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 1.1

Seal Intact Y

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

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

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *12-Dec-23*

CLIENT: GHD
Project: HF Sinclair Tank
Lab Order: 2312004

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.

For Volatiles analysis an MS/MSD was not performed due to insufficient sample volume. An LCS/LCSD was performed instead.

For DRO analysis an MS/MSD was not performed due to insufficient sample volume. An LCS/LCSD was performed instead.

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 matrix spike duplicate recovery was below control limits. In addition, the matrix spike and matrix spike duplicate had the RPD above control limits. This was due to instrument malfunction. This is flagged accordingly in the enclosed QC summary report. The "S" flag denotes spike recovery was outside control limits and the "R" flag denotes the RPD was outside control limits. The LCS was within control limits. No further corrective actions were taken.

For GRO analysis by method M8015V the surrogate recovery for the matrix spike duplicate was below control limits. This was due to instrument malfunction. No further corrective actions were taken

DHL Analytical, Inc.

Date: *12-Dec-23*

CLIENT: GHD
Project: HF Sinclair Tank
Lab Order: 2312004

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2312004-01	HTRW-1		11/30/23 10:42 AM	12/01/2023
2312004-02	HTRW-1D		11/30/23 10:42 AM	12/01/2023
2312004-03	Trip Blank		11/30/23	12/01/2023

DHL Analytical, Inc.

Date: *12-Dec-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-1
Project:	HF Sinclair Tank	**Lab ID:**	2312004-01
Project No:	HF Sinclair - Hobbs	**Collection Date:**	11/30/23 10:42 AM
Lab Order:	2312004	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.151	0.151	0.189		mg/L	1	12/11/23 11:57 AM
Surr: Isopropylbenzene	51.8	0	25-124		%REC	1	12/11/23 11:57 AM
Surr: Octacosane	89.4	0	51-124		%REC	1	12/11/23 11:57 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/06/23 04:37 PM
Surr: Tetrachlorethene	83.5	0	74-138		%REC	1	12/06/23 04:37 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.000350	0.000300	0.00100	J	mg/L	1	12/01/23 03:51 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:51 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/01/23 03:51 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:51 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/01/23 03:51 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:51 PM
Surr: 1,2-Dichloroethane-d4	94.6	0	72-119		%REC	1	12/01/23 03:51 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	12/01/23 03:51 PM
Surr: Dibromofluoromethane	99.4	0	85-115		%REC	1	12/01/23 03:51 PM
Surr: Toluene-d8	89.1	0	81-120		%REC	1	12/01/23 03:51 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: *12-Dec-23*

CLIENT:	GHD	**Client Sample ID:**	HTRW-1D
Project:	HF Sinclair Tank	**Lab ID:**	2312004-02
Project No:	HF Sinclair - Hobbs	**Collection Date:**	11/30/23 10:42 AM
Lab Order:	2312004	**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	0.190		mg/L	1	12/11/23 12:06 PM
Surr: Isopropylbenzene	48.4	0	25-124		%REC	1	12/11/23 12:06 PM
Surr: Octacosane	91.1	0	51-124		%REC	1	12/11/23 12:06 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/06/23 04:59 PM
Surr: Tetrachlorethene	83.5	0	74-138		%REC	1	12/06/23 04:59 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	0.000360	0.000300	0.00100	J	mg/L	1	12/01/23 04:16 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 04:16 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/01/23 04:16 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 04:16 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/01/23 04:16 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 04:16 PM
Surr: 1,2-Dichloroethane-d4	94.9	0	72-119		%REC	1	12/01/23 04:16 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/01/23 04:16 PM
Surr: Dibromofluoromethane	98.5	0	85-115		%REC	1	12/01/23 04:16 PM
Surr: Toluene-d8	89.9	0	81-120		%REC	1	12/01/23 04:16 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: *12-Dec-23*

CLIENT:	GHD	**Client Sample ID:**	Trip Blank
Project:	HF Sinclair Tank	**Lab ID:**	2312004-03
Project No:	HF Sinclair - Hobbs	**Collection Date:**	11/30/23
Lab Order:	2312004	**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	12/06/23 03:49 PM
Surr: Tetrachlorethene	87.8	0	74-138		%REC	1	12/06/23 03:49 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **JVR**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:26 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:26 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/01/23 03:26 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:26 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/01/23 03:26 PM
Total Xylenes	<0.000300	0.000300	0.00100		mg/L	1	12/01/23 03:26 PM
Surr: 1,2-Dichloroethane-d4	93.5	0	72-119		%REC	1	12/01/23 03:26 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	12/01/23 03:26 PM
Surr: Dibromofluoromethane	98.1	0	85-115		%REC	1	12/01/23 03:26 PM
Surr: Toluene-d8	89.1	0	81-120		%REC	1	12/01/23 03:26 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:** *12-Dec-23*

CLIENT: GHD
Work Order: 2312004
Project: HF Sinclair Tank

ANALYTICAL QC SUMMARY REPORT

RunID: **GC15_231211A**

The QC data in batch 113136 applies to the following samples: 2312004-01C, 2312004-02C

Sample ID: **MB-113136** Batch ID: **113136** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_231211A** Analysis Date: **12/11/2023 11:12:52 A** Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0471		0.1000		47.1	25	124			
Surr: Octacosane	0.0836		0.1000		83.6	51	124			

Sample ID: **LCS-113136** Batch ID: **113136** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_231211A** Analysis Date: **12/11/2023 11:21:44 A** Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.06	0.100	1.250	0	85.2	50	114			
Surr: Isopropylbenzene	0.0500		0.1000		50.0	25	124			
Surr: Octacosane	0.0896		0.1000		89.6	51	124			

Sample ID: **LCSD-113136** Batch ID: **113136** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_231211A** Analysis Date: **12/11/2023 11:30:36 A** Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.01	0.100	1.250	0	80.6	50	114	5.50	30	
Surr: Isopropylbenzene	0.0447		0.1000		44.7	25	124	0	0	
Surr: Octacosane	0.0850		0.1000		85.0	51	124	0	0	

Qualifiers:

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

CLIENT: GHD
Work Order: 2312004
Project: HF Sinclair Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_231206A

The QC data in batch 113138 applies to the following samples: 2312004-01B, 2312004-02B, 2312004-03B

Sample ID: **LCS-113138**	Batch ID: **113138**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_231206A**	Analysis Date: **12/6/2023 1:26:23 PM**	Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.56	0.100	2.500	0	102	67	136			
Surr: Tetrachlorethene	0.353		0.4000		88.3	74	138			

Sample ID: **LCSD-113138**	Batch ID: **113138**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_231206A**	Analysis Date: **12/6/2023 1:48:58 PM**	Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.47	0.100	2.500	0	98.9	67	136	3.44	30	
Surr: Tetrachlorethene	0.352		0.4000		87.9	74	138	0	0	

Sample ID: **MB-113138**	Batch ID: **113138**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_231206A**	Analysis Date: **12/6/2023 2:56:23 PM**	Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.363		0.4000		90.7	74	138			

Sample ID: **2312004-02BMS**	Batch ID: **113138**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_231206A**	Analysis Date: **12/6/2023 5:21:51 PM**	Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.04	0.100	2.500	0	81.7	67	136			
Surr: Tetrachlorethene	0.333		0.4000		83.3	74	138			

Sample ID: **2312004-02BMSD**	Batch ID: **113138**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_231206A**	Analysis Date: **12/6/2023 5:44:03 PM**	Prep Date: **12/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	1.26	0.100	2.500	0	50.5	67	136	47.2	30	SR
Surr: Tetrachlorethene	0.204		0.4000		51.0	74	138	0	0	S

Qualifiers:

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

CLIENT: GHD
Work Order: 2312004
Project: HF Sinclair Tank

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_231201A

The QC data in batch 113098 applies to the following samples: 2312004-01A, 2312004-02A, 2312004-03A

Sample ID: **LCS-113098** Batch ID: **113098** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS7_231201A** Analysis Date: **12/1/2023 12:19:00 PM** Prep Date: **12/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0282	0.00100	0.0232	0	122	81	122			
Ethylbenzene	0.0235	0.00100	0.0232	0	101	80	120			
m,p-Xylene	0.0472	0.00200	0.0464	0	102	80	120			
o-Xylene	0.0230	0.00100	0.0232	0	99.1	80	120			
Toluene	0.0278	0.00200	0.0232	0	120	80	120			
Total Xylenes	0.0702	0.00100	0.0696	0	101	80	120			
Surr: 1,2-Dichloroethane-d4	187		200.0		93.4	72	119			
Surr: 4-Bromofluorobenzene	200		200.0		99.8	76	119			
Surr: Dibromofluoromethane	197		200.0		98.6	85	115			
Surr: Toluene-d8	178		200.0		88.8	81	120			

Sample ID: **LCSD-113098** Batch ID: **113098** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCSD** Run ID: **GCMS7_231201A** Analysis Date: **12/1/2023 2:01:00 PM** Prep Date: **12/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0262	0.00100	0.0232	0	113	81	122	7.24	20	
Ethylbenzene	0.0199	0.00100	0.0232	0	85.6	80	120	16.7	20	
m,p-Xylene	0.0405	0.00200	0.0464	0	87.2	80	120	15.4	20	
o-Xylene	0.0195	0.00100	0.0232	0	84.1	80	120	16.4	20	
Toluene	0.0257	0.00200	0.0232	0	111	80	120	7.85	20	
Total Xylenes	0.0600	0.00100	0.0696	0	86.2	80	120	15.7	20	
Surr: 1,2-Dichloroethane-d4	213		200.0		107	72	119	0	0	
Surr: 4-Bromofluorobenzene	200		200.0		100	76	119	0	0	
Surr: Dibromofluoromethane	217		200.0		108	85	115	0	0	
Surr: Toluene-d8	180		200.0		89.8	81	120	0	0	

Sample ID: **MB-113098** Batch ID: **113098** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS7_231201A** Analysis Date: **12/1/2023 3:01:00 PM** Prep Date: **12/1/2023**

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	186		200.0		93.0	72	119			
Surr: 4-Bromofluorobenzene	203		200.0		101	76	119			
Surr: Dibromofluoromethane	195		200.0		97.4	85	115			
Surr: Toluene-d8	176		200.0		88.1	81	120			

Qualifiers:

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

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

CONDITIONS

Action 327694

CONDITIONS

Operator:	OGRID:
HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	15694
	Action Number: 327694
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the Site Status Report for the Hobbs Tank 5201 Release AP-113: content satisfactory 1. Continue to conduct air sparging as prescribed on HTRW-1. 2. Use EFR every two weeks on wells RW-1, HTRW-1, HTRW-2 and HTRW-3 3 Continue the use of an ORC sock in RW-1, HTRW-1 and HTRW-3. 4. Continue to conduct groundwater monitoring per the work plan quarterly and semi-annually. If insufficient groundwater does not allow for a sufficient volume in the sample, deeper drilling or a new well replacement may be necessary as sampling events must be consecutive per rule 30. 19.15.30 NMAC 5. Sample RW-1 if needed per report. 6. Submit the 2024 annual report to OCD by April 1, 2025.	7/26/2024