Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	nAUTOFWCO00262
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jason Leik Title: Environmental Specialist IV

Signature: Date: 5/24/2021

email: Jason.Leik@HollyFroniter.com Telephone: 214-871-3408

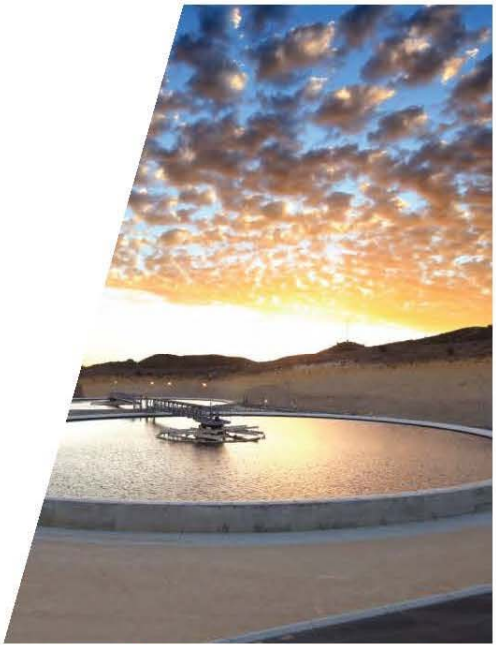
OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

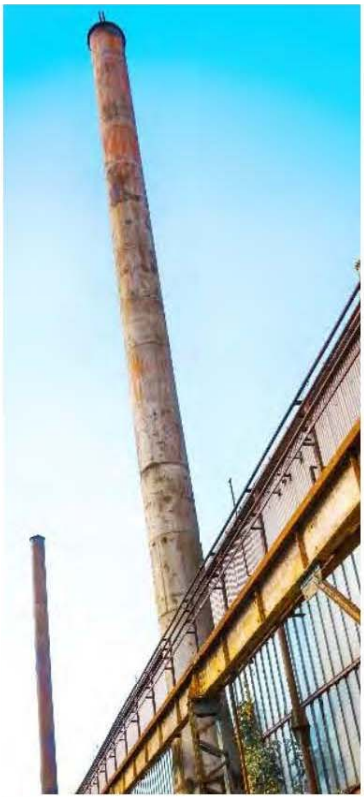
Closure Approved by: Bradford Billings Date: 08/27/2021

Printed Name: Bradford Billings Title: Envi.Spec.A



Site Closure Report

Hobbs South GSA 8” Gathering Line
Lea County, New Mexico



HollyFrontier

April 2021

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1. Introduction

This Site Closure Report is submitted by GHD Services, Inc., on behalf of HollyFrontier, for the Hobbs South GSA 8-inch gathering line leak (Site) located in Lea County, New Mexico (**Figure 1**). Site closure is based on more than eight (8) quarters of no concentrations of hydrocarbon constituents above the New Mexico Water Quality Control Commission (NMWQCC) standards and no wells containing measurable crude oil.

On March 27, 2002, Plains personnel reported a leak from the 8-inch pipeline owned by Navajo Refining Company. There is no record of the leak reported to New Mexico Oil Conservation Division (NMOCD). Previous submittals to the NMOCD for this Site have included the Stage 2 Abatement Plan (November 2012), the Annual Site Status report (August 2013), the Annual Site Status report (August 2014), the Annual Site Status report (August 2015), the Annual Site Status Report (October 2016), the Annual Site Status Report 2016/2017 (September 2017), the Annual Site Status Report 2018 (April 2019) and the Annual Site Status Report 2019 (April 2020). This closure report includes the groundwater monitoring and remediation activities at the Site for the period from March 2019 to March 2021.

1.1 Site Background

On March 27, 2002, a leak was discovered in an 8-inch pipeline operated by Navajo Refining Company, when the pipeline was exposed for trenching for an electrical line (**Figure 2**). An unknown volume of crude oil was released, and it is unknown when the leak occurred to subsurface soils. The pipeline was shut down and a 150-foot section of the pipeline was replaced in the area. This pipeline has remained inactive since this leak was discovered in 2002. Crude oil was recovered, and impacted soil was removed from the area of excavation covering 112 feet by 14 feet by 15 feet deep.

1.2 Site Setting

The Site is located approximately 3 miles south of Hobbs, NM on Plains Pipeline property at 214 County Road 61. The Site is in the SE ¼ of the SW ¼ of Section 15, Township 19 South, Range 38 East in Lea County, New Mexico (32.654949° North, 103.137432° West). The topography at the Site is relatively flat and the average elevation is approximately 3,598 above feet-mean sea level (**Figure 1**). The surrounding land contains crude oil storage tanks, pipelines, rural residences, and open rangeland.

1.3 Regional Geology and Hydrogeology

The *Geologic Map of New Mexico* (2003) prepared by the New Mexico Bureau of Geology and Mineral Resources, and Geology *and Ground-Water Conditions in Southern Lea County, New Mexico* (Ground-Water Report 6) prepared on behalf of the USGS was reviewed in association with the evaluation of regional geology and hydrogeology for the Site.

The surficial geologic unit (Qep) mapped for the location is described as Quaternary aged “Eolian and piedmont deposits (Holocene to middle Pleistocene) – Interlayered eolian sands and piedmont slope deposits along the eastern flank of the Pecos River Valley. Typically capped by thin eolian deposits.” This sediment ranges from zero to 20-feet in thickness in this portion of Lea County. The Quaternary sediment unconformably overlies the Tertiary age Ogallala Formation. The Ogallala

Formation is comprised of sands, silts, indurated calcium carbonate, gravel, and some clay as was observed in the area of the Site.

Groundwater in the site area 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 towards the southeast and follows the Triassic subcrop surface. Groundwater quality is very good with total dissolved solids (TDS) concentrations are typically below 1,000 mg/L. Recharge primarily occurs via infiltration from precipitation events.

1.4 Site Geology and Hydrogeology

The surface soils encountered at the Site are silty to fine sands that are approximately 10-feet thick. This surface soil is consistent with the surface soil description (Quaternary sediment) for this physiographic province. The soil 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 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.

No water wells in the area are known to have been impacted by the leak. An evaluation of water well information obtained from the New Mexico Office of the State Engineer and the USGS indicated that there is one domestic, agricultural, or public water supply wells within a 1-mile radius of the Site (**Figure 2**).

1.5 Summary of Previous Investigations

In 2002, impacted soil was removed from the area of the leak and an additional excavation to remove impacted soil was completed in the area east of the pipeline in January 2003 (**Figure 2**). Soil could not be removed to the west due the presence of a Plains pipeline, pipeline valves and manifolds. These excavations removed a total of approximately 4,033 cubic yards of impacted soil in the area at the Site shown in **Figure 2**. The portion of the pipeline that leaked was repaired in 2002 and the pipeline was decommissioned in 2012.

Four groundwater monitoring wells (MW-1, MW-2, MW-3R, and MW-4) and 13 borehole wells (BH-1 to BH-13) were used to characterize the Site in late 2002 and early 2003. The closest monitoring well to the leak area (MW-4) is approximately 200 feet to the east and down-gradient of the leak (**Figure 2**). The initial borehole wells were in the leak area to approximately 150 feet east and south of the leak. There is no documentation available as to when approximately 50 additional 2-inch and 4-inch borehole wells, which were converted to temporary fluid recovery and fluid measurement wells were installed at the Site. By 2016, 42 of the borehole wells were abandoned due to lack of water or crude oil. Presently, there are eleven (11) 4-inch borehole wells remaining, which have been used for oil recovery.

Total fluid pumps were used in the borehole wells to recover the oil and, as of May 2008, approximately 879 barrels (bbls) of crude oil were reported to be recovered at the Site. Crude oil recovery efforts continued at the Site until 2012 with the total amount of recovered crude oil was reported at 1,061 bbls.

In February 2013, two 4-inch recovery wells (HTRW-1 and HTRW-2) were added in the release area (**Figure 2**). A crude oil only recovery system was installed in these wells in September 2013 and oil was recovered from the new wells until July 2014, when a new oil skimmer pumping system was added to recover oil from eight wells located in this area. Since 2012, approximately 100 barrels have been recovered from these wells. Presently, the system is not being used to recover oil from the wells. A vacuum truck and oil absorbent socks are being used, as needed, to recover oil from all the eleven 4-inch borehole wells.

1.6 Site Conceptual Model

The Site is in an area of multiple crude oil gathering lines and storage tanks and is about 2 miles west of Highway 18 and 3 miles south of Hobbs, New Mexico. The closest residences are located approximately 0.5 miles east of the release. The closest drinking water well is located approximately 400 feet to the northeast of the release (**Figure 2**) and generally down-gradient of the release. This well was sampled for hydrocarbons following the discovery of the release and was found to be un-impacted by the release. Monitoring wells located in the area down-gradient of the release and up-gradient of the drinking water well have also not shown any hydrocarbon impacts to date.

The Site was impacted by crude oil from a leak in a pipeline. The crude oil on groundwater has remained in the same location as the initial leak since 2002 and has decreased from the total site accumulated thickness of 44.68 feet in August 2012 to none measured in any wells since June 2020. Hydrocarbon impacts at the Site appear to be limited to soil and groundwater in the immediate area of the release. Some petroleum-impacted soil may remain in the area from below 15-feet-below ground surface (ft-bgs) to the top of groundwater at approximately 50 ft-bgs. The soil impacts appear to be minimal as the crude oil thickness in the release area has not increased and hydrocarbons have not been detected, to date, in any monitoring wells. The remaining impacts to groundwater appear to be limited to the area of the leak with *de minimis* amount of crude oil on groundwater.

The depth to groundwater at the Site is approximately 50 ft-bgs and the groundwater flow direction is generally towards the east at a gradient of approximately 0.001feet/foot (ft/ft). The closest water well (Townsend Place Subdivision Well) is approximately 400 feet northeast and generally down-gradient of the release (**Figure 2**). There are no surface-water bodies within 1,000 feet of the Site. Due to the depth of groundwater (50 ft-bgs), it is unlikely that any perennial stream would exist at any time within 1,000 feet of the Site.

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

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

The monitoring wells have not had any detections of hydrocarbons above the NMWQCC standards since 2002. There appears to be no immediate threat to the environment or to drinking water wells located in the area caused by the release and any remaining impacts. The crude oil and associated

impacts are decreasing, have remained in the leak area since 2004 and have not migrated from the leak area, indicating that most of the soil impacts have been mitigated in the release area**.** The residual crude oil has a very low mobility, does not readily desorb nor dissolve, and therefore has not migrated from the release area. The dissolved phase hydrocarbon concentrations in the groundwater monitor wells have remained below the NMWQCC standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX) since 2002. Inorganic analyses to date, has only shown detections above NMWQCC standards in 2016 at MW-2 for barium at 1.04 mg/L and chromium at 1.15 mg/L. Since 2016 there has not been any inorganic constituents detected above the NMWQCC standards.

The amount of crude oil has decreased at the Site since 2012 and presently only *de minimis* amounts of recoverable oil remain in the area. The maximum thickness of the oil accumulation on top of groundwater was measured at 6 feet in borehole well BH-404 in August 2012 and presently none of the wells have shown any measured crude oil since June 2020.

2. Site Activities

Site activities for this reporting period have included groundwater monitoring, fluid level measurements, and oil recovery with enhanced fluid recovery (EFR) using a vacuum truck in 2019. Since December 2017, groundwater monitoring was conducted at the Site on a quarterly basis. Fluid levels were measured on a quarterly basis and as needed for crude oil recovery. Groundwater monitoring has included obtaining groundwater samples for laboratory analyses for BTEX, total petroleum hydrocarbon-gasoline range organics (TPH-GRO), total petroleum hydrocarbon-diesel range organics (TPH-DRO) (**Table 1**). Inorganic analyses were conducted on groundwater samples in 2016 (once), 2017 (once), and since December 2019 (**Table 2**)**.** Polycyclic aromatic hydrocarbons (PAHs) analyses were conducted on samples in 2018 (**Table 3**). Crude oil only recovery pumps were used in two wells (BH-401 and BH-408) until 2018 and EFR was used on wells in 2019 monthly. Oil absorbent socks have been used in wells since 2019.

3. Groundwater Monitoring Procedures and Results

For this closure report, groundwater monitoring was conducted at the Site during 2019 and 2020 in March, June, September, and December and March 2021 and included fluid level measurements of all monitor wells and existing borehole wells. Groundwater samples were collected from all four monitor wells during these monitoring periods.

Prior to purging of the wells and obtaining groundwater samples, fluid levels were measured in all monitor wells using a water level indicator and all other wells using an oil/water level indicator. During both sampling events, the monitor wells were purged at a rate of 160 ml/min and groundwater samples were collected using the low flow purging technique following stabilization of the field parameters. The meter used for the field parameters was calibrated prior to use. Field parameters obtained during purging included temperature, specific conductance, pH, dissolved oxygen, and oxidation-reduction potential (ORP). The final parameter readings for the sampling events are summarized in Appendix B. For 2019 to 2021 groundwater samples were analyzed for BTEX by Method 8260C, TPH-GRO by 8015V, TPH-DRO by Method 8015D**.** From December 2019 to March 2021, inorganic analyses were conducted on groundwater samples and included chloride by Method E300, TDS by Method 2540C, mercury by Method 7470A and RCRA metals by Method 6020A. Groundwater samples were immediately collected into the appropriate laboratory provided

containers and placed in an ice-chilled cooler for transport to the DHL laboratory under chain-of-custody procedures. The laboratory reports for each sampling event are contained in **Appendix D**.

March 2019

Crude oil was not measured in any of the monitor wells during the March 2019 monitoring event but was measured in seven (7) borehole wells out of the 11 borehole wells located in the release area. Oil thickness in these wells ranged from 0.03 feet (HSRW-1) to 0.30 feet (BH-401 and BH-408). The crude oil thicknesses for March 2019 are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in March 2019 were approximately 0.75 feet lower than the groundwater levels measured in March 2018 and approximately 0.20 feet lower than in December 2018. For this monitoring period, the depth to groundwater across the Site was approximately 53 to 57 ft-bgs. The groundwater flow in March 2019 was towards the east and the groundwater gradient was relatively flat with a gradient of 0.0005 ft/ft **(Figure 3)**. The groundwater gradient in March 2018 was 0.0005 ft/ft.

The March 2019 hydrocarbon concentrations for each monitor well are shown **in Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents above the NMWQCC standards in March 2019. TPH-GRO concentrations were not detected above 0.136 mg/L (MW-4) in any of the wells. TPH-DRO was not detected in any of the wells above a concentration of 0.767 mg/L (MW-4).

June 2019

Crude oil was not measured in any of the monitor wells during the June 2019 monitoring event but was measured in four (4) borehole wells out of the 11 borehole wells located in the release area. Oil thickness during this monitoring period in these wells ranged from 0.06 feet (HSRW-1) to 0.18 feet (BH-401 and H-404) and are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in June 2019 were less than 0.75 feet lower than the groundwater levels measured in June 2018 and approximately 0.10 feet lower than in March 2019. For this monitoring period, the depth to groundwater across the Site was approximately 54 to 57 ft-bgs. The groundwater flow in June 2019 was towards the east and the groundwater gradient was relatively flat with a gradient of 0.0004 ft/ft (**Figure 4**). The groundwater gradient in June 2018 was 0.0004 ft/ft.

The June 2019 hydrocarbon concentrations for each monitor well are shown in **Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents above the NMWQCC standards in June 2019. TPH-GRO concentrations were not detected in any of the wells above 0.152 mg/L (MW-4) and TPH-DRO was not detected in any of the wells above a concentration of 0.661 mg/L (MW-4).

September 2019

Crude oil was not measured in any of the monitor wells during the September 2019 monitoring event but was measured in three (3) wells out of 11 borehole wells located in the release area. Oil thickness in these wells ranged from 0.05 feet (HTRW-1) to 0.14 feet (BH-401). The crude oil thicknesses for September 2019 are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in September 2019 were approximately 0.50 lower than the groundwater levels measured in September 2018 and approximately 0.20 feet lower than in June 2019**.** For this monitoring period, the depth to groundwater across the Site was approximately 53 to 59 ft-bgs. The groundwater flow in September 2019 was towards the east and the groundwater gradient was relatively flat with a gradient of 0.0004 ft/ft (**Figure 5**). The groundwater gradient in September 2018 was 0.0004 ft/ft.

The September 2019 hydrocarbon concentrations for each monitor well are shown in **Figure 12**, summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents above the NMWQCC standards in September 2019. TPH-GRO concentrations were not detected in any of the wells above 0.143 mg/L (MW-4) and TPH-DRO was not detected in any of the wells above a concentration of 1.02 mg/L (MW-4).

December 2019

Crude oil was not measured in any of the monitor wells during the December 2019 monitoring event but was measured in three (3) wells located in the release area. Oil thickness in these wells ranged from 0.05 feet (HSRW-1) to 0.30 feet (BH-401). The crude oil thicknesses for December 2019 are shown in **Figure14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in December 2019 were approximately 0.50 lower than the groundwater levels measured in December 2018 and approximately 0.10 feet lower that the levels measured in September 2019. For this monitoring period, the depth to groundwater across the Site was approximately 55 to 58 ft-bgs. The groundwater flow in December 2019 was towards the east and the groundwater gradient was relatively flat with a gradient of 0.0005 ft/ft (**Figure 6**). The groundwater gradient in December 2018 was 0.0005 ft/ft.

The December 2019 hydrocarbon concentrations for each monitor well are shown in **Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents above the NMWQCC standards in December 2019. TPH-GRO concentrations were not detected in any of the wells above 0.099 mg/L (MW-4) and TPH-DRO was not detected in any of the wells above a concentration of 0.663 mg/L (MW-4). The inorganic analyses for this monitoring period indicated that none of the constituents were detected above the NMWQCC standards (**Table 2 and Figure 13**).

March 2020

Crude oil was not measured in any of the monitor wells during the March 2020 monitoring event but was measured in one (1) borehole well (BH-401) out of the 11 borehole wells located in the release area. The oil thickness in this well was 0.29 feet in March. The crude oil thicknesses for March 2020 are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in March 2020 were approximately 0.40 feet lower than the groundwater levels measured in March 2019 and were similar to December 2019. For this monitoring period, the depth to groundwater across the Site was approximately 54 to 58 ft-bgs. The groundwater flow in March 2020 was towards the northeast and the groundwater gradient was relatively flat with a gradient of 0.0004 ft/ft **(Figure 7).** The groundwater gradient in March 2019 was 0.0005 ft/ft.

The March 2020 hydrocarbon concentrations for each monitor well are shown in **Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents in any monitor well above the NMWQCC standards in March 2020. TPH-GRO

concentrations were not detected above 0.110 mg/L (MW-4) in any of the wells. TPH-DRO was not detected in any of the wells above a concentration of 0.663 mg/L (MW-4). The inorganic analyses for this monitoring period indicated that none of the constituents were detected above the NMWQCC standards (**Table 2 and Figure 13**).

June 2020

Crude oil was not measured in any of the monitor wells during the June 2020 monitoring event but was measured in one (1) borehole well (BH-401) out of the 11 borehole wells located in the release area. The oil thickness in this well was 0.15 feet in June. The crude oil thicknesses for June 2020 are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in June 2020 were approximately 0.50 feet lower than the groundwater levels measured in June 2019 and approximately 0.10 feet lower than in March 2020. For this monitoring period, the depth to groundwater across the Site was approximately 55 to 58 ft-bgs. The groundwater flow in June 2020 was towards the east and the groundwater gradient was relatively flat with a gradient of 0.0004 ft/ft **(Figure 8).** The groundwater gradient in June 2019 was 0.0004 ft/ft.

The June 2020 hydrocarbon concentrations for each monitor well are shown **in Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents in any monitor well above the NMWQCC standards in June 2020. TPH-GRO concentrations were not detected in any of the wells above the lower laboratory method limit of 0.06 mg/L and TPH-DRO was not detected in any of the wells above a concentration of 0.580 mg/L (MW-4). The inorganic analyses for this monitoring period indicated that none of the constituents were detected above the NMWQCC standards (**Table 2 and Figure 13**).

September 2020

Crude oil was not measured in any of the monitor wells and was not measured in any of 11 borehole wells during the September 2020 event. The crude oil thicknesses for the Site are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in September 2020 were approximately 0.50 lower than the groundwater levels measured in September 2019 and approximately 0.10 feet lower than in June 2020**.** For this monitoring period, the depth to groundwater across the Site was approximately 55 to 59 ft-bgs**.** The groundwater flow in September 2020 was towards the east and the groundwater gradient was relatively flat with a gradient of 0.0004 ft/ft **(Figure 9).** The groundwater gradient in September 2019 was 0.0004 ft/ft.

The September 2020 hydrocarbon concentrations for each monitor well are shown **in Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents above the NMWQCC standards in September 2020. TPH-GRO concentrations were not detected in any of the wells above the lower laboratory method limit of 0.06 mg/L and TPH-DRO was not detected in any of the wells above a concentration of 0.527 mg/L (MW-4). The inorganic analyses for this monitoring period indicated none of the constituents were detected above the NMWQCC standards (**Table 2 and Figure 13**).

December 2020

Crude oil was not measured in any of the monitor wells and was not measured in any of 11 borehole wells during the December 2020 monitoring event. The crude oil thicknesses for the Site are shown

in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in December 2020 were approximately 0.50 lower than the groundwater levels measured in December 2019 and approximately 0.10 feet lower that the levels measured in September 2020. For this monitoring period, the depth to groundwater across the Site was approximately 55 to 58 ft-bgs. The groundwater flow in December 2020 was towards the northeast and the groundwater gradient was relatively flat with a gradient of 0.0003 ft/ft (**Figure 10**). The groundwater gradient in December 2019 was 0.0005 ft/ft.

The December 2019 hydrocarbon concentrations for each monitor well are shown in **Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents above the NMWQCC standards in December 2020. TPH-GRO concentrations were not detected in any of the wells above 0.097 mg/L (MW-4) and TPH-DRO was not detected in any of the wells above a concentration of 0.595 mg/L (MW-4). The inorganic analyses for this monitoring period indicated none were detected above the NMWQCC standards (**Table 2 and Figure 13**).

March 2021

Crude oil was not measured in any of the monitor wells and was not measured in any of 11 borehole wells during the March 2021 monitoring event. The crude oil thicknesses for the Site are shown in **Figure 14** and detailed in **Appendix A**. Graphs of crude oil thickness for selected wells are contained in **Appendix C**.

Groundwater levels in March 2021 were approximately 0.75 feet lower than the groundwater levels measured in March 2020 and approximately 0.25 feet lower than in December 2020**.** For this monitoring period, the depth to groundwater across the Site was approximately 55 to 59 ft-bgs. The groundwater flow in March 2021 was towards the northeast and the groundwater gradient was relatively flat with a gradient of 0.0006 ft/ft (**Figure 11**). The groundwater gradient in March 2019 was 0.0004 ft/ft.

The March 2020 hydrocarbon concentrations for each monitor well are shown in **Figure 12,** summarized in **Table 1**, and detailed in **Appendix B**. There were no detections of any of the BTEX constituents in any monitor well above the NMWQCC standards in March 2021. TPH-GRO concentrations were not detected above 0.110 mg/L (MW-4) in any of the other wells. TPH-DRO was not detected in any of the wells above a concentration of 0.976 mg/L (MW-4).

3.1 QA/QC Results

The results of the Quality Assurance/Quality Control (QA/QC) samples for groundwater are summarized in **Table 4**. For this reporting period, QA/QC samples included trip blanks and duplicates samples, which were analyzed for 2019 and 2020 in March, June, September, December, and March 2021. The trip blanks were analyzed for BTEX and TPH-GRO and the duplicate samples were analyzed for BTEX, TPH-GRO, TPH-DRO and inorganic constituents in December 2019, 2020 and March 2021. There were no detections above the lower laboratory reporting limits for BTEX and TPH-GRO in any of the trip blanks**.** For duplicate results, there were no differences in the results for BTEX, and less than 10% difference in the results for TPH-DRO and chloride. All samples were analyzed within the holding times and all coolers were received at the proper temperature. Based on this evaluation, all the data meets acceptance criteria and is suitable for use in this report.

4. Product Recovery Status

Fluid levels are measured in the borehole wells on a quarterly basis. The crude oil thicknesses for this reporting period are shown in **Figure 14** and detailed in **Appendix A**. Graphs of the measured thickness for the 11 wells are contained in **Appendix C**.

The crude oil at the Site has been declining since 2015. In December 2015, of the 11 wells that contained oil, eight wells contained more than 1.0 foot of oil. In June 2016, crude oil was measured in 10 wells and three wells contained more than 1.0 foot of crude oil. In December 2016, 10 wells contained crude oil, one well (BH-401) contained more than 1.0 foot of crude oil and in June 2017, none of these wells contained more than 1.0 foot of crude oil. In December 2017, 10 wells contained oil and two wells contained more than 1.0 foot of oil (BH-401 and HSRW-1). In March 2018, four (4) wells contained oil and none of the wells contained more than 1.0 foot of oil. In September 2018, seven (7) wells contained oil and one well contained more than 1.0 foot of oil (BH-401). In December 2018, five (5) wells contained oil and none of the wells contained more than 1.0 foot of oil. In December 2019, three wells contained oil, and none contained more than 1.0 foot of oil. In March 2021, none of the borehole wells contained oil and oil has not been measured in any of the wells since June 2020.

Crude oil was last measured in the following wells:

- HSRW-2 January 2018
- BH-411 January 2018
- BH-406 January 2019
- BH-407 January 2019
- BH-409 March 2019
- BH-410 March 2019
- BH-405 March 2019
- BH-404 June 2019
- BH-408 December 2019
- HSRW-1 December 2019
- BH-401 June 2020

The Site total accumulated thickness of crude oil since 2012 is shown in **Figure 15**. The total site accumulated thickness of crude oil for all of wells at the Site has decreased in the immediate area of the leak since 2012. The accumulated thickness in the Site wells in 2012 was approximately 43 feet, 46 feet in December 2014, 17.87 in December 2015, 11.96 feet in June 2016, 4.54 feet in December 2016, 2.37 feet in June 2017, 3.79 feet in December 2017, 1.96 feet in December 2018, 0.52 feet in December 2019 and 0.00 feet in December 2020 and March 2021.

5. Risk Analysis

The Site has no operations and all crude oil tanks have been removed from the area. The pipeline that caused the release is no longer active. The Site is characterized as having minimal crude oil

and no hydrocarbon constituents above state standards for more than eight (8) quarters. The domestic water well in the area down-gradient of the site did not have concentrations that were above NMWQCC standards. The multiple removal actions that were conducted after the release have removed as much of the source area soil as is practical, given the location and the subsurface geology. There has been no release to the off-site and drinking water wells in the area have not been impacted or appear to be threatened.

The release was a crude oil mixture whose thickness and lack of mobility limited migration of the material. The Site is located within active industrial area. The surrounding area contains crude oil storage tanks, pipelines, and open rangeland. The impacted source area soil has been removed and there are no opportunities for contact with impacted soil. Groundwater remediation has been conducted to remove and reduce oil that may have migrated to the underlying groundwater.

The Human Health Risk Assessment analysis was conducted to evaluate whether the release poses a risk to human health based on current site conditions. Human exposure potential is limited to the workers in the area at the site. There are no residents or personnel present at Site. The closest residences are approximately 400 feet west of the release (**Figure 2**). The Site is owned by Plains and is off-limits to recreational activities such as camping or hunting.

From a human health perspective, there are no complete or potentially complete exposure pathways whereby any human receptors other than workers would be exposed to the site. The groundwater in the immediate vicinity of the release is used as a drinking water source but has not been impacted. There are no surface water bodies present and therefore no impacts to any human use of surface water.

A weight of evidence approach was used to assess possible risk from the site. Based on:

- A lack of sensitive or residential receptors,
- No complete exposure pathways present for contact with the contamination,
- No exceedances of NMWQCC standards in adjacent monitoring wells, and
- Successful soil and groundwater remediation.
- The site poses only negligible risk and is not a threat to human health.

Ecological and environmental risks have also been demonstrated to be negligible. The site is a permitted industrial area, is small relative to surrounding available habitat, and there are no sensitive aquatic habitats nearby (**Figure 1**). Like the human health analysis, the lack of sensitive receptors and incomplete exposure pathways indicate that the release will not pose a significant risk to any ecological populations.

6. Conclusion and Recommendations

The site can be closed, and no further monitoring or remediation activities are necessary for this release based on the following criteria:

There are no toxins in the area down-gradient of the site release, which could impact drinking water wells in the area.

There have been no detections of BTEX or PAHs above state standards in the monitoring wells since the release, which occurred in 2002 (**Table 1 and Table 3)**.

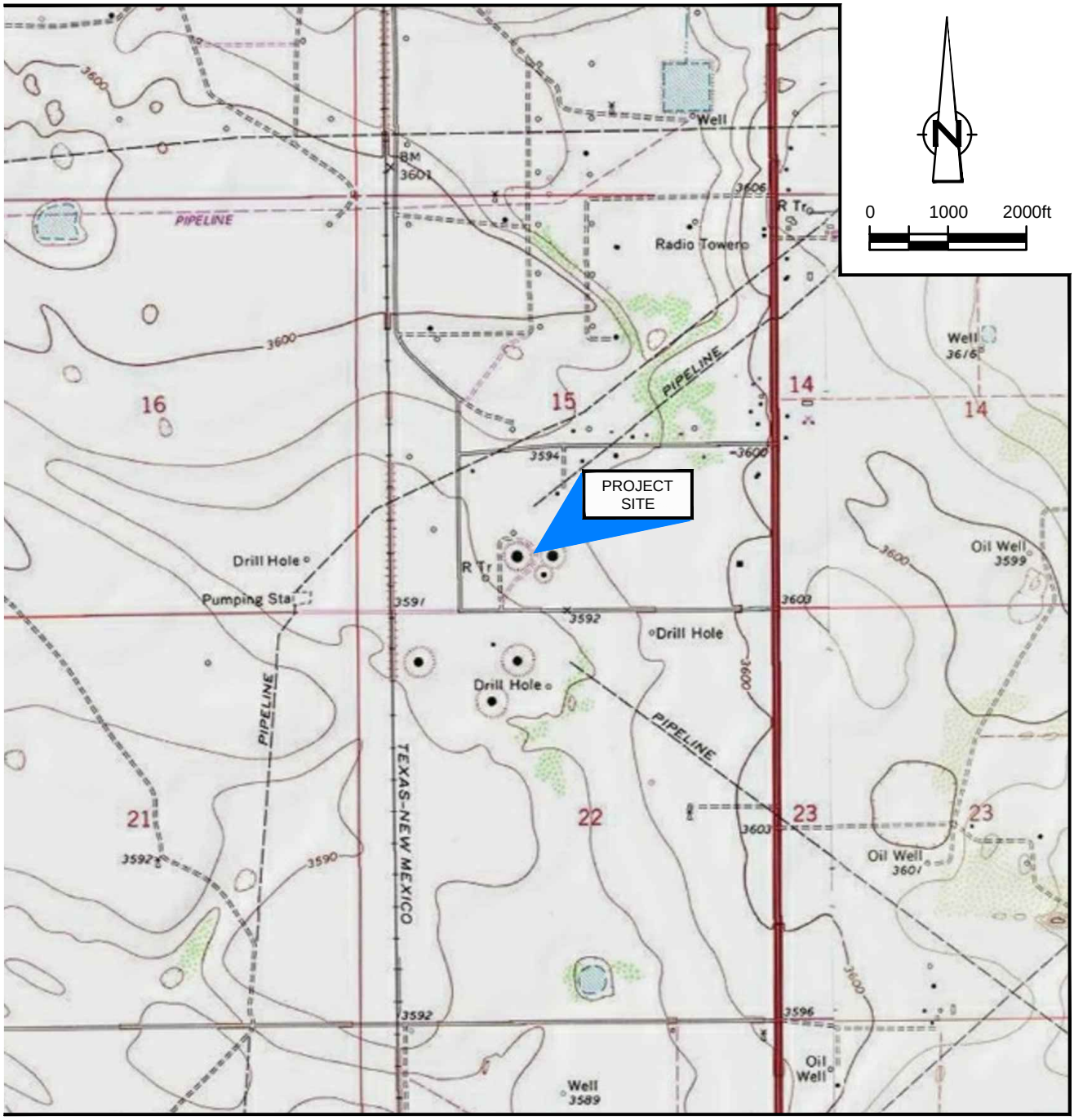
There have been no inorganic constituents detected above the NMWQCC standards consistently in down-gradient wells (**Table 2**).

The crude oil thickness from the release has declined due to removal of the crude oil by pumping, the use of EFR and oil absorbent socks since 2004. Presently, there may only be a *de minimus* amount of oil remaining at the Site (**Appendix A**).

The risk evaluation indicated that the site poses only a negligible risk and is not a threat to human health. Ecological and environmental risks have also been demonstrated to be negligible.

The crude oil has been removed to a *de Minimis* thickness and the monitoring wells have not shown any detections of hydrocarbons above the state standards for more than eight consecutive monitoring quarters, site closure is requested from the NMOCD. All wells will be abandoned following a written acceptance of Site Closure from NMOCD.

Figures



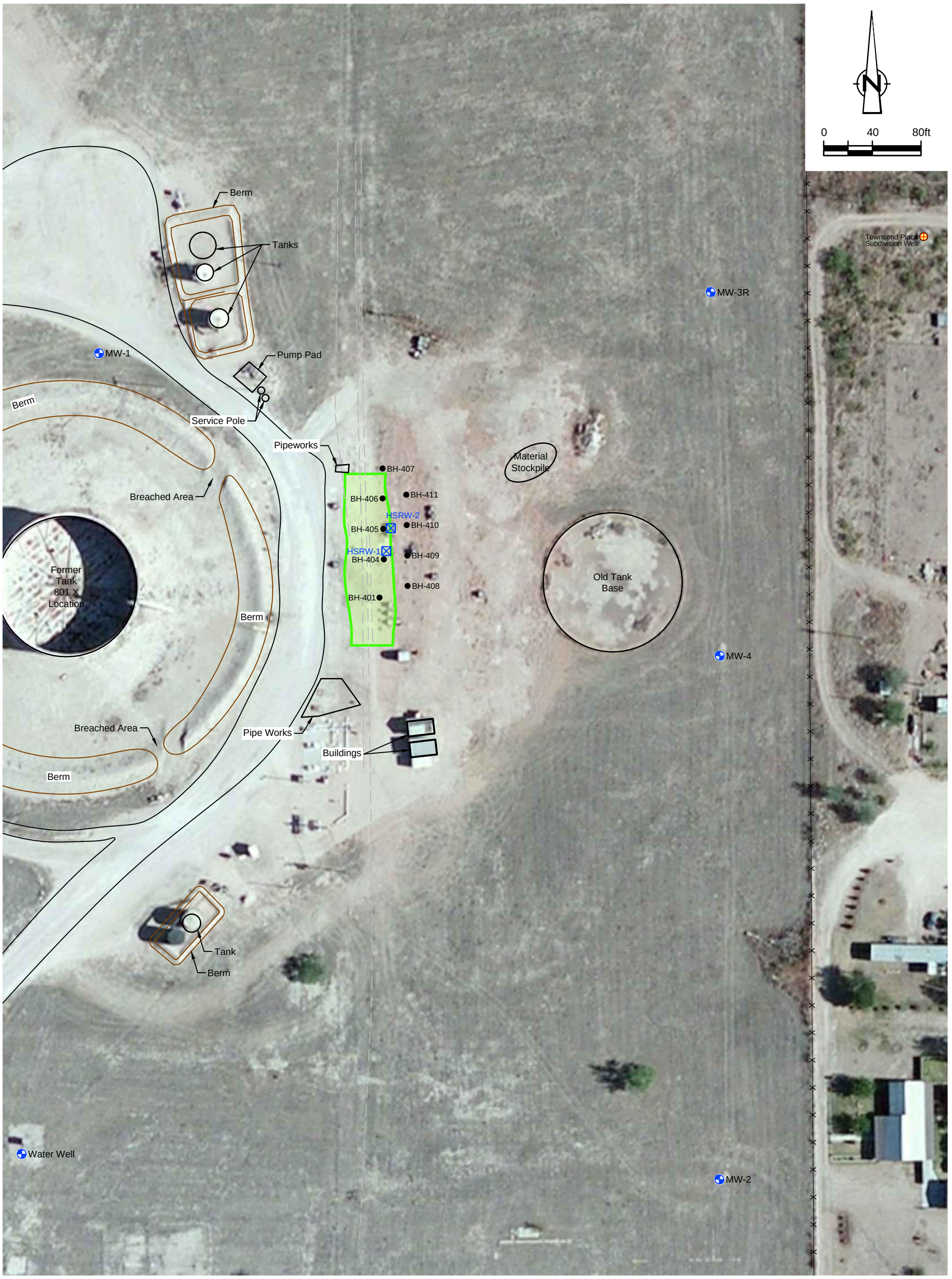
SOURCE: USGS 7.5 MINUTE QUAD
"HOBBS WEST AND HOBBS EAST, NEW MEXICO"

LAT/LONG: 32.6549° NORTH, 103.1382° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17,



LEGEND

- Recovery Well Location
- Borehole Well Location
- Monitoring Well Location
- Well Location
- Area of Leak
- Approximate Location of Underground Line

GHD

Figure 2

SITE MAP
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

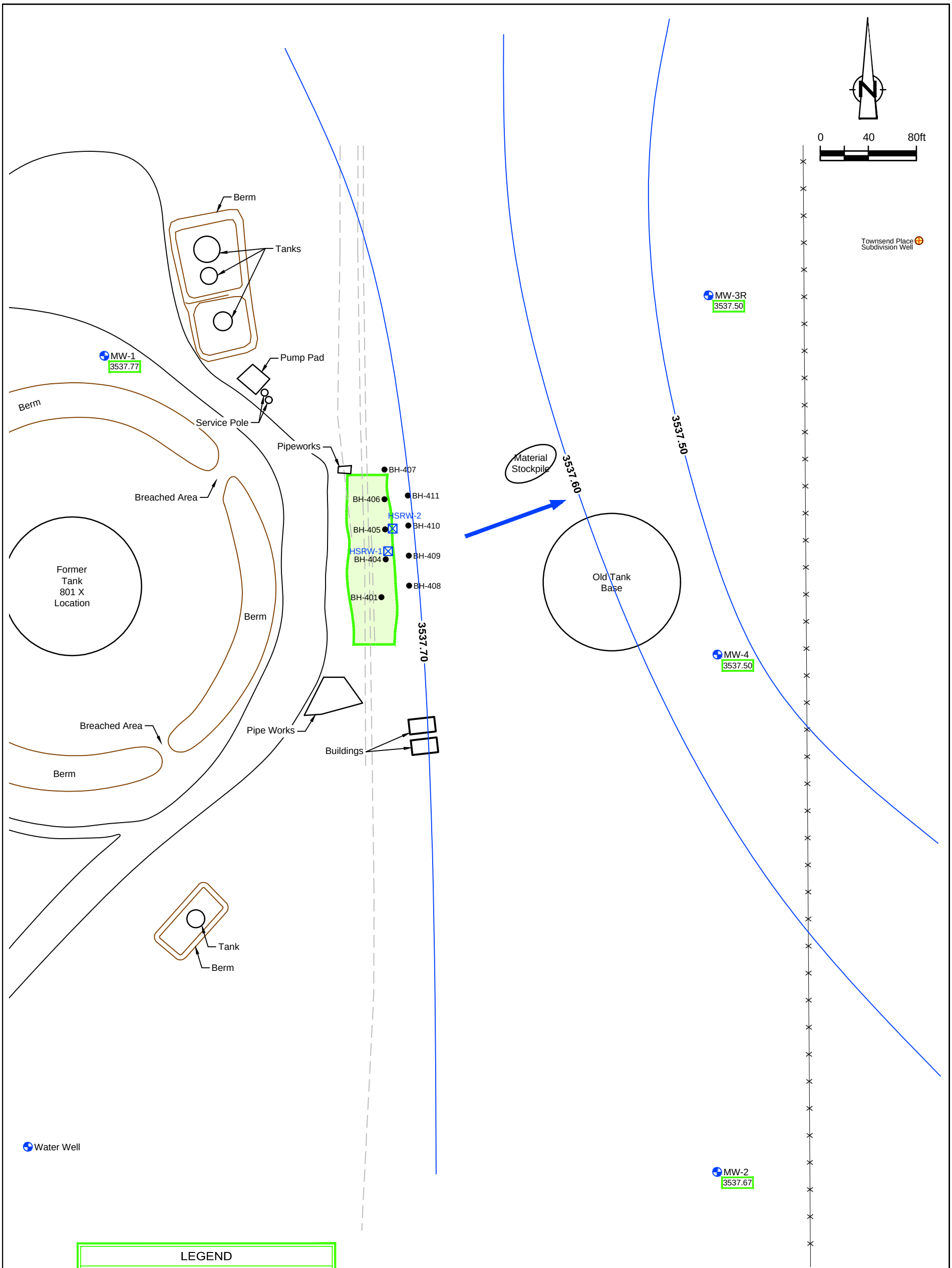


Figure 3

GROUNDWATER POTENTIOMETRIC SURFACE - MARCH 2019
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

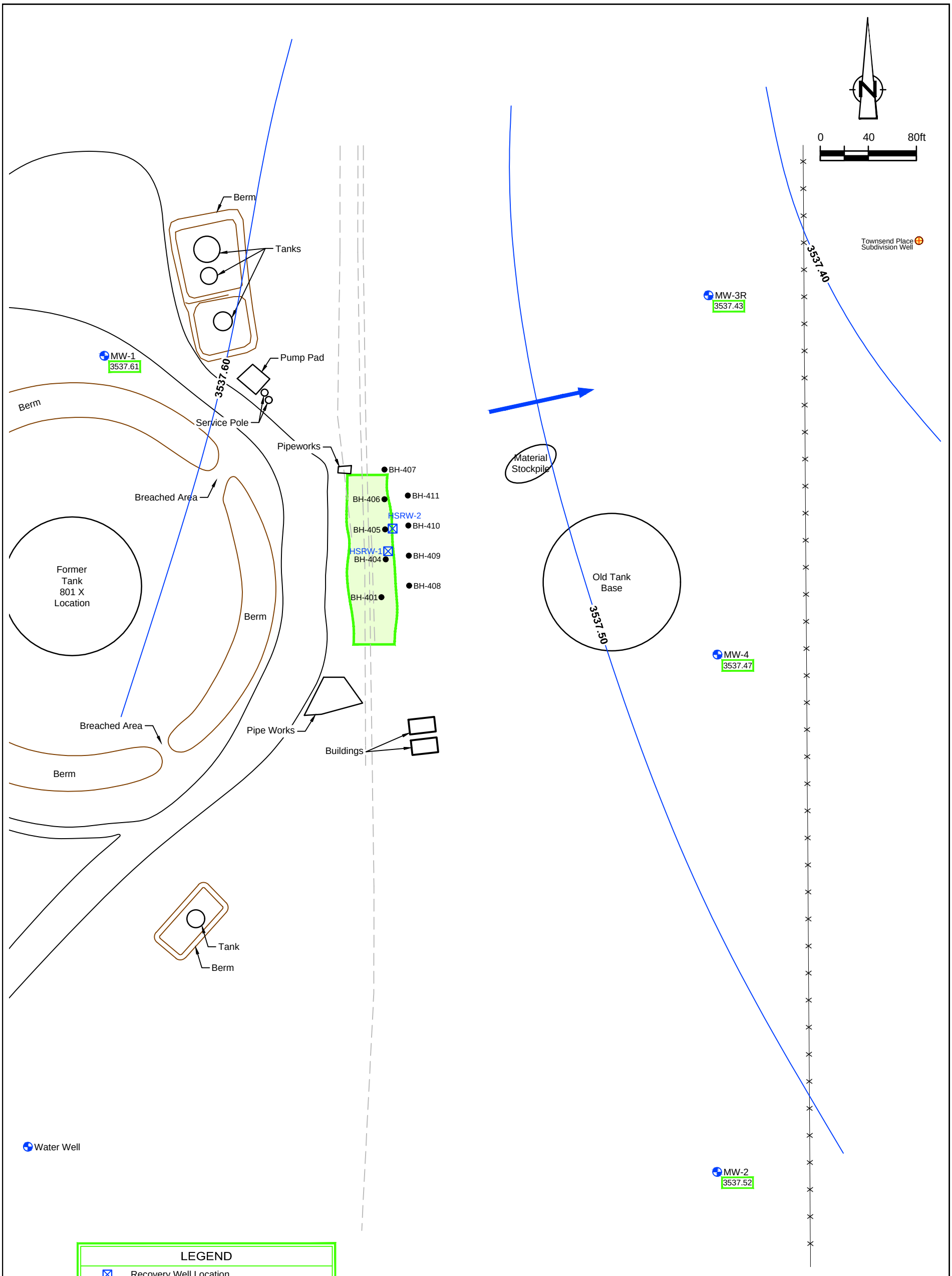


Figure 4

GROUNDWATER POTENTIOMETRIC SURFACE - JUNE 2019
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

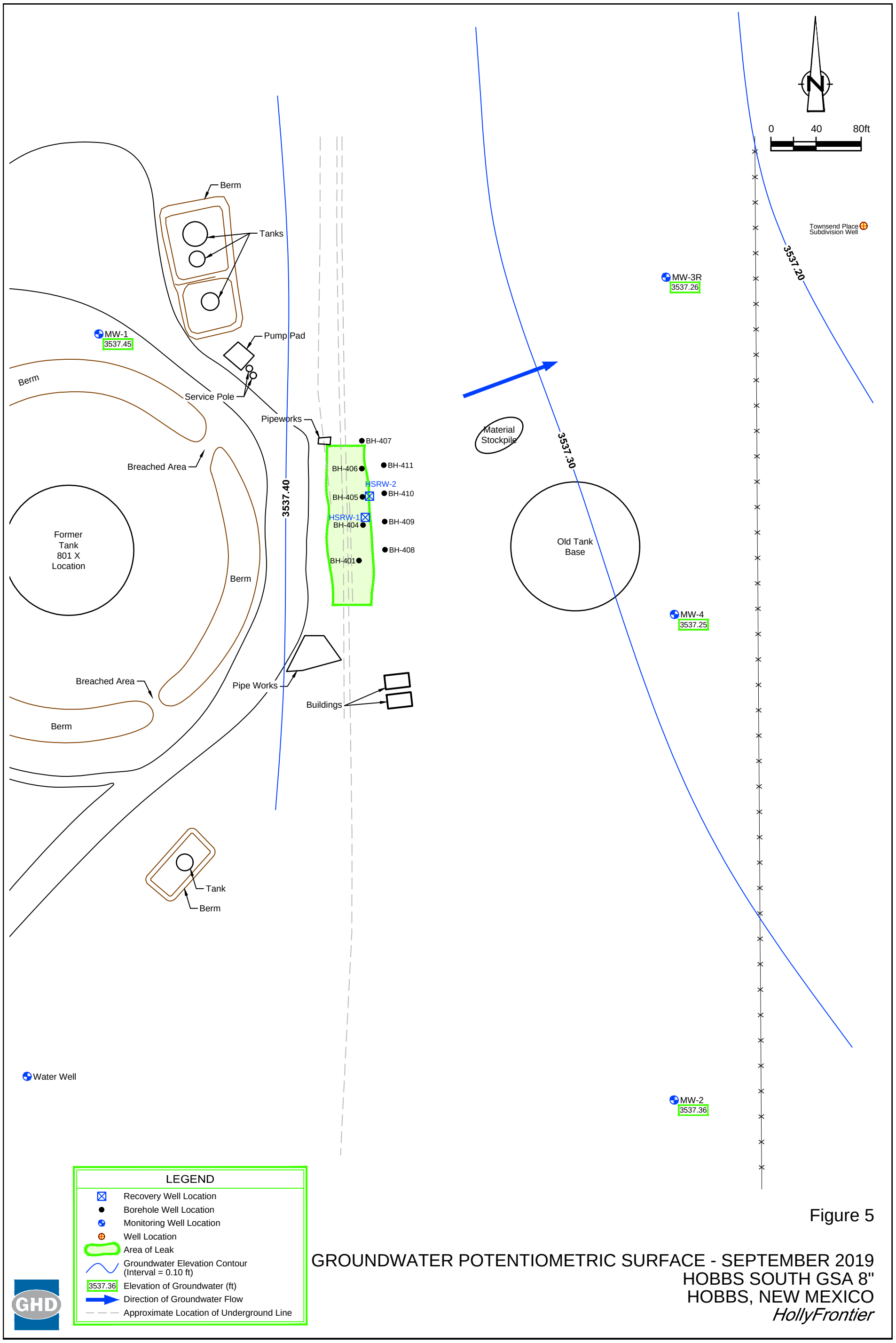


Figure 5

GROUNDWATER POTENTIOMETRIC SURFACE - SEPTEMBER 2019
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

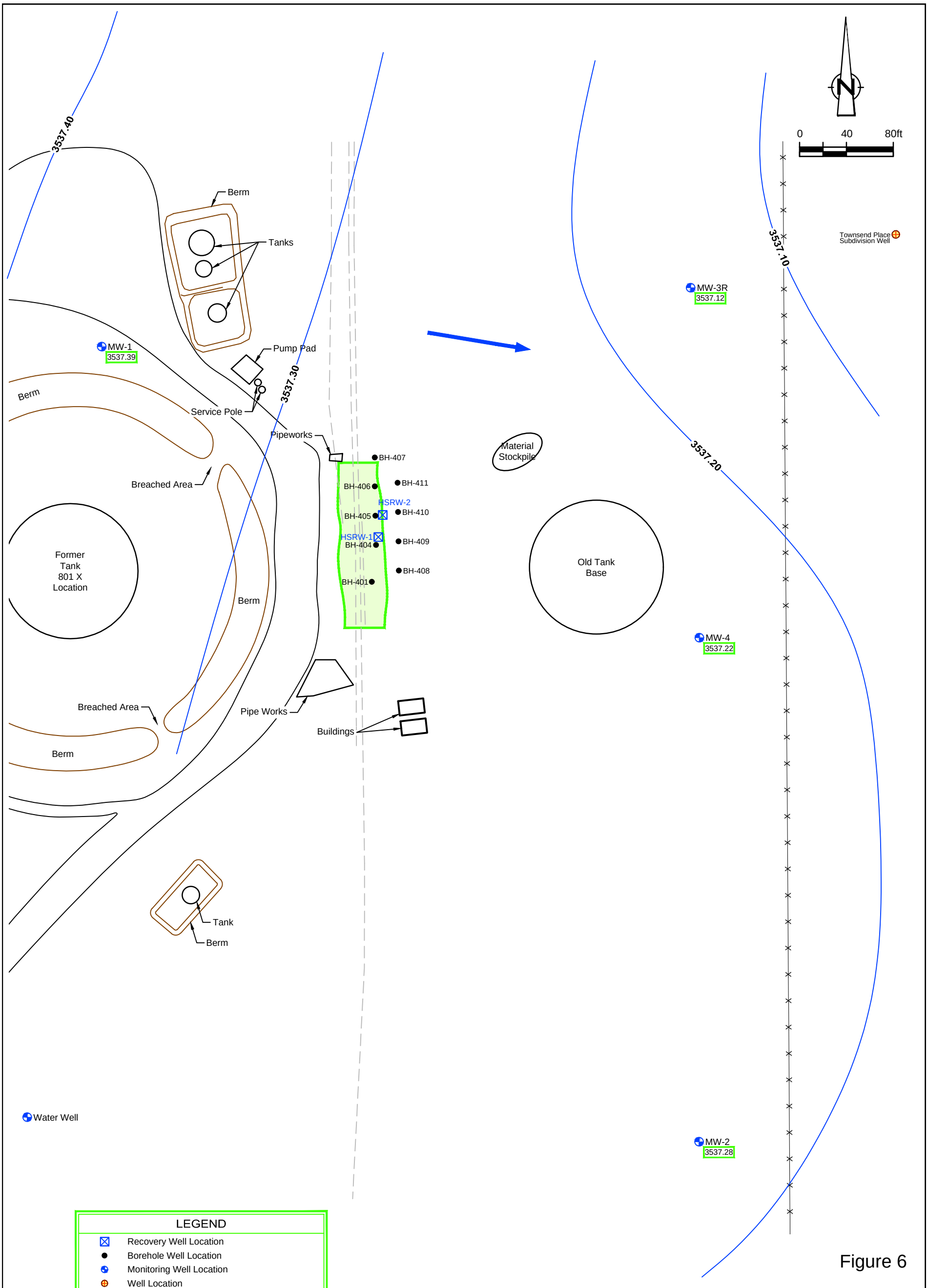


Figure 6

GROUNDWATER POTENTIOMETRIC SURFACE - DECEMBER 2019
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

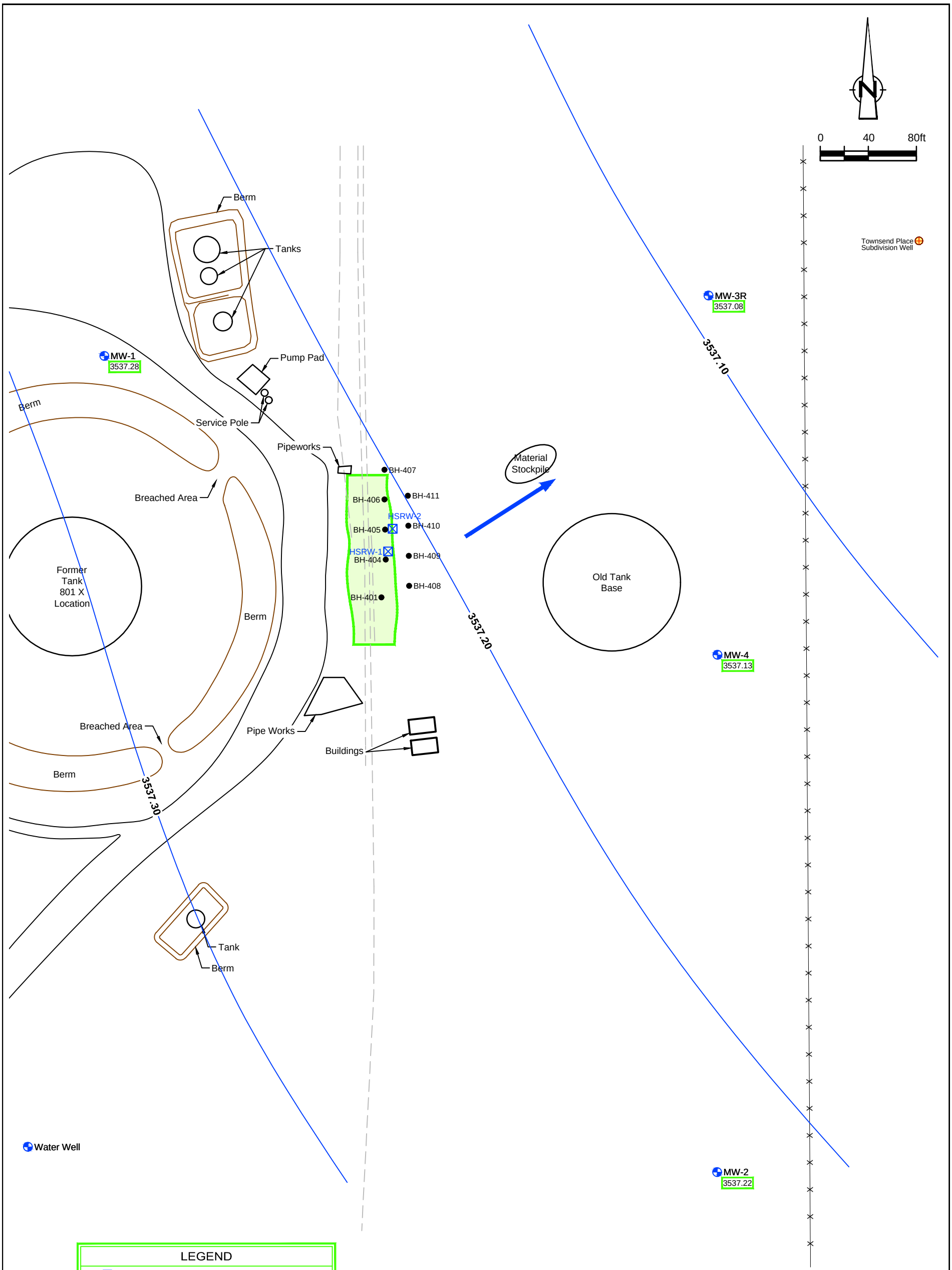


Figure 7

GROUNDWATER POTENTIOMETRIC SURFACE - MARCH 2020
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

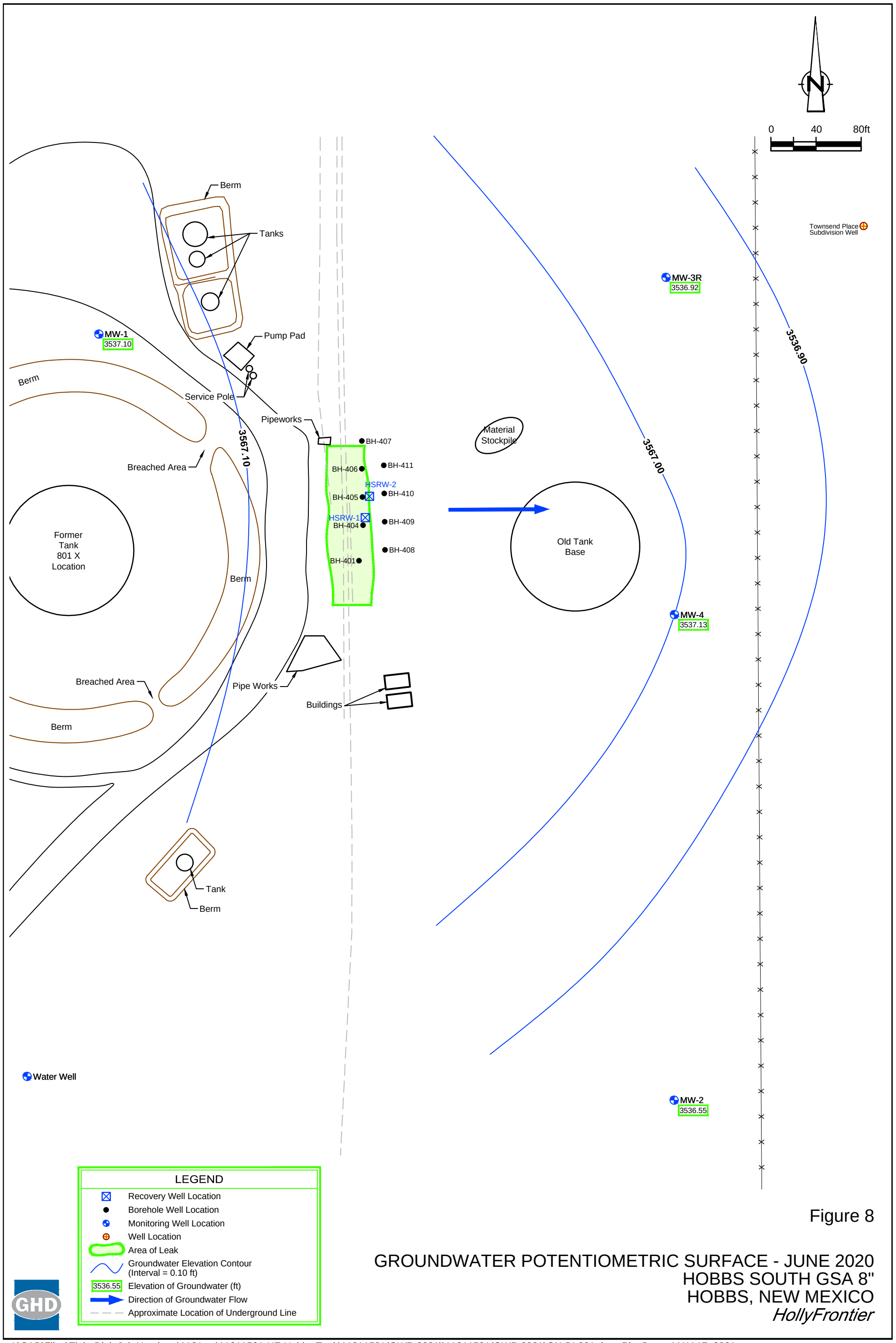


Figure 8

GROUNDWATER POTENTIOMETRIC SURFACE - JUNE 2020
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

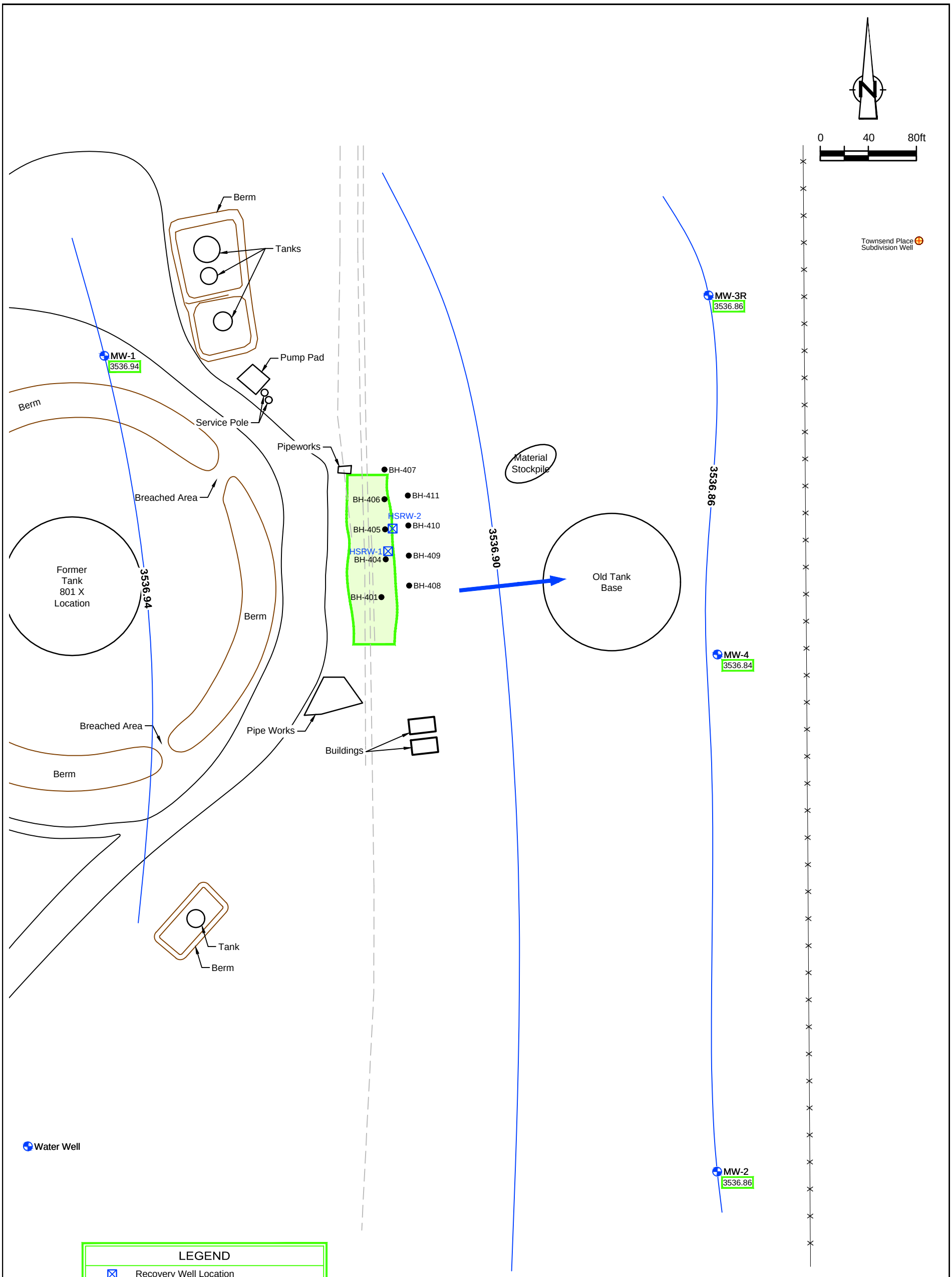


Figure 9

GROUNDWATER POTENTIOMETRIC SURFACE - SEPTEMBER 2020
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

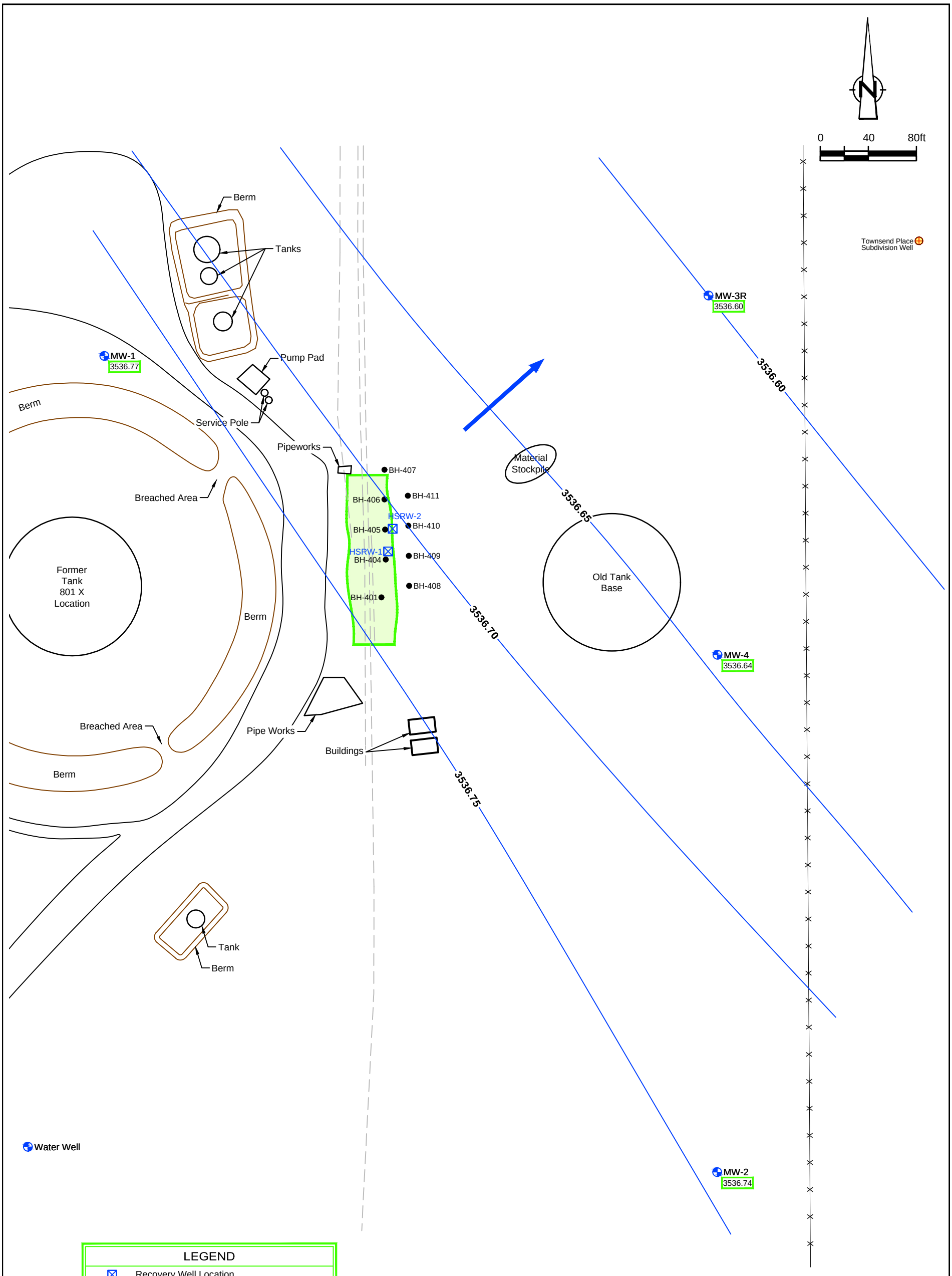


Figure 10

GROUNDWATER POTENTIOMETRIC SURFACE - DECEMBER 2020
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

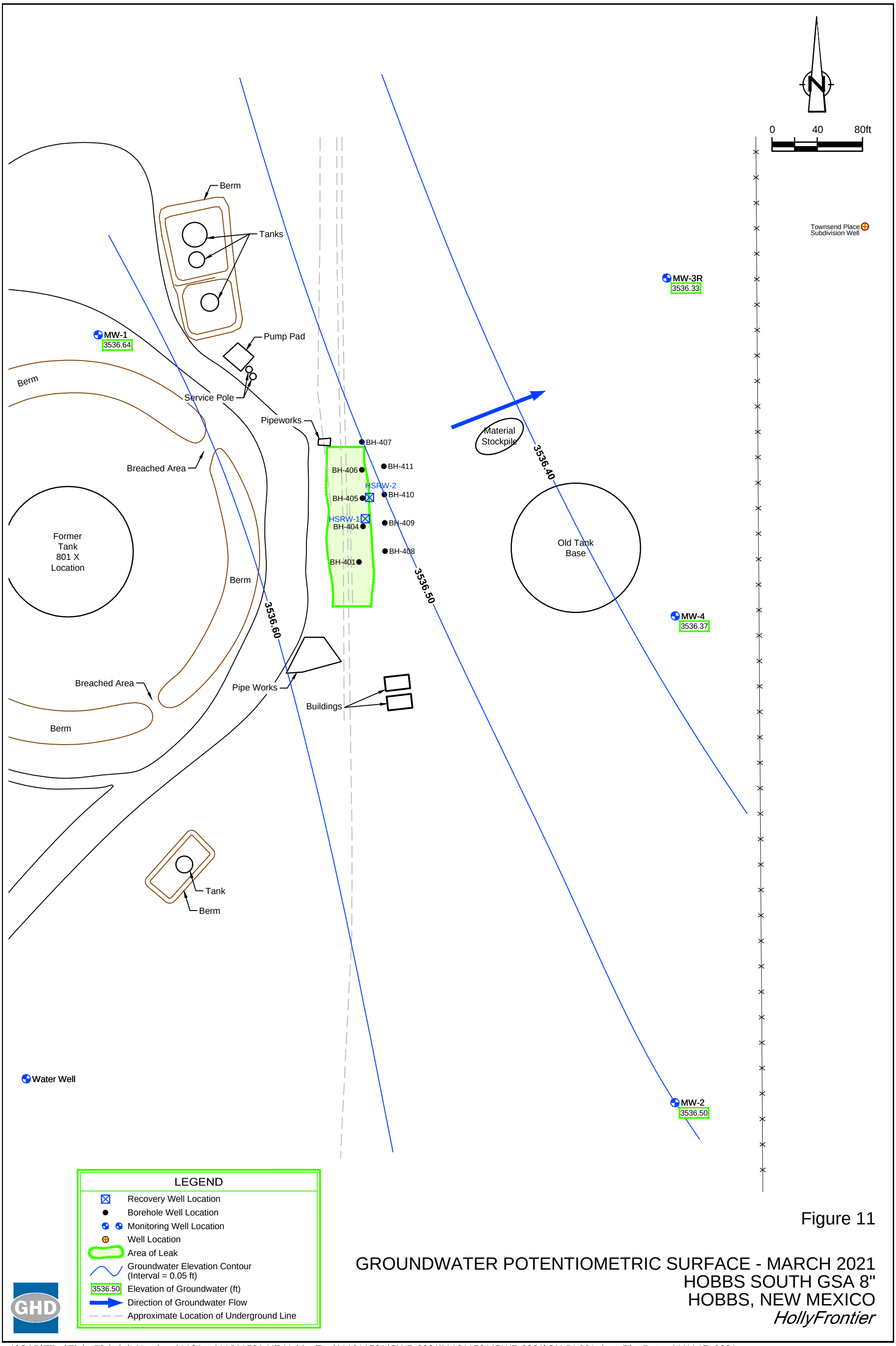


Figure 11

GROUNDWATER POTENTIOMETRIC SURFACE - MARCH 2021
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

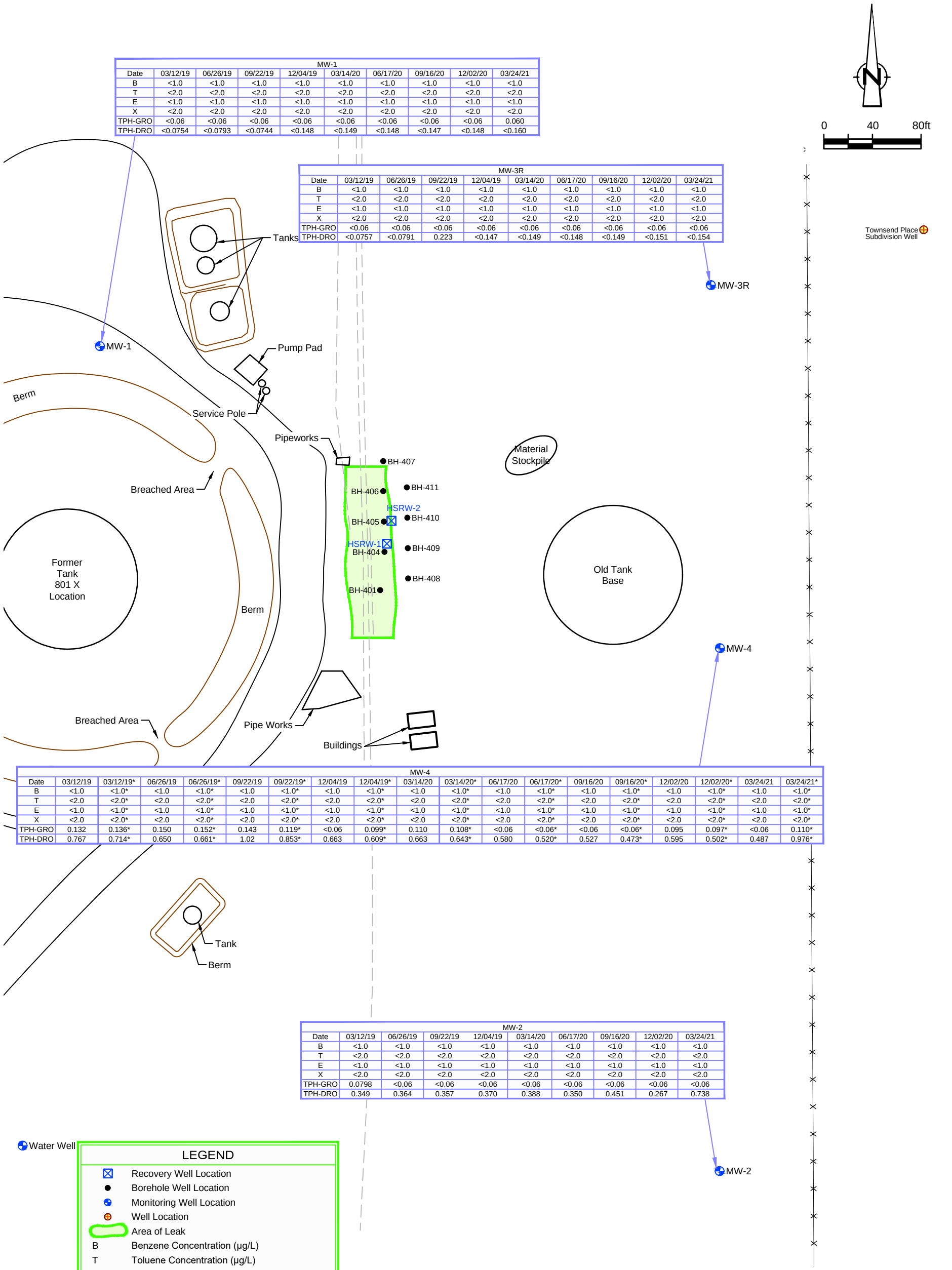
I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

MW-1									
Date	03/12/19	06/26/19	09/22/19	12/04/19	03/14/20	06/17/20	09/16/20	12/02/20	03/24/21
B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
T	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
E	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
TPH-GRO	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.060
TPH-DRO	<0.0754	<0.0793	<0.0744	<0.148	<0.149	<0.148	<0.147	<0.148	<0.160

MW-3R									
Date	03/12/19	06/26/19	09/22/19	12/04/19	03/14/20	06/17/20	09/16/20	12/02/20	03/24/21
B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
T	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
E	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
TPH-GRO	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
TPH-DRO	<0.0757	<0.0791	0.223	<0.147	<0.149	<0.148	<0.149	<0.151	<0.154

MW-4																		
Date	03/12/19	03/12/19*	06/26/19	06/26/19*	09/22/19	09/22/19*	12/04/19	12/04/19*	03/14/20	03/14/20*	06/17/20	06/17/20*	09/16/20	09/16/20*	12/02/20	12/02/20*	03/24/21	03/24/21*
B	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*
T	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*
E	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*	<1.0	<1.0*
X	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*	<2.0	<2.0*
TPH-GRO	0.132	0.136*	0.150	0.152*	0.143	0.119*	<0.06	0.099*	0.110	0.108*	<0.06	<0.06*	<0.06	<0.06*	0.095	0.097*	<0.06	0.110*
TPH-DRO	0.767	0.714*	0.650	0.661*	1.02	0.853*	0.663	0.609*	0.663	0.643*	0.580	0.520*	0.527	0.473*	0.595	0.502*	0.487	0.976*

MW-2									
Date	03/12/19	06/26/19	09/22/19	12/04/19	03/14/20	06/17/20	09/16/20	12/02/20	03/24/21
B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
T	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
E	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
TPH-GRO	0.0798	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
TPH-DRO	0.349	0.364	0.357	0.370	0.388	0.350	0.451	0.267	0.738



LEGEND

⊠	Recovery Well Location
●	Borehole Well Location
⊕	Monitoring Well Location
⊕	Well Location
	Area of Leak
B	Benzene Concentration (µg/L)
T	Toluene Concentration (µg/L)
E	Ethylbenzene Concentration (µg/L)
X	Xylenes Concentration (µg/L)
TPH	Total Petroleum Hydrocarbons Concentration (mg/L)
GRO	TPH as Gasoline Range Organics
DRO	TPH as Diesel Range Organics
*	Indicates Duplicate Sample
NS	Not Sampled
NA	Not Analyzed
— — —	Approximate Location of Underground Line

Figure 12

GROUNDWATER ANALYTICAL RESULTS MAP - MARCH 2019 TO MARCH 2021
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

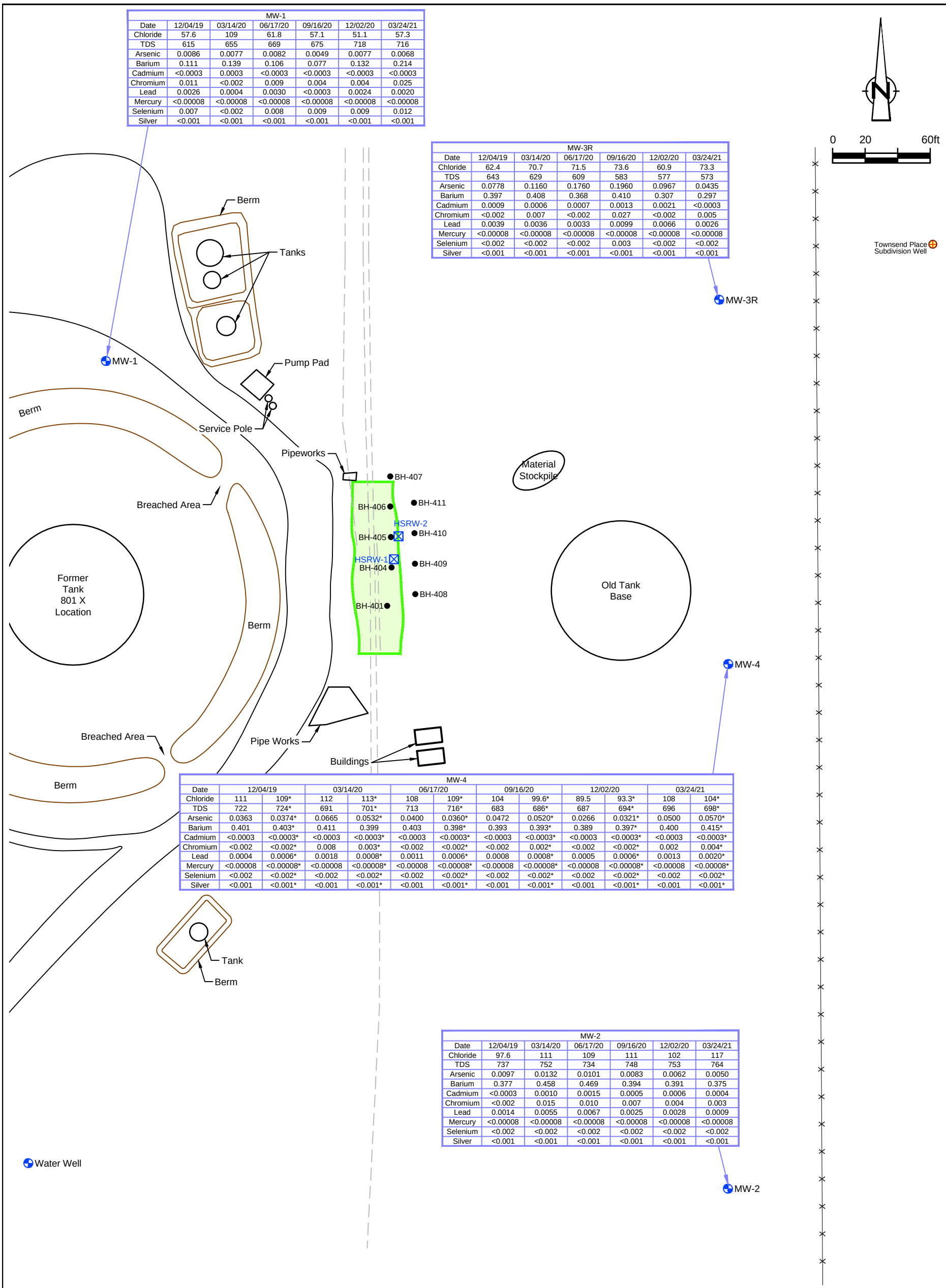
I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

MW-1						
Date	12/04/19	03/14/20	06/17/20	09/16/20	12/02/20	03/24/21
Chloride	57.6	109	61.8	57.1	51.1	57.3
TDS	615	655	669	675	718	716
Arsenic	0.0086	0.0077	0.0082	0.0049	0.0077	0.0068
Barium	0.111	0.139	0.106	0.077	0.132	0.214
Cadmium	<0.0003	0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chromium	0.011	<0.002	0.009	0.004	0.004	0.025
Lead	0.0026	0.0004	0.0030	<0.0003	0.0024	0.0020
Mercury	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Selenium	0.007	<0.002	0.008	0.009	0.009	0.012
Silver	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

MW-3R						
Date	12/04/19	03/14/20	06/17/20	09/16/20	12/02/20	03/24/21
Chloride	62.4	70.7	71.5	73.6	60.9	73.3
TDS	643	629	609	583	577	573
Arsenic	0.0778	0.1160	0.1760	0.1960	0.0967	0.0435
Barium	0.397	0.408	0.368	0.410	0.307	0.297
Cadmium	0.0009	0.0006	0.0007	0.0013	0.0021	<0.0003
Chromium	<0.002	0.007	<0.002	0.027	<0.002	0.005
Lead	0.0039	0.0036	0.0033	0.0099	0.0066	0.0026
Mercury	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Selenium	<0.002	<0.002	<0.002	0.003	<0.002	<0.002
Silver	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

MW-4												
Date	12/04/19		03/14/20		06/17/20		09/16/20		12/02/20		03/24/21	
Chloride	111	109*	112	113*	108	109*	104	99.6*	89.5	93.3*	108	104*
TDS	722	724*	691	701*	713	716*	683	686*	687	694*	696	698*
Arsenic	0.0363	0.0374*	0.0665	0.0532*	0.0400	0.0360*	0.0472	0.0520*	0.0266	0.0321*	0.0500	0.0570*
Barium	0.401	0.403*	0.411	0.399	0.403	0.398*	0.393	0.393*	0.389	0.397*	0.400	0.415*
Cadmium	<0.0003	<0.0003*	<0.0003	<0.0003*	<0.0003	<0.0003*	<0.0003	<0.0003*	<0.0003	<0.0003*	<0.0003	<0.0003*
Chromium	<0.002	<0.002*	0.008	0.003*	<0.002	<0.002*	<0.002	0.002*	<0.002	<0.002*	0.002	0.004*
Lead	0.0004	0.0006*	0.0018	0.0008*	0.0011	0.0006*	0.0008	0.0008*	0.0005	0.0006*	0.0013	0.0020*
Mercury	<0.00008	<0.00008*	<0.00008	<0.00008*	<0.00008	<0.00008*	<0.00008	<0.00008*	<0.00008	<0.00008*	<0.00008	<0.00008*
Selenium	<0.002	<0.002*	<0.002	<0.002*	<0.002	<0.002*	<0.002	<0.002*	<0.002	<0.002*	<0.002	<0.002*
Silver	<0.001	<0.001*	<0.001	<0.001*	<0.001	<0.001*	<0.001	<0.001*	<0.001	<0.001*	<0.001	<0.001*

MW-2						
Date	12/04/19	03/14/20	06/17/20	09/16/20	12/02/20	03/24/21
Chloride	97.6	111	109	111	102	117
TDS	737	752	734	748	753	764
Arsenic	0.0097	0.0132	0.0101	0.0083	0.0062	0.0050
Barium	0.377	0.458	0.469	0.394	0.391	0.375
Cadmium	<0.0003	0.0010	0.0015	0.0005	0.0006	0.0004
Chromium	<0.002	0.015	0.010	0.007	0.004	0.003
Lead	0.0014	0.0055	0.0067	0.0025	0.0028	0.0009
Mercury	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Selenium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silver	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001



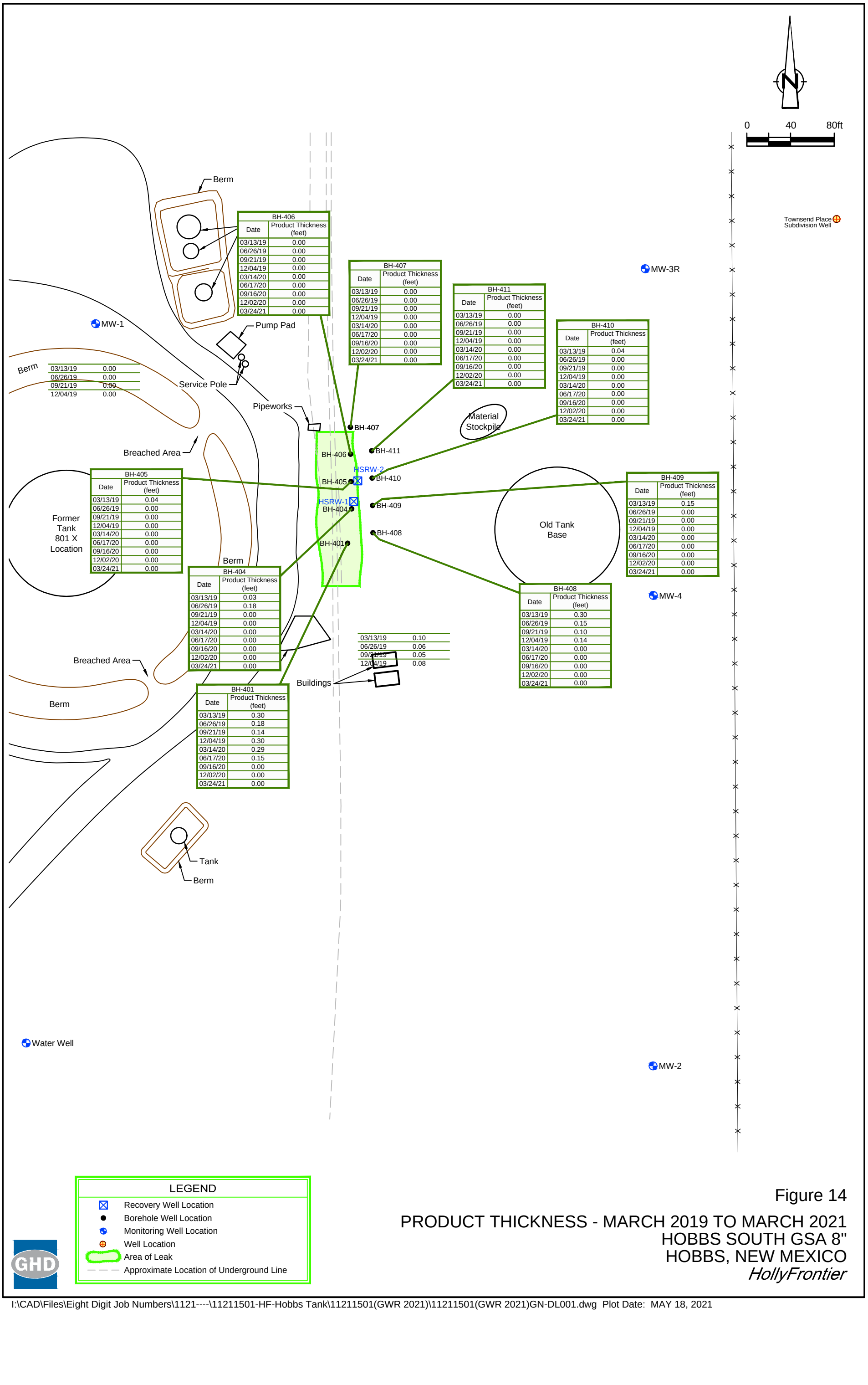
LEGEND

- Recovery Well Location
- Borehole Well Location
- Monitoring Well Location
- Well Location
- 418.6 Exceeds NMOCD Remediation Action Level
- Approximate Location of Underground Line

Figure 13

GROUNDWATER INORGANIC ANALYTICAL RESULTS
DECEMBER 2019 TO MARCH 2021
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021



Berm	
03/13/19	0.00
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00

BH-406	
Date	Product Thickness (feet)
03/13/19	0.00
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-407	
Date	Product Thickness (feet)
03/13/19	0.00
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-411	
Date	Product Thickness (feet)
03/13/19	0.00
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-410	
Date	Product Thickness (feet)
03/13/19	0.04
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-405	
Date	Product Thickness (feet)
03/13/19	0.04
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-409	
Date	Product Thickness (feet)
03/13/19	0.15
06/26/19	0.00
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-404	
Date	Product Thickness (feet)
03/13/19	0.03
06/26/19	0.18
09/21/19	0.00
12/04/19	0.00
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

BH-408	
Date	Product Thickness (feet)
03/13/19	0.30
06/26/19	0.15
09/21/19	0.10
12/04/19	0.14
03/14/20	0.00
06/17/20	0.00
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

Buildings	
03/13/19	0.10
06/26/19	0.06
09/21/19	0.05
12/04/19	0.08

BH-401	
Date	Product Thickness (feet)
03/13/19	0.30
06/26/19	0.18
09/21/19	0.14
12/04/19	0.30
03/14/20	0.29
06/17/20	0.15
09/16/20	0.00
12/02/20	0.00
03/24/21	0.00

Figure 14

PRODUCT THICKNESS - MARCH 2019 TO MARCH 2021
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 18, 2021

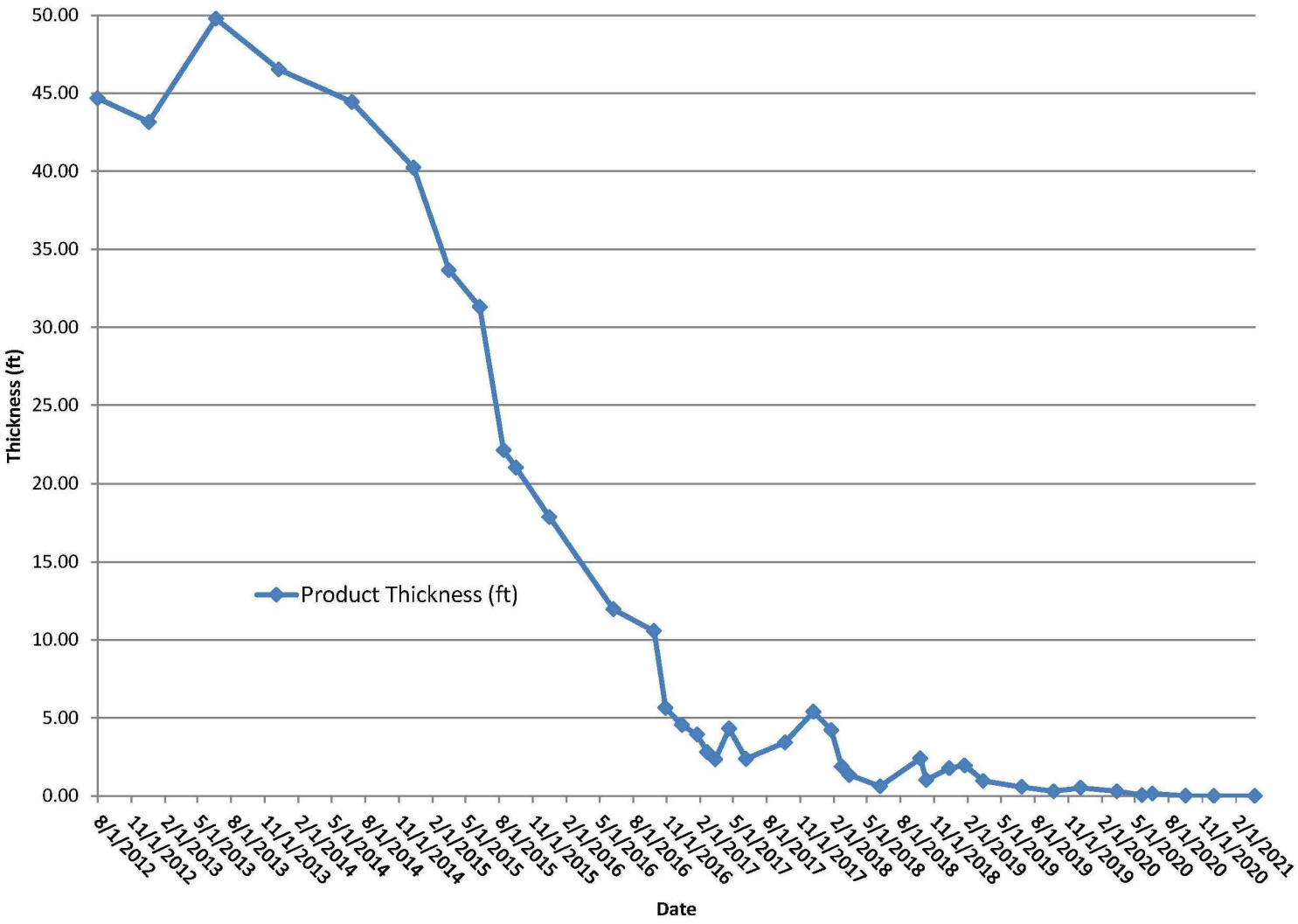


Figure 15

SITE TOTAL ACCUMULATED THICKNESS
HOBBS SOUTH GSA 8"
HOBBS, NEW MEXICO
HollyFrontier

I:\CAD\Files\Eight Digit Job Numbers\1121----\11211501-HF-Hobbs Tank\11211501(GWR 2021)\11211501(GWR 2021)GN-DL001.dwg Plot Date: MAY 17, 2021

Tables

Table 1 - Summary of Groundwater Hydrocarbon Data 2019/2021
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)
NMWQCC Groundwater Standards		5	1000	700	620	NE	NE		
MW-1	3/12/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0754	57.42	3,537.77
	6/26/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0793	57.58	3,537.61
	9/22/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0744	57.74	3,537.45
	12/4/2019	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	57.80	3,537.39
	3/14/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	57.91	3,537.28
	6/17/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	58.09	3,537.10
	9/16/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	58.25	3,536.94
	12/2/2020	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	58.42	3,536.77
	3/24/2021	<1.0	<2.0	<1.0	<2.0	0.060	<0.160	58.55	3,536.64
MW-2	03/12/19	<1.0	<2.0	<1.0	<2.0	0.0798	0.349	59.17	3,537.67
	06/26/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.362	59.32	3,537.52
	09/22/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.357	59.48	3,537.36
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.370	59.56	3,537.28
	03/14/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.388	59.62	3,537.22
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.350	60.29	3,536.55
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.451	59.98	3,536.86
	12/02/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.267	60.10	3,536.74
	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	0.738	60.34	3,536.50
MW-3R	03/12/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0757	61.30	3,537.50
	06/26/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0791	61.37	3,537.43
	09/22/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.223	61.54	3,537.26
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	61.68	3,537.12
	03/14/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	61.72	3,537.08
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	61.88	3,536.92
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	62.08	3,536.72
	12/02/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.151	62.20	3,536.60
	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	62.47	3,536.33

Table 1 - Summary of Groundwater Hydrocarbon Data 2019/2021
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)
NMWQCC Groundwater Standards		**5**	**1000**	**700**	**620**	**NE**	**NE**		
MW-4	03/12/19	<1.0	<2.0	<1.0	<2.0	0.132	0.767	60.62	3,537.50
duplicate	03/12/19	<1.0	<2.0	<1.0	<2.0	0.136	0.714	60.62	3,537.50
	06/26/19	<1.0	<2.0	<1.0	<2.0	0.150	0.650	60.65	3,537.47
duplicate	06/26/19	<1.0	<2.0	<1.0	<2.0	0.152	0.661	60.65	3,537.47
	09/22/19	<1.0	<2.0	<1.0	<2.0	0.143	1.02	60.87	3,537.25
duplicate	09/22/19	<1.0	<2.0	<1.0	<2.0	0.119	0.853	60.87	3,537.25
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.663	60.90	3,537.22
duplicate	12/04/19	<1.0	<2.0	<1.0	<2.0	0.099	0.609	60.90	3,537.22
	03/14/20	<1.0	<2.0	<1.0	<2.0	0.110	0.663	60.99	3,537.13
duplicate	03/14/20	<1.0	<2.0	<1.0	<2.0	0.108	0.643	60.99	3,537.13
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.580	61.16	3,536.96
duplicate	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.520	61.16	3,536.96
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.527	61.28	3,536.84
duplicate	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.473	61.28	3,536.84
	12/02/20	<1.0	<2.0	<1.0	<2.0	0.095	0.595	61.48	3,536.64
duplicate	12/02/20	<1.0	<2.0	<1.0	<2.0	0.097	0.502	61.48	3,536.64
	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	0.487	61.75	3,536.37
duplicate	03/24/21	<1.0	<2.0	<1.0	<2.0	0.110	0.976	61.75	3,536.37

Notes:
BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard
µg/L = micrograms/Liter
mg/L = milligrams/Liter
ft-bmp = feet - below measuring point
ft-msl = feet - mean sea level
< = analyte not detected above reporting limit
BTEX = Benzene, Toluene, Ethylbenzene & Total Xylenes
BTEX analyzed by Method 8260C
TPH-GRO = total petroleum hydrocarcbons- gasoline range organics
TPH-DRO = total petroleum hydrocarcbons- diesel gasoline range organics
TPH-GRO analyzed by Method 8015V
TPH-DRO analyzed by Method 8015D
NA = not analyzed
NE = not established

Table 2 Summary of Groundwater Inorganic Results
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Sample ID	Date Sampled	Chloride	TDS	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
NMWQCC Groundwater Standards		**250**	**1000**	**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
MW-1	12/13/2016	66.4	768	0.0053	0.133	<0.0003	0.109	0.0012	<0.0004	0.007	<0.001
	7/11/2017	NA	NA	0.0123	0.407	<0.0003	0.087	0.0059	<0.00008	0.008	<0.001
	12/4/2019	57.6	615	0.0086	0.111	<0.0003	0.011	0.0026	<0.00008	0.007	<0.001
	3/14/2020	109	655	0.0077	0.139	0.0003	<0.002	0.0004	<0.00008	<0.002	<0.001
	6/17/2020	61.8	669	0.0082	0.106	<0.0003	0.009	0.0030	<0.00008	0.008	<0.001
	9/16/2020	57.1	675	0.0049	0.077	<0.0003	0.004	<0.0003	<0.00008	0.009	<0.001
	12/2/2020	51.1	718	0.0077	0.132	<0.0003	0.004	0.0024	<0.00008	0.009	<0.001
	3/24/2021	57.3	716	0.0068	0.214	<0.0003	0.025	0.0020	<0.00008	0.012	<0.001
MW-2	12/13/2016	99.7	704	0.0378	**1.04**	0.0005	**1.15**	0.0342	<0.00008	0.002	0.002
	6/6/2017	NA	NA	0.0171	0.442	<0.0003	0.011	0.0059	<0.00008	<0.002	<0.001
	12/4/2019	97.6	737	0.0097	0.377	<0.0003	<0.002	0.0014	<0.00008	<0.002	<0.001
	3/14/2020	111	752	0.0132	0.458	0.0010	0.015	0.0055	<0.00008	<0.002	<0.001
	6/17/2020	109	734	0.0101	0.469	0.0015	0.010	0.0067	<0.00008	<0.002	<0.001
	9/16/2020	111	748	0.0083	0.394	0.0005	0.007	0.0025	<0.00008	<0.002	<0.001
	12/2/2020	102	753	0.0062	0.391	0.0006	0.004	0.0028	<0.00008	<0.002	<0.001
	3/24/2021	117	764	0.0050	0.375	0.0004	0.003	0.0009	<0.00008	<0.002	<0.001
MW-3R	12/13/2016	66.2	562	0.0361	0.310	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
duplicate	12/13/2016	65.9	581	0.0365	0.329	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	6/6/2017	NA	NA	0.0382	0.243	<0.0003	0.003	0.0004	<0.00008	<0.002	<0.001
	12/4/2019	62.4	643	0.0778	0.397	0.0009	<0.002	0.0039	<0.00008	<0.002	<0.001
	3/14/2020	70.7	629	0.1160	0.408	0.0006	0.007	0.0036	<0.00008	<0.002	<0.001
	6/17/2020	71.5	609	0.1760	0.368	0.0007	<0.002	0.0033	<0.00008	<0.002	<0.001
	9/16/2020	73.6	583	0.1960	0.410	0.0013	0.027	0.0099	<0.00008	0.003	<0.001
	12/2/2020	60.9	577	0.0967	0.307	0.0021	<0.002	0.0066	<0.00008	<0.002	<0.001
	3/24/2021	73.3	573	0.0435	0.297	<0.0003	0.005	0.0026	<0.00008	<0.002	<0.001
MW-4	12/13/2016	139	753	0.0448	0.440	<0.0003	0.002	<0.0003	<0.00008	<0.002	<0.001
	6/6/2017	NA	NA	0.0423	0.435	<0.0003	0.002	0.0004	<0.00008	<0.002	<0.001
duplicate	6/6/2017	NA	NA	0.0428	0.432	<0.0003	0.004	0.0003	<0.00008	<0.002	<0.001
	12/4/2019	111	722	0.0363	0.401	<0.0003	<0.002	0.0004	<0.00008	<0.002	<0.001
duplicate	12/4/2019	109	724	0.0374	0.403	<0.0003	<0.002	0.0006	<0.00008	<0.002	<0.001
	3/14/2020	112	691	0.0665	0.411	<0.0003	0.008	0.0018	<0.00008	<0.002	<0.001
duplicate	3/14/2020	113	701	0.0532	0.399	<0.0003	0.003	0.0008	<0.00008	<0.002	<0.001
	6/17/2020	108	713	0.0400	0.403	<0.0003	<0.002	0.0011	<0.00008	<0.002	<0.001
duplicate	6/17/2020	109	716	0.0360	0.398	<0.0003	<0.002	0.0006	<0.00008	<0.002	<0.001
	9/16/2020	104	683	0.0472	0.393	<0.0003	<0.002	0.0008	<0.00008	<0.002	<0.001
duplicate	9/16/2020	99.6	686	0.0520	0.393	<0.0003	0.002	0.0008	<0.00008	<0.002	<0.001
	12/2/2020	89.5	687	0.0266	0.389	<0.0003	<0.002	0.0005	<0.00008	<0.002	<0.001
duplicate	12/2/2020	93.3	694	0.0321	0.397	<0.0003	<0.002	0.0006	<0.00008	<0.002	<0.001
	3/24/2021	108	696	0.0500	0.400	<0.0003	0.002	0.0013	<0.00008	<0.002	<0.001
duplicate	3/24/2021	104	698	0.0570	0.415	<0.0003	0.004	0.0020	<0.00008	<0.002	<0.001

NOTES:
mg/L = milligrams per liter
< = analyte not detected above indicated value
BOLD = Exceeds NMWQCC Groundwater Cleanup Level
TDS = Total Disolved Solids
Mercury analyzed by Method SW7470A
All other metals analyzed by Method SW6020A
NA = not analyzed
Chloride analyzed by Method E300
TDS analyzed by Method M2540C

Table 3 Summary PAHs Results for Groundwater
HollyFrontier- Hobbs South Study Area - Lea County, New Mexico

Sample ID	Date Sampled	Total Naphthalenes (mg/L)	Fluorene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)
NMWQCC Groundwater Standard		**0.03**	**NE**	**NE**	**NE**
MW-1	3/14/2018	<0.005	<0.0000238	<0.0000238	<0.0000238
	6/5/2018	<0.005	<0.0000236	<0.0000236	<0.0000236
	9/24/2018	<0.005	<0.0000237	<0.00002367	<0.0000237
	12/12/2018	<0.0000237	<0.0000237	<0.0000237	<0.0000237
MW-2	3/14/2018	<0.005	<0.0000236	<0.0000236	<0.0000236
	6/5/2018	NS	NS	NS	NS
	9/24/2018	<0.005	<0.0000237	<0.00002367	<0.0000237
	12/12/2018	<0.0000239	<0.0000239	<0.0000239	<0.0000239
MW-3R	3/14/2018	<0.005	<0.0000237	<0.0000237	<0.0000237
	6/5/2018	<0.005	<0.0000237	<0.0000237	<0.0000237
	9/24/2018	<0.005	<0.0000237	<0.0000237	<0.0000237
	12/12/2018	<0.0000237	<0.0000237	<0.0000237	<0.0000237
MW-4	3/14/2018	<0.005	<0.0000236	<0.0000236	<0.0000236
	6/5/2018	<0.005	<0.0000237	<0.0000237	<0.0000237
duplicate	6/5/2018	<0.005	<0.0000236	<0.0000236	<0.0000236
	9/24/2018	<0.005	<0.0000237	<0.0000237	<0.0000237
duplicate	9/24/2018	<0.005	<0.0000237	<0.0000237	<0.0000237
	12/12/2018	<0.0000236	<0.0000236	<0.0000236	<0.0000236
duplicate	12/12/2018	<0.0000235	<0.0000235	<0.0000235	<0.0000235

NOTES:
mg/L = milligrams per liter
< = analyte not detected above indicated value
BOLD = Exceeds NMWQCC Groundwater Cleanup Level
All analyzed by Method SW8270
NE - Not Established

Table 4 Summary of Groundwater QA/QC Results for March 2019 to March 2021
HollyFontier - Hobbs South Study Area - Lea County, New Mexico

		Laboratory Analytical Results															
Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Chloride (mg/L)	TDS (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
NMWQC Groundwater Standards		**5**	**1000**	**700**	**620**	**NE**	**NE**	**250**	**1000**	**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
MW-4	03/12/19	<1.0	<2.0	<1.0	<2.0	0.132	0.767	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/12/19	<1.0	<2.0	<1.0	<2.0	0.136	0.714	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	06/26/19	<1.0	<2.0	<1.0	<2.0	0.150	0.650	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/26/19	<1.0	<2.0	<1.0	<2.0	0.152	0.661	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	09/22/19	<1.0	<2.0	<1.0	<2.0	0.143	1.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/19	<1.0	<2.0	<1.0	<2.0	0.119	0.853	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.663	111	722	0.0363	0.401	<0.0003	<0.002	0.0004	<0.00008	<0.002	<0.001
	12/04/19	<1.0	<2.0	<1.0	<2.0	0.099	0.609	109	724	0.0374	0.403	<0.0003	<0.002	0.0006	<0.00008	<0.002	<0.001
MW-4	03/14/20	<1.0	<2.0	<1.0	<2.0	0.110	0.663	112	691	0.0665	0.411	<0.0003	0.008	0.0018	<0.00008	<0.002	<0.001
	03/14/20	<1.0	<2.0	<1.0	<2.0	0.108	0.643	113	701	0.0532	0.399	<0.0003	0.003	0.0008	<0.00008	<0.002	<0.001
MW-4	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.580	108	713	0.0400	0.403	<0.0003	<0.002	0.0011	<0.00008	<0.002	<0.001
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.520	109	716	0.0360	0.398	<0.0003	<0.002	0.0006	<0.00008	<0.002	<0.001
MW-4	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.527	104	683	0.0472	0.393	<0.0003	<0.002	0.0008	<0.00008	<0.002	<0.001
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.473	99.6	686	0.0520	0.393	<0.0003	0.002	0.0008	<0.00008	<0.002	<0.001
MW-4	12/02/20	<1.0	<2.0	<1.0	<2.0	0.095	0.595	89.5	687	0.0266	0.389	<0.0003	<0.002	0.0005	<0.00008	<0.002	<0.001
	12/02/20	<1.0	<2.0	<1.0	<2.0	0.097	0.502	93.3	694	0.0321	0.397	<0.0003	<0.002	0.0006	<0.00008	<0.002	<0.001
MW-4	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	0.487	108	696	0.0500	0.400	<0.0003	0.002	0.0013	<0.00008	<0.002	<0.001
	03/24/21	<1.0	<2.0	<1.0	<2.0	0.110	0.976	104	698	0.0570	0.415	<0.0003	0.004	0.0020	<0.00008	<0.002	<0.001
Trip Blank	03/12/19	<1.0	<2.0	<1.0	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	6/26/2019	<1.0	<2.0	<1.0	<2.0	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	9/22/2019	<1.0	<2.0	<1.0	<2.0	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	12/04/19	<1.0	<2.0	<1.0	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	03/14/20	<1.0	<2.0	<1.0	<2.0	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	12/02/20	<1.0	<2.0	<1.0	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

notes:
BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standard
µg/L = micrograms per liter
mg/L = milligrams/Liter
< = Not detected above indicated level
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
BTEX analyzed by Method EPA 8260C
TPH-GRO = total petroleum hydrocarcbons- gasoline range organics
TPH-DRO = total petroleum hydrocarcbons- diesel gasoline range organics
TPH-GRO analyzed by Method 8015V
TPH-DRO analyzed by Method 8015D
NA = not analyzed
NE = not established

Appendices

Appendix A
Historical Fluid Levels

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
BH-407	8/1/2012	53.61	55.56	1.95	67.51
	12/19/2012	53.97	55.85	1.88	
	6/20/2013	54.40	56.35	1.95	
	12/9/2013	54.75	56.62	1.87	
	6/25/2014	55.35	57.29	1.94	
	12/10/2014	55.75	57.52	1.77	
	3/17/2015	55.90	57.70	1.80	
	6/9/2015	56.10	57.85	1.75	
	8/13/2015	56.27	57.44	1.17	
	9/16/2015	56.38	57.68	1.30	
	12/16/2015	56.50	57.12	0.62	
	6/8/2016	56.68	57.16	0.48	
	9/27/2016	57.03	60.45	3.42	
	10/28/2016	56.89	57.03	0.14	
	12/12/2016	57.03	57.10	0.07	
	1/22/2017	57.15	57.20	0.05	
	2/19/2017	57.14	57.16	0.02	
	3/13/2017		57.38	0.00	
	4/20/2017	57.19	57.20	0.01	
	6/5/2017		57.88	0.00	
	9/19/2017		57.46	0.00	
	12/6/2017		57.55	0.00	
	1/24/2018		57.60	0.00	
	2/21/2018		57.60	0.00	
	3/14/2018		57.65	0.00	
	6/6/2018		57.82	0.00	
	9/24/2018		58.10	0.00	
	10/10/2018		58.05	0.00	
	12/12/2018		58.06	0.00	
	1/23/2019	58.17	58.18	0.01	
	3/13/2019		58.25	0.00	
	6/26/2019		58.39	0.00	
	9/21/2019		58.60	0.00	
	12/4/2019		58.68	0.00	
	3/12/2020		58.75	0.00	
	5/20/2020		58.89	0.00	
	6/17/2020		58.92	0.00	
	9/16/2020		59.06	0.00	
	12/2/2020		59.30	0.00	
	3/24/2021		59.49	0.00	
BH-411	8/1/2012	54.61	57.81	3.20	68.20
	12/19/2012	54.78	59.03	4.25	
	6/20/2013	55.16	59.88	4.72	
	12/9/2013	55.52	60.32	4.80	
	6/25/2014	56.17	60.73	4.56	
	12/10/2014	56.56	60.95	4.39	
	3/17/2015	57.25	57.35	0.10	
	6/9/2015	57.41	57.92	0.51	
	8/13/2015	57.57	58.22	0.65	
	9/16/2015	57.62	58.31	0.69	
	12/16/2015	57.69	57.81	0.12	
	6/8/2016		57.89	0.00	
	9/27/2016	58.08	59.67	1.59	
	10/28/2016	58.09	58.86	0.77	
	12/12/2016		58.20	0.00	
	1/22/2017		58.30	0.00	
	2/19/2017	58.30	58.35	0.05	
	3/13/2017		58.33	0.00	
	4/20/2017	58.32	58.40	0.08	
	6/5/2017	58.43	58.50	0.07	
	9/19/2017	58.62	58.67	0.05	
	12/6/2017	57.70	57.75	0.05	
	1/24/2018	58.84	58.85	0.01	
	2/21/2018		58.78	0.00	
	3/14/2018		58.80	0.00	
	6/6/2018		58.98	0.00	
	9/24/2018		59.18	0.00	
	10/10/2018		59.20	0.00	
	12/12/2018		59.22	0.00	
	3/13/2019		59.40	0.00	
	6/26/2019		59.57	0.00	
	9/21/2019		59.77	0.00	
	12/4/2019		59.81	0.00	
	3/12/2020		59.90	0.00	
	5/20/2020		60.07	0.00	
	6/17/2020		60.08	0.00	
	9/16/2020		60.21	0.00	
	12/2/2020		60.38	0.00	
	3/24/2021		66.55	0.00	

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
BH-406	8/1/2012	53.79	56.94	3.15	65.93
	12/19/2012	54.16	57.59	3.43	
	6/20/2013	54.58	58.37	3.79	
	12/9/2013	54.93	58.77	3.84	
	6/25/2014	55.53	59.41	3.88	
	12/10/2014	56.23	57.64	1.41	
	3/17/2015	56.31	58.01	1.70	
	6/9/2015	56.50	58.29	1.79	
	8/13/2015	56.66	58.49	1.83	
	9/16/2015	56.77	58.33	1.56	
	12/16/2015	56.83	57.85	1.02	
	6/8/2016	57.13	57.49	0.36	
	9/27/2016	57.40	57.70	0.30	
	10/28/2016	57.30	57.49	0.19	
	12/12/2016	57.43	57.45	0.02	
	1/22/2017	57.55	57.60	0.05	
	2/19/2017	57.55	57.57	0.02	
	3/13/2017	57.55	57.60	0.05	
	4/20/2017	57.58	57.67	0.09	
	6/5/2017	57.68	57.70	0.02	
	9/19/2017		57.91	0.00	
	12/6/2017	57.90	58.03	0.13	
	1/24/2018		57.98	0.00	
	2/21/2018		58.04	0.00	
	3/14/2018		58.07	0.00	
	6/6/2018		58.20	0.00	
	9/24/2018	58.42	58.45	0.03	
	10/10/2018	58.47	58.48	0.01	
	12/12/2018		58.47	0.00	
	1/23/2019	58.11	58.12	0.01	
	3/13/2019		58.70	0.00	
	6/26/2019		58.81	0.00	
	9/21/2019		59.00	0.00	
	12/4/2019		59.04	0.00	
	3/12/2020		59.13	0.00	
	5/20/2020		59.30	0.00	
	6/17/2020		59.31	0.00	
	9/16/2020		59.47	0.00	
	12/2/2020		59.63	0.00	
	3/24/2021		59.80	0.00	
BH-410	8/1/2012	53.61	58.54	4.93	63.14
	12/19/2012	53.96	59.25	5.29	
	6/20/2013	54.43	59.63	5.20	
	12/9/2013	54.80	59.89	5.09	
	6/25/2014	55.45	60.31	4.86	
	12/10/2014	55.85	60.43	4.58	
	3/17/2015	56.00	60.54	4.54	
	6/9/2015	56.31	59.93	3.62	
	8/13/2015	56.44	60.47	4.03	
	9/16/2015	56.60	59.83	3.23	
	12/16/2015	56.68	59.32	2.64	
	6/8/2016	57.95	58.66	0.71	
	9/27/2016	58.21	59.05	0.84	
	10/28/2016	58.17	58.47	0.30	
	12/12/2016	57.50	57.66	0.16	
	1/22/2017	57.60	57.80	0.20	
	2/19/2017	57.60	57.70	0.10	
	3/13/2017	57.62	57.70	0.08	
	4/20/2017	57.65	57.76	0.11	
	6/5/2017	57.75	57.81	0.06	
	9/19/2017	57.94	58.04	0.10	
	12/6/2017	58.00	58.10	0.10	
	1/24/2018	58.05	58.13	0.08	
	2/21/2018		58.18	0.00	
	3/14/2018		58.18	0.00	
	6/6/2018		58.37	0.00	
	9/24/2018		58.82	0.00	
	10/10/2018		58.80	0.00	
	12/12/2018		58.80	0.00	
	3/13/2019	58.70	58.74	0.04	
	6/26/2019		58.89	0.00	
	9/21/2019		59.20	0.00	
	12/4/2019		59.11	0.00	
	3/12/2020		59.20	0.00	
	5/20/2020		59.35	0.00	
	6/17/2020		59.39	0.00	
	9/16/2020		59.51	0.00	
	12/2/2020		59.73	0.00	
	3/24/2021		60.30	0.00	

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
BH-409	8/1/2012	54.41	60.10	5.69	67.02
	12/19/2012	54.72	60.35	5.63	
	6/20/2013	55.21	60.65	5.44	
	12/9/2013	55.58	60.94	5.36	
	6/25/2014	56.22	61.38	5.16	
	12/10/2014	56.59	61.62	5.03	
	3/17/2015	56.75	61.75	5.00	
	6/9/2015	57.05	61.27	4.22	
	8/13/2015	57.58	58.91	1.33	
	9/16/2015	57.69	58.70	1.01	
	12/16/2015	57.65	59.00	1.35	
	6/8/2016	57.21	57.34	0.13	
	9/27/2016	57.80	57.97	0.17	
	10/28/2016	57.39	57.54	0.15	
	12/12/2016	58.27	58.52	0.25	
	1/22/2017	58.40	58.68	0.28	
	2/19/2017	58.38	58.58	0.20	
	3/13/2017	58.40	58.58	0.18	
	4/20/2017	58.49	58.82	0.33	
	6/5/2017	58.54	58.63	0.09	
	9/19/2017	57.90	58.11	0.21	
	12/6/2017	58.75	59.15	0.40	
	1/24/2018	58.80	59.05	0.25	
	2/21/2018	58.84	59.00	0.16	
	3/14/2018		59.23	0.00	
	6/6/2018		59.42	0.00	
	9/24/2018	59.25	59.45	0.20	
	10/10/2018	59.30	59.33	0.03	
	12/12/2018		59.28	0.00	
	3/13/2019	59.50	59.65	0.15	
	6/26/2019		59.69	0.00	
	9/21/2019		60.28	0.00	
	12/4/2019		59.90	0.00	
	3/12/2020		59.98	0.00	
	5/20/2020		60.17	0.00	
	6/17/2020		60.18	0.00	
	9/16/2020		60.34	0.00	
	12/2/2020		60.48	0.00	
	3/24/2021		60.72	0.00	
BH-408	8/1/2012	54.29	60.24	5.95	67.76
	12/19/2012	54.68	60.58	5.90	
	6/20/2013	55.17	60.97	5.80	
	12/9/2013	55.54	61.25	5.71	
	6/25/2014	56.19	61.63	5.44	
	12/10/2014	56.56	61.81	5.25	
	3/17/2015	56.71	61.95	5.24	
	6/9/2015	57.18	60.31	3.13	
	8/13/2015	57.21	61.36	4.15	
	9/16/2015	57.37	60.97	3.60	
	12/16/2015	57.40	60.71	3.31	
	6/8/2016	57.52	61.59	4.07	
	9/27/2016	58.18	58.22	0.04	
	10/28/2016		58.04	0.00	
	12/12/2016	58.20	59.04	0.84	
	1/22/2017	58.30	59.15	0.85	
	2/19/2017	55.55	55.83	0.28	
	3/13/2017	58.38	58.82	0.44	
	4/20/2017	58.38	59.00	0.62	
	6/5/2017	58.48	59.01	0.53	
	9/19/2017	57.67	58.32	0.65	
	12/6/2017	57.70	58.65	0.95	
	1/24/2018	58.45	59.44	0.99	
	2/21/2018	58.80	59.20	0.40	
	3/14/2018	58.88	59.15	0.27	
	6/6/2018	59.05	59.30	0.25	
	9/24/2018	59.23	59.57	0.34	
	10/10/2018	58.32	58.52	0.20	
	12/12/2018	59.28	59.62	0.34	
	1/23/2019	58.35	58.70	0.35	
	3/13/2019	59.45	59.75	0.30	
	6/26/2019	59.65	59.80	0.15	
	9/21/2019	59.82	59.92	0.10	
	12/4/2019	59.87	60.01	0.14	
	3/12/2020		59.98	0.00	
	5/20/2020		60.12	0.00	
	6/17/2020		60.19	0.00	
	9/16/2020		60.79	0.00	
	12/2/2020		60.93	0.00	
	3/24/2021		60.65	0.00	

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
BH-401	8/1/2012	55.10	55.45	0.35	64.14
	12/19/2012	55.26	57.55	2.29	
	6/20/2013	55.53	59.33	4.07	
	12/9/2013	55.78	60.60	4.82	
	6/25/2014	56.27	62.03	5.76	
	12/10/2014	56.60	62.40	5.80	
	3/17/2015	56.75	62.75	6.00	
	6/9/2015	56.95	62.88	5.93	
	8/13/2015	57.43	60.62	3.19	
	9/16/2015	57.42	61.14	3.72	
	12/16/2015	57.41	61.37	3.96	
	6/8/2016	57.78	60.86	3.08	
	9/27/2016	57.98	60.45	2.47	
	10/28/2016	58.06	59.39	1.33	
	12/12/2016	58.18	59.82	1.64	
	1/22/2017	58.28	59.80	1.52	
	2/19/2017	58.35	59.35	1.00	
	3/13/2017	58.40	59.16	0.76	
	4/20/2017	58.30	60.02	1.72	
	6/5/2017	58.54	59.10	0.56	
	9/19/2017	58.56	59.50	0.94	
	12/6/2017	59.64	60.64	1.00	
	1/24/2018	58.75	59.98	1.23	
	2/21/2018	58.88	59.54	0.66	
	3/14/2018	58.92	59.38	0.46	
	6/6/2018	59.12	59.28	0.16	
	9/24/2018	59.61	60.61	1.00	
	10/10/2018	59.38	59.63	0.25	
	12/12/2018	59.28	60.10	0.82	
	1/23/2019	59.40	59.93	0.53	
	3/13/2019	59.50	59.80	0.30	
	6/26/2019	59.72	59.90	0.18	
	9/21/2019	59.90	60.04	0.14	
	12/4/2019	59.95	60.25	0.30	
	3/12/2020	60.03	60.32	0.29	
	5/20/2020	60.18	60.23	0.05	
	6/17/2020	60.20	60.35	0.15	
	9/16/2020		60.12	0.00	
	12/2/2020		60.31	0.00	
	3/24/2021		60.98	0.00	
BH-404	8/1/2012	53.31	59.38	6.07	66.52
	12/19/2012	53.72	59.68	5.96	
	6/20/2013	54.22	60.09	5.87	
	12/9/2013	54.60	60.33	5.73	
	6/25/2014	55.23	60.75	5.52	
	12/10/2014	55.92	58.87	2.95	
	3/17/2015	56.39	56.67	0.28	
	6/9/2015	56.46	57.83	1.37	
	8/13/2015	56.56	58.41	1.85	
	9/16/2015	56.59	58.66	2.07	
	12/16/2015	56.66	58.42	1.76	
	6/8/2016	56.43	58.31	1.88	
	9/27/2016	57.20	58.20	1.00	
	10/28/2016	57.14	57.89	0.75	
	12/12/2016	57.28	57.95	0.67	
	1/22/2017	57.55	57.60	0.05	
	2/19/2017	57.39	57.86	0.47	
	3/13/2017	57.42	57.80	0.38	
	4/20/2017	57.41	58.14	0.73	
	6/5/2017	57.55	57.90	0.35	
	9/19/2017	57.70	58.31	0.61	
	12/6/2017	57.75	58.53	0.78	
	1/24/2018	57.79	58.45	0.66	
	2/21/2018	57.85	58.04	0.19	
	3/14/2018	57.90	58.27	0.37	
	6/6/2018	58.10	58.27	0.17	
	9/24/2018	58.28	58.68	0.40	
	10/10/2018	58.35	58.65	0.30	
	12/12/2018	58.38	58.65	0.27	
	1/23/2019	58.40	58.70	0.30	
	3/13/2019	58.65	58.68	0.03	
	6/26/2019	58.73	58.91	0.18	
	9/21/2019		58.92	0.00	
	12/4/2019		58.94	0.00	
	3/12/2020		59.05	0.00	
	5/20/2020		59.18	0.00	
	6/17/2020		59.20	0.00	
	9/16/2020		59.35	0.00	
	12/2/2020		59.56	0.00	
	3/24/2021		59.80	0.00	

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HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
BH-405	8/1/2012	53.53	59.38	5.85	66.11
	12/19/2012	53.90	59.56	5.66	
	6/20/2013	54.37	59.93	5.56	
	12/9/2013	54.74	60.20	5.46	
	6/25/2014	55.39	60.62	5.23	
	12/10/2014	55.76	60.81	5.05	
	3/17/2015	55.90	60.95	5.05	
	6/9/2015	56.12	61.09	4.97	
	8/13/2015	56.86	57.41	0.55	
	9/16/2015	56.90	57.57	0.67	
	12/16/2015	56.92	57.48	0.56	
	6/8/2016	57.14	57.81	0.67	
	9/27/2016	57.38	58.11	0.73	
	10/28/2016	57.31	57.68	0.37	
	12/12/2016	57.44	57.73	0.29	
	1/22/2017	57.54	57.95	0.41	
	2/19/2017	57.55	57.84	0.29	
	3/13/2017	57.58	57.77	0.19	
	4/20/2017	57.60	57.85	0.25	
	6/5/2017	57.69	57.93	0.24	
	9/19/2017	57.88	58.22	0.34	
	12/6/2017	57.95	58.33	0.38	
	1/24/2018	57.95	58.35	0.40	
	2/21/2018	58.04	58.20	0.16	
	3/14/2018		58.18	0.00	
	6/6/2018		58.28	0.00	
	9/24/2018	58.43	58.67	0.24	
	10/10/2018	58.48	58.65	0.17	
	12/12/2018	58.48	58.68	0.20	
	1/23/2019	58.54	58.70	0.16	
	3/13/2019	58.70	58.74	0.04	
	6/26/2019		58.87	0.00	
	9/21/2019		59.14	0.00	
	12/4/2019		59.08	0.00	
	3/12/2020		59.17	0.00	
	5/20/2020		59.30	0.00	
	6/17/2020		59.34	0.00	
	9/16/2020		59.48	0.00	
	12/2/2020		59.73	0.00	
	3/24/2021		59.85	0.00	
HSRW-1	5/15/2013	54.55	56.34	1.79	64.34
	6/20/2013	54.58	56.93	2.35	
	12/9/2013	52.91	53.73	0.82	
	6/25/2014	53.53	53.88	0.35	
	12/10/2014	53.74	55.41	1.67	
	3/17/2015	53.78	56.03	2.25	
	6/9/2015	53.94	56.55	2.61	
	8/13/2015	54.65	56.80	2.15	
	9/16/2015	54.25	56.06	1.81	
	12/16/2015	54.38	55.68	1.30	
	6/8/2016	54.75	54.90	0.15	
	9/27/2016	54.85	55.35	0.50	
	10/28/2016	54.83	55.39	0.56	
	12/12/2016	54.90	55.38	0.48	
	1/22/2017	55.00	55.47	0.47	
	2/19/2017	55.04	55.37	0.33	
	3/13/2017	55.07	55.28	0.21	
	4/20/2017	55.07	55.37	0.30	
	6/5/2017	55.17	55.58	0.41	
	9/19/2017	55.33	55.78	0.45	
	12/6/2017	54.40	56.00	1.60	
	1/24/2018	55.45	55.95	0.50	
	2/21/2018	55.50	55.80	0.30	
	3/14/2018	55.58	55.82	0.24	
	6/6/2018	55.78	55.81	0.03	
	9/24/2018	59.60	59.80	0.20	
	10/10/2008	56.00	56.05	0.05	
	12/12/2018	58.98	59.12	0.14	
	1/23/2019	56.10	56.70	0.60	
	3/13/2019	56.15	56.25	0.10	
	6/26/2019	56.32	56.38	0.06	
	9/21/2019	56.60	56.65	0.05	
	12/4/2019	56.35	56.43	0.08	
	3/12/2020		56.52	0.00	
	5/20/2020		56.80	0.00	
	6/17/2020		56.88	0.00	
	9/16/2020		56.95	0.00	
	12/2/2020		57.12	0.00	
	3/24/2021		57.42	0.00	

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
HSRW-2	5/15/2013	53.44	55.15	1.71	63.97
	6/20/2013	53.48	55.62	2.14	
	12/9/2013	52.80	53.35	0.55	
	6/25/2014	53.42	53.61	0.19	
	12/10/2014	53.71	54.63	0.92	
	3/17/2015	53.82	54.87	1.05	
	6/9/2015	54.00	55.18	1.18	
	8/13/2015	54.11	55.35	1.24	
	9/16/2015	54.20	55.59	1.39	
	12/16/2015	54.40	55.63	1.23	
	6/8/2016	54.56	54.99	0.43	
	9/27/2016	54.80	54.89	0.09	
	10/28/2016	54.76	55.84	1.08	
	12/12/2016	54.80	54.92	0.12	
	1/22/2017	54.95	55.00	0.05	
	2/19/2017	54.95	55.00	0.05	
	3/13/2017	54.97	55.02	0.05	
	4/20/2017	54.97	55.04	0.07	
	6/5/2017	55.09	55.13	0.04	
	9/19/2017	55.26	55.33	0.07	
	12/6/2017	55.32	55.52	0.20	
	1/24/2018	55.39	55.49	0.10	
	2/21/2018		55.40	0.00	
	3/14/2018		55.48	0.00	
	6/6/2018		55.66	0.00	
	9/24/2018		55.70	0.00	
	10/10/2018		55.80	0.00	
	12/12/2018		55.85	0.00	
	3/13/2019		56.02	0.00	
	6/26/2019		56.20	0.00	
	9/21/2019		56.65	0.00	
	12/4/2019		56.40	0.00	
	3/12/2020		56.64	0.00	
	5/20/2020		56.77	0.00	
	6/17/2020		56.72	0.00	
	9/16/2020		56.81	0.00	
	12/2/2020		56.98	0.00	
	3/24/2021		57.1	0.00	

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
MW-1	8/1/2012		52.94	0.00	64.24
	12/19/2012		53.36	0.00	
	6/23/2013		53.53	0.00	
	12/9/2013		54.25	0.00	
	6/25/2014		54.86	0.00	
	12/10/2014		54.86	0.00	
	3/17/2015		55.3	0.00	
	6/10/2015		55.48	0.00	
	12/16/2015		55.64	0.00	
	6/8/2016		55.99	0.00	
	12/13/2016		56.20	0.00	
	7/11/2017		56.61	0.00	
	12/6/2017		56.74	0.00	
	3/14/2018		56.79	0.00	
	6/6/2018		57.06	0.00	
	9/24/2018		57.26	0.00	
	12/12/2018		57.22	0.00	
	3/13/2019		57.42	0.00	
	6/26/2019		57.58	0.00	
	9/21/2019		57.74	0.00	
	12/4/2019		57.80	0.00	
	3/14/2020		57.91	0.00	
	6/17/2020		58.09	0.00	
	9/16/2020		58.25	0.00	
	12/2/2020		58.42	0.00	
	3/24/2021		58.55	0.00	
MW-2	8/1/2012		54.77	0.00	60.38
	12/19/2012		55.17	0.00	
	6/23/2013		55.61	0.00	
	12/9/2013		56.13	0.00	
	6/25/2014		56.67	0.00	
	12/10/2014		56.86	0.00	
	3/17/2015		57.10	0.00	
	6/10/2015		57.22	0.00	
	12/16/2015		57.79	0.00	
	6/8/2016		57.90	0.00	
	12/13/2016		57.90	0.00	
	6/6/2017		58.21	0.00	
	12/6/2017		58.45	0.00	
	3/14/2018		58.51	0.00	
	6/6/2018		dry	0.00	
	9/24/2018		59.02	0.00	
	12/12/2018		58.95	0.00	
	3/13/2019		59.17	0.00	
	6/26/2019		59.32	0.00	
	9/21/2019		59.48	0.00	
	12/4/2019		59.56	0.00	
	3/14/2020		59.62	0.00	
	6/17/2020		60.29	0.00	
	9/16/2020		59.98	0.00	
	12/2/2020		60.10	0.00	
	3/24/2021		60.34	0.00	

Appendix A - Summary of Fluid Levels
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Well	Date	DTP (ft-bmp)	DTW (ft-bmp)	Prod Thick (feet)	TD (ft-bmp)
MW-3R	8/1/2012		56.84	0.00	65.24
	12/19/2012		57.22	0.00	
	6/23/2013		57.62	0.00	
	12/9/2013		57.55	0.00	
	6/25/2014		58.34	0.00	
	12/10/2014		58.96	0.00	
	3/17/2015		59.13	0.00	
	6/10/2015		59.29	0.00	
	12/16/2015		59.52	0.00	
	6/8/2016		59.47	0.00	
	12/13/2016		60.03	0.00	
	6/6/2017		60.30	0.00	
	12/6/2017		60.59	0.00	
	3/14/2018		60.61	0.00	
	6/6/2018		60.85	0.00	
	9/24/2018		61.08	0.00	
	12/12/2018		61.06	0.00	
	3/13/2019		61.30	0.00	
	6/26/2019		61.37	0.00	
	9/21/2019		61.54	0.00	
	12/4/2019		61.68	0.00	
	3/14/2020		61.72	0.00	
	6/17/2020		61.88	0.00	
	9/16/2020		62.08	0.00	
	12/2/2020		62.20	0.00	
	3/24/2021		62.47	0.00	
MW-4	8/1/2012		56.14	0.00	68.18
	12/19/2012		56.53	0.00	
	6/23/2013		56.94	0.00	
	12/9/2013		57.29	0.00	
	6/25/2014		57.89	0.00	
	12/10/2014		57.89	0.00	
	3/17/2015		58.48	0.00	
	6/10/2015		58.60	0.00	
	12/16/2015		58.96	0.00	
	6/8/2016		59.10	0.00	
	12/13/2016		59.30	0.00	
	6/6/2017		59.59	0.00	
	12/6/2017		59.87	0.00	
	3/14/2018		59.91	0.00	
	6/6/2018		60.82	0.00	
	9/24/2018		60.35	0.00	
	12/12/2018		60.35	0.00	
	3/13/2019		60.62	0.00	
	6/26/2019		60.65	0.00	
	9/21/2019		60.87	0.00	
	12/4/2019		60.90	0.00	
	3/14/2020		60.99	0.00	
	6/17/2020		61.16	0.00	
	9/16/2020		61.28	0.00	
	12/2/2020		61.48	0.00	
	3/24/2021		61.75	0.00	

Notes:
ft-bmp = feet - below measuring point

Appendix B
Summary of Historical Groundwater Data

Appendix B - Summary of Historical Groundwater Data
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-1	12/04/02	<2	<2	<2	<6									
MP =	05/20/03	<2	<2	<2	<6									
3,595.19	11/12/03	<2	<2	<2	<6									
	06/02/04	<2	<2	<2	<6									
	10/12/04	<2	<2	<2	<6									
	01/11/05	<2	<2	<2	<6									
	10/26/05	<2	<2	<2	<6									
	03/08/06	<2	<2	<2	<6									
	07/11/06	<2	<2	<2	<6									
	09/07/06	<0.5	<0.5	<0.5	<1									
	12/19/06	<0.5	<0.5	<0.5	<1.0									
	03/13/07	<0.5	<0.5	<0.5	<1.0									
	06/21/07	<0.5	<0.5	<0.5	<1.0									
	09/21/07	<0.5	<0.5	<0.5	<1.0									
	12/07/07	<0.5	<0.5	<0.5	<1.0									
	03/04/08	<0.5	<0.5	<0.5	<1.0									
	06/03/08	<0.5	<0.5	<0.5	<1.0									
	09/23/08	<0.5	<0.5	<0.5	<1.0									
	12/18/08	<0.5	<0.5	<0.5	<1.0									
	03/19/09	<0.5	<0.5	<0.5	<1.0									
	06/22/09	<1.0	<1.0	<1.0	<2.0									
	09/08/09	<1.0	<1.0	<1.0	<2.0									
	12/17/09	<1.0	<1.0	<1.0	<2.0									
	03/09/10	<1.0	<1.0	<1.0	<1.5									
	06/18/10	<1.0	<1.0	<1.0	<2.0									
	09/01/10	<1.0	<1.0	<1.0	<2.0									
	12/06/10	<1.0	<1.0	<1.0	<2.0									
	03/18/11	<1.0	<1.0	<1.0	<2.0									
	06/23/11	<1.0	<1.0	<1.0	<2.0									
	10/07/11	<1.0	<1.0	<1.0	<2.0									
	12/08/11	<1.0	<1.0	<1.0	<2.0									
	12/19/12	<1.0	<2.0	<1.0	<2.0			53.36	3,541.83	18.4	0.913	2.12	7.06	-302
	06/23/13	<1.0	<2.0	<1.0	<2.0			53.83	3,541.36	20.5	1.211	2.17	6.8	248.9
duplicate	06/23/13	<1.0	<2.0	<1.0	<2.0			53.83	3,541.36	20.5	1.211	2.17	6.8	248.9
	12/10/13	<1.0	<2.0	<1.0	<2.0			54.25	3,540.94	20.2	0.894	5.28	7.16	65
	06/25/14	<1.0	<2.0	<1.0	1.44			54.83	3,540.36	21.9	1.031	3.69	7.08	20.8
	12/12/14	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	55.11	3,540.08	17.84	1.51	3.76	6.78	69.9
	06/10/15	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	55.48	3,539.71	25.88	1.261	2.81	6.48	47.3
	12/16/15	<1.0	<2.0	<1.0	<1.0	<0.10	<0.08	55.64	3,539.55	18.44	1.262	2.76	7.07	119.9
	06/08/16	<1.0	<2.0	<1.0	<1.0	<0.10	<0.08	55.99	3,539.20	26.7	1.225	4.63	7.2	35.1
	12/13/16	<1.0	<2.0	<1.0	<2.0	<0.06	0.104	56.20	3,538.99	19.5	1.476	4.03	6.94	79.4
	07/11/17	<1.0	<2.0	<1.0	<2.0	<0.06	<0.08	56.61	3,538.58	21.21	1.132	3.06	6.98	56.6
	12/06/17	<1.0	<2.0	<1.0	<2.0	<0.06	0.130	56.74	3,538.45	19.12	1.346	2.88	7.12	42.3
	03/14/18	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0758	56.79	3,538.40	20.45	1.475	3.45	6.92	41.2
	06/05/18	<1.0	<2.0	<1.0	<2.0	0.0748	0.136	57.06	3,538.13	23.6	1.367	2.98	7.05	66.4
	09/24/18	<1.0	<2.0	<1.0	<1.0	<0.06	0.0789	57.26	3,537.93	22.7	1.078	3.56	7.22	52.3
	12/12/18	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0753	57.22	3,537.97	18.88	1.557	2.67	6.87	35.8
	03/12/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0754	57.42	3,537.77	19.9	1.112	3.3	7.11	44.3
	06/26/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0793	57.58	3,537.61	21.1	1.334	2.98	6.92	56.7
	09/22/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0744	57.74	3,537.45	21.8	1.455	2.66	7.06	68.7
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	57.80	3,537.39	20.8	1.502	3.01	7.22	72.1
	03/14/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	57.91	3,537.28	20.3	1.226	3.1	7.09	56.6
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	58.09	3,537.10	22.6	1.112	2.98	7.11	42.4
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	58.25	3,536.94	21.6	1.298	2.55	6.88	66.8
	12/02/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	58.42	3,536.77	20.2	1.077	2.86	7.23	35.6
	03/24/21	<1.0	<2.0	<1.0	<2.0	0.0603	<0.160	58.55	3,536.64	21.3	1.033	3.21	7.06	54.3

Appendix B - Summary of Historical Groundwater Data
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-2	12/04/02	<2	<2	<2	<6									
MP =	05/20/03	<2	<2	<2	<6									
3,596.84	11/12/03	<2	<2	<2	<6									
	12/19/12	<1.0	<2.0	<1.0	<2.0			55.17	3,541.67	19.1	1.108	1.15	6.81	-236
	06/23/13	0.250	<2.0	<1.0	<2.0			55.61	3,541.23	22.8	1.307	2.3	6.58	-10.1
	12/10/13	0.290	<2.0	<1.0	<2.0			56.13	3,540.71	22.04	0.915	3.7	6.23	-75
duplicate	12/10/13	0.280	<2.0	<1.0	<2.0			56.13	3,540.71	22.04	0.915	3.7	6.23	-75
	06/25/14	0.310	<2.0	<1.0	1.08			56.7	3,540.14	21.91	1.211	1.75	6.83	58.8
duplicate	06/25/14	0.340	<2.0	<1.0	1.04			56.7	3,540.14	21.91	1.211	1.75	6.83	58.8
	12/10/14	<1.0	<2.0	<1.0	<1.0	0.125	0.453	56.86	3,539.98	19.35	1.256	5.37	6.66	-52.2
duplicate	12/10/14	0.2	<2.0	<1.0	<1.0	0.094	0.363	56.86	3,539.98	19.35	1.256	5.37	6.66	-52.2
	06/10/15	<1.0	<2.0	<1.0	<1.0	<0.10	0.219	57.22	3,539.62	30.42	1.378	8.41	6.16	-31.3
duplicate	06/10/15	<1.0	<2.0	<1.0	<1.0	<0.10	0.252	57.22	3,539.62	30.42	1.378	8.41	6.16	-31.3
	12/16/15	<1.0	<2.0	<1.0	<1.0	0.142	0.275	57.79	3,539.05	18.8	1.222	2.11	6.96	-37.5
	06/08/16	<1.0	<2.0	<1.0	<1.0	<0.06	NA	57.90	3,538.94	NM	NM	NM	NM	NM
	12/13/16	<1.0	<2.0	<1.0	<2.0	<0.06	0.637	57.90	3,538.94	NM	NM	NM	NM	NM
	06/06/17	<1.0	<2.0	<1.0	<2.0	<0.06	1.01	58.21	3,538.63	23.75	1.213	1.5	7.02	-27.3
	12/06/17	<1.0	<2.0	<1.0	<2.0	<0.06	0.500	58.45	3,538.39	20.16	1.987	2.09	6.76	44.7
	03/14/18	<1.0	<2.0	<1.0	<2.0	<0.06	0.364	58.51	3,538.33	22.34	1.116	1.23	6.82	51.6
	06/05/18	NS	NS	NS	NS	NS	NS	dry	dry					
	09/24/18	<1.0	<2.0	<1.0	<1.0	<0.06	0.438	59.02	3,537.82	21.66	1.341	3.13	6.93	-33
	12/12/18	<1.0	<2.0	<1.0	<2.0	<0.06	0.231	58.95	3,537.89	19.63	1.103	1.98	6.88	22
	03/12/19	<1.0	<2.0	<1.0	<2.0	0.080	0.349	59.17	3,537.67	20.08	1.887	2.11	6.97	54.3
	06/26/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.362	59.32	3,537.52	21.98	1.293	1.76	7.11	39.8
	09/22/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.357	59.48	3,537.36	21.22	1.378	2.02	6.79	44.6
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.370	59.56	3,537.28	19.88	1.617	1.44	7.01	-11.2
	03/14/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.388	59.62	3,537.22	19.97	1.428	1.67	7.22	22.6
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.350	60.29	3,536.55	22.1	1.337	2.88	7.03	38.7
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.451	59.98	3,536.86	21.5	1.286	2.26	6.89	11.6
	12/02/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.267	60.10	3,536.74	20.3	1.482	1.88	7.12	48.6
	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	0.738	60.34	3,536.50	21.6	1.516	2.01	7.22	66.7

Appendix B - Summary of Historical Groundwater Data
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

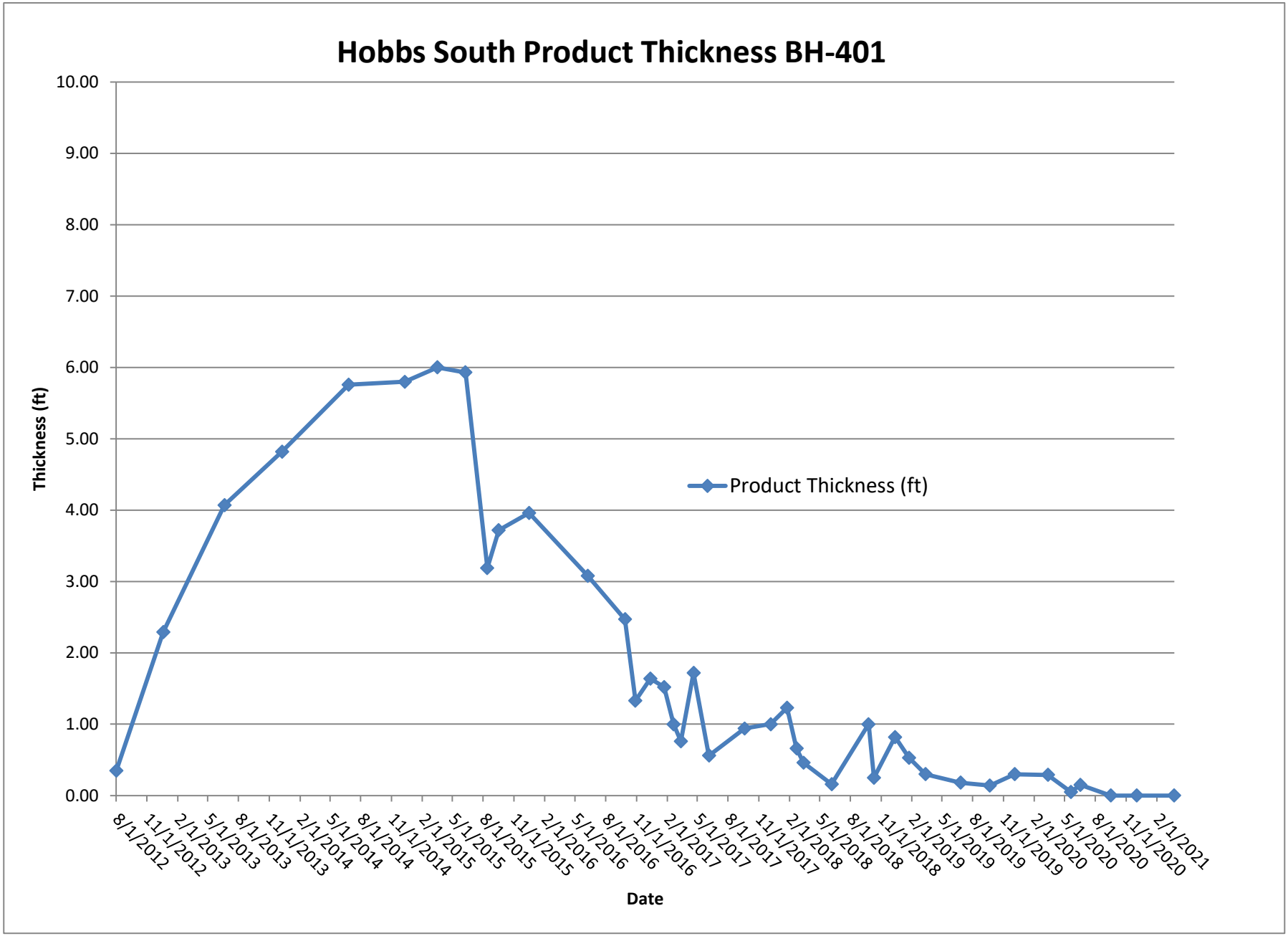
Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-3R	12/04/02	<2	<2	<2	<6									
MP =	05/20/03	<2	<2	<2	<6									
3,598.80	11/12/03	<2	<2	<2	<6									
	06/02/04	<2	<2	<2	<6									
	10/12/04	<2	<2	<2	<6									
	01/11/05	<2	<2	<2	<6									
	10/26/05	<2	<2	<2	11									
	03/08/06	<2	<2	<2	<6									
	07/11/06	<2	<2	<2	<6									
	09/07/06	<0.5	<0.5	<0.5	<1									
	12/19/06	<0.5	<0.5	<0.5	<1									
	03/13/07	<0.5	<0.5	<0.5	<1									
	06/21/07	<0.5	0.6	<0.5	1.1									
	09/21/07	<0.5	<0.5	<0.5	2.2									
	12/07/07	<0.5	<0.5	<0.5	<1.0									
	03/04/08	<0.5	<0.5	<0.5	<1.0									
	06/03/08	<0.5	<0.5	<0.5	<1.0									
	09/23/08	<0.5	<0.5	<0.5	<1.0									
	12/18/08	<0.5	<0.5	<0.5	<1.0									
	03/19/09	<0.5	<0.5	<0.5	<1.0									
	06/22/09	<1.0	<1.0	<1.0	<2.0									
	09/08/09	<1.0	<1.0	<1.0	<2.0									
	12/17/09	<1.0	<1.0	<1.0	<2.0									
	03/09/10	<1.0	<1.0	<1.0	<1.5									
	06/18/10	<1.0	<1.0	<1.0	<2.0									
	09/01/10	<1.0	<1.0	<1.0	<2.0									
	12/06/10	<1.0	<1.0	<1.0	<2.0									
	03/18/11	<1.0	<1.0	<1.0	<2.0									
	06/23/11	<1.0	<1.0	<1.0	<2.0									
	10/07/11	<1.0	<1.0	<1.0	<2.0									
	12/08/11	<1.0	<1.0	<1.0	<2.0									
	12/19/12	<1.0	<2.0	<1.0	<2.0			57.22	3,541.58	19.5	0.774	0.74	6.98	-279
duplicate	12/19/12	<1.0	<2.0	<1.0	<2.0			57.22	3,541.58	19.5	0.774	0.74	6.98	-279
	06/23/13	<1.0	<2.0	<1.0	<2.0			57.62	3,541.18	22.2	0.936	1.00	6.67	12.8
	12/10/13	<1.0	<2.0	<1.0	<2.0			57.55	3,541.25	21.7	0.638	4.09	7.24	-105
	06/25/14	<1.0	<2.0	<1.0	<2.0			58.35	3,540.45	21.3	0.815	2.00	7.03	-60.6
	12/10/14	<1.0	<2.0	<1.0	<1.0	0.0694	0.137	58.96	3,539.84	18.24	0.863	2.91	6.86	-50.1
	06/10/15	<1.0	<2.0	<1.0	<1.0	<0.10	<0.10	59.29	3,539.51	28.96	1.001	1.56	6.12	-6.9
	12/16/15	<1.0	<2.0	<1.0	<1.0	<0.10	0.321	59.52	3,539.28	17.48	0.891	1.50	7.11	12.1
	06/08/16	<1.0	<2.0	<1.0	<1.0	<0.10	0.362	59.47	3,539.33	27.91	1.115	0.94	6.4	41.1
	12/13/16	<1.0	<2.0	<1.0	<2.0	<0.06	0.234	60.03	3,538.77	19.93	1.213	2.29	7.28	-58.6
duplicate	12/13/16	<1.0	<2.0	<1.0	<2.0	<0.06	0.325	60.03	3,538.77	19.93	1.213	2.29	7.28	-58.6
	06/06/17	<1.0	<2.0	<1.0	<2.0	<0.06	0.124	60.30	3,538.50	22.1	0.811	1.66	7.13	33.4
	12/06/17	<1.0	<2.0	<1.0	<2.0	<0.06	0.099	60.59	3,538.21	20.6	1.116	2.01	7.03	-18.6
	03/14/18	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0759	60.61	3,538.19	21.6	1.213	1.88	6.98	10.2
	06/05/18	<1.0	<2.0	<1.0	<2.0	0.124	0.599	60.85	3,537.95	22.28	0.987	1.11	6.77	26.1
	09/24/18	<1.0	<2.0	<1.0	<1.0	<0.06	<0.0757	61.08	3,537.72	22.06	1.001	1.66	7.23	48.6
	12/12/18	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0761	61.06	3,537.74	19.88	1.988	1.23	7.19	-45.1
	03/12/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0757	61.30	3,537.50	20.1	0.866	2.21	6.88	22.6
	06/26/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.0791	61.37	3,537.43	22.8	1.107	1.03	6.92	10.9
	09/22/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.223	61.54	3,537.26	21.6	1.301	1.72	7.23	-33.1
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	<0.147	61.68	3,537.12	19.9	0.966	1.88	7.06	43.6
	03/14/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	61.72	3,537.08	21.2	1.224	1.98	7.11	20.6
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.148	61.88	3,536.92	22.8	1.022	1.11	6.93	19.6
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.149	62.08	3,536.72	21.6	1.117	2.07	7.02	33.1
	12/02/20	<1.0	<2.0	<1.0	<2.0	<0.06	<0.151	62.20	3,536.60	20.1	1.206	1.76	7.19	-10.2
	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	<0.154	62.47	3,536.33	21.2	1.332	2.01	7.29	54.6

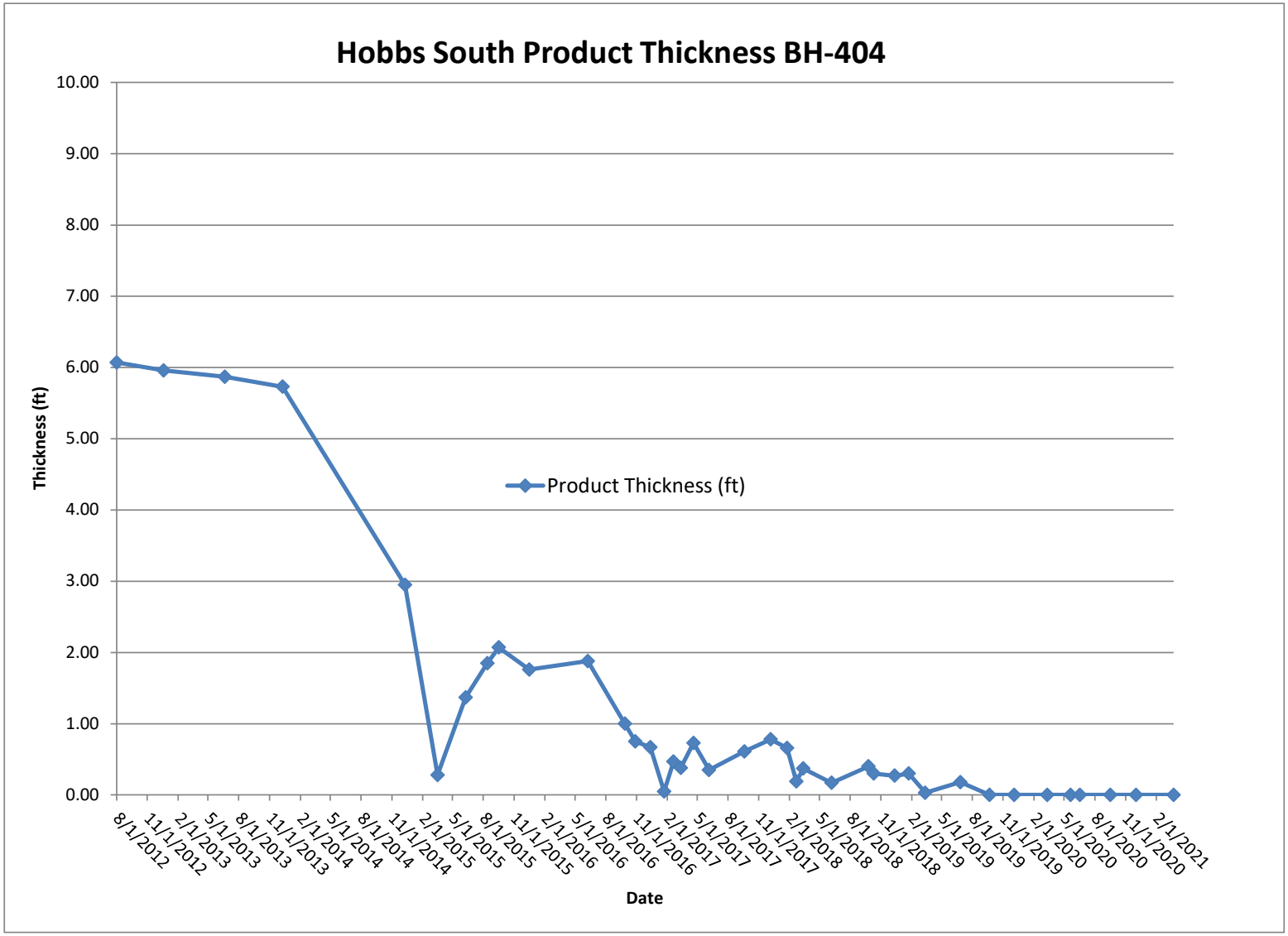
Appendix B - Summary of Historical Groundwater Data
HollyFrontier - Hobbs South Study Area - Lea County, New Mexico

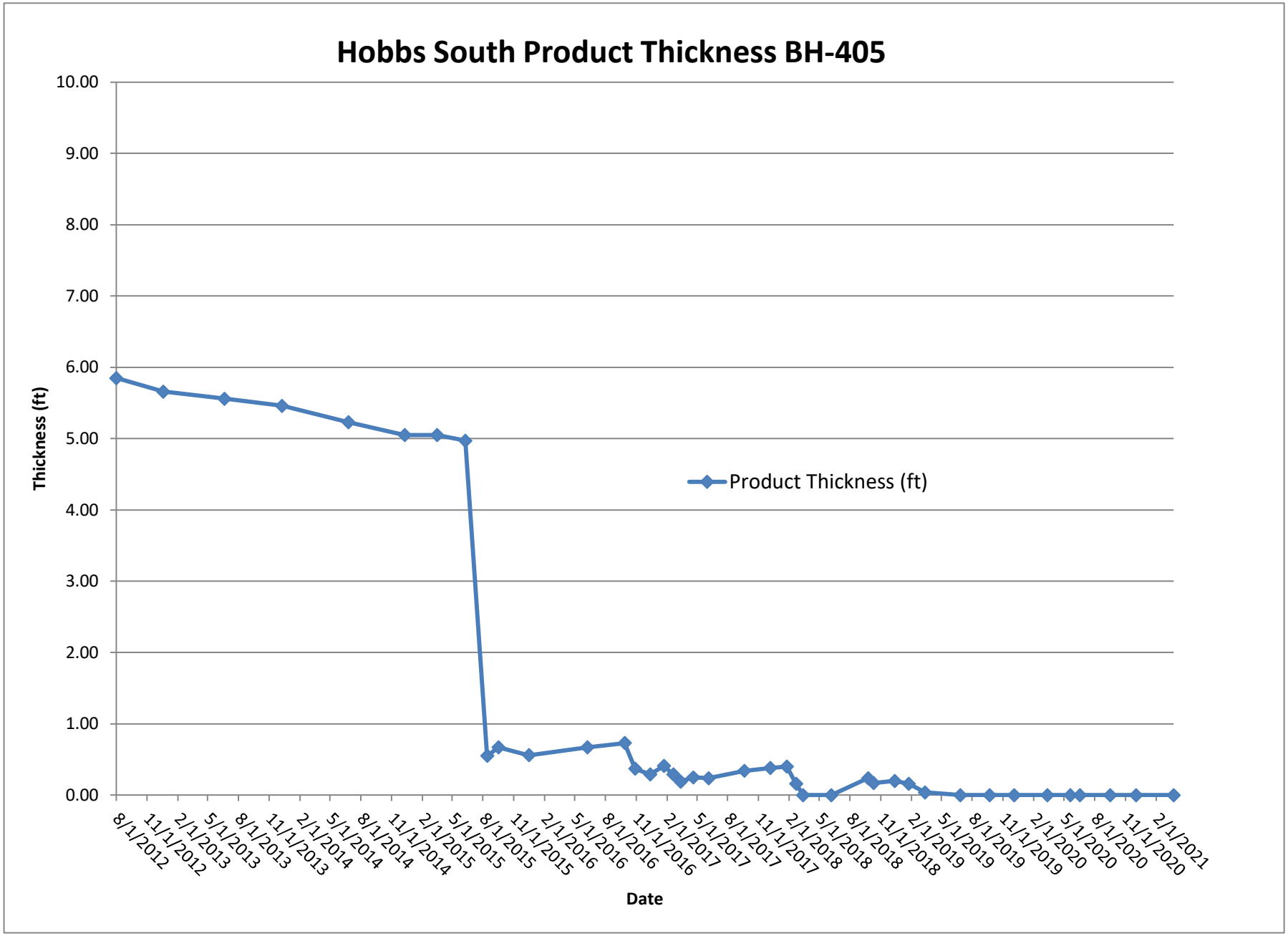
Monitoring Well	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Depth to Water (ft-bmp)	Groundwater Elevation (ft-msl)	Temperature (deg-C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-4	01/13/03	<2	<2	<2	<6									
MP =	05/20/03	<2	<2	<2	<6									
3,598.12	11/12/03	<2	<2	<2	<6									
	06/02/04	<2	<2	<2	<6									
	10/12/04	<2	<2	<2	<6									
	01/11/05	<2	<2	<2	<6									
	10/26/05	<2	<2	<2	<6									
	03/08/06	<2	<2	<2	<6									
	07/11/06	<2	<2	<2	<6									
	09/07/06	<0.5	<0.5	<0.5	<1									
	12/19/06	<0.5	2.1	0.9	2.9									
	03/13/07	<0.5	1.7	<0.5	2.4									
	06/21/07	<0.5	1.8	0.8	1.5									
	09/21/07	<0.5	2.4	1.2	2.2									
	12/07/07	0.8	1.7	0.8	19									
	03/04/08	<0.5	<0.5	<0.5	<1.0									
	06/03/08	<0.5	1.5	0.8	18									
	09/23/08	<0.5	1.1	<0.5	5.5									
	12/18/08	<0.5	0.9	<0.5	7.7									
	03/19/09	<0.5	1.3	0.6	5.6									
	06/22/09	<1.0	<1.0	<1.0	<2.0									
	09/08/09	<1.0	<1.0	<1.0	<2.0									
	12/17/09	<1.0	<1.0	<1.0	21									
	03/09/10	<1.0	<1.0	<1.0	<1.5									
	06/18/10	<1.0	<1.0	<1.0	6.2									
	09/01/10	<1.0	<1.0	<1.0	5.0									
	12/06/10	<1.0	<1.0	<1.0	5.8									
	03/18/11	<1.0	<1.0	<1.0	<2.0									
	06/23/11	<1.0	<1.0	<1.0	7.4									
	10/07/11	<1.0	<1.0	<1.0	4.9									
	12/08/11	<1.0	<1.0	<1.0	2.9									
	12/19/12	<1.0	<2.0	<1.0	<2.0			56.53	3,541.59	19.6	1.116	2.26	6.83	-252
	06/23/13	0.24	<2.0	<1.0	<2.0			56.94	3,541.18	22.8	1.317	0.69	6.59	-50.1
	12/10/13	0.27	<2.0	<1.0	<2.0			57.29	3,540.83	21.38	0.866	4.51	6.9	-95
	06/25/14	<1.0	<2.0	<1.0	0.33			57.89	3,540.23	20.2	1.086	1.73	6.88	-83.6
	12/10/14	<1.0	<2.0	<1.0	<1.0	0.179	0.446	57.89	3,540.23	18.39	1.212	2.06	6.63	-99.4
	06/10/15	<1.0	<2.0	<1.0	<1.0	<0.10	0.198	58.60	3,539.52	34.51	1.293	0.94	6.69	-101.3
	12/16/15	<1.0	<2.0	<1.0	<1.0	0.170	0.121	58.96	3,539.16	17.36	1.243	0.58	6.96	-60.0
	06/08/16	<1.0	<2.0	<1.0	<1.0	0.097	1.57	59.10	3,539.02	26.86	1.416	1.41	6.36	-79.4
	12/13/16	<1.0	<2.0	<1.0	<2.0	0.226	1.60	59.30	3,538.82	19.84	1.717	3.72	7.19	-56.1
	06/06/17	<1.0	<2.0	<1.0	<2.0	0.123	1.70	59.59	3,538.53	22.92	1.308	0.72	6.91	-72.1
duplicate	06/06/17	<1.0	<2.0	<1.0	<2.0	0.129	1.64	59.59	3,538.53	22.92	1.308	0.72	6.91	-72.1
	12/06/17	<1.0	<2.0	<1.0	<2.0	0.0825	1.01	59.87	3,538.25	18.01	1.288	1.02	7.07	-55
duplicate	12/06/17	<1.0	<2.0	<1.0	<2.0	0.172	1.06	59.87	3,538.25	18.01	1.288	1.02	7.07	-55
	03/14/18	<1.0	<2.0	<1.0	<2.0	<0.06	0.548	59.91	3,538.21	20.16	1.423	1.88	7.23	-34
	06/05/18	<1.0	<2.0	<1.0	<2.0	0.0823	<0.0754	60.82	3,537.30	22.75	1.398	1.63	7.11	-28.1
duplicate	06/05/18	<1.0	<2.0	<1.0	<2.0	0.0702	<0.0833	60.82	3,537.30	22.75	1.398	1.63	7.11	-28.1
	09/24/18	<1.0	<2.0	<1.0	<1.0	0.166	0.711	60.35	3,537.77	21.63	1.316	1.92	6.88	-66.7
duplicate	09/24/18	<1.0	<2.0	<1.0	<1.0	0.145	0.703	60.35	3,537.77	21.63	1.316	1.92	6.88	-66.7
	12/12/18	<1.0	<2.0	<1.0	<2.0	0.161	0.600	60.35	3,537.77	18.43	1.366	0.92	6.76	-98.6
duplicate	12/12/18	<1.0	<2.0	<1.0	<2.0	0.158	0.662	60.35	3,537.77	18.43	1.366	0.92	6.76	-98.6
	03/12/19	<1.0	<2.0	<1.0	<2.0	0.132	0.767	60.62	3,537.50	19.65	1.266	1.11	7.01	-18.3
duplicate	03/12/19	<1.0	<2.0	<1.0	<2.0	0.136	0.714	60.62	3,537.50	19.65	1.266	1.11	7.01	-18.3
	06/26/19	<1.0	<2.0	<1.0	<2.0	0.150	0.650	60.65	3,537.47	22.03	1.483	1.26	6.97	10.1
duplicate	06/26/19	<1.0	<2.0	<1.0	<2.0	0.152	0.661	60.65	3,537.47	22.03	1.483	1.26	6.97	10.1
	09/22/19	<1.0	<2.0	<1.0	<2.0	0.143	1.02	60.87	3,537.25	21.6	1.866	0.88	6.78	-22.3
duplicate	09/22/19	<1.0	<2.0	<1.0	<2.0	0.119	0.853	60.87	3,537.25	21.6	1.866	0.88	6.78	-22.3
	12/04/19	<1.0	<2.0	<1.0	<2.0	<0.06	0.663	60.90	3,537.22	21.01	1.575	1.01	7.22	-45.6
duplicate	12/04/19	<1.0	<2.0	<1.0	<2.0	0.099	0.609	60.90	3,537.22	21.01	1.575	1.01	7.22	-45.6
	03/14/20	<1.0	<2.0	<1.0	<2.0	0.110	0.663	60.99	3,537.13	20.6	1.566	1.98	7.05	-10.1
duplicate	03/14/20	<1.0	<2.0	<1.0	<2.0	0.108	0.643	60.99	3,537.13	20.6	1.566	1.98	7.05	-10.1
	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.580	61.16	3,536.96	21.9	1.287	0.87	6.87	2.8
duplicate	06/17/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.520	61.16	3,536.96	21.9	1.287	0.87	6.87	2.8
	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.527	61.28	3,536.84	22.07	1.783	1.22	7.13	22.6
duplicate	09/16/20	<1.0	<2.0	<1.0	<2.0	<0.06	0.473	61.28	3,536.84	22.07	1.783	1.22	7.13	22.6
	12/02/20	<1.0	<2.0	<1.0	<2.0	0.095	0.595	61.48	3,536.64	21.3	1.343	1.46	7.23	33.7
duplicate	12/02/20	<1.0	<2.0	<1.0	<2.0	0.097	0.502	61.48	3,536.64	21.3	1.343	1.46	7.23	33.7
	03/24/21	<1.0	<2.0	<1.0	<2.0	<0.06	0.487	61.75	3,536.37	20.9	1.607	1.87	7.03	45.3
duplicate	03/24/21	<1.0	<2.0	<1.0	<2.0	0.110	0.976	61.75	3,536.37	20.9	1.607	1.87	7.03	45.3
NMWQCC Groundwater Standard		**5**	**1000**	**700**	**620**	**NE**	**NE**							

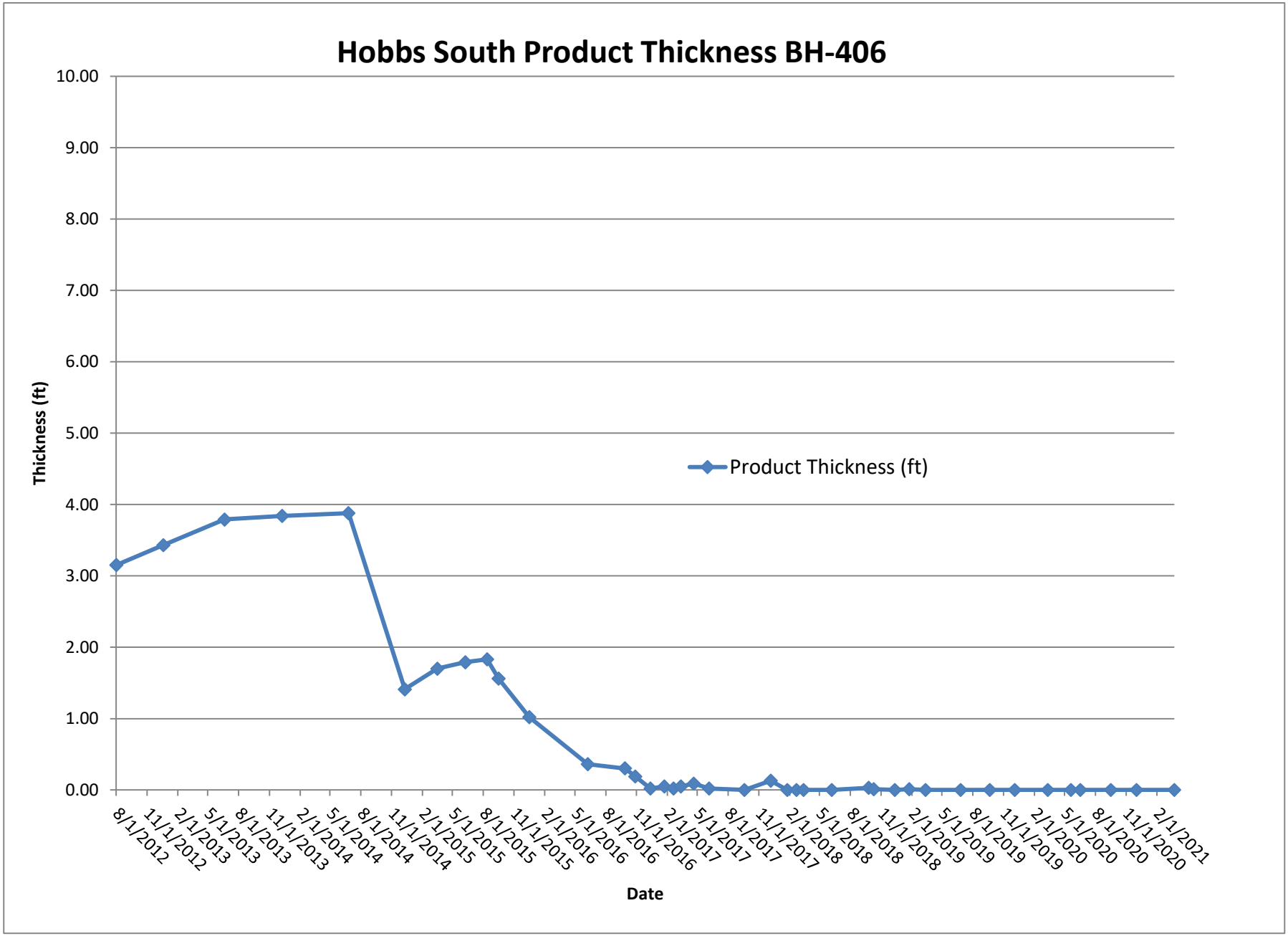
BOLD = Exceeds New Mexico Water Quality Commission (NMWQC) Standarc
µg/L = micrograms/Liter
mg/L = milligrams/Liter
ft-bmp = feet - below measuring point
ft-msl = feet - mean sea level
deg-C = degrees Celcius
mS/cm = milliSiemens/ centimeter
mV = millivolts
DO = Dissolved Oxyger
ORP = oxygen reduiction potentia
< = analyte not detected above reporting limi
BTEX = Benzene, Toluene, Ethylbenzene & Total Xylene
BTEX analyzed by Method 8260C
TPH-GRO = total petroleum hydrocarcbons- gasoline range organic
TPH-DRO = total petroleum hydrocarcbons- diesel gasoline range organic
TPH-GRO analyzed by Method 8015\
TPH-DRO analyzed by Method 8015D
NA = not analyzed
NE = not established
TDS = Total Dissolved Solids
Chloride analyzed by Method E30(
TDS analyzed by Method M2540C

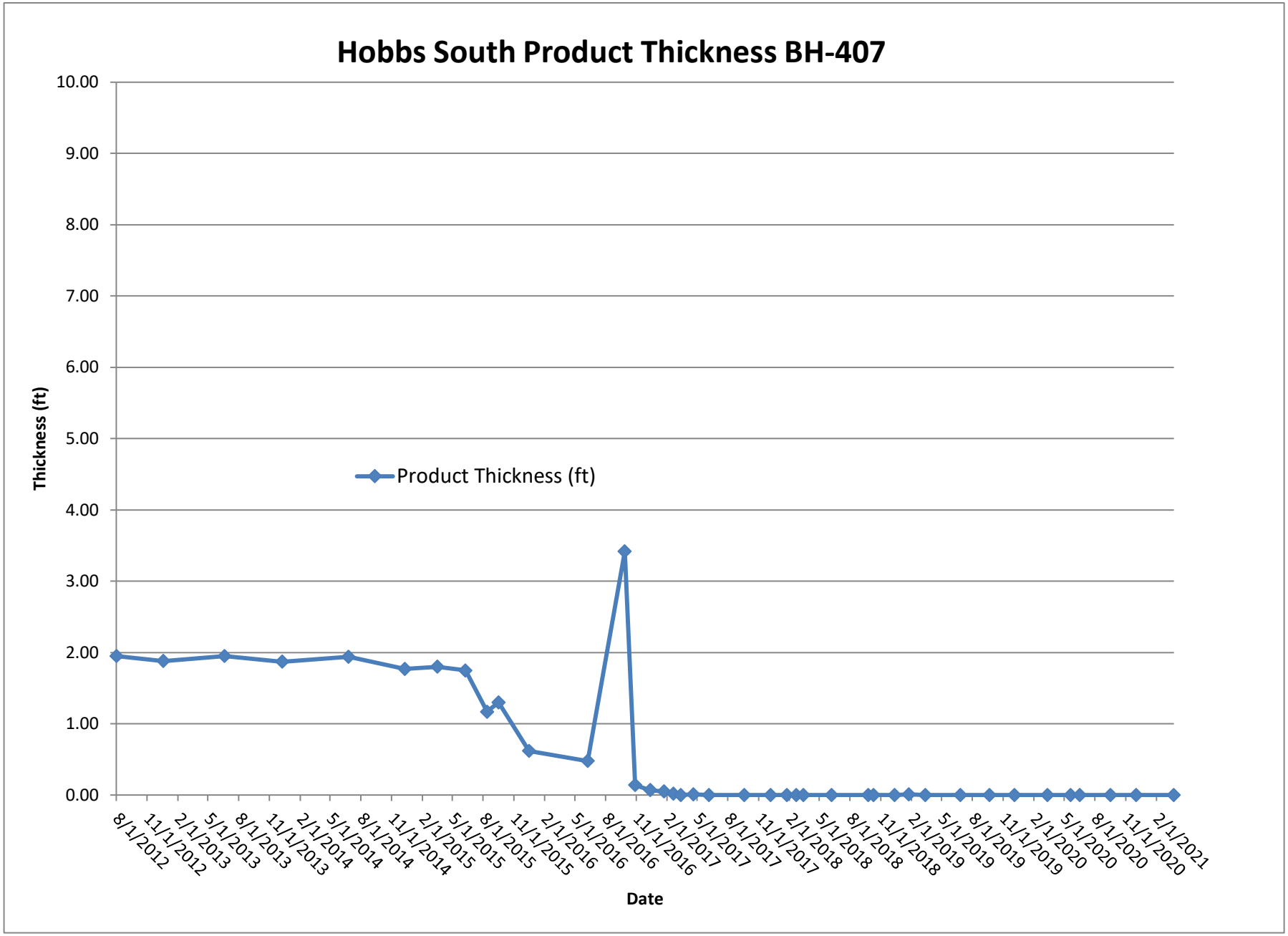
Appendix C
PSH Graphs

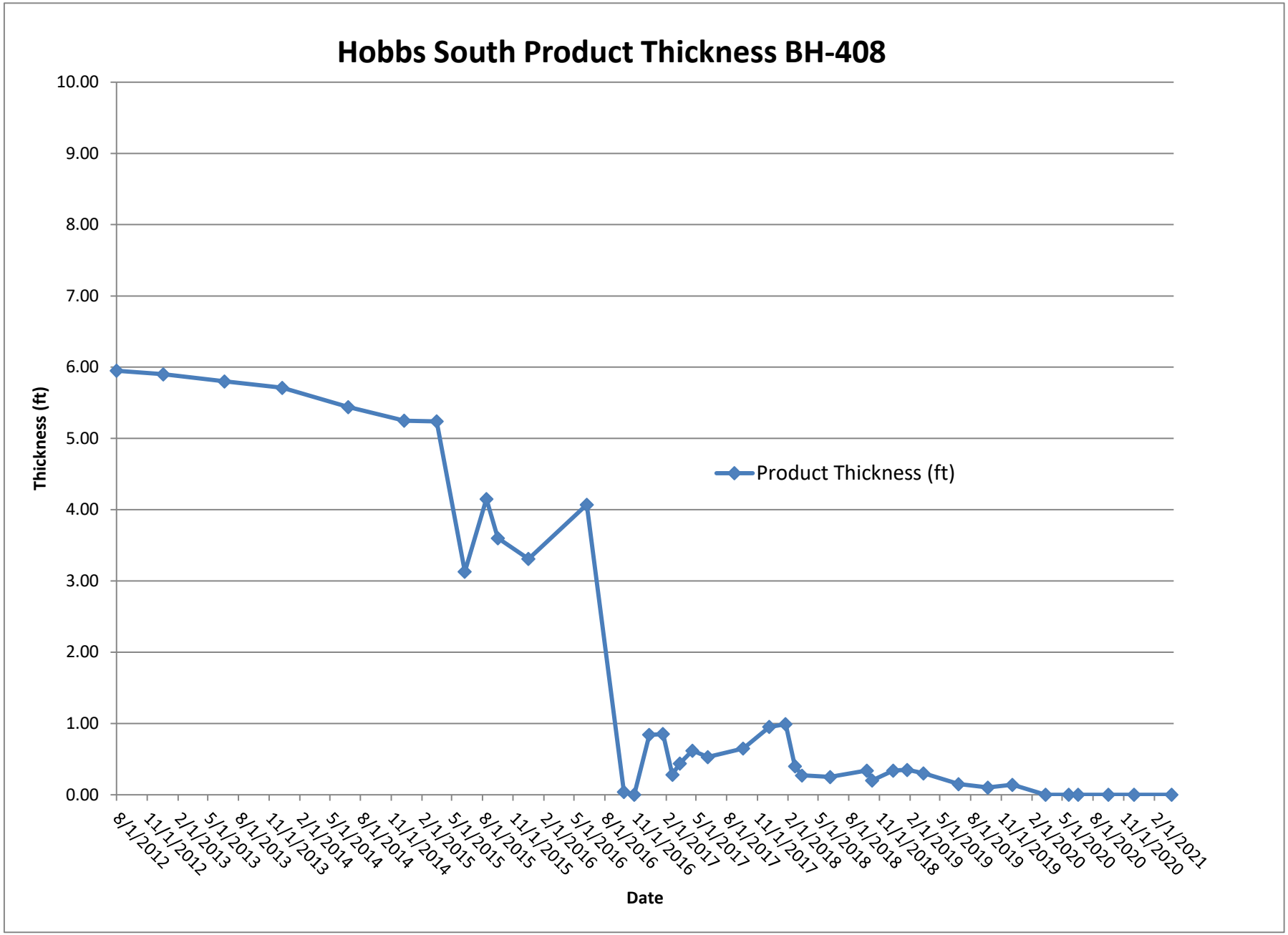


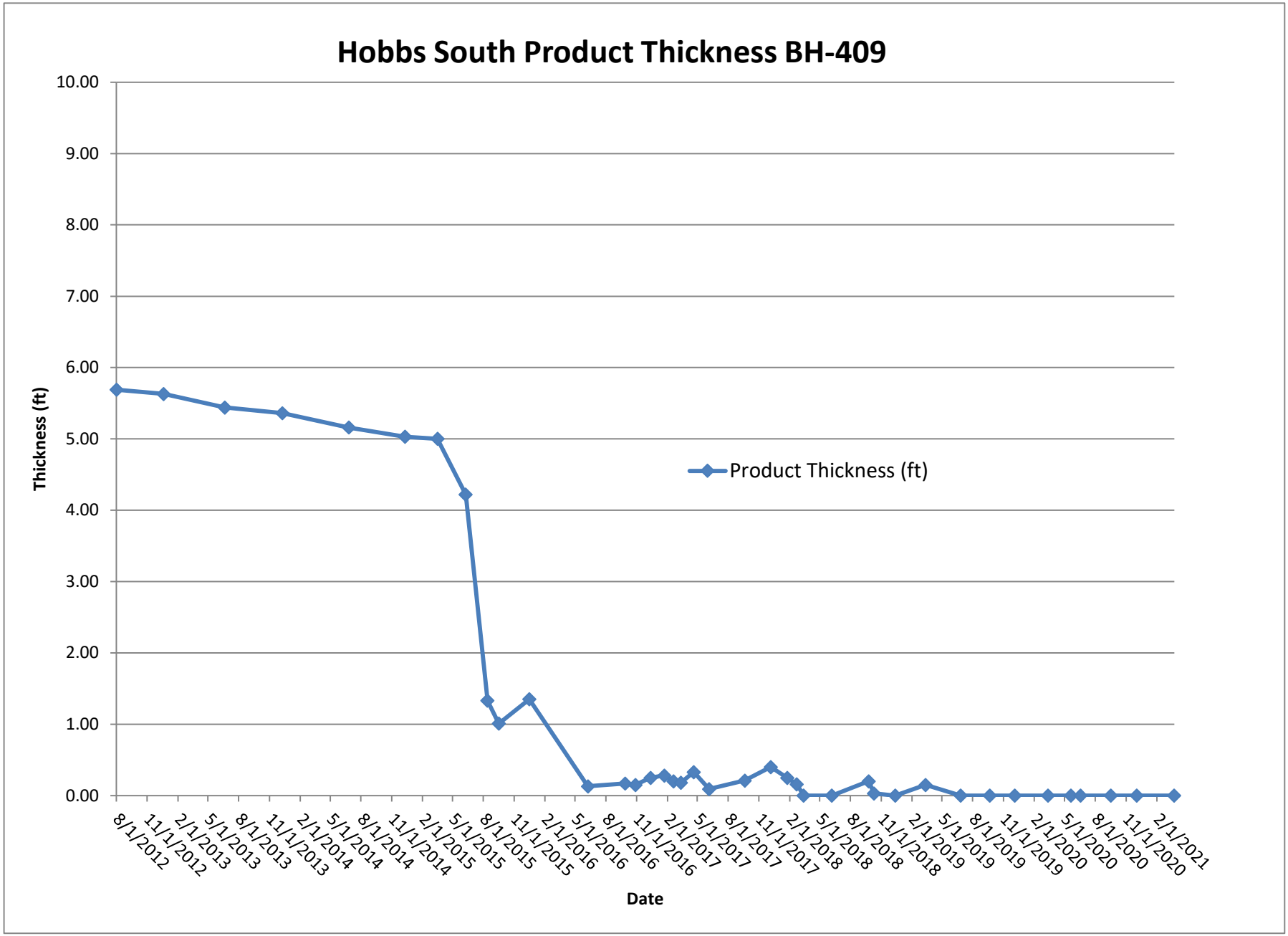


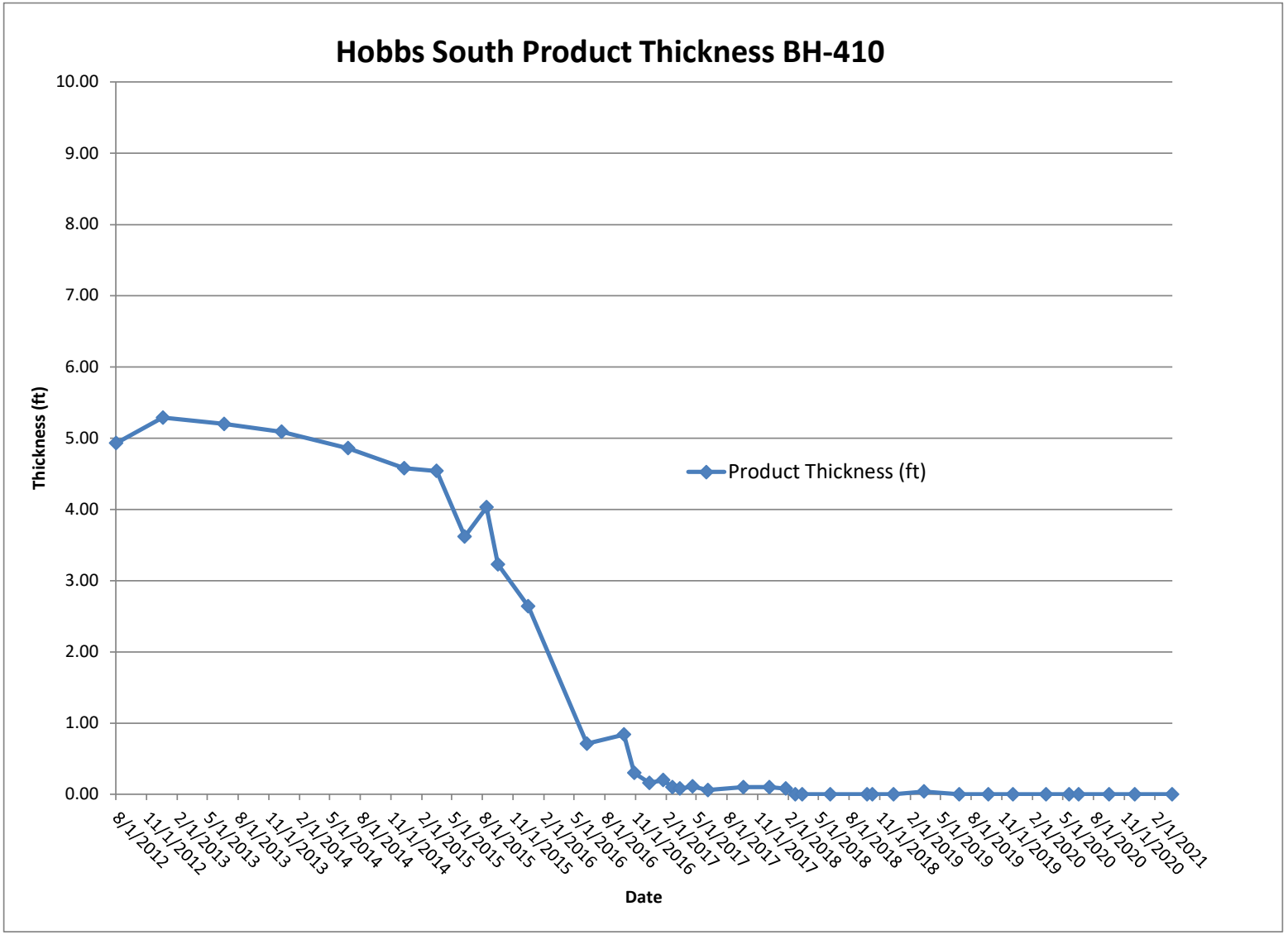


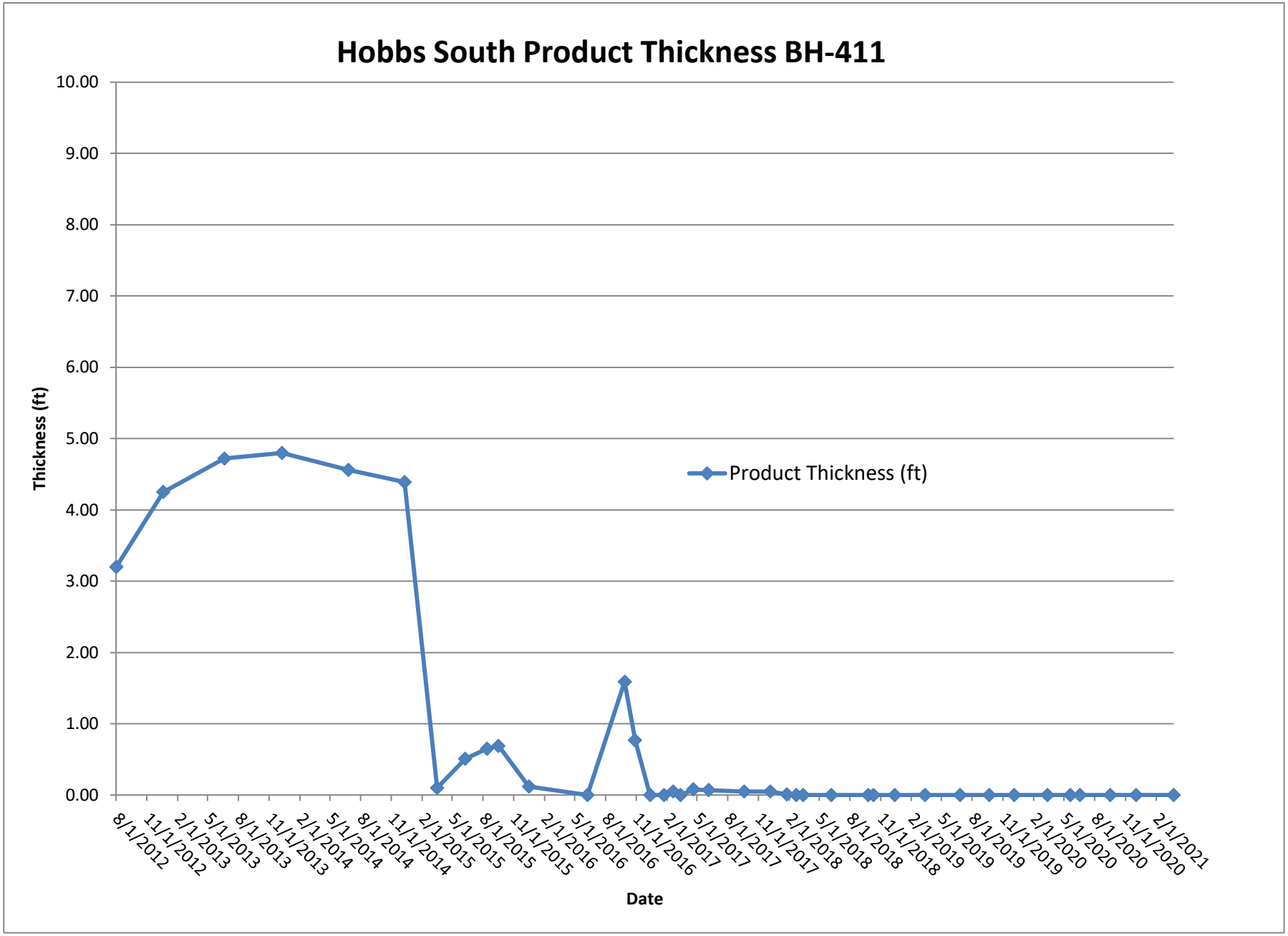












Appendix D
Groundwater Laboratory Reports

March 26, 2020

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

Order No.: 2003140

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 3/17/2020 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: T104704211-19-24

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

Nº 81248
CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 14988 W 6TH AVE GOLDEN
PHONE: 303 941 6156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: BSTEPHENSON
ADDITIONAL REPORT COPIES TO: J CLOUD

DATE: 3/16/2020 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 2003140
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 07526675007 COLLECTOR: B STEPHENSON

Authorize 5% surcharge for TRRP Report? ☐ Yes ☑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
MW-1	01	3/14/20	1400	W		10						X X X X X X	
MW-2	02		1240	W		10						X X X X X X	
MW-3R	03		1335	W		10						X X X X X X	
MW-4	04		1310	W		10						X X X X X X	
MW-4D	05		1310	W		10						X X X X X X	
TRIP	06	3/14/20				1						X (2) GRO	

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ GRO [METHOD 80151] ☐ DRO [METHOD 8105] ☐ VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐ 8270 O-P PEST ☐ 8082 PCB ☐ T PHOS, AMMONIA ☐ 8321 HERB ☐ METALS 200.8 ☐ DISS. METALS ☐ ☐ METALS 6020 ☐ RCRA ☐ TX11 ☐ PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ CHLORIDE ☐ ANIONS ☐ TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ RCI ☐ FLASHPOINT ☐ DGAS ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

RELINQUISHED BY: (Signature) DATE/TIME 3/16/2020 1030 RECEIVED BY: (Signature) TO FEDEX
RELINQUISHED BY: (Signature) FedEx DATE/TIME 3.17.20 9:15 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return 3

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.6/2.8/5.8 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL COC Rev 1 | FEB 2010

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD

Date Received: 3/17/2020

Work Order Number 2003140

Received by: JH

Checklist completed by: Signature 3/17/2020 Date

Reviewed by Initials 3/17/2020 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	3.6 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? No		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted: Date contacted: Person contacted

Contacted by: Regarding:

Comments:

Corrective Action

Page 1 of 1

DHL Analytical, Inc. **Date:** *26-Mar-20*

CLIENT: GHD
Project: Hobbs South
Lab Order: 2003140

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, E300 and Standard Methods.

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

For GRO analysis (batch 95602) an MS/MSD was not performed as per project specifications. An LCS/LCSD was performed instead.

All method blanks, sample duplicates, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For DRO analysis by method M8015D the surrogate recovery for the method blank was slightly below control limits for Isopropylbenzene. This is flagged accordingly in the QC summary report. The remaining surrogate was within control limits. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *26-Mar-20*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	2003140-01
Project No:	078807	**Collection Date:**	03/14/20 02:00 PM
Lab Order:	2003140	**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	03/22/20 11:10 AM
Surr: Isopropylbenzene	99.0	0	47-142		%REC	1	03/22/20 11:10 AM
Surr: Octacosane	79.9	0	51-124		%REC	1	03/22/20 11:10 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/20/20 03:41 PM
Surr: Tetrachlorethene	123	0	74-138		%REC	1	03/20/20 03:41 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.00771	0.00200	0.00500		mg/L	1	03/19/20 10:50 AM
Barium	0.139	0.00300	0.0100		mg/L	1	03/19/20 10:50 AM
Cadmium	0.000313	0.000300	0.00100	J	mg/L	1	03/19/20 10:50 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	03/19/20 10:50 AM
Lead	0.000383	0.000300	0.00100	J	mg/L	1	03/19/20 10:50 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/19/20 10:50 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/19/20 10:50 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/20/20 10:51 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 04:51 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 04:51 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 04:51 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 04:51 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 04:51 PM
Surr: 1,2-Dichloroethane-d4	97.2	0	72-119		%REC	1	03/19/20 04:51 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	03/19/20 04:51 PM
Surr: Dibromofluoromethane	97.7	0	85-115		%REC	1	03/19/20 04:51 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	03/19/20 04:51 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	109	3.00	10.0		mg/L	10	03/24/20 01:09 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	655	10.0	10.0		mg/L	1	03/20/20 03:15 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: *26-Mar-20*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	2003140-02
Project No:	078807	**Collection Date:**	03/14/20 12:40 PM
Lab Order:	2003140	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.388	0.148	0.185		mg/L	1	03/22/20 11:19 AM
Surr: Isopropylbenzene	84.1	0	47-142		%REC	1	03/22/20 11:19 AM
Surr: Octacosane	92.9	0	51-124		%REC	1	03/22/20 11:19 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/23/20 01:08 PM
Surr: Tetrachlorethene	126	0	74-138		%REC	1	03/23/20 01:08 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0132	0.00200	0.00500		mg/L	1	03/19/20 10:54 AM
Barium	0.458	0.00300	0.0100		mg/L	1	03/19/20 10:54 AM
Cadmium	0.00102	0.000300	0.00100		mg/L	1	03/19/20 10:54 AM
Chromium	0.0154	0.00200	0.00500		mg/L	1	03/19/20 10:54 AM
Lead	0.00550	0.000300	0.00100		mg/L	1	03/19/20 10:54 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/19/20 10:54 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/19/20 10:54 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/20/20 11:02 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 05:15 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 05:15 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 05:15 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 05:15 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 05:15 PM
Surr: 1,2-Dichloroethane-d4	97.2	0	72-119		%REC	1	03/19/20 05:15 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	03/19/20 05:15 PM
Surr: Dibromofluoromethane	97.2	0	85-115		%REC	1	03/19/20 05:15 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	03/19/20 05:15 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	111	3.00	10.0		mg/L	10	03/24/20 01:25 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	752	10.0	10.0		mg/L	1	03/20/20 03:15 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: *26-Mar-20*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	2003140-03
Project No:	078807	**Collection Date:**	03/14/20 01:35 PM
Lab Order:	2003140	**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	03/22/20 11:28 AM
Surr: Isopropylbenzene	92.6	0	47-142		%REC	1	03/22/20 11:28 AM
Surr: Octacosane	82.5	0	51-124		%REC	1	03/22/20 11:28 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/23/20 01:33 PM
Surr: Tetrachlorethene	126	0	74-138		%REC	1	03/23/20 01:33 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.116	0.00200	0.00500		mg/L	1	03/19/20 10:56 AM
Barium	0.408	0.00300	0.0100		mg/L	1	03/19/20 10:56 AM
Cadmium	0.000558	0.000300	0.00100	J	mg/L	1	03/19/20 10:56 AM
Chromium	0.00730	0.00200	0.00500		mg/L	1	03/19/20 10:56 AM
Lead	0.00360	0.000300	0.00100		mg/L	1	03/19/20 10:56 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/19/20 10:56 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/19/20 10:56 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/20/20 11:04 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 05:38 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 05:38 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 05:38 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 05:38 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 05:38 PM
Surr: 1,2-Dichloroethane-d4	95.7	0	72-119		%REC	1	03/19/20 05:38 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	03/19/20 05:38 PM
Surr: Dibromofluoromethane	97.7	0	85-115		%REC	1	03/19/20 05:38 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	03/19/20 05:38 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	70.7	3.00	10.0		mg/L	10	03/24/20 01:42 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	629	10.0	10.0		mg/L	1	03/20/20 03:15 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: *26-Mar-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	2003140-04
Project No:	078807	**Collection Date:**	03/14/20 01:10 PM
Lab Order:	2003140	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.663	0.150	0.187		mg/L	1	03/22/20 11:37 AM
Surr: Isopropylbenzene	99.5	0	47-142		%REC	1	03/22/20 11:37 AM
Surr: Octacosane	95.8	0	51-124		%REC	1	03/22/20 11:37 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.110	0.0600	0.100		mg/L	1	03/23/20 01:57 PM
Surr: Tetrachlorethene	127	0	74-138		%REC	1	03/23/20 01:57 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0665	0.00200	0.00500		mg/L	1	03/19/20 10:59 AM
Barium	0.411	0.00300	0.0100		mg/L	1	03/19/20 10:59 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 10:59 AM
Chromium	0.00784	0.00200	0.00500		mg/L	1	03/19/20 10:59 AM
Lead	0.00177	0.000300	0.00100		mg/L	1	03/19/20 10:59 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/19/20 10:59 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/19/20 10:59 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/20/20 11:07 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 06:02 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 06:02 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 06:02 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 06:02 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 06:02 PM
Surr: 1,2-Dichloroethane-d4	96.4	0	72-119		%REC	1	03/19/20 06:02 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	03/19/20 06:02 PM
Surr: Dibromofluoromethane	98.3	0	85-115		%REC	1	03/19/20 06:02 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	03/19/20 06:02 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	112	3.00	10.0		mg/L	10	03/24/20 01:58 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	691	10.0	10.0		mg/L	1	03/20/20 03:15 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: *26-Mar-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	2003140-05
Project No:	078807	**Collection Date:**	03/14/20 01:10 PM
Lab Order:	2003140	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.643	0.149	0.186		mg/L	1	03/22/20 11:46 AM
Surr: Isopropylbenzene	91.6	0	47-142		%REC	1	03/22/20 11:46 AM
Surr: Octacosane	101	0	51-124		%REC	1	03/22/20 11:46 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.108	0.0600	0.100		mg/L	1	03/23/20 02:21 PM
Surr: Tetrachlorethene	117	0	74-138		%REC	1	03/23/20 02:21 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0532	0.00200	0.00500		mg/L	1	03/19/20 11:01 AM
Barium	0.399	0.00300	0.0100		mg/L	1	03/19/20 11:01 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 11:01 AM
Chromium	0.00288	0.00200	0.00500	J	mg/L	1	03/19/20 11:01 AM
Lead	0.000828	0.000300	0.00100	J	mg/L	1	03/19/20 11:01 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/19/20 11:01 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/19/20 11:01 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/20/20 11:09 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 06:25 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 06:25 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 06:25 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 06:25 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 06:25 PM
Surr: 1,2-Dichloroethane-d4	96.2	0	72-119		%REC	1	03/19/20 06:25 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	03/19/20 06:25 PM
Surr: Dibromofluoromethane	99.3	0	85-115		%REC	1	03/19/20 06:25 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	03/19/20 06:25 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	113	3.00	10.0		mg/L	10	03/24/20 02:14 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	701	10.0	10.0		mg/L	1	03/20/20 03:15 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: *26-Mar-20*

CLIENT:	GHD	**Client Sample ID:**	TRIP
Project:	Hobbs South	**Lab ID:**	2003140-06
Project No:	078807	**Collection Date:**	03/14/20
Lab Order:	2003140	**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	03/20/20 01:22 PM
Surr: Tetrachlorethene	126	0	74-138		%REC	1	03/20/20 01:22 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 04:04 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 04:04 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 04:04 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/20 04:04 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/20 04:04 PM
Surr: 1,2-Dichloroethane-d4	96.2	0	72-119		%REC	1	03/19/20 04:04 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	03/19/20 04:04 PM
Surr: Dibromofluoromethane	95.8	0	85-115		%REC	1	03/19/20 04:04 PM
Surr: Toluene-d8	103	0	81-120		%REC	1	03/19/20 04:04 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:** *26-Mar-20*

CLIENT: GHD
Work Order: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_200322A

The QC data in batch 95462 applies to the following samples: 2003140-01E, 2003140-02E, 2003140-03E, 2003140-04E, 2003140-05E

Sample ID: **MB-95462** Batch ID: **95462** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_200322A** Analysis Date: **3/22/2020 9:58:24 AM** Prep Date: **3/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0375		0.1000		37.5	47	142			S
Surr: Octacosane	0.0569		0.1000		56.9	51	124			

Sample ID: **LCS-95462** Batch ID: **95462** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_200322A** Analysis Date: **3/22/2020 10:07:28 AM** Prep Date: **3/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.06	0.100	1.250	0	85.1	50	114			
Surr: Isopropylbenzene	0.0624		0.1000		62.4	47	142			
Surr: Octacosane	0.0813		0.1000		81.3	51	124			

Sample ID: **LCSD-95462** Batch ID: **95462** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_200322A** Analysis Date: **3/22/2020 10:16:31 AM** Prep Date: **3/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.12	0.100	1.250	0	89.9	50	114	5.54	30	
Surr: Isopropylbenzene	0.0866		0.1000		86.6	47	142	0	0	
Surr: Octacosane	0.0836		0.1000		83.6	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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200320A

The QC data in batch 95551 applies to the following samples: 2003140-01B, 2003140-06B

Sample ID: **LCS-95551**	Batch ID: **95551**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_200320A**	Analysis Date: **3/20/2020 10:37:13 AM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.71	0.100	2.500	0	108	67	136			
Surr: Tetrachlorethene	0.452		0.4000		113	74	138			

Sample ID: **LCSD-95551**	Batch ID: **95551**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_200320A**	Analysis Date: **3/20/2020 11:00:23 AM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.69	0.100	2.500	0	108	67	136	0.482	30	
Surr: Tetrachlorethene	0.467		0.4000		117	74	138	0	0	

Sample ID: **MB-95551**	Batch ID: **95551**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_200320A**	Analysis Date: **3/20/2020 12:11:10 PM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.455		0.4000		114	74	138			

Sample ID: **2003111-01BMS**	Batch ID: **95551**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_200320A**	Analysis Date: **3/20/2020 4:27:55 PM**	Prep Date: **3/20/2020**

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	0.487		0.4000		122	74	138			

Sample ID: **2003111-01BMSD**	Batch ID: **95551**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_200320A**	Analysis Date: **3/20/2020 4:51:37 PM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.79	0.100	2.500	0	112	67	136	10.0	30	
Surr: Tetrachlorethene	0.486		0.4000		122	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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200323A

The QC data in batch 95602 applies to the following samples: 2003140-02B, 2003140-03B, 2003140-04B, 2003140-05B

Sample ID: **LCS-95602**	Batch ID: **95602**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_200323A**	Analysis Date: **3/23/2020 11:07:28 AM**	Prep Date: **3/23/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.58	0.100	2.500	0	103	67	136			
Surr: Tetrachlorethene	0.427		0.4000		107	74	138			

Sample ID: **LCSD-95602**	Batch ID: **95602**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_200323A**	Analysis Date: **3/23/2020 11:31:47 AM**	Prep Date: **3/23/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.64	0.100	2.500	0	106	67	136	2.48	30	
Surr: Tetrachlorethene	0.457		0.4000		114	74	138	0	0	

Sample ID: **MB-95602**	Batch ID: **95602**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_200323A**	Analysis Date: **3/23/2020 12:44:58 PM**	Prep Date: **3/23/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.477		0.4000		119	74	138			

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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_200320A

The QC data in batch 95522 applies to the following samples: 2003140-01C, 2003140-02C, 2003140-03C, 2003140-04C, 2003140-05C

Sample ID: **MB-95522**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 10:44:23 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-95522**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 10:46:39 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00187	0.000200	0.00200	0	93.5	85	115			

Sample ID: **LCSD-95522**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 10:48:55 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00195	0.000200	0.00200	0	97.5	85	115	4.19	15	

Sample ID: **2003140-01C MS**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 10:53:29 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	80	120			

Sample ID: **2003140-01C MSD**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 10:55:44 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00193	0.000200	0.00200	0	96.5	80	120	0.517	15	

Sample ID: **2003140-01C SD**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 10:58:00 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID: **2003140-01C PDS**	Batch ID: **95522**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_200320A**	Analysis Date: **3/20/2020 11:00:15 AM**	Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00234	0.000200	0.00250	0	93.6	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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_200319A

The QC data in batch 95490 applies to the following samples: 2003140-01C, 2003140-02C, 2003140-03C, 2003140-04C, 2003140-05C

Sample ID: **MB-95490** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 10:41:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								

Sample ID: **LCS-95490** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 10:43:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.203	0.00500	0.200	0	101	80	120			
Barium	0.198	0.0100	0.200	0	98.8	80	120			
Cadmium	0.201	0.00100	0.200	0	101	80	120			
Chromium	0.195	0.00500	0.200	0	97.5	80	120			
Lead	0.194	0.00100	0.200	0	96.8	80	120			
Selenium	0.205	0.00500	0.200	0	103	80	120			
Silver	0.197	0.00200	0.200	0	98.6	80	120			

Sample ID: **LCSD-95490** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 10:45:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.202	0.00500	0.200	0	101	80	120	0.346	15	
Barium	0.200	0.0100	0.200	0	100	80	120	1.19	15	
Cadmium	0.201	0.00100	0.200	0	101	80	120	0.041	15	
Chromium	0.197	0.00500	0.200	0	98.3	80	120	0.833	15	
Lead	0.196	0.00100	0.200	0	97.9	80	120	1.10	15	
Selenium	0.210	0.00500	0.200	0	105	80	120	2.27	15	
Silver	0.197	0.00200	0.200	0	98.5	80	120	0.162	15	

Sample ID: **2003140-01C SD** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 10:52:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0100	0.0250	0	0.00771				0	20	
Barium	0.139	0.0500	0	0.139				0.325	20	
Cadmium	<0.00150	0.00500	0	0.000313				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	

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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_200319A

Sample ID: **2003140-01C SD** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 10:52:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.00150	0.00500	0	0.000383				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Silver	<0.00500	0.0100	0	0				0	20	

Sample ID: **2003140-01C PDS** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 11:14:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.196	0.00500	0.200	0.00771	94.2	75	125			
Barium	0.332	0.0100	0.200	0.139	96.8	75	125			
Cadmium	0.201	0.00100	0.200	0.000313	100	75	125			
Chromium	0.200	0.00500	0.200	0	100	75	125			
Lead	0.197	0.00100	0.200	0.000383	98.1	75	125			
Selenium	0.184	0.00500	0.200	0	92.0	75	125			
Silver	0.197	0.00200	0.200	0	98.4	75	125			

Sample ID: **2003140-01C MS** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 11:16:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0.00771	96.6	75	125			
Barium	0.331	0.0100	0.200	0.139	96.1	75	125			
Cadmium	0.199	0.00100	0.200	0.000313	99.5	75	125			
Chromium	0.197	0.00500	0.200	0	98.4	75	125			
Lead	0.194	0.00100	0.200	0.000383	96.8	75	125			
Selenium	0.186	0.00500	0.200	0	93.2	75	125			
Silver	0.196	0.00200	0.200	0	98.2	75	125			

Sample ID: **2003140-01C MSD** Batch ID: **95490** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_200319A** Analysis Date: **3/19/2020 11:18:00 AM** Prep Date: **3/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.202	0.00500	0.200	0.00771	96.9	75	125	0.299	15	
Barium	0.329	0.0100	0.200	0.139	95.1	75	125	0.601	15	
Cadmium	0.198	0.00100	0.200	0.000313	98.7	75	125	0.829	15	
Chromium	0.193	0.00500	0.200	0	96.7	75	125	1.71	15	
Lead	0.195	0.00100	0.200	0.000383	97.2	75	125	0.381	15	
Selenium	0.187	0.00500	0.200	0	93.4	75	125	0.157	15	
Silver	0.195	0.00200	0.200	0	97.4	75	125	0.769	15	

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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_200319A

The QC data in batch 95534 applies to the following samples: 2003140-01A, 2003140-02A, 2003140-03A, 2003140-04A, 2003140-05A, 2003140-06A

Sample ID: **LCS-95534** Batch ID: **95534** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_200319A** Analysis Date: **3/19/2020 3:17:00 PM** Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0238	0.00100	0.0232	0	103	81	122			
Ethylbenzene	0.0231	0.00100	0.0232	0	99.6	80	120			
m,p-Xylene	0.0470	0.00200	0.0464	0	101	80	120			
o-Xylene	0.0238	0.00100	0.0232	0	103	80	120			
Toluene	0.0238	0.00200	0.0232	0	103	80	120			
Surr: 1,2-Dichloroethane-d4	206		200.0		103	72	119			
Surr: 4-Bromofluorobenzene	199		200.0		99.6	76	119			
Surr: Dibromofluoromethane	201		200.0		101	85	115			
Surr: Toluene-d8	199		200.0		99.5	81	120			

Sample ID: **MB-95534** Batch ID: **95534** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_200319A** Analysis Date: **3/19/2020 3:41:00 PM** Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	190		200.0		95.0	72	119			
Surr: 4-Bromofluorobenzene	208		200.0		104	76	119			
Surr: Dibromofluoromethane	195		200.0		97.3	85	115			
Surr: Toluene-d8	205		200.0		102	81	120			

Sample ID: **2003179-04AMS** Batch ID: **95534** TestNo: **SW8260D** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_200319A** Analysis Date: **3/19/2020 11:32:00 PM** Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0240	0.00100	0.0232	0	103	81	122			
Ethylbenzene	0.0227	0.00100	0.0232	0	98.0	80	120			
m,p-Xylene	0.0460	0.00200	0.0464	0	99.1	80	120			
o-Xylene	0.0232	0.00100	0.0232	0	99.9	80	120			
Toluene	0.0236	0.00200	0.0232	0	102	80	120			
Surr: 1,2-Dichloroethane-d4	207		200.0		104	72	119			
Surr: 4-Bromofluorobenzene	196		200.0		98.2	76	119			
Surr: Dibromofluoromethane	201		200.0		101	85	115			
Surr: Toluene-d8	195		200.0		97.4	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

CLIENT: GHD
Work Order: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_200319A

Sample ID: **2003179-04AMSD** Batch ID: **95534** TestNo: **SW8260D** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_200319A** Analysis Date: **3/19/2020 11:55:00 PM** Prep Date: **3/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0241	0.00100	0.0232	0	104	81	120	0.432	20	
Ethylbenzene	0.0226	0.00100	0.0232	0	97.4	80	120	0.556	20	
m,p-Xylene	0.0458	0.00200	0.0464	0	98.8	80	120	0.379	20	
o-Xylene	0.0230	0.00100	0.0232	0	99.0	80	120	0.936	20	
Toluene	0.0236	0.00200	0.0232	0	102	80	120	0.246	20	
Surr: 1,2-Dichloroethane-d4	206		200.0		103	72	119	0	0	
Surr: 4-Bromofluorobenzene	194		200.0		96.8	76	119	0	0	
Surr: Dibromofluoromethane	202		200.0		101	85	115	0	0	
Surr: Toluene-d8	199		200.0		99.3	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

CLIENT: GHD
Work Order: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_200324A

The QC data in batch 95612 applies to the following samples: 2003140-01D, 2003140-02D, 2003140-03D, 2003140-04D, 2003140-05D

Sample ID: **MB-95612** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 10:32:37 AM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-95612** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 10:48:37 AM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.3	1.00	10.00	0	103	90	110			

Sample ID: **LCSD-95612** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 11:04:37 AM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.3	1.00	10.00	0	103	90	110	0.106	20	

Sample ID: **2003140-01DMS** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 6:33:22 PM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	299	10.0	200.0	109.4	94.6	90	110			

Sample ID: **2003140-01DMSD** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 6:49:22 PM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	302	10.0	200.0	109.4	96.5	90	110	1.27	20	

Sample ID: **2003140-02DMS** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 7:05:22 PM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	294	10.0	200.0	110.7	91.5	90	110			

Sample ID: **2003140-02DMSD** Batch ID: **95612** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_200324A** Analysis Date: **3/24/2020 7:21:22 PM** Prep Date: **3/24/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	302	10.0	200.0	110.7	95.7	90	110	2.84	20	

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: 2003140
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: **WC_200320A**

The QC data in batch 95552 applies to the following samples: 2003140-01D, 2003140-02D, 2003140-03D, 2003140-04D, 2003140-05D

Sample ID: **MB-95552**	Batch ID: **95552**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_200320A**	Analysis Date: **3/20/2020 3:15:00 PM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-95552**	Batch ID: **95552**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_200320A**	Analysis Date: **3/20/2020 3:15:00 PM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	740	10.0	745.6	0	99.2	90	113			

Sample ID: **2003148-01A-DUP**	Batch ID: **95552**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_200320A**	Analysis Date: **3/20/2020 3:15:00 PM**	Prep Date: **3/20/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1040	50.0	0	1035				0	5	

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

June 25, 2020

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

Order No.: 2006204

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 6/18/2020 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: T104704211-20-25

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 71167

CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 14998 W 6th AVE #800, GOLDEN 80403
PHONE: 303 941 6156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: B STEPHENSON
ADDITIONAL REPORT COPIES TO: J CLOUD

DATE: 6/17/20 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 2006204
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 11211501 COLLECTOR: B STEPHENSON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021]	TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑	GRO [METHOD 8015] DRO [METHOD 8105]	VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑	SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑	8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑	8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑	8321 HERB ❑ T PHOS, AMMONIA ❑	METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑	RCRA ❑ TX11 ❑	PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑	CHLORIDE ❑ ANIONS ❑	TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑	TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑	RCI ❑ FLASHPOINT ❑ DGAS ❑	TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑	FIELD NOTES
MW-1	01	6/17/20	0830	W		10						X	X						X		X		X					
MW-2	02		0900	W		10						X	X						X		X		X					
MW-3R	03		0925	W		10						X	X						X		X		X					
MW-4	04		1000	W		10						X	X						X		X		X					
MW-5	05	6/17/20	1000	W		10						X	X						X		X		X					
TRIP	06			W								X	X (BTEX)															

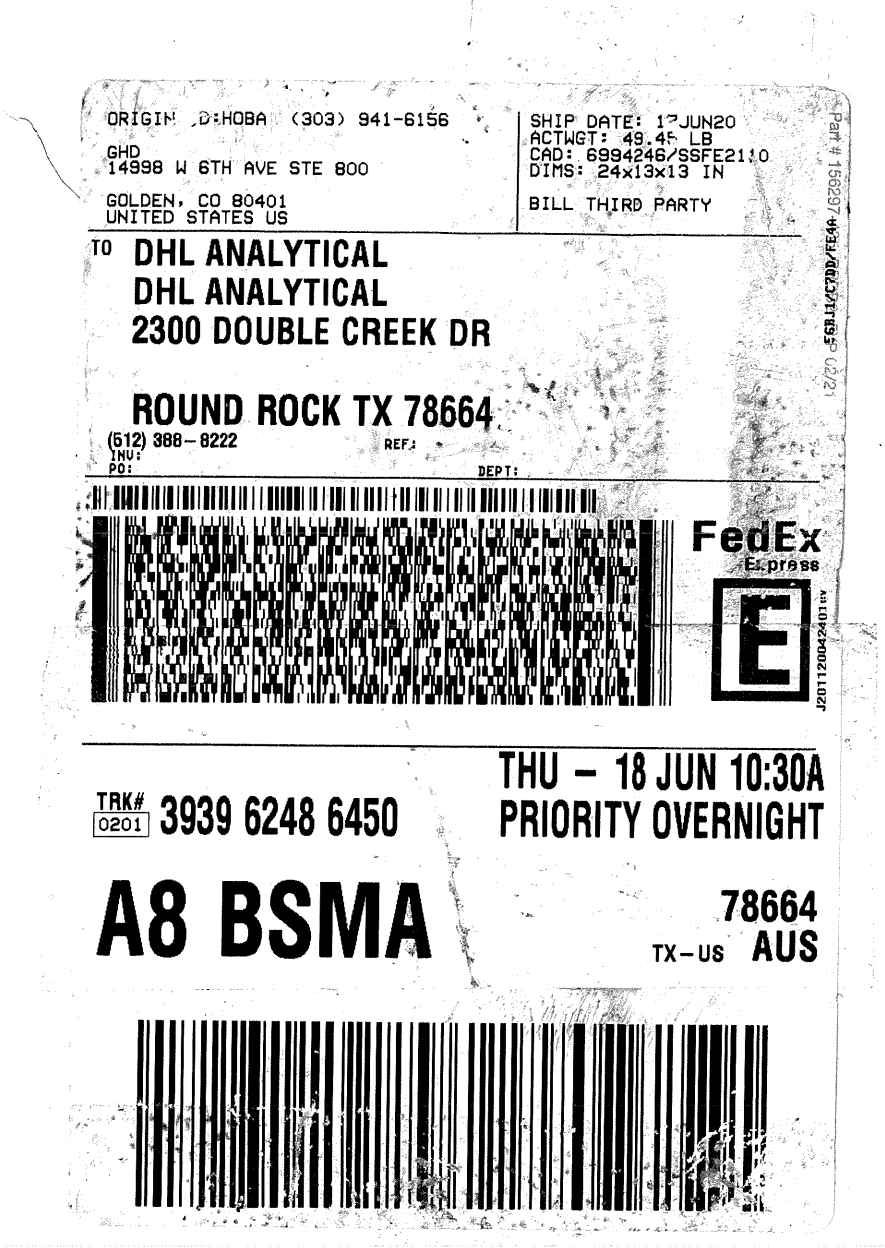
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	6/17/20 1430	TO FEDEX
FedEx	6.18.20 09:11	[signature]
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑

LABORATORY USE ONLY:
RECEIVING TEMP: 2.8 THERM #: 78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☒ NOT USED
CARRIER: ❑ LONE STAR ☒ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL COC Rev 1 | FEB 2010



ORIGIN ID:HOBA (303) 941-6156
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 17JUN20
ACTWGT: 49.45 LB
CAD: 6994246/SSFE2110
DIMS: 24x13x13 IN
BILL THIRD PARTY

TO DHL ANALYTICAL
DHL ANALYTICAL
2300 DOUBLE CREEK DR

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

FedEx Express

TRK# 0201 3939 6248 6450

THU - 18 JUN 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD Date Received: 6/18/2020

Work Order Number 2006204 Received by: JH

Checklist completed by: _____ 6/18/2020 Reviewed by _____ 6/18/2020
Signature | Date | Initials | Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	2.8 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? no		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted: _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

DHL Analytical, Inc. **Date:** *25-Jun-20*

CLIENT: GHD
Project: Hobbs South
Lab Order: 2006204

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, E300 and Standard Methods.

For Volatiles analysis an MS/MSD was not performed due to insufficient sample volume. The QC includes the method blank and LCS.

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

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

DHL Analytical, Inc.

Date: *25-Jun-20*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	2006204-01
Project No:	11211501	**Collection Date:**	06/17/20 08:30 AM
Lab Order:	2006204	**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	06/23/20 12:36 PM
Surr: Isopropylbenzene	63.4	0	47-142		%REC	1	06/23/20 12:36 PM
Surr: Octacosane	80.6	0	51-124		%REC	1	06/23/20 12:36 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/22/20 05:33 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	06/22/20 05:33 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.00823	0.00200	0.00500		mg/L	1	06/23/20 11:40 AM
Barium	0.106	0.00300	0.0100		mg/L	1	06/23/20 11:40 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/23/20 11:40 AM
Chromium	0.00945	0.00200	0.00500		mg/L	1	06/23/20 11:40 AM
Lead	0.00304	0.000300	0.00100		mg/L	1	06/23/20 11:40 AM
Selenium	0.00826	0.00200	0.00500		mg/L	1	06/23/20 11:40 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	06/23/20 11:40 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/22/20 01:02 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 09:23 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 09:23 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 09:23 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 09:23 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 09:23 PM
Surr: 1,2-Dichloroethane-d4	116	0	72-119		%REC	1	06/22/20 09:23 PM
Surr: 4-Bromofluorobenzene	98.0	0	76-119		%REC	1	06/22/20 09:23 PM
Surr: Dibromofluoromethane	109	0	85-115		%REC	1	06/22/20 09:23 PM
Surr: Toluene-d8	93.2	0	81-120		%REC	1	06/22/20 09:23 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	61.8	3.00	10.0		mg/L	10	06/18/20 02:11 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	669	10.0	10.0		mg/L	1	06/22/20 03:20 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: *25-Jun-20*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	2006204-02
Project No:	11211501	**Collection Date:**	06/17/20 09:00 AM
Lab Order:	2006204	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.350	0.148	0.185		mg/L	1	06/23/20 12:45 PM
Surr: Isopropylbenzene	62.6	0	47-142		%REC	1	06/23/20 12:45 PM
Surr: Octacosane	85.0	0	51-124		%REC	1	06/23/20 12:45 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/23/20 09:56 AM
Surr: Tetrachlorethene	104	0	74-138		%REC	1	06/23/20 09:56 AM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0101	0.00200	0.00500		mg/L	1	06/23/20 11:42 AM
Barium	0.469	0.00300	0.0100		mg/L	1	06/23/20 11:42 AM
Cadmium	0.00146	0.000300	0.00100		mg/L	1	06/23/20 11:42 AM
Chromium	0.0103	0.00200	0.00500		mg/L	1	06/23/20 11:42 AM
Lead	0.00666	0.000300	0.00100		mg/L	1	06/23/20 11:42 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:42 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	06/23/20 11:42 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/22/20 01:09 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 09:48 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 09:48 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 09:48 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 09:48 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 09:48 PM
Surr: 1,2-Dichloroethane-d4	117	0	72-119		%REC	1	06/22/20 09:48 PM
Surr: 4-Bromofluorobenzene	97.5	0	76-119		%REC	1	06/22/20 09:48 PM
Surr: Dibromofluoromethane	110	0	85-115		%REC	1	06/22/20 09:48 PM
Surr: Toluene-d8	93.2	0	81-120		%REC	1	06/22/20 09:48 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	109	3.00	10.0		mg/L	10	06/18/20 02:27 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	734	10.0	10.0		mg/L	1	06/22/20 03:20 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: *25-Jun-20*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	2006204-03
Project No:	11211501	**Collection Date:**	06/17/20 09:25 AM
Lab Order:	2006204	**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	06/23/20 12:54 PM
Surr: Isopropylbenzene	68.1	0	47-142		%REC	1	06/23/20 12:54 PM
Surr: Octacosane	80.1	0	51-124		%REC	1	06/23/20 12:54 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/22/20 07:10 PM
Surr: Tetrachlorethene	117	0	74-138		%REC	1	06/22/20 07:10 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.176	0.00200	0.00500		mg/L	1	06/23/20 11:44 AM
Barium	0.368	0.00300	0.0100		mg/L	1	06/23/20 11:44 AM
Cadmium	0.000682	0.000300	0.00100	J	mg/L	1	06/23/20 11:44 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:44 AM
Lead	0.00329	0.000300	0.00100		mg/L	1	06/23/20 11:44 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:44 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	06/23/20 11:44 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/22/20 01:11 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 10:13 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 10:13 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 10:13 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 10:13 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 10:13 PM
Surr: 1,2-Dichloroethane-d4	116	0	72-119		%REC	1	06/22/20 10:13 PM
Surr: 4-Bromofluorobenzene	98.8	0	76-119		%REC	1	06/22/20 10:13 PM
Surr: Dibromofluoromethane	110	0	85-115		%REC	1	06/22/20 10:13 PM
Surr: Toluene-d8	91.9	0	81-120		%REC	1	06/22/20 10:13 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	71.5	3.00	10.0		mg/L	10	06/18/20 02:43 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	609	10.0	10.0		mg/L	1	06/22/20 03:20 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: *25-Jun-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	2006204-04
Project No:	11211501	**Collection Date:**	06/17/20 10:00 AM
Lab Order:	2006204	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.580	0.148	0.185		mg/L	1	06/23/20 01:03 PM
Surr: Isopropylbenzene	68.2	0	47-142		%REC	1	06/23/20 01:03 PM
Surr: Octacosane	92.8	0	51-124		%REC	1	06/23/20 01:03 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/22/20 07:34 PM
Surr: Tetrachlorethene	74.0	0	74-138		%REC	1	06/22/20 07:34 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0400	0.00200	0.00500		mg/L	1	06/23/20 11:46 AM
Barium	0.403	0.00300	0.0100		mg/L	1	06/23/20 11:46 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/23/20 11:46 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:46 AM
Lead	0.00105	0.000300	0.00100		mg/L	1	06/23/20 11:46 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:46 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	06/23/20 11:46 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/22/20 01:13 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 10:38 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 10:38 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 10:38 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 10:38 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 10:38 PM
Surr: 1,2-Dichloroethane-d4	118	0	72-119		%REC	1	06/22/20 10:38 PM
Surr: 4-Bromofluorobenzene	97.4	0	76-119		%REC	1	06/22/20 10:38 PM
Surr: Dibromofluoromethane	110	0	85-115		%REC	1	06/22/20 10:38 PM
Surr: Toluene-d8	93.2	0	81-120		%REC	1	06/22/20 10:38 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	108	3.00	10.0		mg/L	10	06/18/20 02:59 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	713	10.0	10.0		mg/L	1	06/22/20 03:20 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: *25-Jun-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	2006204-05
Project No:	11211501	**Collection Date:**	06/17/20 10:00 AM
Lab Order:	2006204	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.520	0.148	0.185		mg/L	1	06/23/20 01:12 PM
Surr: Isopropylbenzene	52.8	0	47-142		%REC	1	06/23/20 01:12 PM
Surr: Octacosane	109	0	51-124		%REC	1	06/23/20 01:12 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/22/20 07:59 PM
Surr: Tetrachlorethene	80.3	0	74-138		%REC	1	06/22/20 07:59 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0360	0.00200	0.00500		mg/L	1	06/23/20 11:59 AM
Barium	0.398	0.00300	0.0100		mg/L	1	06/23/20 11:59 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/23/20 11:59 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:59 AM
Lead	0.000619	0.000300	0.00100	J	mg/L	1	06/23/20 11:59 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/23/20 11:59 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	06/23/20 11:59 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/22/20 01:15 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 11:02 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 11:02 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 11:02 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 11:02 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 11:02 PM
Surr: 1,2-Dichloroethane-d4	115	0	72-119		%REC	1	06/22/20 11:02 PM
Surr: 4-Bromofluorobenzene	98.1	0	76-119		%REC	1	06/22/20 11:02 PM
Surr: Dibromofluoromethane	109	0	85-115		%REC	1	06/22/20 11:02 PM
Surr: Toluene-d8	93.5	0	81-120		%REC	1	06/22/20 11:02 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	109	3.00	10.0		mg/L	10	06/18/20 03:15 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	716	10.0	10.0		mg/L	1	06/22/20 03:20 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: *25-Jun-20*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	2006204-06
Project No:	11211501	**Collection Date:**	06/17/20
Lab Order:	2006204	**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	06/22/20 02:18 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	06/22/20 02:18 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 06:05 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 06:05 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 06:05 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/22/20 06:05 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/22/20 06:05 PM
Surr: 1,2-Dichloroethane-d4	109	0	72-119		%REC	1	06/22/20 06:05 PM
Surr: 4-Bromofluorobenzene	98.0	0	76-119		%REC	1	06/22/20 06:05 PM
Surr: Dibromofluoromethane	108	0	85-115		%REC	1	06/22/20 06:05 PM
Surr: Toluene-d8	92.8	0	81-120		%REC	1	06/22/20 06:05 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:** *25-Jun-20*

CLIENT: GHD
Work Order: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_200623A

The QC data in batch 96868 applies to the following samples: 2006204-01E, 2006204-02E, 2006204-03E, 2006204-04E, 2006204-05E

Sample ID: **MB-96868** Batch ID: **96868** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_200623A** Analysis Date: **6/23/2020 11:04:24 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0540		0.1000		54.0	47	142			
Surr: Octacosane	0.0808		0.1000		80.8	51	124			

Sample ID: **LCS-96868** Batch ID: **96868** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_200623A** Analysis Date: **6/23/2020 11:13:28 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.955	0.100	1.250	0	76.4	50	114			
Surr: Isopropylbenzene	0.0546		0.1000		54.6	47	142			
Surr: Octacosane	0.0847		0.1000		84.7	51	124			

Sample ID: **LCSD-96868** Batch ID: **96868** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_200623A** Analysis Date: **6/23/2020 11:38:21 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.950	0.100	1.250	0	76.0	50	114	0.451	30	
Surr: Isopropylbenzene	0.0550		0.1000		55.0	47	142	0	0	
Surr: Octacosane	0.0847		0.1000		84.7	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: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200622A

The QC data in batch 96877 applies to the following samples: 2006204-01B, 2006204-02B, 2006204-03B, 2006204-04B, 2006204-05B, 2006204-06B

Sample ID: **LCS-96877**	Batch ID: **96877**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_200622A**	Analysis Date: **6/22/2020 11:54:12 AM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.50	0.100	2.500	0	99.9	67	136			
Surr: Tetrachlorethene	0.409		0.4000		102	74	138			

Sample ID: **LCSD-96877**	Batch ID: **96877**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_200622A**	Analysis Date: **6/22/2020 12:19:05 PM**	Prep Date: **6/22/2020**

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	3.82	30	
Surr: Tetrachlorethene	0.413		0.4000		103	74	138	0	0	

Sample ID: **MB-96877**	Batch ID: **96877**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_200622A**	Analysis Date: **6/22/2020 1:31:11 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.443		0.4000		111	74	138			

Sample ID: **2006184-01BMSD**	Batch ID: **96877**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_200622A**	Analysis Date: **6/22/2020 11:13:50 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.46	0.100	2.500	0	98.5	67	136	2.86	30	
Surr: Tetrachlorethene	0.404		0.4000		101	74	138	0	0	

Sample ID: **2006184-01BMS**	Batch ID: **96877**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_200622A**	Analysis Date: **6/23/2020 10:20:57 AM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.39	0.100	2.500	0	95.8	67	136			
Surr: Tetrachlorethene	0.364		0.4000		91.1	74	138			

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: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_200622A

The QC data in batch 96869 applies to the following samples: 2006204-01C, 2006204-02C, 2006204-03C, 2006204-04C, 2006204-05C

Sample ID: **MB-96869**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:23:40 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-96869**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:28:12 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00214	0.000200	0.00200	0	107	85	115			

Sample ID: **LCSD-96869**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:30:28 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00214	0.000200	0.00200	0	107	85	115	0	15	

Sample ID: **2006167-01A MS**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:35:00 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0104	0.00100	0.0100	0	104	80	120			

Sample ID: **2006167-01A MSD**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:37:15 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0102	0.00100	0.0100	0	103	80	120	1.45	15	

Sample ID: **2006167-01A SD**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:39:31 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00200	0.00500	0	0				0	10	

Sample ID: **2006167-01A PDS**	Batch ID: **96869**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_200622A**	Analysis Date: **6/22/2020 12:41:47 PM**	Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0122	0.00100	0.0125	0	97.6	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: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_200623A

The QC data in batch 96873 applies to the following samples: 2006204-01C, 2006204-02C, 2006204-03C, 2006204-04C, 2006204-05C

Sample ID: **MB-96873** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:15:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								

Sample ID: **LCS-96873** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:17:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0	102	80	120			
Barium	0.200	0.0100	0.200	0	100	80	120			
Cadmium	0.202	0.00100	0.200	0	101	80	120			
Chromium	0.199	0.00500	0.200	0	99.7	80	120			
Lead	0.192	0.00100	0.200	0	96.2	80	120			
Selenium	0.206	0.00500	0.200	0	103	80	120			
Silver	0.195	0.00200	0.200	0	97.4	80	120			

Sample ID: **LCSD-96873** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:20:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.199	0.00500	0.200	0	99.6	80	120	2.23	15	
Barium	0.197	0.0100	0.200	0	98.4	80	120	1.72	15	
Cadmium	0.201	0.00100	0.200	0	101	80	120	0.641	15	
Chromium	0.195	0.00500	0.200	0	97.5	80	120	2.21	15	
Lead	0.191	0.00100	0.200	0	95.7	80	120	0.553	15	
Selenium	0.200	0.00500	0.200	0	99.8	80	120	3.21	15	
Silver	0.193	0.00200	0.200	0	96.3	80	120	1.15	15	

Sample ID: **2006184-03C SD** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:26:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0100	0.0250	0	0.00525				0	20	
Barium	0.194	0.0500	0	0.193				0.237	20	
Cadmium	<0.00150	0.00500	0	0.000400				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	

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: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_200623A

Sample ID: **2006184-03C SD** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:26:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.00150	0.00500	0	0.00108				0	20	
Selenium	<0.0100	0.0250	0	0.00247				0	20	
Silver	<0.00500	0.0100	0	0				0	20	

Sample ID: **2006184-03C PDS** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:48:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0.00525	98.1	75	125			
Barium	0.396	0.0100	0.200	0.193	101	75	125			
Cadmium	0.209	0.00100	0.200	0.000400	105	75	125			
Chromium	0.214	0.00500	0.200	0	107	75	125			
Lead	0.206	0.00100	0.200	0.00108	103	75	125			
Selenium	0.195	0.00500	0.200	0.00247	96.4	75	125			
Silver	0.197	0.00200	0.200	0	98.4	75	125			

Sample ID: **2006184-03C MS** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:51:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.198	0.00500	0.200	0.00525	96.3	75	125			
Barium	0.392	0.0100	0.200	0.193	99.6	75	125			
Cadmium	0.199	0.00100	0.200	0.000400	99.4	75	125			
Chromium	0.198	0.00500	0.200	0	99.1	75	125			
Lead	0.195	0.00100	0.200	0.00108	96.7	75	125			
Selenium	0.189	0.00500	0.200	0.00247	93.1	75	125			
Silver	0.191	0.00200	0.200	0	95.4	75	125			

Sample ID: **2006184-03C MSD** Batch ID: **96873** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_200623A** Analysis Date: **6/23/2020 11:53:00 AM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.196	0.00500	0.200	0.00525	95.6	75	125	0.734	15	
Barium	0.399	0.0100	0.200	0.193	103	75	125	1.66	15	
Cadmium	0.199	0.00100	0.200	0.000400	99.2	75	125	0.165	15	
Chromium	0.199	0.00500	0.200	0	99.7	75	125	0.567	15	
Lead	0.194	0.00100	0.200	0.00108	96.6	75	125	0.106	15	
Selenium	0.189	0.00500	0.200	0.00247	93.4	75	125	0.269	15	
Silver	0.193	0.00200	0.200	0	96.3	75	125	0.897	15	

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: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_200622B

The QC data in batch 96880 applies to the following samples: 2006204-01A, 2006204-02A, 2006204-03A, 2006204-04A, 2006204-05A, 2006204-06A

Sample ID: **LCS-96880** Batch ID: **96880** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS7_200622B** Analysis Date: **6/22/2020 4:12:00 PM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0247	0.00100	0.0232	0	106	81	122			
Ethylbenzene	0.0233	0.00100	0.0232	0	101	80	120			
m,p-Xylene	0.0470	0.00200	0.0464	0	101	80	120			
o-Xylene	0.0234	0.00100	0.0232	0	101	80	120			
Toluene	0.0253	0.00200	0.0232	0	109	80	120			
Surr: 1,2-Dichloroethane-d4	209		200.0		104	72	119			
Surr: 4-Bromofluorobenzene	195		200.0		97.3	76	119			
Surr: Dibromofluoromethane	213		200.0		106	85	115			
Surr: Toluene-d8	188		200.0		93.8	81	120			

Sample ID: **MB-96880** Batch ID: **96880** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS7_200622B** Analysis Date: **6/22/2020 5:15:00 PM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	212		200.0		106	72	119			
Surr: 4-Bromofluorobenzene	194		200.0		96.9	76	119			
Surr: Dibromofluoromethane	215		200.0		107	85	115			
Surr: Toluene-d8	186		200.0		92.8	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

CLIENT: GHD
Work Order: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_200618B

The QC data in batch 96850 applies to the following samples: 2006204-01D, 2006204-02D, 2006204-03D, 2006204-04D, 2006204-05D

Sample ID: **MB-96850**	Batch ID: **96850**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC4_200618B**	Analysis Date: **6/18/2020 11:28:36 AM**	Prep Date: **6/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-96850**	Batch ID: **96850**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC4_200618B**	Analysis Date: **6/18/2020 12:48:36 PM**	Prep Date: **6/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			

Sample ID: **LCSD-96850**	Batch ID: **96850**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC4_200618B**	Analysis Date: **6/18/2020 1:07:42 PM**	Prep Date: **6/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110	0.303	20	

Sample ID: **2006204-01DMS**	Batch ID: **96850**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC4_200618B**	Analysis Date: **6/18/2020 3:39:50 PM**	Prep Date: **6/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	256	10.0	200.0	61.75	97.0	90	110			

Sample ID: **2006204-01DMSD**	Batch ID: **96850**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC4_200618B**	Analysis Date: **6/18/2020 3:55:50 PM**	Prep Date: **6/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	254	10.0	200.0	61.75	96.0	90	110	0.852	20	

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: 2006204
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: WC_200622A

The QC data in batch 96878 applies to the following samples: 2006204-01D, 2006204-02D, 2006204-03D, 2006204-04D, 2006204-05D

Sample ID: **MB-96878** Batch ID: **96878** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_200622A** Analysis Date: **6/22/2020 3:20:00 PM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-96878** Batch ID: **96878** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_200622A** Analysis Date: **6/22/2020 3:20:00 PM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	757	10.0	745.6	0	102	90	113			

Sample ID: **2006190-05B-DUP** Batch ID: **96878** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_200622A** Analysis Date: **6/22/2020 3:20:00 PM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	22900	200	0	23020				0.523	5	

Sample ID: **2006200-01D-DUP** Batch ID: **96878** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_200622A** Analysis Date: **6/22/2020 3:20:00 PM** Prep Date: **6/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4720	50.0	0	4725				0.212	5	

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

September 24, 2020

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

Order No.: 2009127

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 9/17/2020 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: T104704211-20-25

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 69579

CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 14998 W 6TH AVE # 800 GOLDEN 80403
PHONE: 303.941.6156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: BRAD STEPHENSON
ADDITIONAL REPORT COPIES TO: J CLOUD

DATE: 9/16/20 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 2009127
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 112111501-0202 COLLECTOR: BSTEPHENSON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT
P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX● MTBE❑ (METHOD 8021) | TPH 1005❑ TPH 1006❑ HOLD 1006❑ | GRO (METHOD 8015)● DRO (METHOD 8105)❑ | VOC 8260❑ VOC 624❑ VOC 8260/5035❑ | SVOC 8270❑ PAH 8270❑ HOLD PAH❑ SVOC 625❑ | 8270 PEST❑ 625 PEST/PCB❑ 608 PCB❑ | 8270 O-P PEST❑ 8082 PCB❑ 8270 PCB❑ | 8321 HERB❑ T PHOS, AMMONIA❑ | METALS 6020❑ METALS 200.8❑ DISS. METALS❑ | RCRA❑ TX11❑ | PH❑ HEX CHROM❑ ALKALINITY❑ COD❑ | CHLORIDE● ANIONS | TCLP-SVOC❑ VOC❑ PEST❑ HERB❑ | TCLP-METALS❑ RCRA 8● TX-11❑ Pb❑ | RCI❑ FLASHPOINT❑ DGAS❑ | TDS● TSS❑ % MOISTURE❑ CYANIDE❑

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
MW-1	01	9/16/20	8:00	W		10							
MW-2	02		08:30	W		10							
MW-3R	03		09:30	W		10							
MW-4	04		08:55	W		10							
MW-4D	05	9/16/20	08:55	W		10							
TRIP	06	9/16/20		W		2							

GHD

RELINQUISHED BY: (Signature) DATE/TIME 9/16/20 1500 RECEIVED BY: (Signature) FEDEX
RELINQUISHED BY: (Signature) DATE/TIME 9/17/20 0935 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑

LABORATORY USE ONLY:
RECEIVING TEMP: 3.3°C THERM #: 78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☑ NOT USED
CARRIER: ❑ LONE STAR ☑ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

R.A. 9/17/20

DHL COC Rev 1 | FEB 2010


ORIGIN ID:HOBA (303) 941-6156
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US
SHIP DATE: 16SEP20
ACTWGT: 53.00 LB
CAD: 6994246/SSFE2110
DIMS: 24x14x13 IN
BILL THIRD PARTY
DHL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(612) 388-8222
REF: 11211520
INV:
PO:
DEPT:
FedEx
Express
2 of 2
MPS# 0263 3968 9466 4729
Mstr# 3968 9466 4718
0201
THU - 17 SEP 10:30A
PRIORITY OVERNIGHT
A8 BSMA
78664
TX-US AUS
Part # 156297-435 RRDR EXP 06/21

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD Date Received: 9/17/2020

Work Order Number 2009127 Received by: RA

Checklist completed by: _____ 9/17/2020 Reviewed by DL 9/17/2020
Signature | Date | Initials | Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	3.3 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? no		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted: _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *24-Sep-20*

CLIENT: GHD
Project: Hobbs South
Lab Order: 2009127

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, EPA and Standard Methods.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For DRO Analysis. The recovery of surrogate Isopropylbenzene for Sample MW-4D was below the method control limits. This is flagged accordingly in the Analytical Data Report. The remaining surrogate for this sample was within method control limits. No further corrective action was taken.

DHL Analytical, Inc.

Date: *24-Sep-20*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	2009127-01
Project No:	11211501-02-02	**Collection Date:**	09/16/20 08:00 AM
Lab Order:	2009127	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.147	0.147	0.184		mg/L	1	09/22/20 12:54 PM
Surr: Isopropylbenzene	63.1	0	47-142		%REC	1	09/22/20 12:54 PM
Surr: Octacosane	89.0	0	51-124		%REC	1	09/22/20 12:54 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/22/20 03:26 PM
Surr: Tetrachlorethene	126	0	74-138		%REC	1	09/22/20 03:26 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.00494	0.00200	0.00500	J	mg/L	1	09/21/20 04:27 PM
Barium	0.0770	0.00300	0.0100		mg/L	1	09/21/20 04:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/21/20 04:27 PM
Chromium	0.00413	0.00200	0.00500	J	mg/L	1	09/21/20 04:27 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/21/20 04:27 PM
Selenium	0.00867	0.00200	0.00500		mg/L	1	09/21/20 04:27 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	09/21/20 04:27 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/21/20 12:59 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 07:16 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 07:16 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 07:16 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 07:16 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 07:16 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119		%REC	1	09/17/20 07:16 PM
Surr: 4-Bromofluorobenzene	100	0	76-119		%REC	1	09/17/20 07:16 PM
Surr: Dibromofluoromethane	93.9	0	85-115		%REC	1	09/17/20 07:16 PM
Surr: Toluene-d8	97.6	0	81-120		%REC	1	09/17/20 07:16 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	57.1	3.00	10.0		mg/L	10	09/17/20 05:01 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	675	10.0	10.0		mg/L	1	09/18/20 04:30 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: *24-Sep-20*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	2009127-02
Project No:	11211501-02-02	**Collection Date:**	09/16/20 08:30 AM
Lab Order:	2009127	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.451	0.148	0.185		mg/L	1	09/22/20 01:03 PM
Surr: Isopropylbenzene	58.7	0	47-142		%REC	1	09/22/20 01:03 PM
Surr: Octacosane	91.4	0	51-124		%REC	1	09/22/20 01:03 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/22/20 03:51 PM
Surr: Tetrachlorethene	127	0	74-138		%REC	1	09/22/20 03:51 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.00834	0.00200	0.00500		mg/L	1	09/21/20 04:29 PM
Barium	0.394	0.00300	0.0100		mg/L	1	09/21/20 04:29 PM
Cadmium	0.000456	0.000300	0.00100	J	mg/L	1	09/21/20 04:29 PM
Chromium	0.00714	0.00200	0.00500		mg/L	1	09/21/20 04:29 PM
Lead	0.00246	0.000300	0.00100		mg/L	1	09/21/20 04:29 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/21/20 04:29 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	09/21/20 04:29 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/21/20 01:02 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 07:40 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 07:40 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 07:40 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 07:40 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 07:40 PM
Surr: 1,2-Dichloroethane-d4	103	0	72-119		%REC	1	09/17/20 07:40 PM
Surr: 4-Bromofluorobenzene	99.8	0	76-119		%REC	1	09/17/20 07:40 PM
Surr: Dibromofluoromethane	91.8	0	85-115		%REC	1	09/17/20 07:40 PM
Surr: Toluene-d8	98.4	0	81-120		%REC	1	09/17/20 07:40 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	111	3.00	10.0		mg/L	10	09/17/20 05:17 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	748	10.0	10.0		mg/L	1	09/18/20 04:30 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: *24-Sep-20*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	2009127-03
Project No:	11211501-02-02	**Collection Date:**	09/16/20 09:30 AM
Lab Order:	2009127	**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	09/22/20 01:12 PM
Surr: Isopropylbenzene	64.9	0	47-142		%REC	1	09/22/20 01:12 PM
Surr: Octacosane	83.8	0	51-124		%REC	1	09/22/20 01:12 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/22/20 04:15 PM
Surr: Tetrachlorethene	127	0	74-138		%REC	1	09/22/20 04:15 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.196	0.00200	0.00500		mg/L	1	09/21/20 04:31 PM
Barium	0.410	0.00300	0.0100		mg/L	1	09/21/20 04:31 PM
Cadmium	0.00126	0.000300	0.00100		mg/L	1	09/21/20 04:31 PM
Chromium	0.0266	0.00200	0.00500		mg/L	1	09/21/20 04:31 PM
Lead	0.00988	0.000300	0.00100		mg/L	1	09/21/20 04:31 PM
Selenium	0.00279	0.00200	0.00500	J	mg/L	1	09/21/20 04:31 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	09/21/20 04:31 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/21/20 01:04 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:04 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:04 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 08:04 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:04 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 08:04 PM
Surr: 1,2-Dichloroethane-d4	106	0	72-119		%REC	1	09/17/20 08:04 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	09/17/20 08:04 PM
Surr: Dibromofluoromethane	94.2	0	85-115		%REC	1	09/17/20 08:04 PM
Surr: Toluene-d8	98.5	0	81-120		%REC	1	09/17/20 08:04 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	73.6	3.00	10.0		mg/L	10	09/17/20 05:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	583	10.0	10.0		mg/L	1	09/18/20 04:30 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: *24-Sep-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	2009127-04
Project No:	11211501-02-02	**Collection Date:**	09/16/20 08:55 AM
Lab Order:	2009127	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.527	0.148	0.185		mg/L	1	09/22/20 01:21 PM
Surr: Isopropylbenzene	57.3	0	47-142		%REC	1	09/22/20 01:21 PM
Surr: Octacosane	97.1	0	51-124		%REC	1	09/22/20 01:21 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/22/20 05:50 PM
Surr: Tetrachlorethene	74.6	0	74-138		%REC	1	09/22/20 05:50 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.0472	0.00200	0.00500		mg/L	1	09/21/20 04:33 PM
Barium	0.393	0.00300	0.0100		mg/L	1	09/21/20 04:33 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/21/20 04:33 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/21/20 04:33 PM
Lead	0.000802	0.000300	0.00100	J	mg/L	1	09/21/20 04:33 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/21/20 04:33 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	09/21/20 04:33 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/21/20 01:11 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:28 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:28 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 08:28 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:28 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 08:28 PM
Surr: 1,2-Dichloroethane-d4	105	0	72-119		%REC	1	09/17/20 08:28 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	09/17/20 08:28 PM
Surr: Dibromofluoromethane	92.2	0	85-115		%REC	1	09/17/20 08:28 PM
Surr: Toluene-d8	99.1	0	81-120		%REC	1	09/17/20 08:28 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	104	3.00	10.0		mg/L	10	09/17/20 05:49 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	683	10.0	10.0		mg/L	1	09/18/20 04:30 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: *24-Sep-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	2009127-05
Project No:	11211501-02-02	**Collection Date:**	09/16/20 08:55 AM
Lab Order:	2009127	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.473	0.149	0.186		mg/L	1	09/22/20 01:30 PM
Surr: Isopropylbenzene	37.8	0	47-142	S	%REC	1	09/22/20 01:30 PM
Surr: Octacosane	91.1	0	51-124		%REC	1	09/22/20 01:30 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/22/20 06:14 PM
Surr: Tetrachlorethene	75.9	0	74-138		%REC	1	09/22/20 06:14 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.0520	0.00200	0.00500		mg/L	1	09/21/20 04:35 PM
Barium	0.393	0.00300	0.0100		mg/L	1	09/21/20 04:35 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/21/20 04:35 PM
Chromium	0.00231	0.00200	0.00500	J	mg/L	1	09/21/20 04:35 PM
Lead	0.000847	0.000300	0.00100	J	mg/L	1	09/21/20 04:35 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/21/20 04:35 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	09/21/20 04:35 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/21/20 01:13 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:52 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:52 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 08:52 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 08:52 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 08:52 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119		%REC	1	09/17/20 08:52 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	09/17/20 08:52 PM
Surr: Dibromofluoromethane	93.7	0	85-115		%REC	1	09/17/20 08:52 PM
Surr: Toluene-d8	98.8	0	81-120		%REC	1	09/17/20 08:52 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	99.6	3.00	10.0		mg/L	10	09/17/20 07:25 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	686	10.0	10.0		mg/L	1	09/18/20 04:30 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: *24-Sep-20*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	2009127-06
Project No:	11211501-02-02	**Collection Date:**	#Type!
Lab Order:	2009127	**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	09/23/20 12:53 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	09/23/20 12:53 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 04:04 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 04:04 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 04:04 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/17/20 04:04 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/17/20 04:04 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119		%REC	1	09/17/20 04:04 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	09/17/20 04:04 PM
Surr: Dibromofluoromethane	94.7	0	85-115		%REC	1	09/17/20 04:04 PM
Surr: Toluene-d8	99.0	0	81-120		%REC	1	09/17/20 04:04 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:** *24-Sep-20*

CLIENT: GHD
Work Order: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_200922A

The QC data in batch 97960 applies to the following samples: 2009127-01E, 2009127-02E, 2009127-03E, 2009127-04E, 2009127-05E

Sample ID: **MB-97960** Batch ID: **97960** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_200922A** Analysis Date: **9/22/2020 11:14:09 AM** Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0576		0.1000		57.6	47	142			
Surr: Octacosane	0.0876		0.1000		87.6	51	124			

Sample ID: **LCS-97960** Batch ID: **97960** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_200922A** Analysis Date: **9/22/2020 11:23:13 AM** Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.995	0.100	1.250	0	79.6	50	114			
Surr: Isopropylbenzene	0.0589		0.1000		58.9	47	142			
Surr: Octacosane	0.0866		0.1000		86.6	51	124			

Sample ID: **LCSD-97960** Batch ID: **97960** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_200922A** Analysis Date: **9/22/2020 11:32:16 AM** Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.972	0.100	1.250	0	77.7	50	114	2.42	30	
Surr: Isopropylbenzene	0.0496		0.1000		49.6	47	142	0	0	
Surr: Octacosane	0.0861		0.1000		86.1	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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200922A

The QC data in batch 97969 applies to the following samples: 2009127-01B, 2009127-02B, 2009127-03B, 2009127-04B, 2009127-05B, 2009127-06B

Sample ID: **LCS-97969** Batch ID: **97969** TestNo: **M8015V** Units: **mg/L**
SampType: **LCS** Run ID: **GC4_200922A** Analysis Date: **9/22/2020 10:35:59 AM** Prep Date: **9/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.46	0.100	2.500	0	98.3	67	136			
Surr: Tetrachlorethene	0.386		0.4000		96.6	74	138			

Sample ID: **LCSD-97969** Batch ID: **97969** TestNo: **M8015V** Units: **mg/L**
SampType: **LCSD** Run ID: **GC4_200922A** Analysis Date: **9/22/2020 10:59:48 AM** Prep Date: **9/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.57	0.100	2.500	0	103	67	136	4.56	30	
Surr: Tetrachlorethene	0.420		0.4000		105	74	138	0	0	

Sample ID: **MB-97969** Batch ID: **97969** TestNo: **M8015V** Units: **mg/L**
SampType: **MBLK** Run ID: **GC4_200922A** Analysis Date: **9/22/2020 12:11:13 PM** Prep Date: **9/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.510		0.4000		127	74	138			

Sample ID: **2009113-01BMS** Batch ID: **97969** TestNo: **M8015V** Units: **mg/L**
SampType: **MS** Run ID: **GC4_200922A** Analysis Date: **9/22/2020 9:01:05 PM** Prep Date: **9/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.32	0.100	2.500	0	92.8	67	136			
Surr: Tetrachlorethene	0.412		0.4000		103	74	138			

Sample ID: **2009113-01BMSD** Batch ID: **97969** TestNo: **M8015V** Units: **mg/L**
SampType: **MSD** Run ID: **GC4_200922A** Analysis Date: **9/22/2020 9:24:37 PM** Prep Date: **9/22/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.45	0.100	2.500	0	97.9	67	136	5.36	30	
Surr: Tetrachlorethene	0.401		0.4000		100	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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200923A

The QC data in batch 97983 applies to the following samples: 2009127-06B

Sample ID: **LCS-97983**	Batch ID: **97983**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_200923A**	Analysis Date: **9/23/2020 11:17:56 AM**	Prep Date: **9/23/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.74	0.100	2.500	0	110	67	136			
Surr: Tetrachlorethene	0.458		0.4000		115	74	138			

Sample ID: **LCSD-97983**	Batch ID: **97983**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_200923A**	Analysis Date: **9/23/2020 11:42:50 AM**	Prep Date: **9/23/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.69	0.100	2.500	0	107	67	136	2.07	30	
Surr: Tetrachlorethene	0.439		0.4000		110	74	138	0	0	

Sample ID: **MB-97983**	Batch ID: **97983**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_200923A**	Analysis Date: **9/23/2020 12:29:53 PM**	Prep Date: **9/23/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.486		0.4000		122	74	138			

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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_200921A

The QC data in batch 97959 applies to the following samples: 2009127-01C, 2009127-02C, 2009127-03C, 2009127-04C, 2009127-05C

Sample ID: **MB-97959**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:25:46 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-97959**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:30:18 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00191	0.000200	0.00200	0	95.5	85	115			

Sample ID: **LCSD-97959**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:32:35 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00193	0.000200	0.00200	0	96.5	85	115	1.04	15	

Sample ID: **2009092-01C MS**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:37:07 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00945	0.00100	0.0100	0	94.5	80	120			

Sample ID: **2009092-01C MSD**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:39:22 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00980	0.00100	0.0100	0	98.0	80	120	3.64	15	

Sample ID: **2009092-01C SD**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:41:38 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00200	0.00500	0	0				0	10	

Sample ID: **2009092-01C PDS**	Batch ID: **97959**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_200921A**	Analysis Date: **9/21/2020 12:43:54 PM**	Prep Date: **9/21/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0112	0.00100	0.0125	0	90.0	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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_200921C

The QC data in batch 97941 applies to the following samples: 2009127-01C, 2009127-02C, 2009127-03C, 2009127-04C, 2009127-05C

Sample ID: **MB-97941** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:03:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								

Sample ID: **LCS-97941** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:05:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.199	0.00500	0.200	0	99.3	80	120			
Barium	0.200	0.0100	0.200	0	99.8	80	120			
Cadmium	0.202	0.00100	0.200	0	101	80	120			
Chromium	0.206	0.00500	0.200	0	103	80	120			
Lead	0.196	0.00100	0.200	0	97.8	80	120			
Selenium	0.191	0.00500	0.200	0	95.5	80	120			
Silver	0.204	0.00200	0.200	0	102	80	120			

Sample ID: **LCSD-97941** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:07:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.200	0.00500	0.200	0	100	80	120	0.851	15	
Barium	0.201	0.0100	0.200	0	100	80	120	0.701	15	
Cadmium	0.203	0.00100	0.200	0	102	80	120	0.729	15	
Chromium	0.207	0.00500	0.200	0	104	80	120	0.344	15	
Lead	0.199	0.00100	0.200	0	99.4	80	120	1.71	15	
Selenium	0.197	0.00500	0.200	0	98.6	80	120	3.17	15	
Silver	0.208	0.00200	0.200	0	104	80	120	1.52	15	

Sample ID: **2009109-03B SD** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:17:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0100	0.0250	0	0				0	20	
Barium	0.0172	0.0500	0	0.0171				0.829	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	

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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_200921C

Sample ID: **2009109-03B SD** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:17:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.00150	0.00500	0	0				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Silver	<0.00500	0.0100	0	0				0	20	

Sample ID: **2009109-03B PDS** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:41:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0	102	75	125			
Barium	0.218	0.0100	0.200	0.0171	100	75	125			
Cadmium	0.192	0.00100	0.200	0	96.1	75	125			
Chromium	0.205	0.00500	0.200	0	103	75	125			
Lead	0.202	0.00100	0.200	0	101	75	125			
Selenium	0.215	0.00500	0.200	0	108	75	125			
Silver	0.188	0.00200	0.200	0	93.8	75	125			

Sample ID: **2009109-03B MS** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:43:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.205	0.00500	0.200	0	103	75	125			
Barium	0.207	0.0100	0.200	0.0171	95.1	75	125			
Cadmium	0.188	0.00100	0.200	0	93.9	75	125			
Chromium	0.194	0.00500	0.200	0	96.8	75	125			
Lead	0.194	0.00100	0.200	0	97.0	75	125			
Selenium	0.211	0.00500	0.200	0	105	75	125			
Silver	0.185	0.00200	0.200	0	92.5	75	125			

Sample ID: **2009109-03B MSD** Batch ID: **97941** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_200921C** Analysis Date: **9/21/2020 4:45:00 PM** Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0	102	75	125	0.408	15	
Barium	0.205	0.0100	0.200	0.0171	93.9	75	125	1.10	15	
Cadmium	0.187	0.00100	0.200	0	93.3	75	125	0.663	15	
Chromium	0.194	0.00500	0.200	0	96.9	75	125	0.056	15	
Lead	0.194	0.00100	0.200	0	96.9	75	125	0.051	15	
Selenium	0.206	0.00500	0.200	0	103	75	125	2.19	15	
Silver	0.186	0.00200	0.200	0	92.8	75	125	0.279	15	

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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_200917B

The QC data in batch 97940 applies to the following samples: 2009127-01A, 2009127-02A, 2009127-03A, 2009127-04A, 2009127-05A, 2009127-06A

Sample ID: **LCS-97940** Batch ID: **97940** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_200917B** Analysis Date: **9/17/2020 1:06:00 PM** Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0266	0.00100	0.0232	0	115	81	122			
Ethylbenzene	0.0248	0.00100	0.0232	0	107	80	120			
m,p-Xylene	0.0495	0.00200	0.0464	0	107	80	120			
o-Xylene	0.0241	0.00100	0.0232	0	104	80	120			
Toluene	0.0257	0.00200	0.0232	0	111	80	120			
Surr: 1,2-Dichloroethane-d4	203		200.0		101	72	119			
Surr: 4-Bromofluorobenzene	196		200.0		98.1	76	119			
Surr: Dibromofluoromethane	188		200.0		94.0	85	115			
Surr: Toluene-d8	191		200.0		95.7	81	120			

Sample ID: **LCSD-97940** Batch ID: **97940** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCSD** Run ID: **GCMS5_200917B** Analysis Date: **9/17/2020 1:30:00 PM** Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0283	0.00100	0.0232	0	122	81	122	6.32	20	
Ethylbenzene	0.0263	0.00100	0.0232	0	113	80	120	5.85	20	
m,p-Xylene	0.0528	0.00200	0.0464	0	114	80	120	6.49	20	
o-Xylene	0.0259	0.00100	0.0232	0	112	80	120	7.47	20	
Toluene	0.0275	0.00200	0.0232	0	118	80	120	6.64	20	
Surr: 1,2-Dichloroethane-d4	200		200.0		100	72	119	0	0	
Surr: 4-Bromofluorobenzene	195		200.0		97.4	76	119	0	0	
Surr: Dibromofluoromethane	188		200.0		94.0	85	115	0	0	
Surr: Toluene-d8	192		200.0		96.1	81	120	0	0	

Sample ID: **MB-97940** Batch ID: **97940** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_200917B** Analysis Date: **9/17/2020 2:18:00 PM** Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	206		200.0		103	72	119			
Surr: 4-Bromofluorobenzene	202		200.0		101	76	119			
Surr: Dibromofluoromethane	186		200.0		92.8	85	115			
Surr: Toluene-d8	195		200.0		97.7	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

CLIENT: GHD
Work Order: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_200917A

The QC data in batch 97927 applies to the following samples: 2009127-01D, 2009127-02D, 2009127-03D, 2009127-04D, 2009127-05D

Sample ID: **MB-97927**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 11:47:17 AM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-97927**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 12:03:17 PM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.4	1.00	10.00	0	104	90	110			

Sample ID: **LCSD-97927**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 12:19:17 PM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110	0.368	20	

Sample ID: **2009113-01DMS**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 9:01:05 PM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	326	10.0	200.0	117.5	104	90	110			

Sample ID: **2009113-01DMSD**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 9:17:05 PM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	323	10.0	200.0	117.5	103	90	110	0.718	20	

Sample ID: **2009113-02DMS**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 9:33:05 PM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	493	10.0	200.0	310.8	91.1	90	110			

Sample ID: **2009113-02DMSD**	Batch ID: **97927**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_200917A**	Analysis Date: **9/17/2020 9:49:05 PM**	Prep Date: **9/17/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	491	10.0	200.0	310.8	90.2	90	110	0.368	20	

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: 2009127
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: WC_200918D

The QC data in batch 97945 applies to the following samples: 2009127-01D, 2009127-02D, 2009127-03D, 2009127-04D, 2009127-05D

Sample ID: **MB-97945**	Batch ID: **97945**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_200918D**	Analysis Date: **9/18/2020 4:30:00 PM**	Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-97945**	Batch ID: **97945**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_200918D**	Analysis Date: **9/18/2020 4:30:00 PM**	Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	763	10.0	745.6	0	102	90	113			

Sample ID: **2009114-01A-DUP**	Batch ID: **97945**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_200918D**	Analysis Date: **9/18/2020 4:30:00 PM**	Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	970	10.0	0	969.0				0.103	5	

Sample ID: **2009114-02A-DUP**	Batch ID: **97945**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_200918D**	Analysis Date: **9/18/2020 4:30:00 PM**	Prep Date: **9/18/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	815	10.0	0	811.0				0.492	5	

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

December 10, 2020

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

Order No.: 2012025

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 12/3/2020 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: T104704211-20-25

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 69388

CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 14998 W 6TH AVE #800 GOLDEN, CO
PHONE: 3039416156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: BSTEPHENSON
ADDITIONAL REPORT COPIES TO: JECOOK

DATE: 12/2/20 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 2012025
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 11211501 COLLECTOR: BSTEPHENSON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ ~~MTBE~~ ❑ (METHOD 8021) | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO (METHOD 8015) ❑ DRO (METHOD 8105) ☑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA X TX11 ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE X ANIONS ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS X TSS ❑ % MOISTURE ❑ CYANIDE ❑

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
MW-1	01	12/2/20	1000			10						X X X X X	
MW-2	02		1020			10						X X X X X	
MW-3	03		1045			10						X X X X X	
MW-4	04		1105			10						X X X X X	
MW-4D	05		1105			10						X X X X X	
TRIP	06	12/2/20				2						X X GHD	Per Brad S. 6/16/2021

RELINQUISHED BY: (Signature) DATE/TIME 12/2/20 1600 RECEIVED BY: (Signature) TO FEDEX
RELINQUISHED BY: (Signature) FedEx DATE/TIME 12/3/20 1119 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑

LABORATORY USE ONLY:
RECEIVING TEMP: 5.1°C THERM #: 78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☑ NOT USED
CARRIER: ❑ LONE STAR ☑ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL COC Rev 1 | FEB 2010

Do Not ...

ORIGIN ID:HOBA (303) 941-6156
BRAD STEVENSON

14998 W 6TH AVE STE 800

GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 02DEC20
ACTWGT: 25.30 LB
CAD: 6994246/SSFE2121
DIMS: 16x10x15 IN

BILL THIRD PARTY

156297-435 RRDB EXP 06/21
55BJ2/9196/B765

TO

DHL ANALYSTICS
2300 DOUBLE CREEK DR

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

FedEx
Express
E

J202020071401uv

4 of 4
MPS# 0263 3997 5463 6342
Mstr# 3997 5463 6310 0201

THU - 03 DEC 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

RT 512
FZ 511
1
10:30
C
6342
12.03

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD | Date Received: 12/3/2020

Work Order Number 2012025 | Received by: RA

Checklist completed by: [signature] (Signature) 12/3/2020 (Date) | Reviewed by (DL) (Initials) 12/3/2020 (Date)

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☐	No ☑	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	5.1 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? no		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted: GHD Date contacted: 12/3/20 Person contacted Brad S.

Contacted by: Eric L. Regarding: Broken TBs

Comments: One vial received intact for the Trip Blank sample.

Corrective Action: Per Brad, proceed with BTEX analysis on intact vial.

DHL Analytical, Inc. **Date:** *10-Dec-20*

CLIENT: GHD
Project: Hobbs South
Lab Order: 2012025

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, E300 and Standard Methods.

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

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

DHL Analytical, Inc.

Date: *10-Dec-20*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	2012025-01
Project No:	11211501	**Collection Date:**	12/02/20 10:00 AM
Lab Order:	2012025	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.148	0.148	0.185		mg/L	1	12/08/20 10:51 AM
Surr: Isopropylbenzene	65.3	0	47-142		%REC	1	12/08/20 10:51 AM
Surr: Octacosane	81.2	0	51-124		%REC	1	12/08/20 10:51 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/08/20 02:59 PM
Surr: Tetrachlorethene	105	0	74-138		%REC	1	12/08/20 02:59 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.00773	0.00200	0.00500		mg/L	1	12/07/20 11:09 AM
Barium	0.132	0.00300	0.0100		mg/L	1	12/07/20 11:09 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/07/20 11:09 AM
Chromium	0.00423	0.00200	0.00500	J	mg/L	1	12/07/20 11:09 AM
Lead	0.00238	0.000300	0.00100		mg/L	1	12/07/20 11:09 AM
Selenium	0.00910	0.00200	0.00500		mg/L	1	12/07/20 11:09 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/07/20 11:09 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/09/20 11:34 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 07:16 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 07:16 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 07:16 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 07:16 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 07:16 PM
Surr: 1,2-Dichloroethane-d4	107	0	72-119		%REC	1	12/04/20 07:16 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	12/04/20 07:16 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	12/04/20 07:16 PM
Surr: Toluene-d8	96.6	0	81-120		%REC	1	12/04/20 07:16 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	51.1	3.00	10.0		mg/L	10	12/07/20 02:57 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	718	10.0	10.0		mg/L	1	12/04/20 03:30 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: *10-Dec-20*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	2012025-02
Project No:	11211501	**Collection Date:**	12/02/20 10:20 AM
Lab Order:	2012025	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.267	0.153	0.192		mg/L	1	12/08/20 11:00 AM
Surr: Isopropylbenzene	63.1	0	47-142		%REC	1	12/08/20 11:00 AM
Surr: Octacosane	89.6	0	51-124		%REC	1	12/08/20 11:00 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/08/20 03:22 PM
Surr: Tetrachlorethene	111	0	74-138		%REC	1	12/08/20 03:22 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.00624	0.00200	0.00500		mg/L	1	12/07/20 11:11 AM
Barium	0.391	0.00300	0.0100		mg/L	1	12/07/20 11:11 AM
Cadmium	0.000604	0.000300	0.00100	J	mg/L	1	12/07/20 11:11 AM
Chromium	0.00355	0.00200	0.00500	J	mg/L	1	12/07/20 11:11 AM
Lead	0.00282	0.000300	0.00100		mg/L	1	12/07/20 11:11 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:11 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/07/20 11:11 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/09/20 11:36 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 07:40 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 07:40 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 07:40 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 07:40 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 07:40 PM
Surr: 1,2-Dichloroethane-d4	109	0	72-119		%REC	1	12/04/20 07:40 PM
Surr: 4-Bromofluorobenzene	99.9	0	76-119		%REC	1	12/04/20 07:40 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	12/04/20 07:40 PM
Surr: Toluene-d8	96.8	0	81-120		%REC	1	12/04/20 07:40 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	102	3.00	10.0		mg/L	10	12/07/20 03:13 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	753	10.0	10.0		mg/L	1	12/04/20 03:30 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: *10-Dec-20*

CLIENT:	GHD	**Client Sample ID:**	MW-3
Project:	Hobbs South	**Lab ID:**	2012025-03
Project No:	11211501	**Collection Date:**	12/02/20 10:45 AM
Lab Order:	2012025	**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	12/08/20 11:09 AM
Surr: Isopropylbenzene	62.4	0	47-142		%REC	1	12/08/20 11:09 AM
Surr: Octacosane	82.5	0	51-124		%REC	1	12/08/20 11:09 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/08/20 03:46 PM
Surr: Tetrachlorethene	105	0	74-138		%REC	1	12/08/20 03:46 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0967	0.00200	0.00500		mg/L	1	12/07/20 11:13 AM
Barium	0.307	0.00300	0.0100		mg/L	1	12/07/20 11:13 AM
Cadmium	0.00205	0.000300	0.00100		mg/L	1	12/07/20 11:13 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:13 AM
Lead	0.00656	0.000300	0.00100		mg/L	1	12/07/20 11:13 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:13 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/07/20 11:13 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/09/20 11:38 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 11:23 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 11:23 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 11:23 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 11:23 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 11:23 PM
Surr: 1,2-Dichloroethane-d4	106	0	72-119		%REC	1	12/04/20 11:23 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	12/04/20 11:23 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	12/04/20 11:23 PM
Surr: Toluene-d8	96.6	0	81-120		%REC	1	12/04/20 11:23 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	60.9	3.00	10.0		mg/L	10	12/07/20 03:29 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	577	10.0	10.0		mg/L	1	12/04/20 03:30 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: *10-Dec-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	2012025-04
Project No:	11211501	**Collection Date:**	12/02/20 11:05 AM
Lab Order:	2012025	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.595	0.149	0.186		mg/L	1	12/08/20 11:18 AM
Surr: Isopropylbenzene	61.7	0	47-142		%REC	1	12/08/20 11:18 AM
Surr: Octacosane	109	0	51-124		%REC	1	12/08/20 11:18 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0949	0.0600	0.100	J	mg/L	1	12/08/20 04:10 PM
Surr: Tetrachlorethene	108	0	74-138		%REC	1	12/08/20 04:10 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0266	0.00200	0.00500		mg/L	1	12/07/20 11:15 AM
Barium	0.389	0.00300	0.0100		mg/L	1	12/07/20 11:15 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/07/20 11:15 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:15 AM
Lead	0.000529	0.000300	0.00100	J	mg/L	1	12/07/20 11:15 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:15 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/07/20 11:15 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/09/20 11:41 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 08:05 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 08:05 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 08:05 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 08:05 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 08:05 PM
Surr: 1,2-Dichloroethane-d4	108	0	72-119		%REC	1	12/04/20 08:05 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	12/04/20 08:05 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	12/04/20 08:05 PM
Surr: Toluene-d8	95.5	0	81-120		%REC	1	12/04/20 08:05 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	89.5	3.00	10.0		mg/L	10	12/07/20 03:45 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	687	10.0	10.0		mg/L	1	12/04/20 03:30 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: *10-Dec-20*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	2012025-05
Project No:	11211501	**Collection Date:**	12/02/20 11:05 AM
Lab Order:	2012025	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.502	0.151	0.188		mg/L	1	12/08/20 11:27 AM
Surr: Isopropylbenzene	61.4	0	47-142		%REC	1	12/08/20 11:27 AM
Surr: Octacosane	101	0	51-124		%REC	1	12/08/20 11:27 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0966	0.0600	0.100	J	mg/L	1	12/08/20 04:35 PM
Surr: Tetrachlorethene	111	0	74-138		%REC	1	12/08/20 04:35 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0321	0.00200	0.00500		mg/L	1	12/07/20 11:17 AM
Barium	0.397	0.00300	0.0100		mg/L	1	12/07/20 11:17 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/07/20 11:17 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:17 AM
Lead	0.000613	0.000300	0.00100	J	mg/L	1	12/07/20 11:17 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/07/20 11:17 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/07/20 11:17 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/09/20 11:43 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 08:30 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 08:30 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 08:30 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 08:30 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 08:30 PM
Surr: 1,2-Dichloroethane-d4	108	0	72-119		%REC	1	12/04/20 08:30 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	12/04/20 08:30 PM
Surr: Dibromofluoromethane	103	0	85-115		%REC	1	12/04/20 08:30 PM
Surr: Toluene-d8	96.2	0	81-120		%REC	1	12/04/20 08:30 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	93.3	3.00	10.0		mg/L	10	12/07/20 04:01 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	694	10.0	10.0		mg/L	1	12/04/20 03:30 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: *10-Dec-20*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	2012025-06
Project No:	11211501	**Collection Date:**	12/02/20
Lab Order:	2012025	**Matrix:**	TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 05:12 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 05:12 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 05:12 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/04/20 05:12 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/04/20 05:12 PM
Surr: 1,2-Dichloroethane-d4	108	0	72-119		%REC	1	12/04/20 05:12 PM
Surr: 4-Bromofluorobenzene	100	0	76-119		%REC	1	12/04/20 05:12 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	12/04/20 05:12 PM
Surr: Toluene-d8	96.5	0	81-120		%REC	1	12/04/20 05:12 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:** *10-Dec-20*

CLIENT: GHD
Work Order: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_201208A

The QC data in batch 98775 applies to the following samples: 2012025-01E, 2012025-02E, 2012025-03E, 2012025-04E, 2012025-05E

Sample ID: **MB-98775** Batch ID: **98775** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_201208A** Analysis Date: **12/8/2020 9:57:24 AM** Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0586		0.1000		58.6	47	142			
Surr: Octacosane	0.0812		0.1000		81.2	51	124			

Sample ID: **LCS-98775** Batch ID: **98775** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_201208A** Analysis Date: **12/8/2020 10:06:28 AM** Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.882	0.100	1.250	0	70.5	50	114			
Surr: Isopropylbenzene	0.0612		0.1000		61.2	47	142			
Surr: Octacosane	0.0827		0.1000		82.7	51	124			

Sample ID: **LCSD-98775** Batch ID: **98775** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_201208A** Analysis Date: **12/8/2020 10:15:32 AM** Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.884	0.100	1.250	0	70.8	50	114	0.325	30	
Surr: Isopropylbenzene	0.0538		0.1000		53.8	47	142	0	0	
Surr: Octacosane	0.0857		0.1000		85.7	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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_201208A

The QC data in batch 98791 applies to the following samples: 2012025-01B, 2012025-02B, 2012025-03B, 2012025-04B, 2012025-05B

Sample ID: **LCS-98791**	Batch ID: **98791**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_201208A**	Analysis Date: **12/8/2020 10:50:14 AM**	Prep Date: **12/8/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.82	0.100	2.500	0	113	67	136			
Surr: Tetrachlorethene	0.395		0.4000		98.7	74	138			

Sample ID: **LCSD-98791**	Batch ID: **98791**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_201208A**	Analysis Date: **12/8/2020 11:15:07 AM**	Prep Date: **12/8/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.91	0.100	2.500	0	116	67	136	2.96	30	
Surr: Tetrachlorethene	0.414		0.4000		103	74	138	0	0	

Sample ID: **MB-98791**	Batch ID: **98791**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_201208A**	Analysis Date: **12/8/2020 12:29:07 PM**	Prep Date: **12/8/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.421		0.4000		105	74	138			

Sample ID: **2012026-06BMS**	Batch ID: **98791**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_201208A**	Analysis Date: **12/8/2020 8:34:31 PM**	Prep Date: **12/8/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.83	0.100	2.500	0	113	67	136			
Surr: Tetrachlorethene	0.431		0.4000		108	74	138			

Sample ID: **2012026-06BMSD**	Batch ID: **98791**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_201208A**	Analysis Date: **12/8/2020 8:57:59 PM**	Prep Date: **12/8/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.91	0.100	2.500	0	117	67	136	2.81	30	
Surr: Tetrachlorethene	0.428		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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_201209B

The QC data in batch 98762 applies to the following samples: 2012025-01C, 2012025-02C, 2012025-03C, 2012025-04C, 2012025-05C

Sample ID: **MB-98762**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:23:01 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-98762**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:25:17 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00212	0.000200	0.00200	0	106	85	115			

Sample ID: **LCSD-98762**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:27:33 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00212	0.000200	0.00200	0	106	85	115	0	15	

Sample ID: **2012026-01C MS**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:47:57 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00210	0.000200	0.00200	0	105	80	120			

Sample ID: **2012026-01C MSD**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:50:14 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00209	0.000200	0.00200	0	104	80	120	0.477	15	

Sample ID: **2012026-01C SD**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:52:30 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID: **2012026-01C PDS**	Batch ID: **98762**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_201209B**	Analysis Date: **12/9/2020 11:54:46 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00261	0.000200	0.00250	0	104	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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_201207A

The QC data in batch 98759 applies to the following samples: 2012025-01C, 2012025-02C, 2012025-03C, 2012025-04C, 2012025-05C

Sample ID: **MB-98759** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 10:51:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								

Sample ID: **LCS-98759** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 10:53:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.207	0.00500	0.200	0	103	80	120			
Barium	0.206	0.0100	0.200	0	103	80	120			
Cadmium	0.209	0.00100	0.200	0	104	80	120			
Chromium	0.207	0.00500	0.200	0	103	80	120			
Lead	0.203	0.00100	0.200	0	101	80	120			
Selenium	0.202	0.00500	0.200	0	101	80	120			
Silver	0.206	0.00200	0.200	0	103	80	120			

Sample ID: **LCSD-98759** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 10:55:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.208	0.00500	0.200	0	104	80	120	0.626	15	
Barium	0.206	0.0100	0.200	0	103	80	120	0.036	15	
Cadmium	0.208	0.00100	0.200	0	104	80	120	0.364	15	
Chromium	0.207	0.00500	0.200	0	104	80	120	0.411	15	
Lead	0.204	0.00100	0.200	0	102	80	120	0.663	15	
Selenium	0.202	0.00500	0.200	0	101	80	120	0.169	15	
Silver	0.206	0.00200	0.200	0	103	80	120	0.239	15	

Sample ID: **2012026-02C SD** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 11:01:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0139	0.0250	0	0.0134				4.14	20	
Barium	0.262	0.0500	0	0.263				0.235	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	

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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_201207A

Sample ID: **2012026-02C SD** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 11:01:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.00150	0.00500	0	0.00132				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Silver	<0.00500	0.0100	0	0				0	20	

Sample ID: **2012026-02C PDS** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 11:21:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.221	0.00500	0.200	0.0134	104	75	125			
Barium	0.459	0.0100	0.200	0.263	97.8	75	125			
Cadmium	0.209	0.00100	0.200	0	104	75	125			
Chromium	0.210	0.00500	0.200	0	105	75	125			
Lead	0.211	0.00100	0.200	0.00132	105	75	125			
Selenium	0.198	0.00500	0.200	0	98.8	75	125			
Silver	0.184	0.00200	0.200	0	91.9	75	125			

Sample ID: **2012026-02C MS** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 11:23:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.220	0.00500	0.200	0.0134	103	75	125			
Barium	0.473	0.0100	0.200	0.263	105	75	125			
Cadmium	0.203	0.00100	0.200	0	102	75	125			
Chromium	0.202	0.00500	0.200	0	101	75	125			
Lead	0.205	0.00100	0.200	0.00132	102	75	125			
Selenium	0.196	0.00500	0.200	0	98.0	75	125			
Silver	0.197	0.00200	0.200	0	98.4	75	125			

Sample ID: **2012026-02C MSD** Batch ID: **98759** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_201207A** Analysis Date: **12/7/2020 11:25:00 AM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.222	0.00500	0.200	0.0134	104	75	125	0.968	15	
Barium	0.471	0.0100	0.200	0.263	104	75	125	0.392	15	
Cadmium	0.204	0.00100	0.200	0	102	75	125	0.592	15	
Chromium	0.203	0.00500	0.200	0	101	75	125	0.262	15	
Lead	0.207	0.00100	0.200	0.00132	103	75	125	1.10	15	
Selenium	0.202	0.00500	0.200	0	101	75	125	2.95	15	
Silver	0.198	0.00200	0.200	0	98.8	75	125	0.380	15	

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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_201204A

The QC data in batch 98767 applies to the following samples: 2012025-01A, 2012025-02A, 2012025-03A, 2012025-04A, 2012025-05A, 2012025-06A

Sample ID: **LCS-98767** Batch ID: **98767** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS7_201204A** Analysis Date: **12/4/2020 12:46:00 PM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0240	0.00100	0.0232	0	104	81	122			
Ethylbenzene	0.0233	0.00100	0.0232	0	100	80	120			
m,p-Xylene	0.0471	0.00200	0.0464	0	101	80	120			
o-Xylene	0.0232	0.00100	0.0232	0	99.8	80	120			
Toluene	0.0241	0.00200	0.0232	0	104	80	120			
Surr: 1,2-Dichloroethane-d4	210		200.0		105	72	119			
Surr: 4-Bromofluorobenzene	197		200.0		98.5	76	119			
Surr: Dibromofluoromethane	199		200.0		99.4	85	115			
Surr: Toluene-d8	193		200.0		96.3	81	120			

Sample ID: **MB-98767** Batch ID: **98767** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS7_201204A** Analysis Date: **12/4/2020 1:36:00 PM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	214		200.0		107	72	119			
Surr: 4-Bromofluorobenzene	200		200.0		99.8	76	119			
Surr: Dibromofluoromethane	201		200.0		100	85	115			
Surr: Toluene-d8	194		200.0		96.9	81	120			

Sample ID: **SB-201204** Batch ID: **98767** TestNo: **SW8260D** Units: **mg/L**
SampType: **SBLK** Run ID: **GCMS7_201204A** Analysis Date: **12/4/2020 4:22:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	213		0							
Surr: 4-Bromofluorobenzene	207		0							
Surr: Dibromofluoromethane	198		0							
Surr: Toluene-d8	192		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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_201204A

Sample ID: **2012029-01AMS**	Batch ID: **98767**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **MS**	Run ID: **GCMS7_201204A**	Analysis Date: **12/5/2020 12:37:00 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0220	0.00100	0.0232	0	94.9	81	122			
Ethylbenzene	0.0213	0.00100	0.0232	0	91.6	80	120			
m,p-Xylene	0.0429	0.00200	0.0464	0	92.5	80	120			
o-Xylene	0.0213	0.00100	0.0232	0	91.9	80	120			
Toluene	0.0219	0.00200	0.0232	0	94.2	80	120			
Surr: 1,2-Dichloroethane-d4	209		200.0		105	72	119			
Surr: 4-Bromofluorobenzene	200		200.0		100	76	119			
Surr: Dibromofluoromethane	201		200.0		100	85	115			
Surr: Toluene-d8	191		200.0		95.5	81	120			

Sample ID: **2012029-01AMSD**	Batch ID: **98767**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **MSD**	Run ID: **GCMS7_201204A**	Analysis Date: **12/5/2020 1:02:00 AM**	Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0225	0.00100	0.0232	0	97.0	81	122	2.16	20	
Ethylbenzene	0.0215	0.00100	0.0232	0	92.6	80	120	1.03	20	
m,p-Xylene	0.0433	0.00200	0.0464	0	93.3	80	120	0.858	20	
o-Xylene	0.0216	0.00100	0.0232	0	93.0	80	120	1.21	20	
Toluene	0.0225	0.00200	0.0232	0	96.8	80	120	2.71	20	
Surr: 1,2-Dichloroethane-d4	208		200.0		104	72	119	0	0	
Surr: 4-Bromofluorobenzene	198		200.0		99.1	76	119	0	0	
Surr: Dibromofluoromethane	202		200.0		101	85	115	0	0	
Surr: Toluene-d8	192		200.0		95.8	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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_201207A

The QC data in batch 98766 applies to the following samples: 2012025-01D, 2012025-02D, 2012025-03D, 2012025-04D, 2012025-05D

Sample ID: **MB-98766**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 11:19:54 AM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-98766**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 11:35:54 AM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.66	1.00	10.00	0	96.6	90	110			

Sample ID: **LCSD-98766**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 11:51:54 AM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.71	1.00	10.00	0	97.1	90	110	0.567	20	

Sample ID: **2012024-02DMS**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 1:53:06 PM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	220	10.0	200.0	20.53	99.7	90	110			

Sample ID: **2012024-02DMSD**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 2:09:06 PM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	220	10.0	200.0	20.53	100	90	110	0.264	20	

Sample ID: **2012026-01DMS**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 4:33:06 PM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	305	10.0	200.0	110.6	97.4	90	110			

Sample ID: **2012026-01DMSD**	Batch ID: **98766**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_201207A**	Analysis Date: **12/7/2020 4:49:06 PM**	Prep Date: **12/7/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	306	10.0	200.0	110.6	97.7	90	110	0.217	20	

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: 2012025
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: **WC_201204E**

The QC data in batch 98761 applies to the following samples: 2012025-01D, 2012025-02D, 2012025-03D, 2012025-04D, 2012025-05D

Sample ID: **MB-98761** Batch ID: **98761** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_201204E** Analysis Date: **12/4/2020 3:30:00 PM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-98761** Batch ID: **98761** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_201204E** Analysis Date: **12/4/2020 3:30:00 PM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	773	10.0	745.6	0	104	90	113			

Sample ID: **2012017-01C-DUP** Batch ID: **98761** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_201204E** Analysis Date: **12/4/2020 3:30:00 PM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2250	50.0	0	2250				0	5	

Sample ID: **2012024-02D-DUP** Batch ID: **98761** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_201204E** Analysis Date: **12/4/2020 3:30:00 PM** Prep Date: **12/4/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1420	200	0	1360				4.32	5	

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

April 01, 2021

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

Order No.: 2103199

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 3/25/2021 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: T104704211-21-26

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72855
CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 34127 GAO RD GOLDEN 80403
PHONE: 303 941-0156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: BSTEPHENSON
ADDITIONAL REPORT COPIES TO: JCLOUD

DATE: 3/24/21 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 2103199
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 112150 COLLECTOR: BSTEPHENSON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX X MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO (METHOD 8015) DRO (METHOD 8015) ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ T PHOS, AMMONIA ❑ | 8321 HERB ❑ METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | METALS ❑ | RCRA X TX11 ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE X ANIONS ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS X TSS ❑ % MOISTURE ❑ CYANIDE ❑

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	FIELD NOTES
MW-1	01	3/24/21	1115	W		10						
MW-2	02	"	1130	W		10						
MW-3	03	"	1145	W		10						
MW-4	04	"	1210	W		10						
MW-4D	05	"	1210	W		10						
TRIP	06	3/24/21	—			2						

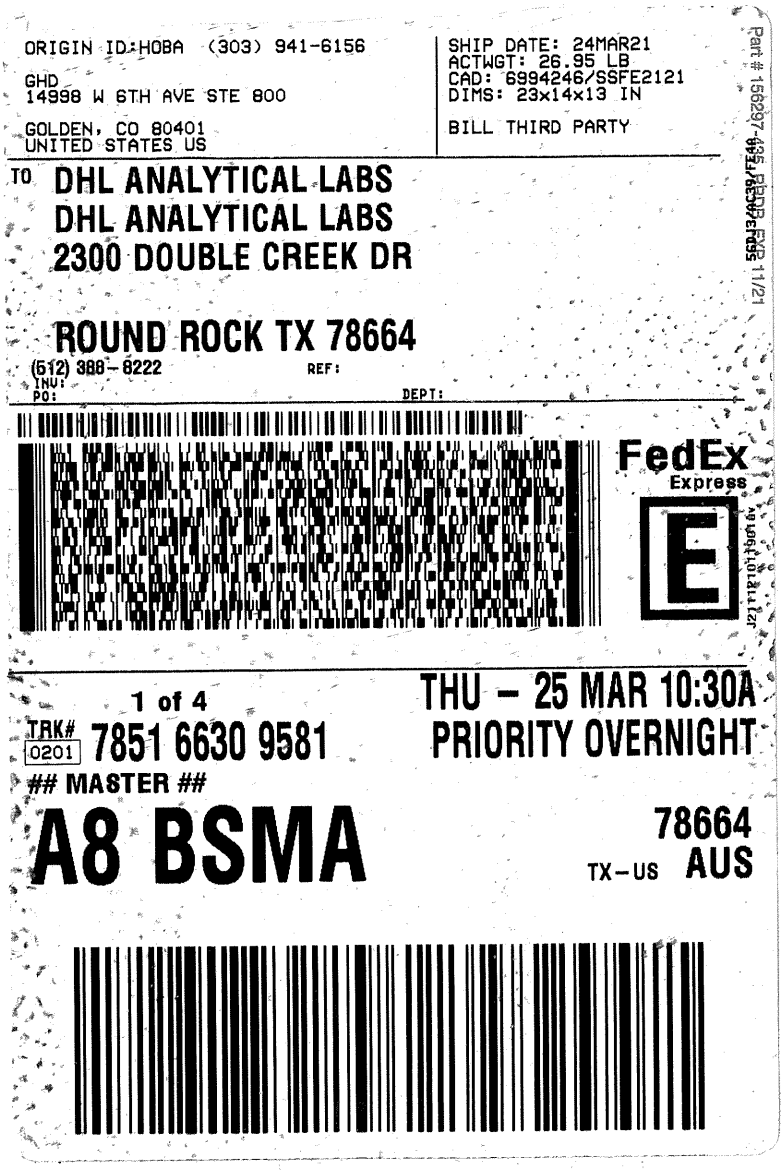
RELINQUISHED BY: (Signature) DATE/TIME 3/24/21 1600 RECEIVED BY: (Signature) to FedEx
RELINQUISHED BY: (Signature) Fed Ex DATE/TIME 3/25/21 0940 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑

LABORATORY USE ONLY:
RECEIVING TEMP: 3.7°C THERM #: 78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☒ NOT USED
CARRIER: ❑ LONE STAR ☒ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL COC Rev 1 | FEB 2010



ORIGIN ID:HOBA (303) 941-6156
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 24MAR21
ACTWGT: 26.95 LB
CAD: 6994246/SSFE2121
DIMS: 23x14x13 IN
BILL THIRD PARTY

Part # 156287-635 RRD EXP 11/21

TO DHL ANALYTICAL LABS
DHL ANALYTICAL LABS
2300 DOUBLE CREEK DR

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

FedEx Express

1 of 4
TRK# 0201 7851 6630 9581
MASTER
A8 BSMA

THU - 25 MAR 10:30A
PRIORITY OVERNIGHT

78664
TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD

Date Received: 3/25/2021

Work Order Number 2103199

Received by: EL

Checklist completed by: Signature 3/25/2021 Date

Reviewed by Initials 3/25/2021 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	3.7 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? NO		Checked by R.A.
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted: Date contacted: Person contacted

Contacted by: Regarding:

Comments:

Corrective Action:

Page 1 of 1

DHL Analytical, Inc. **Date:** *01-Apr-21*

CLIENT: GHD
Project: Hobbs South
Lab Order: 2103199

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, EPA and Standard Methods.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For Anions Analysis, the recovery of Chloride for the Matrix Spike and Matrix Spike Duplicate (2103155-02 MS/MSD) was below the method control limits. This is flagged accordingly in the QC Summary Report. This anion was within method control limits in the associated LCS. No further corrective action was taken.

DHL Analytical, Inc.

Date: *01-Apr-21*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	2103199-01
Project No:	11211501	**Collection Date:**	03/24/21 11:15 AM
Lab Order:	2103199	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.160	0.160	0.200		mg/L	1	03/31/21 01:51 PM
Surr: Isopropylbenzene	55.2	0	47-142		%REC	1	03/31/21 01:51 PM
Surr: Octacosane	66.3	0	51-124		%REC	1	03/31/21 01:51 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0603	0.0600	0.100	J	mg/L	1	03/30/21 03:59 PM
Surr: Tetrachlorethene	122	0	74-138		%REC	1	03/30/21 03:59 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.00682	0.00200	0.00500		mg/L	1	03/29/21 01:08 PM
Barium	0.214	0.00300	0.0100		mg/L	1	03/29/21 01:08 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 01:08 PM
Chromium	0.0245	0.00200	0.00500		mg/L	1	03/29/21 01:08 PM
Lead	0.00197	0.000300	0.00100		mg/L	1	03/29/21 01:08 PM
Selenium	0.0122	0.00200	0.00500		mg/L	1	03/29/21 01:08 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/29/21 01:08 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/29/21 11:37 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 11:08 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 11:08 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 11:08 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 11:08 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 11:08 AM
Surr: 1,2-Dichloroethane-d4	108	0	72-119		%REC	1	03/30/21 11:08 AM
Surr: 4-Bromofluorobenzene	107	0	76-119		%REC	1	03/30/21 11:08 AM
Surr: Dibromofluoromethane	104	0	85-115		%REC	1	03/30/21 11:08 AM
Surr: Toluene-d8	99.4	0	81-120		%REC	1	03/30/21 11:08 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	57.3	3.00	10.0		mg/L	10	03/27/21 12:42 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	716	10.0	10.0		mg/L	1	03/30/21 05:00 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Apr-21*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	2103199-02
Project No:	11211501	**Collection Date:**	03/24/21 11:30 AM
Lab Order:	2103199	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.738	0.177	0.221		mg/L	1	03/31/21 02:00 PM
Surr: Isopropylbenzene	51.8	0	47-142		%REC	1	03/31/21 02:00 PM
Surr: Octacosane	109	0	51-124		%REC	1	03/31/21 02:00 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/21 04:24 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	03/30/21 04:24 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.00496	0.00200	0.00500	J	mg/L	1	03/29/21 01:24 PM
Barium	0.375	0.00300	0.0100		mg/L	1	03/29/21 01:24 PM
Cadmium	0.000376	0.000300	0.00100	J	mg/L	1	03/29/21 01:24 PM
Chromium	0.00252	0.00200	0.00500	J	mg/L	1	03/29/21 01:24 PM
Lead	0.000946	0.000300	0.00100	J	mg/L	1	03/29/21 01:24 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/29/21 01:24 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/29/21 01:24 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/29/21 11:39 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 12:38 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 12:38 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 12:38 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 12:38 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 12:38 AM
Surr: 1,2-Dichloroethane-d4	109	0	72-119		%REC	1	03/30/21 12:38 AM
Surr: 4-Bromofluorobenzene	107	0	76-119		%REC	1	03/30/21 12:38 AM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	03/30/21 12:38 AM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/30/21 12:38 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	117	3.00	10.0		mg/L	10	03/27/21 12:58 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	764	10.0	10.0		mg/L	1	03/30/21 05:00 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Apr-21*

CLIENT:	GHD	**Client Sample ID:**	MW-3
Project:	Hobbs South	**Lab ID:**	2103199-03
Project No:	11211501	**Collection Date:**	03/24/21 11:45 AM
Lab Order:	2103199	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.154	0.154	0.192		mg/L	1	03/31/21 02:09 PM
Surr: Isopropylbenzene	77.7	0	47-142		%REC	1	03/31/21 02:09 PM
Surr: Octacosane	90.1	0	51-124		%REC	1	03/31/21 02:09 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/21 04:47 PM
Surr: Tetrachlorethene	125	0	74-138		%REC	1	03/30/21 04:47 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.0435	0.00200	0.00500		mg/L	1	03/29/21 01:26 PM
Barium	0.297	0.00300	0.0100		mg/L	1	03/29/21 01:26 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 01:26 PM
Chromium	0.00507	0.00200	0.00500		mg/L	1	03/29/21 01:26 PM
Lead	0.00257	0.000300	0.00100		mg/L	1	03/29/21 01:26 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/29/21 01:26 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/29/21 01:26 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/29/21 11:42 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:02 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:02 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 01:02 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:02 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 01:02 AM
Surr: 1,2-Dichloroethane-d4	109	0	72-119		%REC	1	03/30/21 01:02 AM
Surr: 4-Bromofluorobenzene	107	0	76-119		%REC	1	03/30/21 01:02 AM
Surr: Dibromofluoromethane	103	0	85-115		%REC	1	03/30/21 01:02 AM
Surr: Toluene-d8	99.9	0	81-120		%REC	1	03/30/21 01:02 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	73.3	3.00	10.0		mg/L	10	03/27/21 01:14 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	573	10.0	10.0		mg/L	1	03/30/21 05:00 PM

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

DHL Analytical, Inc.

Date: *01-Apr-21*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	2103199-04
Project No:	11211501	**Collection Date:**	03/24/21 12:10 PM
Lab Order:	2103199	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.487	0.149	0.186		mg/L	1	03/31/21 02:18 PM
Surr: Isopropylbenzene	57.1	0	47-142		%REC	1	03/31/21 02:18 PM
Surr: Octacosane	76.8	0	51-124		%REC	1	03/31/21 02:18 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/30/21 06:00 PM
Surr: Tetrachlorethene	122	0	74-138		%REC	1	03/30/21 06:00 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.0500	0.00200	0.00500		mg/L	1	03/29/21 01:28 PM
Barium	0.400	0.00300	0.0100		mg/L	1	03/29/21 01:28 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 01:28 PM
Chromium	0.00232	0.00200	0.00500	J	mg/L	1	03/29/21 01:28 PM
Lead	0.00126	0.000300	0.00100		mg/L	1	03/29/21 01:28 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/29/21 01:28 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/29/21 01:28 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/29/21 11:44 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:27 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:27 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 01:27 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:27 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 01:27 AM
Surr: 1,2-Dichloroethane-d4	108	0	72-119		%REC	1	03/30/21 01:27 AM
Surr: 4-Bromofluorobenzene	109	0	76-119		%REC	1	03/30/21 01:27 AM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	03/30/21 01:27 AM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/30/21 01:27 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	108	3.00	10.0		mg/L	10	03/27/21 02:50 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	696	10.0	10.0		mg/L	1	03/30/21 05:00 PM

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

DHL Analytical, Inc.

Date: *01-Apr-21*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	2103199-05
Project No:	11211501	**Collection Date:**	03/24/21 12:10 PM
Lab Order:	2103199	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.976	0.148	0.184		mg/L	1	03/31/21 04:23 PM
Surr: Isopropylbenzene	83.5	0	47-142		%REC	1	03/31/21 04:23 PM
Surr: Octacosane	117	0	51-124		%REC	1	03/31/21 04:23 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.110	0.0600	0.100		mg/L	1	03/30/21 06:24 PM
Surr: Tetrachlorethene	121	0	74-138		%REC	1	03/30/21 06:24 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **RO**
Arsenic	0.0570	0.00200	0.00500		mg/L	1	03/29/21 01:30 PM
Barium	0.415	0.00300	0.0100		mg/L	1	03/29/21 01:30 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 01:30 PM
Chromium	0.00365	0.00200	0.00500	J	mg/L	1	03/29/21 01:30 PM
Lead	0.00204	0.000300	0.00100		mg/L	1	03/29/21 01:30 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	03/29/21 01:30 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	03/29/21 01:30 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JVR**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	03/29/21 11:46 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:51 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:51 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 01:51 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/30/21 01:51 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/30/21 01:51 AM
Surr: 1,2-Dichloroethane-d4	109	0	72-119		%REC	1	03/30/21 01:51 AM
Surr: 4-Bromofluorobenzene	110	0	76-119		%REC	1	03/30/21 01:51 AM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	03/30/21 01:51 AM
Surr: Toluene-d8	100	0	81-120		%REC	1	03/30/21 01:51 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	104	3.00	10.0		mg/L	10	03/27/21 03:06 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	698	10.0	10.0		mg/L	1	03/30/21 05:00 PM

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

DHL Analytical, Inc.

Date: *01-Apr-21*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	2103199-06
Project No:	11211501	**Collection Date:**	03/24/21
Lab Order:	2103199	**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	03/30/21 01:32 PM
Surr: Tetrachlorethene	127	0	74-138		%REC	1	03/30/21 01:32 PM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **SNM**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 04:21 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 04:21 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/29/21 04:21 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/29/21 04:21 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/29/21 04:21 PM
Surr: 1,2-Dichloroethane-d4	108	0	72-119		%REC	1	03/29/21 04:21 PM
Surr: 4-Bromofluorobenzene	108	0	76-119		%REC	1	03/29/21 04:21 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	03/29/21 04:21 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	03/29/21 04:21 PM

Qualifiers:

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

DHL Analytical, Inc. **Date:** *01-Apr-21*

CLIENT: GHD
Work Order: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_210331A

The QC data in batch 100024 applies to the following samples: 2103199-01E, 2103199-02E, 2103199-03E, 2103199-04E, 2103199-05E

Sample ID: **LCS-100024** Batch ID: **100024** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_210331A** Analysis Date: **3/31/2021 12:26:05 PM** Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.973	0.100	1.250	0	77.8	50	114			
Surr: Isopropylbenzene	0.0576		0.1000		57.6	47	142			
Surr: Octacosane	0.0753		0.1000		75.3	51	124			

Sample ID: **LCSD-100024** Batch ID: **100024** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_210331A** Analysis Date: **3/31/2021 12:35:07 PM** Prep Date: **3/30/2021**

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	1.99	30	
Surr: Isopropylbenzene	0.0575		0.1000		57.5	47	142	0	0	
Surr: Octacosane	0.0715		0.1000		71.5	51	124	0	0	

Sample ID: **MB-100024** Batch ID: **100024** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_210331A** Analysis Date: **3/31/2021 3:36:24 PM** Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0654		0.1000		65.4	47	142			
Surr: Octacosane	0.0722		0.1000		72.2	51	124			

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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_210330A

The QC data in batch 100027 applies to the following samples: 2103199-01B, 2103199-02B, 2103199-03B, 2103199-04B, 2103199-05B, 2103199-06B

Sample ID: **LCS-100027**	Batch ID: **100027**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_210330A**	Analysis Date: **3/30/2021 11:08:38 AM**	Prep Date: **3/30/2021**

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			
Surr: Tetrachlorethene	0.432		0.4000		108	74	138			

Sample ID: **LCSD-100027**	Batch ID: **100027**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCSD**	Run ID: **GC4_210330A**	Analysis Date: **3/30/2021 11:33:07 AM**	Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.99	0.100	2.500	0	120	67	136	0.567	30	
Surr: Tetrachlorethene	0.477		0.4000		119	74	138	0	0	

Sample ID: **MB-100027**	Batch ID: **100027**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_210330A**	Analysis Date: **3/30/2021 12:44:26 PM**	Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.478		0.4000		120	74	138			

Sample ID: **2103200-06BMS**	Batch ID: **100027**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_210330A**	Analysis Date: **3/30/2021 9:08:36 PM**	Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.83	0.100	2.500	0	113	67	136			
Surr: Tetrachlorethene	0.492		0.4000		123	74	138			

Sample ID: **2103200-06BMSD**	Batch ID: **100027**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_210330A**	Analysis Date: **3/30/2021 9:32:37 PM**	Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.89	0.100	2.500	0	116	67	136	2.20	30	
Surr: Tetrachlorethene	0.489		0.4000		122	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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_210329B

The QC data in batch 99972 applies to the following samples: 2103199-01C, 2103199-02C, 2103199-03C, 2103199-04C, 2103199-05C

Sample ID: **MB-99972**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 10:38:23 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-99972**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 10:40:39 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00200	0.000200	0.00200	0	100	85	115			

Sample ID: **LCSD-99972**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 10:42:55 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00201	0.000200	0.00200	0	101	85	115	0.499	15	

Sample ID: **2103168-02A MS**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 11:21:40 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	80	120			

Sample ID: **2103168-02A MSD**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 11:23:56 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00196	0.000200	0.00200	0	98.0	80	120	1.02	15	

Sample ID: **2103168-02A SD**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 11:26:13 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID: **2103168-02A PDS**	Batch ID: **99972**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_210329B**	Analysis Date: **3/29/2021 11:28:30 AM**	Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00243	0.000200	0.00250	0	97.2	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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_210329B

The QC data in batch 99978 applies to the following samples: 2103199-01C, 2103199-02C, 2103199-03C, 2103199-04C, 2103199-05C

Sample ID: **MB-99978** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 12:40:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								

Sample ID: **LCS-99978** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 12:42:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.198	0.00500	0.200	0	98.8	80	120			
Barium	0.204	0.0100	0.200	0	102	80	120			
Cadmium	0.199	0.00100	0.200	0	99.7	80	120			
Chromium	0.205	0.00500	0.200	0	102	80	120			
Lead	0.203	0.00100	0.200	0	102	80	120			
Selenium	0.205	0.00500	0.200	0	102	80	120			
Silver	0.196	0.00200	0.200	0	98.1	80	120			

Sample ID: **LCSD-99978** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 12:44:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.200	0.00500	0.200	0	99.8	80	120	1.02	15	
Barium	0.204	0.0100	0.200	0	102	80	120	0.082	15	
Cadmium	0.199	0.00100	0.200	0	99.7	80	120	0.025	15	
Chromium	0.204	0.00500	0.200	0	102	80	120	0.274	15	
Lead	0.204	0.00100	0.200	0	102	80	120	0.166	15	
Selenium	0.209	0.00500	0.200	0	104	80	120	1.93	15	
Silver	0.196	0.00200	0.200	0	98.2	80	120	0.146	15	

Sample ID: **2103200-01C SD** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 12:50:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0100	0.0250	0	0.00549				0	20	
Barium	0.0964	0.0500	0	0.0946				1.84	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	

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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_210329B

Sample ID: **2103200-01C SD** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 12:50:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.00150	0.00500	0	0				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Silver	<0.00500	0.0100	0	0				0	20	

Sample ID: **2103200-01C PDS** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 1:10:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.203	0.00500	0.200	0.00549	98.6	75	125			
Barium	0.301	0.0100	0.200	0.0946	103	75	125			
Cadmium	0.201	0.00100	0.200	0	100	75	125			
Chromium	0.211	0.00500	0.200	0	106	75	125			
Lead	0.212	0.00100	0.200	0	106	75	125			
Selenium	0.209	0.00500	0.200	0	104	75	125			
Silver	0.184	0.00200	0.200	0	92.0	75	125			

Sample ID: **2103200-01C MS** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 1:12:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0.00549	99.4	75	125			
Barium	0.299	0.0100	0.200	0.0946	102	75	125			
Cadmium	0.195	0.00100	0.200	0	97.7	75	125			
Chromium	0.204	0.00500	0.200	0	102	75	125			
Lead	0.209	0.00100	0.200	0	105	75	125			
Selenium	0.203	0.00500	0.200	0	102	75	125			
Silver	0.190	0.00200	0.200	0	95.1	75	125			

Sample ID: **2103200-01C MSD** Batch ID: **99978** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_210329B** Analysis Date: **3/29/2021 1:14:00 PM** Prep Date: **3/26/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0.00549	99.2	75	125	0.135	15	
Barium	0.303	0.0100	0.200	0.0946	104	75	125	1.31	15	
Cadmium	0.195	0.00100	0.200	0	97.4	75	125	0.350	15	
Chromium	0.203	0.00500	0.200	0	102	75	125	0.223	15	
Lead	0.209	0.00100	0.200	0	105	75	125	0.000	15	
Selenium	0.208	0.00500	0.200	0	104	75	125	2.00	15	
Silver	0.189	0.00200	0.200	0	94.7	75	125	0.459	15	

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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_210329A

The QC data in batch 100010 applies to the following samples: 2103199-01A, 2103199-02A, 2103199-03A, 2103199-04A, 2103199-05A, 2103199-06A

Sample ID: **LCS-100010** Batch ID: **100010** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS7_210329A** Analysis Date: **3/29/2021 12:09:00 PM** Prep Date: **3/29/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0260	0.00100	0.0232	0	112	81	122			
Ethylbenzene	0.0253	0.00100	0.0232	0	109	80	120			
m,p-Xylene	0.0510	0.00200	0.0464	0	110	80	120			
o-Xylene	0.0250	0.00100	0.0232	0	108	80	120			
Toluene	0.0249	0.00200	0.0232	0	107	80	120			
Surr: 1,2-Dichloroethane-d4	199		200.0		99.3	72	119			
Surr: 4-Bromofluorobenzene	205		200.0		103	76	119			
Surr: Dibromofluoromethane	199		200.0		99.6	85	115			
Surr: Toluene-d8	202		200.0		101	81	120			

Sample ID: **MB-100010** Batch ID: **100010** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS7_210329A** Analysis Date: **3/29/2021 1:06:00 PM** Prep Date: **3/29/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	208		200.0		104	72	119			
Surr: 4-Bromofluorobenzene	209		200.0		104	76	119			
Surr: Dibromofluoromethane	206		200.0		103	85	115			
Surr: Toluene-d8	196		200.0		98.1	81	120			

Sample ID: **SB-210329** Batch ID: **100010** TestNo: **SW8260D** Units: **mg/L**
SampType: **SBLK** Run ID: **GCMS7_210329A** Analysis Date: **3/29/2021 6:07:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	209		0							
Surr: 4-Bromofluorobenzene	211		0							
Surr: Dibromofluoromethane	205		0							
Surr: Toluene-d8	202		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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_210329A

Sample ID: **2103193-01AMS**	Batch ID: **100010**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **MS**	Run ID: **GCMS7_210329A**	Analysis Date: **3/30/2021 2:15:00 AM**	Prep Date: **3/29/2021**

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	0.0220	0.00100	0.0232	0	94.9	80	120			
m,p-Xylene	0.0447	0.00200	0.0464	0	96.4	80	120			
o-Xylene	0.0220	0.00100	0.0232	0	95.0	80	120			
Toluene	0.0222	0.00200	0.0232	0	95.8	80	120			
Surr: 1,2-Dichloroethane-d4	210		200.0		105	72	119			
Surr: 4-Bromofluorobenzene	211		200.0		105	76	119			
Surr: Dibromofluoromethane	203		200.0		101	85	115			
Surr: Toluene-d8	204		200.0		102	81	120			

Sample ID: **2103193-01AMSD**	Batch ID: **100010**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **MSD**	Run ID: **GCMS7_210329A**	Analysis Date: **3/30/2021 2:40:00 AM**	Prep Date: **3/29/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0221	0.00100	0.0232	0	95.4	81	122	5.83	20	
Ethylbenzene	0.0210	0.00100	0.0232	0	90.3	80	120	4.93	20	
m,p-Xylene	0.0426	0.00200	0.0464	0	91.8	80	120	4.92	20	
o-Xylene	0.0210	0.00100	0.0232	0	90.7	80	120	4.64	20	
Toluene	0.0210	0.00200	0.0232	0	90.4	80	120	5.79	20	
Surr: 1,2-Dichloroethane-d4	208		200.0		104	72	119	0	0	
Surr: 4-Bromofluorobenzene	209		200.0		105	76	119	0	0	
Surr: Dibromofluoromethane	203		200.0		101	85	115	0	0	
Surr: Toluene-d8	203		200.0		101	81	120	0	0	

Sample ID: **SB-210330**	Batch ID: **100010**	TestNo: **SW8260D**	Units: **mg/L**
SampType: **SBLK**	Run ID: **GCMS7_210329A**	Analysis Date: **3/30/2021 10:43:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	214		0							
Surr: 4-Bromofluorobenzene	216		0							
Surr: Dibromofluoromethane	207		0							
Surr: Toluene-d8	200		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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_210326A

The QC data in batch 99989 applies to the following samples: 2103199-01D, 2103199-02D, 2103199-03D, 2103199-04D, 2103199-05D

Sample ID: MB-99989	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: MBLK	Run ID: IC4_210326A	Analysis Date: 3/26/2021 4:58:06 PM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: LCS-99989	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: LCS	Run ID: IC4_210326A	Analysis Date: 3/26/2021 5:14:06 PM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			

Sample ID: LCSD-99989	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: LCSD	Run ID: IC4_210326A	Analysis Date: 3/26/2021 5:30:06 PM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	1.00	10.00	0	97.3	90	110	3.41	20	

Sample ID: 2103155-02AMS	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC4_210326A	Analysis Date: 3/26/2021 10:34:06 PM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	819	10.0	200.0	727.9	45.3	90	110			S

Sample ID: 2103155-02AMSD	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC4_210326A	Analysis Date: 3/26/2021 10:50:06 PM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	819	10.0	200.0	727.9	45.4	90	110	0.021	20	S

Sample ID: 2103198-03DMS	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: MS	Run ID: IC4_210326A	Analysis Date: 3/26/2021 11:54:06 PM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	305	10.0	200.0	102.9	101	90	110			

Sample ID: 2103198-03DMSD	Batch ID: 99989	TestNo: E300	Units: mg/L
SampType: MSD	Run ID: IC4_210326A	Analysis Date: 3/27/2021 12:10:06 AM	Prep Date: 3/26/2021

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	302	10.0	200.0	102.9	99.5	90	110	1.03	20	

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: 2103199
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: WC_210330C

The QC data in batch 100032 applies to the following samples: 2103199-01D, 2103199-02D, 2103199-03D, 2103199-04D, 2103199-05D

Sample ID: **MB-100032**	Batch ID: **100032**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_210330C**	Analysis Date: **3/30/2021 5:00:00 PM**	Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-100032**	Batch ID: **100032**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_210330C**	Analysis Date: **3/30/2021 5:00:00 PM**	Prep Date: **3/30/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	749	10.0	745.6	0	100	90	113			

Sample ID: **2103198-01D DUP**	Batch ID: **100032**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_210330C**	Analysis Date: **4/1/2021 12:40:00 PM**	Prep Date: **3/31/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1240	200	0	1220				1.63	5	

Sample ID: **2103198-04D DUP**	Batch ID: **100032**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_210330C**	Analysis Date: **4/1/2021 12:40:00 PM**	Prep Date: **3/31/2021**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	760	200	0	800.0				5.13	5	

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

March 22, 2019

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

Order No.: 1903131

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 3/15/2019 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: T104704211-19-22

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 86324

CHAIN-OF-CUSTODY

CLIENT: GHD
ADDRESS: 14998 W 6TH AVE #800
PHONE: 3/941-6156 FAX/E-MAIL: BRAD.STEPHENSON
DATA REPORTED TO: BSTEPHENSON@GHD.COM
ADDITIONAL REPORT COPIES TO:

DATE: 3/13/19 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1903131
PROJECT LOCATION OR NAME: HOBBS South
CLENT PROJECT #: 078807 COLLECTOR: BSTEPHENSON

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

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX X MTBE ☐ (METHOD 8021) | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO (METHOD 8015) X DRO (METHOD 8105) X | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ ___ ☐ | RCRA ☐ TX11 ☐ ___ ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS ___ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX X	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO (METHOD 8015) X DRO (METHOD 8105) X	FIELD NOTES
MW-1	01	3/12/19	1030	W		7						X		X	
MW-2	02		1130			7						X		X	
MW-3R	03		1050			7						X		X	
MW-4	04		1110			7						X		X	
MW-40	05	3/12/19	1110	W		7						X		X	
TRIP	06			W		2						X		X	

RELINQUISHED BY: (Signature) DATE/TIME 3/13/19 1600 RECEIVED BY: (Signature) to UPS
RELINQUISHED BY: (Signature) UPS DATE/TIME 3/15/19 0940 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

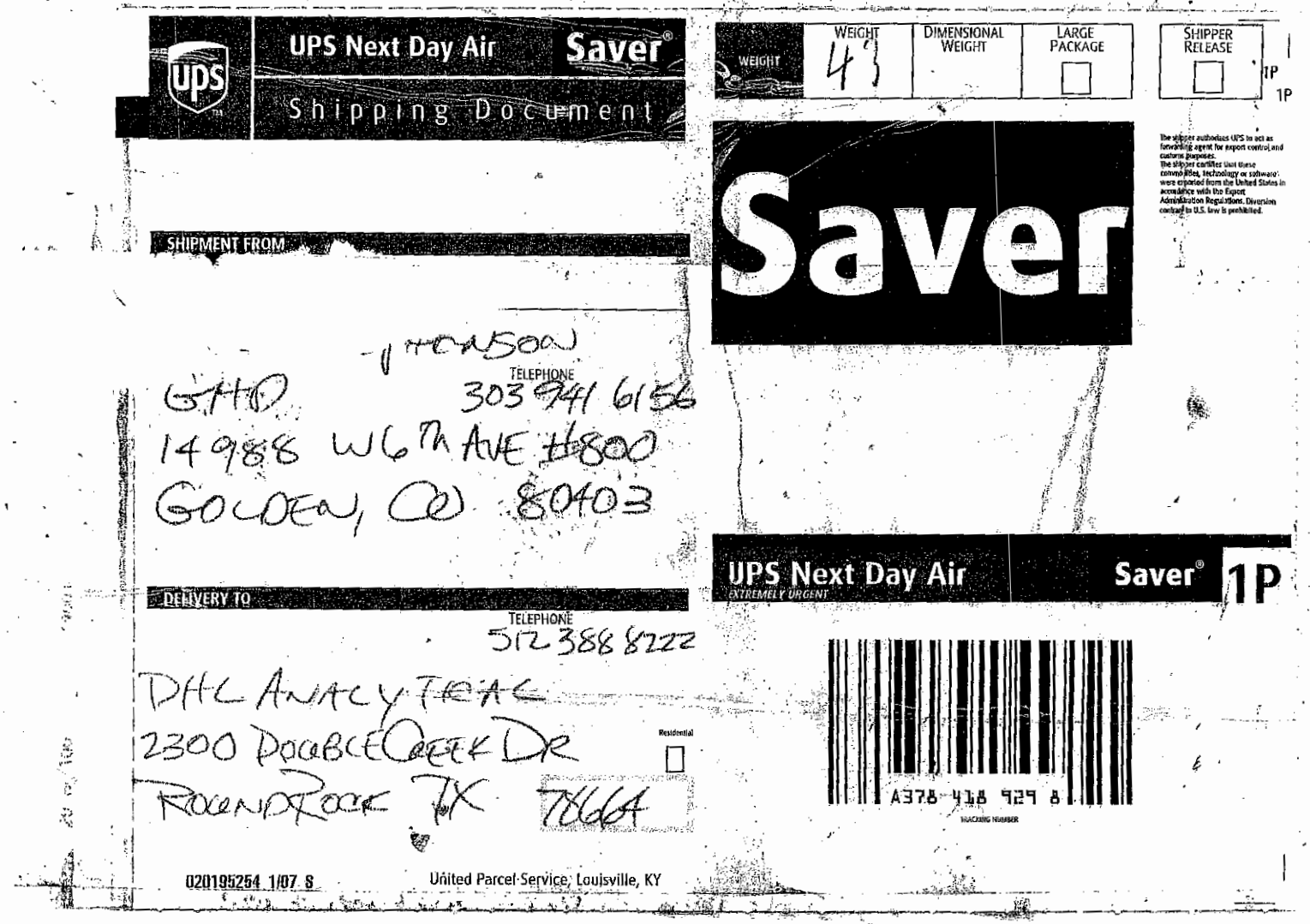
☐ DHL DISPOSAL @ $5.00 each ☐ Return

3

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.0°C THERM #: 38
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☐ FEDEX ☒ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL COC Rev 1 | FEB 2010



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GHD TELEPHONE 303 941 6156

14988 W 6TH AVE #800

GOLDEN, CO 80403

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DHL ANALYTICS

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

Residential ☐

A378 418 929 8
TRACKING NUMBER

020195254 1/07 S United Parcel Service, Louisville, KY

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD Date Received: 3/15/2019

Work Order Number 1903131 Received by EL

Checklist completed by: [signature] 3/15/2019 Reviewed by PL 3/15/2019
Signature | Date | Initials | Date

Carrier name UPS Blue

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☐	No ☑	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	3.0 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: 3 Trip Blank vials broken in transit. Only 1 TB vial intact.

Corrective Action Proceed w/ analysis on remaining vial

Page 1 of 1

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

CLIENT: GHD
Project: Hobbs South
Lab Order: 1903131

CASE NARRATIVE

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

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

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For GRO Analysis, the recovery of surrogate Tetrachloroethene for Sample MW-4D was slightly below the method control limits, due to matrix. This is flagged accordingly in the Analytical Data Report. No further corrective action was taken.

For GRO Analysis, the recovery of the Matrix Spike Duplicate (1903131-05 MSD) was slightly below the method control limits. This is flagged accordingly in the QC Summary Report. The associated LCS/MS was within method control limits. No further corrective action was taken.

For Volatile Organics Analysis, o-Xylenes was detected below the reporting limit for System Blank-190319. This affects Batch QC sample only, no field data affected. No further corrective action was taken.

DHL Analytical, Inc.

Date: *22-Mar-19*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	1903131-01
Project No:	078807	**Collection Date:**	03/12/19 10:30 AM
Lab Order:	1903131	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.0754	0.0754	0.0942		mg/L	1	03/22/19 11:52 AM
Surr: Isopropylbenzene	77.7	0	47-142		%REC	1	03/22/19 11:52 AM
Surr: Octacosane	84.2	0	51-124		%REC	1	03/22/19 11:52 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/20/19 09:29 PM
Surr: Tetrachlorethene	105	0	74-138		%REC	1	03/20/19 09:29 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 01:21 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 01:21 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 01:21 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 01:21 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 01:21 AM
Surr: 1,2-Dichloroethane-d4	118	0	72-119		%REC	1	03/19/19 01:21 AM
Surr: 4-Bromofluorobenzene	109	0	76-119		%REC	1	03/19/19 01:21 AM
Surr: Dibromofluoromethane	105	0	85-115		%REC	1	03/19/19 01:21 AM
Surr: Toluene-d8	105	0	81-120		%REC	1	03/19/19 01:21 AM

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

DHL Analytical, Inc.

Date: *22-Mar-19*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	1903131-02
Project No:	078807	**Collection Date:**	03/12/19 11:30 AM
Lab Order:	1903131	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.349	0.0754	0.0943		mg/L	1	03/22/19 12:01 PM
Surr: Isopropylbenzene	61.7	0	47-142		%REC	1	03/22/19 12:01 PM
Surr: Octacosane	98.9	0	51-124		%REC	1	03/22/19 12:01 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0798	0.0600	0.100	J	mg/L	1	03/21/19 12:02 PM
Surr: Tetrachlorethene	114	0	74-138		%REC	1	03/21/19 12:02 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 01:45 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 01:45 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 01:45 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 01:45 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 01:45 AM
Surr: 1,2-Dichloroethane-d4	118	0	72-119		%REC	1	03/19/19 01:45 AM
Surr: 4-Bromofluorobenzene	105	0	76-119		%REC	1	03/19/19 01:45 AM
Surr: Dibromofluoromethane	105	0	85-115		%REC	1	03/19/19 01:45 AM
Surr: Toluene-d8	104	0	81-120		%REC	1	03/19/19 01:45 AM

Qualifiers:

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

DHL Analytical, Inc.

Date: *22-Mar-19*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	1903131-03
Project No:	078807	**Collection Date:**	03/12/19 10:50 AM
Lab Order:	1903131	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.0757	0.0757	0.0946		mg/L	1	03/22/19 12:10 PM
Surr: Isopropylbenzene	73.9	0	47-142		%REC	1	03/22/19 12:10 PM
Surr: Octacosane	84.5	0	51-124		%REC	1	03/22/19 12:10 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	03/20/19 10:16 PM
Surr: Tetrachlorethene	77.7	0	74-138		%REC	1	03/20/19 10:16 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:10 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:10 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 02:10 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:10 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 02:10 AM
Surr: 1,2-Dichloroethane-d4	117	0	72-119		%REC	1	03/19/19 02:10 AM
Surr: 4-Bromofluorobenzene	106	0	76-119		%REC	1	03/19/19 02:10 AM
Surr: Dibromofluoromethane	104	0	85-115		%REC	1	03/19/19 02:10 AM
Surr: Toluene-d8	105	0	81-120		%REC	1	03/19/19 02:10 AM

Qualifiers:

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

DHL Analytical, Inc.

Date: *22-Mar-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	1903131-04
Project No:	078807	**Collection Date:**	03/12/19 11:10 AM
Lab Order:	1903131	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.767	0.0760	0.0951		mg/L	1	03/22/19 12:19 PM
Surr: Isopropylbenzene	69.5	0	47-142		%REC	1	03/22/19 12:19 PM
Surr: Octacosane	104	0	51-124		%REC	1	03/22/19 12:19 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.132	0.0600	0.100		mg/L	1	03/20/19 10:40 PM
Surr: Tetrachlorethene	73.7	0	74-138		%REC	1	03/20/19 10:40 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:35 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:35 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 02:35 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:35 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 02:35 AM
Surr: 1,2-Dichloroethane-d4	119	0	72-119		%REC	1	03/19/19 02:35 AM
Surr: 4-Bromofluorobenzene	107	0	76-119		%REC	1	03/19/19 02:35 AM
Surr: Dibromofluoromethane	105	0	85-115		%REC	1	03/19/19 02:35 AM
Surr: Toluene-d8	106	0	81-120		%REC	1	03/19/19 02:35 AM

Qualifiers:

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

DHL Analytical, Inc.

Date: *22-Mar-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	1903131-05
Project No:	078807	**Collection Date:**	03/12/19 11:10 AM
Lab Order:	1903131	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.714	0.0758	0.0947		mg/L	1	03/22/19 12:28 PM
Surr: Isopropylbenzene	67.2	0	47-142		%REC	1	03/22/19 12:28 PM
Surr: Octacosane	104	0	51-124		%REC	1	03/22/19 12:28 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.136	0.0600	0.100		mg/L	1	03/20/19 11:04 PM
Surr: Tetrachlorethene	72.5	0	74-138	S	%REC	1	03/20/19 11:04 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:59 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:59 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 02:59 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/19/19 02:59 AM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/19/19 02:59 AM
Surr: 1,2-Dichloroethane-d4	119	0	72-119		%REC	1	03/19/19 02:59 AM
Surr: 4-Bromofluorobenzene	106	0	76-119		%REC	1	03/19/19 02:59 AM
Surr: Dibromofluoromethane	103	0	85-115		%REC	1	03/19/19 02:59 AM
Surr: Toluene-d8	105	0	81-120		%REC	1	03/19/19 02:59 AM

Qualifiers:

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

DHL Analytical, Inc.

Date: *22-Mar-19*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	1903131-06
Project No:	078807	**Collection Date:**	03/12/19
Lab Order:	1903131	**Matrix:**	TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	03/20/19 07:50 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/20/19 07:50 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/20/19 07:50 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/20/19 07:50 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/20/19 07:50 PM
Surr: 1,2-Dichloroethane-d4	118	0	72-119		%REC	1	03/20/19 07:50 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	03/20/19 07:50 PM
Surr: Dibromofluoromethane	105	0	85-115		%REC	1	03/20/19 07:50 PM
Surr: Toluene-d8	106	0	81-120		%REC	1	03/20/19 07:50 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:** *22-Mar-19*

CLIENT: GHD
Work Order: 1903131
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_190322A

The QC data in batch 89928 applies to the following samples: 1903131-01C, 1903131-02C, 1903131-03C, 1903131-04C, 1903131-05C

Sample ID **LCS-89928** Batch ID: **89928** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_190322A** Analysis Date: **3/22/2019 9:23:25 AM** Prep Date: **3/18/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.05	0.100	1.250	0	83.7	50	114			
Surr: Isopropylbenzene	0.0646		0.1000		64.6	47	142			
Surr: Octacosane	0.0745		0.1000		74.5	51	124			

Sample ID **LCSD-89928** Batch ID: **89928** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_190322A** Analysis Date: **3/22/2019 9:32:28 AM** Prep Date: **3/18/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.18	0.100	1.250	0	94.1	50	114	11.6	30	
Surr: Isopropylbenzene	0.0780		0.1000		78.0	47	142	0	0	
Surr: Octacosane	0.0838		0.1000		83.8	51	124	0	0	

Sample ID **MB-89928** Batch ID: **89928** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_190322A** Analysis Date: **3/22/2019 9:50:35 AM** Prep Date: **3/18/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0611		0.1000		61.1	47	142			
Surr: Octacosane	0.0810		0.1000		81.0	51	124			

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: 1903131
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_190320A

The QC data in batch 89979 applies to the following samples: 1903131-01B, 1903131-02B, 1903131-03B, 1903131-04B, 1903131-05B

Sample ID	LCS-89979	Batch ID:	89979	TestNo:	M8015V	Units:	mg/L
SampType:	LCS	Run ID:	GC4_190320A	Analysis Date:	3/20/2019 11:58:31 AM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.39	0.100	2.500	0	95.5	67	136			
Surr: Tetrachlorethene	0.385		0.4000		96.3	74	138			

Sample ID	LCSD-89979	Batch ID:	89979	TestNo:	M8015V	Units:	mg/L
SampType:	LCSD	Run ID:	GC4_190320A	Analysis Date:	3/20/2019 12:22:26 PM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.35	0.100	2.500	0	94.1	67	136	1.51	30	
Surr: Tetrachlorethene	0.390		0.4000		97.5	74	138	0	0	

Sample ID	MB-89979	Batch ID:	89979	TestNo:	M8015V	Units:	mg/L
SampType:	MBLK	Run ID:	GC4_190320A	Analysis Date:	3/20/2019 1:34:10 PM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.395		0.4000		98.7	74	138			

Sample ID	1903131-05BMS	Batch ID:	89979	TestNo:	M8015V	Units:	mg/L
SampType:	MS	Run ID:	GC4_190320A	Analysis Date:	3/20/2019 11:52:35 PM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.07	0.100	2.500	0.1359	77.2	67	136			
Surr: Tetrachlorethene	0.370		0.4000		92.6	74	138			

Sample ID	SB-190321	Batch ID:	89979	TestNo:	M8015V	Units:	mg/L
SampType:	SBLK	Run ID:	GC4_190320A	Analysis Date:	3/21/2019 10:50:37 AM	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100	0							
Surr: Tetrachlorethene	0.424		0.4000		106	74	138			

Sample ID	1903131-05BMSD	Batch ID:	89979	TestNo:	M8015V	Units:	mg/L
SampType:	MSD	Run ID:	GC4_190320A	Analysis Date:	3/21/2019 12:27:02 PM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	1.76	0.100	2.500	0.1359	65.0	67	136	15.9	30	S
Surr: Tetrachlorethene	0.367		0.4000		91.7	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: 1903131
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_190318A

The QC data in batch 89935 applies to the following samples: 1903131-01A, 1903131-02A, 1903131-03A, 1903131-04A, 1903131-05A

Sample ID **1903129-06AMS** Batch ID: **89935** TestNo: **SW8260C** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_190318A** Analysis Date: **3/18/2019 5:57:00 PM** Prep Date: **3/18/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.250	0.0100	0.232	0.0248	97.0	81	122			
Ethylbenzene	0.233	0.0100	0.232	0	100	80	120			
m,p-Xylene	0.462	0.0200	0.464	0	99.6	80	120			
o-Xylene	0.234	0.0100	0.232	0	101	80	120			
Toluene	0.226	0.0200	0.232	0	97.4	80	120			
Surr: 1,2-Dichloroethane-d4	2300		2000		115	72	119			
Surr: 4-Bromofluorobenzene	2090		2000		105	76	119			
Surr: Dibromofluoromethane	2120		2000		106	85	115			
Surr: Toluene-d8	2050		2000		103	81	120			

Sample ID **1903129-06AMSD** Batch ID: **89935** TestNo: **SW8260C** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_190318A** Analysis Date: **3/18/2019 6:21:00 PM** Prep Date: **3/18/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.233	0.0100	0.232	0.0248	89.9	81	120	6.83	20	
Ethylbenzene	0.216	0.0100	0.232	0	93.3	80	120	7.27	20	
m,p-Xylene	0.433	0.0200	0.464	0	93.3	80	120	6.53	20	
o-Xylene	0.218	0.0100	0.232	0	93.9	80	120	7.08	20	
Toluene	0.208	0.0200	0.232	0	89.8	80	120	8.09	20	
Surr: 1,2-Dichloroethane-d4	2270		2000		113	72	119	0	0	
Surr: 4-Bromofluorobenzene	2120		2000		106	76	119	0	0	
Surr: Dibromofluoromethane	2120		2000		106	85	115	0	0	
Surr: Toluene-d8	2070		2000		104	81	120	0	0	

Sample ID **MB-89935** Batch ID: **89935** TestNo: **SW8260C** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_190318A** Analysis Date: **3/18/2019 7:11:00 PM** Prep Date: **3/18/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	216		200.0		108	72	119			
Surr: 4-Bromofluorobenzene	213		200.0		107	76	119			
Surr: Dibromofluoromethane	209		200.0		105	85	115			
Surr: Toluene-d8	209		200.0		105	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

CLIENT: GHD
Work Order: 1903131
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_190318A

Sample ID	SB-190319	Batch ID:	89935	TestNo:	SW8260C	Units:	mg/L
SampType:	SBLK	Run ID:	GCMS5_190318A	Analysis Date:	3/19/2019 12:07:00 PM	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	0.000307	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	227		0							
Surr: 4-Bromofluorobenzene	214		0							
Surr: Dibromofluoromethane	204		0							
Surr: Toluene-d8	209		0							

Sample ID	LCS-89935	Batch ID:	89935	TestNo:	SW8260C	Units:	mg/L
SampType:	LCS	Run ID:	GCMS5_190318A	Analysis Date:	3/19/2019 12:32:00 PM	Prep Date:	3/18/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0211	0.00100	0.0232	0	90.8	81	122			
Ethylbenzene	0.0218	0.00100	0.0232	0	94.0	80	120			
m,p-Xylene	0.0434	0.00200	0.0464	0	93.6	80	120			
o-Xylene	0.0217	0.00100	0.0232	0	93.6	80	120			
Toluene	0.0209	0.00200	0.0232	0	90.0	80	120			
Surr: 1,2-Dichloroethane-d4	228		200.0		114	72	119			
Surr: 4-Bromofluorobenzene	211		200.0		106	76	119			
Surr: Dibromofluoromethane	208		200.0		104	85	115			
Surr: Toluene-d8	207		200.0		103	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

CLIENT: GHD
Work Order: 1903131
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_190320C

The QC data in batch 89975 applies to the following samples: 1903131-06A

Sample ID	LCS-89975	Batch ID:	89975	TestNo:	SW8260C	Units:	mg/L
SampType:	LCS	Run ID:	GCMS7_190320C	Analysis Date:	3/20/2019 10:59:00 AM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0220	0.00100	0.0232	0	94.8	81	122			
Ethylbenzene	0.0217	0.00100	0.0232	0	93.6	80	120			
m,p-Xylene	0.0450	0.00200	0.0464	0	97.1	80	120			
o-Xylene	0.0216	0.00100	0.0232	0	93.2	80	120			
Toluene	0.0220	0.00200	0.0232	0	94.7	80	120			
Surr: 1,2-Dichloroethane-d4	203		200.0		102	72	119			
Surr: 4-Bromofluorobenzene	193		200.0		96.5	76	119			
Surr: Dibromofluoromethane	196		200.0		97.9	85	115			
Surr: Toluene-d8	202		200.0		101	81	120			

Sample ID	MB-89975	Batch ID:	89975	TestNo:	SW8260C	Units:	mg/L
SampType:	MBLK	Run ID:	GCMS7_190320C	Analysis Date:	3/20/2019 11:47:00 AM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	218		200.0		109	72	119			
Surr: 4-Bromofluorobenzene	202		200.0		101	76	119			
Surr: Dibromofluoromethane	197		200.0		98.4	85	115			
Surr: Toluene-d8	211		200.0		106	81	120			

Sample ID	1903152-01AMS	Batch ID:	89975	TestNo:	SW8260C	Units:	mg/L
SampType:	MS	Run ID:	GCMS7_190320C	Analysis Date:	3/20/2019 2:11:00 PM	Prep Date:	3/20/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0226	0.00100	0.0232	0	97.3	81	122			
Ethylbenzene	0.0217	0.00100	0.0232	0	93.4	80	120			
m,p-Xylene	0.0444	0.00200	0.0464	0	95.6	80	120			
o-Xylene	0.0208	0.00100	0.0232	0	89.9	80	120			
Toluene	0.0224	0.00200	0.0232	0	96.5	80	120			
Surr: 1,2-Dichloroethane-d4	222		200.0		111	72	119			
Surr: 4-Bromofluorobenzene	186		200.0		92.9	76	119			
Surr: Dibromofluoromethane	202		200.0		101	85	115			
Surr: Toluene-d8	195		200.0		97.4	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

CLIENT: GHD
Work Order: 1903131
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_190320C

Sample ID **1903152-01AMSD**	Batch ID: **89975**	TestNo: **SW8260C**	Units: **mg/L**		
SampType: **MSD**	Run ID: **GCMS7_190320C**	Analysis Date: **3/20/2019 2:35:00 PM**	Prep Date: **3/20/2019**		

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0227	0.00100	0.0232	0	97.8	81	120	0.530	20	
Ethylbenzene	0.0220	0.00100	0.0232	0	94.9	80	120	1.56	20	
m,p-Xylene	0.0450	0.00200	0.0464	0	97.0	80	120	1.50	20	
o-Xylene	0.0213	0.00100	0.0232	0	91.8	80	120	2.09	20	
Toluene	0.0226	0.00200	0.0232	0	97.3	80	120	0.890	20	
Surr: 1,2-Dichloroethane-d4	220		200.0		110	72	119	0	0	
Surr: 4-Bromofluorobenzene	187		200.0		93.3	76	119	0	0	
Surr: Dibromofluoromethane	202		200.0		101	85	115	0	0	
Surr: Toluene-d8	198		200.0		98.8	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

July 09, 2019

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

Order No.: 1906309

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 6/27/2019 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: T104704211-19-24

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: *www.dhlanalytical.com*
E-Mail: *login@dhlanalytical.com*

nelap ACCREDITED AUTHORITY · DEPARTMENT OF DEFENSE UNITED STATES OF AMERICA

№ 83455

CHAIN-OF-CUSTODY

CLIENT: GHD SERVICES
ADDRESS: 14988 W 6th AVE #800 GOLDEN, CO 80401
PHONE: 303 941-6156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.com
DATA REPORTED TO: B STEPHENSON
ADDITIONAL REPORT COPIES TO:

DATE: 6/26/19 PAGE 1 OF 1
PO #:
DHL WORK ORDER #: 1906309
PROJECT LOCATION OR NAME: HOBBS South
CLENT PROJECT #: 078807-06-01 COLLECTOR: B STEPHENSON

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

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

ANALYSES: BTEX ☐ MTBE ☐ (METHOD 8021) · TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ · GRO (METHOD 8015) ☐ DRO (METHOD 8015) ☐ · VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ · SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ · 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ · 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ · 8321 HERB ☐ T PHOS, AMMONIA ☐ · METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ · RCRA ☐ TX11 ☐ · PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ · CHLORIDE ☐ ANIONS ☐ · TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ · TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ · RCI ☐ FLASHPOINT ☐ DGAS ☐ · TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX/MTBE (8021)	TPH 1005/1006	GRO/DRO (8015)	Field Notes
MW-1	01	6/26/19	0825	W		8						X		X	
MW-2	02		0930	W		8						X		X	
MW-3R	03		0845	W		8						X		X	
MW-4	04		0900	W		8						X		X	
MW-4D	05	6/26/19	0900	W		8						X		X	
TRIP	06	6/26/19	—	W		2						X		X GRO	

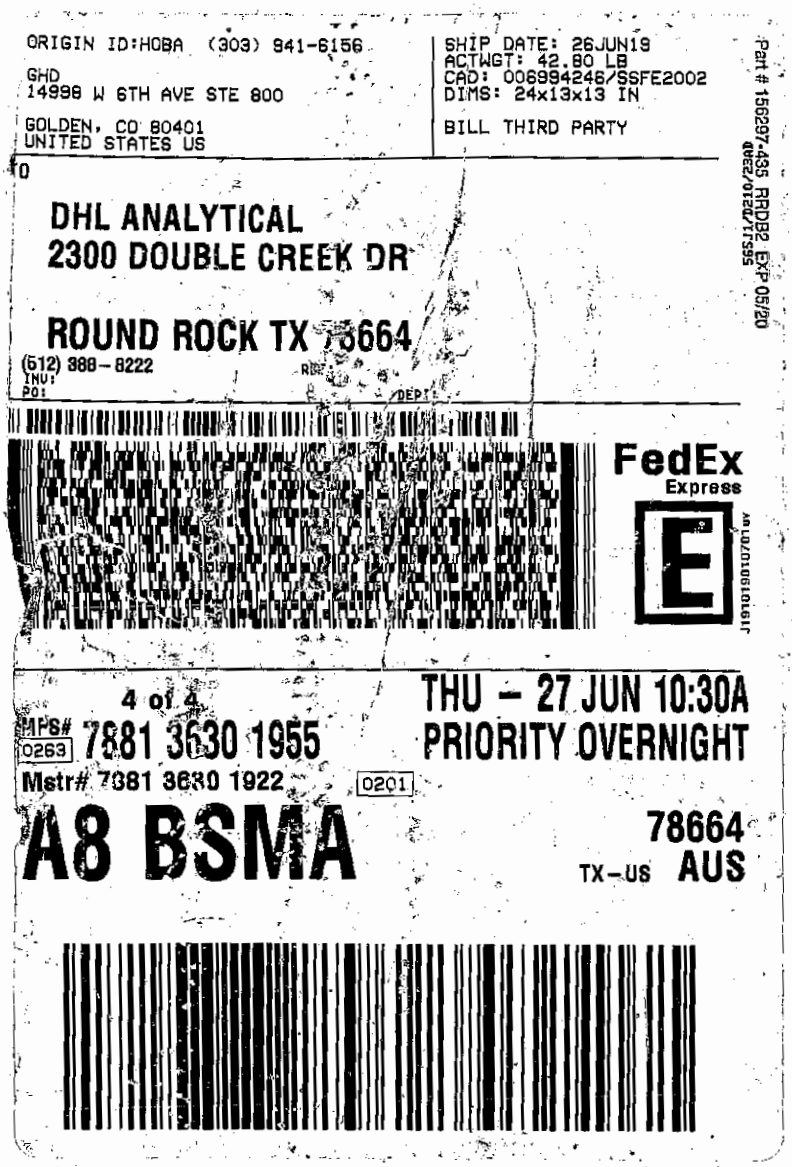
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	6/26/19 1600	To UPS Fed Ex
Fed Ex	6/27/19 0953	[signature]

☐ DHL DISPOSAL @ $5.00 each ☐ Return

3

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ ______

LABORATORY USE ONLY:
RECEIVING TEMP: 4.9/5.6°C THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☑ NOT USED
CARRIER: ☐ LONE STAR ☑ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED



DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD Date Received: 6/27/2019

Work Order Number 1906309 Received by EL

Checklist completed by: _____ 6/27/2019 Reviewed by CC 6/27/2019
Signature | Date | Initials | Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	4.9 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *09-Jul-19*

CLIENT: GHD
Project: Hobbs South
Lab Order: 1906309

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: *09-Jul-19*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	1906309-01
Project No:	078807-06-01	**Collection Date:**	06/26/19 08:25 AM
Lab Order:	1906309	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.0793	0.0793	0.0992		mg/L	1	07/09/19 10:53 AM
Surr: Isopropylbenzene	63.3	0	47-142		%REC	1	07/09/19 10:53 AM
Surr: Octacosane	88.1	0	51-124		%REC	1	07/09/19 10:53 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	07/05/19 04:05 PM
Surr: Tetrachlorethene	114	0	74-138		%REC	1	07/05/19 04:05 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 03:56 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 03:56 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 03:56 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 03:56 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 03:56 PM
Surr: 1,2-Dichloroethane-d4	83.1	0	72-119		%REC	1	06/28/19 03:56 PM
Surr: 4-Bromofluorobenzene	99.2	0	76-119		%REC	1	06/28/19 03:56 PM
Surr: Dibromofluoromethane	94.2	0	85-115		%REC	1	06/28/19 03:56 PM
Surr: Toluene-d8	99.4	0	81-120		%REC	1	06/28/19 03:56 PM

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

DHL Analytical, Inc.

Date: *09-Jul-19*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	1906309-02
Project No:	078807-06-01	**Collection Date:**	06/26/19 09:30 AM
Lab Order:	1906309	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.362	0.0785	0.0981		mg/L	1	07/09/19 11:02 AM
Surr: Isopropylbenzene	59.9	0	47-142		%REC	1	07/09/19 11:02 AM
Surr: Octacosane	103	0	51-124		%REC	1	07/09/19 11:02 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/28/19 09:30 PM
Surr: Tetrachlorethene	100	0	74-138		%REC	1	06/28/19 09:30 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 04:20 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 04:20 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 04:20 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 04:20 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 04:20 PM
Surr: 1,2-Dichloroethane-d4	83.7	0	72-119		%REC	1	06/28/19 04:20 PM
Surr: 4-Bromofluorobenzene	98.6	0	76-119		%REC	1	06/28/19 04:20 PM
Surr: Dibromofluoromethane	96.0	0	85-115		%REC	1	06/28/19 04:20 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	06/28/19 04:20 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-Jul-19*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	1906309-03
Project No:	078807-06-01	**Collection Date:**	06/26/19 08:45 AM
Lab Order:	1906309	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.0791	0.0791	0.0989		mg/L	1	07/09/19 11:11 AM
Surr: Isopropylbenzene	63.2	0	47-142		%REC	1	07/09/19 11:11 AM
Surr: Octacosane	88.5	0	51-124		%REC	1	07/09/19 11:11 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/28/19 09:54 PM
Surr: Tetrachlorethene	99.5	0	74-138		%REC	1	06/28/19 09:54 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 05:33 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 05:33 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 05:33 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 05:33 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 05:33 PM
Surr: 1,2-Dichloroethane-d4	85.0	0	72-119		%REC	1	06/28/19 05:33 PM
Surr: 4-Bromofluorobenzene	96.9	0	76-119		%REC	1	06/28/19 05:33 PM
Surr: Dibromofluoromethane	96.7	0	85-115		%REC	1	06/28/19 05:33 PM
Surr: Toluene-d8	99.8	0	81-120		%REC	1	06/28/19 05:33 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *09-Jul-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	1906309-04
Project No:	078807-06-01	**Collection Date:**	06/26/19 09:00 AM
Lab Order:	1906309	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.650	0.0797	0.0996		mg/L	1	07/09/19 11:20 AM
Surr: Isopropylbenzene	64.6	0	47-142		%REC	1	07/09/19 11:20 AM
Surr: Octacosane	104	0	51-124		%REC	1	07/09/19 11:20 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **DEW**
Gasoline Range Organics	0.150	0.0600	0.100		mg/L	1	06/28/19 10:18 PM
Surr: Tetrachlorethene	103	0	74-138		%REC	1	06/28/19 10:18 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 05:58 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 05:58 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 05:58 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 05:58 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 05:58 PM
Surr: 1,2-Dichloroethane-d4	85.2	0	72-119		%REC	1	06/28/19 05:58 PM
Surr: 4-Bromofluorobenzene	97.6	0	76-119		%REC	1	06/28/19 05:58 PM
Surr: Dibromofluoromethane	96.2	0	85-115		%REC	1	06/28/19 05:58 PM
Surr: Toluene-d8	99.7	0	81-120		%REC	1	06/28/19 05:58 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-Jul-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	1906309-05
Project No:	078807-06-01	**Collection Date:**	06/26/19 09:00 AM
Lab Order:	1906309	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.661	0.0795	0.0994		mg/L	1	07/09/19 11:29 AM
Surr: Isopropylbenzene	63.2	0	47-142		%REC	1	07/09/19 11:29 AM
Surr: Octacosane	100	0	51-124		%REC	1	07/09/19 11:29 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **DEW**
Gasoline Range Organics	0.152	0.0600	0.100		mg/L	1	06/28/19 10:42 PM
Surr: Tetrachlorethene	103	0	74-138		%REC	1	06/28/19 10:42 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 06:22 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 06:22 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 06:22 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 06:22 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 06:22 PM
Surr: 1,2-Dichloroethane-d4	84.7	0	72-119		%REC	1	06/28/19 06:22 PM
Surr: 4-Bromofluorobenzene	96.1	0	76-119		%REC	1	06/28/19 06:22 PM
Surr: Dibromofluoromethane	95.7	0	85-115		%REC	1	06/28/19 06:22 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	06/28/19 06:22 PM

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

DHL Analytical, Inc.

Date: *09-Jul-19*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	1906309-06
Project No:	078807-06-01	**Collection Date:**	06/26/19
Lab Order:	1906309	**Matrix:**	TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	06/28/19 08:17 PM
Surr: Tetrachlorethene	105	0	74-138		%REC	1	06/28/19 08:17 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 06:47 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 06:47 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 06:47 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	06/28/19 06:47 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	06/28/19 06:47 PM
Surr: 1,2-Dichloroethane-d4	82.1	0	72-119		%REC	1	06/28/19 06:47 PM
Surr: 4-Bromofluorobenzene	97.1	0	76-119		%REC	1	06/28/19 06:47 PM
Surr: Dibromofluoromethane	93.1	0	85-115		%REC	1	06/28/19 06:47 PM
Surr: Toluene-d8	99.6	0	81-120		%REC	1	06/28/19 06:47 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-Jul-19*

CLIENT: GHD
Work Order: 1906309
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_190709A

The QC data in batch 91646 applies to the following samples: 1906309-01C, 1906309-02C, 1906309-03C, 1906309-04C, 1906309-05C

Sample ID **MB-91646** Batch ID: **91646** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_190709A** Analysis Date: **7/9/2019 10:26:23 AM** Prep Date: **7/3/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0561		0.1000		56.1	47	142			
Surr: Octacosane	0.0692		0.1000		69.2	51	124			

Sample ID **LCS-91646** Batch ID: **91646** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_190709A** Analysis Date: **7/9/2019 10:35:27 AM** Prep Date: **7/3/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.956	0.100	1.250	0	76.5	50	114			
Surr: Isopropylbenzene	0.0687		0.1000		68.7	47	142			
Surr: Octacosane	0.0860		0.1000		86.0	51	124			

Sample ID **LCSD-91646** Batch ID: **91646** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_190709A** Analysis Date: **7/9/2019 10:44:30 AM** Prep Date: **7/3/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.990	0.100	1.250	0	79.2	50	114	3.46	30	
Surr: Isopropylbenzene	0.0780		0.1000		78.0	47	142	0	0	
Surr: Octacosane	0.0865		0.1000		86.5	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 5
	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: 1906309
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_190628A

The QC data in batch 91553 applies to the following samples: 1906309-01B, 1906309-02B, 1906309-03B, 1906309-04B, 1906309-05B, 1906309-06B

Sample ID	**LCS-91553**	Batch ID:	**91553**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**GC4_190628A**	Analysis Date:	**6/28/2019 6:40:17 PM**	Prep Date:	**6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.20	0.100	2.500	0	87.9	67	136			
Surr: Tetrachlorethene	0.382		0.4000		95.5	74	138			

Sample ID	**MB-91553**	Batch ID:	**91553**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**GC4_190628A**	Analysis Date:	**6/28/2019 7:53:19 PM**	Prep Date:	**6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.446		0.4000		112	74	138			

Sample ID	**1906309-02BMS**	Batch ID:	**91553**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**GC4_190628A**	Analysis Date:	**6/29/2019 2:43:10 AM**	Prep Date:	**6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	1.92	0.100	2.500	0	76.9	67	136			
Surr: Tetrachlorethene	0.354		0.4000		88.4	74	138			

Sample ID	**1906309-02BMSD**	Batch ID:	**91553**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**GC4_190628A**	Analysis Date:	**6/29/2019 3:07:21 AM**	Prep Date:	**6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.42	0.100	2.500	0	96.8	67	136	22.9	30	
Surr: Tetrachlorethene	0.415		0.4000		104	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: 1906309
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_190705A

The QC data in batch 91660 applies to the following samples: 1906309-01B

Sample ID	LCS-91660	Batch ID:	91660	TestNo:	M8015V	Units:	mg/L
SampType:	LCS	Run ID:	GC4_190705A	Analysis Date:	7/5/2019 2:26:22 PM	Prep Date:	7/5/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	4.10	0.100	5.000	0	82.0	67	136			
Surr: Tetrachlorethene	0.406		0.4000		102	74	138			

Sample ID	MB-91660	Batch ID:	91660	TestNo:	M8015V	Units:	mg/L
SampType:	MBLK	Run ID:	GC4_190705A	Analysis Date:	7/5/2019 3:40:18 PM	Prep Date:	7/5/2019

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.455		0.4000		114	74	138			

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: 1906309
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_190628A

The QC data in batch 91573 applies to the following samples: 1906309-01A, 1906309-02A, 1906309-03A, 1906309-04A, 1906309-05A, 1906309-06A

Sample ID **LCS-91573** Batch ID: **91573** TestNo: **SW8260C** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_190628A** Analysis Date: **6/28/2019 3:00:00 PM** Prep Date: **6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0226	0.00100	0.0232	0	97.6	81	122			
Ethylbenzene	0.0234	0.00100	0.0232	0	101	80	120			
m,p-Xylene	0.0470	0.00200	0.0464	0	101	80	120			
o-Xylene	0.0230	0.00100	0.0232	0	99.2	80	120			
Toluene	0.0230	0.00200	0.0232	0	99.1	80	120			
Surr: 1,2-Dichloroethane-d4	178		200.0		89.2	72	119			
Surr: 4-Bromofluorobenzene	188		200.0		94.0	76	119			
Surr: Dibromofluoromethane	195		200.0		97.7	85	115			
Surr: Toluene-d8	199		200.0		99.3	81	120			

Sample ID **MB-91573** Batch ID: **91573** TestNo: **SW8260C** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_190628A** Analysis Date: **6/28/2019 3:31:00 PM** Prep Date: **6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	165		200.0		82.6	72	119			
Surr: 4-Bromofluorobenzene	196		200.0		97.8	76	119			
Surr: Dibromofluoromethane	189		200.0		94.3	85	115			
Surr: Toluene-d8	201		200.0		101	81	120			

Sample ID **1906309-01AMS** Batch ID: **91573** TestNo: **SW8260C** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_190628A** Analysis Date: **6/28/2019 4:45:00 PM** Prep Date: **6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0214	0.00100	0.0232	0	92.3	81	122			
Ethylbenzene	0.0216	0.00100	0.0232	0	93.0	80	120			
m,p-Xylene	0.0434	0.00200	0.0464	0	93.5	80	120			
o-Xylene	0.0216	0.00100	0.0232	0	93.1	80	120			
Toluene	0.0212	0.00200	0.0232	0	91.2	80	120			
Surr: 1,2-Dichloroethane-d4	170		200.0		84.9	72	119			
Surr: 4-Bromofluorobenzene	183		200.0		91.7	76	119			
Surr: Dibromofluoromethane	193		200.0		96.6	85	115			
Surr: Toluene-d8	198		200.0		99.0	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

CLIENT: GHD
Work Order: 1906309
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_190628A

Sample ID **1906309-01AMSD** Batch ID: **91573** TestNo: **SW8260C** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_190628A** Analysis Date: **6/28/2019 5:09:00 PM** Prep Date: **6/28/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0226	0.00100	0.0232	0	97.6	81	120	5.57	20	
Ethylbenzene	0.0227	0.00100	0.0232	0	98.0	80	120	5.17	20	
m,p-Xylene	0.0450	0.00200	0.0464	0	96.9	80	120	3.56	20	
o-Xylene	0.0227	0.00100	0.0232	0	98.0	80	120	5.11	20	
Toluene	0.0222	0.00200	0.0232	0	95.5	80	120	4.59	20	
Surr: 1,2-Dichloroethane-d4	169		200.0		84.3	72	119	0	0	
Surr: 4-Bromofluorobenzene	183		200.0		91.5	76	119	0	0	
Surr: Dibromofluoromethane	197		200.0		98.5	85	115	0	0	
Surr: Toluene-d8	193		200.0		96.3	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

October 01, 2019

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

Order No.: 1909207

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 7 sample(s) on 9/24/2019 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: T104704211-19-24

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 85955
CHAIN-OF-CUSTODY

CLIENT: GHD SERVICES / HF
ADDRESS: 14988 W 6TH AVE #800 GOLDEN
PHONE: 303 9416656 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: BRAD STEPHENSON
ADDITIONAL REPORT COPIES TO: J CLOUD

DATE: 9/23/19 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1909207
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 078807-06-01 COLLECTOR: B STEPHENSON

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

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐	VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC8270 ☐ PAH8270 ☐ HOLD PAH ☐ SVOC625 ☐	8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐	8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐	8321 HERB ☐ T PHOS, AMMONIA ☐	METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐	RCRA ☐ TX11 ☐ ____	PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	CHLORIDE ☐ ANIONS ____ ☐	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ FLASHPOINT ☐ DGAS ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	FIELD NOTES
MW-1	01	9/22/19	0850	W		8						X	X															
MW-2	02	↑	0900	W		8						X	X															
MW-3R	03	↓	1000	W		8						X	X															
MW-4	04	↓	0930	W		8						X	X															
MW-4D	05	9/22/19	0930	W		8						X	X															
TRIP 1	06	—	—	—																								
Trip Blank 2	07	↓																										

RELINQUISHED BY: (Signature) DATE/TIME 9/23/19 1100 RECEIVED BY: (Signature) TOM DEX
RELINQUISHED BY: (Signature) Fed Ex DATE/TIME 9/24/19 0942 RECEIVED BY: (Signature) Ex
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 5.5 THERM #: 73
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

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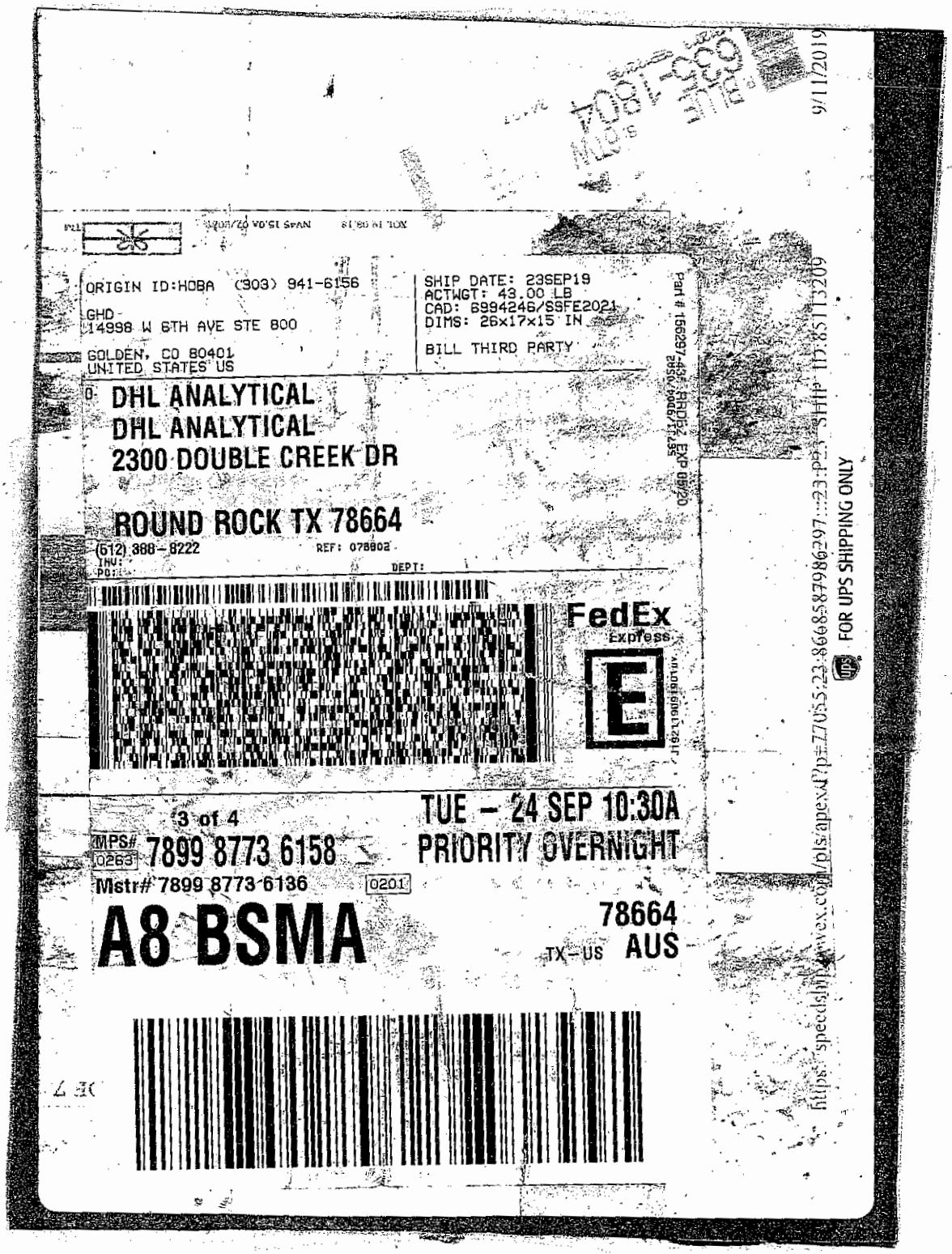
ORIGIN ID:HOBA (303) 941-6156
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US
SHIP DATE: 23SEP19
ACTWGT: 43.00 LB
CAD: 6994246/SSFE2021
DIMS: 26x17x15 IN
BILL THIRD PARTY
DHL ANALYTICAL
DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(612) 388-8222
REF: 078802
DEPT:
FedEx
Express
3 of 4
MPS# 7899 8773 6158
Mstr# 7899 8773 6136
TUE - 24 SEP 10:30A
PRIORITY OVERNIGHT
A8 BSMA
78664
TX-US AUS
FOR UPS SHIPPING ONLY
9/11/2019

ORIGIN ID:HOBA (303) 941-6156
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US

SHIP DATE: 23SEP19
ACTWGT: 28.40 LB
CAD: 6994246/SSFE2021
DIMS: 26x17x15 IN
BILL THIRD PARTY

Part # 156297-435 RRD82 EXP 05/20

TO DHL ANALYTICAL
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(612) 388-8222 REF: 078802
INV:
PO: DEPT:

FedEx Express

4 of 4
MPS# 0263 7899 8773 6169
Mstr# 7899 8773 6136 0201

TUE - 24 SEP 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD Date Received: 9/24/2019

Work Order Number 1909207 Received by EL

Checklist completed by: _____ 9/24/2019 Reviewed by DL 9/24/2019
Signature | Date | Initials | Date

Carrier name FedEx 1day

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

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

Client contacted GHD Date contacted: 9/24/19 Person contacted Brad S.

Contacted by: John D. Regarding: Missing Cooler

Comments: One of two coolers not received

Corrective Action Proceed with samples received. Missing Cooler received on 9/25/19, samples within temp. Proceed w/ analysis.

Page 1 of 1

DHL Analytical, Inc. **Date:** *01-Oct-19*

CLIENT: GHD
Project: Hobbs South
Lab Order: 1909207

CASE NARRATIVE

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

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

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For DRO Analysis, the recovery of surrogate Octacosane for Sample MW-64 was above the method control limits. This is flagged accordingly in the Analytical Data Report. The remaining surrogate for this sample was within method control limits. No further corrective action was taken.

DHL Analytical, Inc.

Date: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	1909207-01
Project No:	078807-06-01	**Collection Date:**	09/22/19 08:30 AM
Lab Order:	1909207	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.0744	0.0744	0.0930		mg/L	1	09/29/19 11:53 AM
Surr: Isopropylbenzene	75.6	0	47-142		%REC	1	09/29/19 11:53 AM
Surr: Octacosane	91.6	0	51-124		%REC	1	09/29/19 11:53 AM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/27/19 11:57 AM
Surr: Tetrachlorethene	120	0	74-138		%REC	1	09/27/19 11:57 AM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 02:43 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 02:43 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 02:43 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 02:43 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 02:43 PM
Surr: 1,2-Dichloroethane-d4	94.9	0	72-119		%REC	1	09/25/19 02:43 PM
Surr: 4-Bromofluorobenzene	99.4	0	76-119		%REC	1	09/25/19 02:43 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	09/25/19 02:43 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/25/19 02:43 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: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	1909207-02
Project No:	078807-06-01	**Collection Date:**	09/22/19 09:00 AM
Lab Order:	1909207	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.357	0.0740	0.0925		mg/L	1	09/29/19 12:02 PM
Surr: Isopropylbenzene	72.2	0	47-142		%REC	1	09/29/19 12:02 PM
Surr: Octacosane	121	0	51-124		%REC	1	09/29/19 12:02 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/27/19 12:21 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	09/27/19 12:21 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:31 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:31 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 03:31 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:31 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 03:31 PM
Surr: 1,2-Dichloroethane-d4	94.1	0	72-119		%REC	1	09/25/19 03:31 PM
Surr: 4-Bromofluorobenzene	99.6	0	76-119		%REC	1	09/25/19 03:31 PM
Surr: Dibromofluoromethane	97.9	0	85-115		%REC	1	09/25/19 03:31 PM
Surr: Toluene-d8	102	0	81-120		%REC	1	09/25/19 03:31 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	1909207-03
Project No:	078807-06-01	**Collection Date:**	09/22/19 10:00 AM
Lab Order:	1909207	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.223	0.0741	0.0926		mg/L	1	09/29/19 12:11 PM
Surr: Isopropylbenzene	74.2	0	47-142		%REC	1	09/29/19 12:11 PM
Surr: Octacosane	97.7	0	51-124		%REC	1	09/29/19 12:11 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	09/27/19 12:45 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	09/27/19 12:45 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:07 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:07 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 03:07 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:07 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 03:07 PM
Surr: 1,2-Dichloroethane-d4	94.8	0	72-119		%REC	1	09/25/19 03:07 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	09/25/19 03:07 PM
Surr: Dibromofluoromethane	99.5	0	85-115		%REC	1	09/25/19 03:07 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/25/19 03:07 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	1909207-04
Project No:	078807-06-01	**Collection Date:**	09/22/19 09:30 AM
Lab Order:	1909207	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	1.02	0.0741	0.0926		mg/L	1	09/29/19 12:20 PM
Surr: Isopropylbenzene	84.7	0	47-142		%REC	1	09/29/19 12:20 PM
Surr: Octacosane	129	0	51-124	S	%REC	1	09/29/19 12:20 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.143	0.0600	0.100		mg/L	1	09/27/19 01:09 PM
Surr: Tetrachlorethene	124	0	74-138		%REC	1	09/27/19 01:09 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:55 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:55 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 03:55 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 03:55 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 03:55 PM
Surr: 1,2-Dichloroethane-d4	93.3	0	72-119		%REC	1	09/25/19 03:55 PM
Surr: 4-Bromofluorobenzene	98.1	0	76-119		%REC	1	09/25/19 03:55 PM
Surr: Dibromofluoromethane	99.8	0	85-115		%REC	1	09/25/19 03:55 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	09/25/19 03:55 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	1909207-05
Project No:	078807-06-01	**Collection Date:**	09/22/19 09:30 AM
Lab Order:	1909207	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.853	0.0740	0.0924		mg/L	1	09/29/19 12:29 PM
Surr: Isopropylbenzene	75.3	0	47-142		%REC	1	09/29/19 12:29 PM
Surr: Octacosane	118	0	51-124		%REC	1	09/29/19 12:29 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.119	0.0600	0.100		mg/L	1	09/27/19 01:33 PM
Surr: Tetrachlorethene	123	0	74-138		%REC	1	09/27/19 01:33 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 04:20 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 04:20 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 04:20 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 04:20 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 04:20 PM
Surr: 1,2-Dichloroethane-d4	94.2	0	72-119		%REC	1	09/25/19 04:20 PM
Surr: 4-Bromofluorobenzene	98.3	0	76-119		%REC	1	09/25/19 04:20 PM
Surr: Dibromofluoromethane	99.4	0	85-115		%REC	1	09/25/19 04:20 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	09/25/19 04:20 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	Trip Blank 1
Project:	Hobbs South	**Lab ID:**	1909207-06
Project No:	078807-06-01	**Collection Date:**	09/22/19
Lab Order:	1909207	**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	09/27/19 11:08 AM
Surr: Tetrachlorethene	123	0	74-138		%REC	1	09/27/19 11:08 AM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 11:54 AM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 11:54 AM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 11:54 AM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 11:54 AM
Toluene	0.00102	0.000600	0.00200	J	mg/L	1	09/25/19 11:54 AM
Surr: 1,2-Dichloroethane-d4	94.1	0	72-119		%REC	1	09/25/19 11:54 AM
Surr: 4-Bromofluorobenzene	99.1	0	76-119		%REC	1	09/25/19 11:54 AM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	09/25/19 11:54 AM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/25/19 11:54 AM

Qualifiers:

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

DHL Analytical, Inc.

Date: *01-Oct-19*

CLIENT:	GHD	**Client Sample ID:**	Trip Blank 2
Project:	Hobbs South	**Lab ID:**	1909207-07
Project No:	078807-06-01	**Collection Date:**	09/22/19
Lab Order:	1909207	**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	09/27/19 11:33 AM
Surr: Tetrachlorethene	127	0	74-138		%REC	1	09/27/19 11:33 AM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **CC**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 04:44 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 04:44 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/25/19 04:44 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/25/19 04:44 PM
Toluene	0.00145	0.000600	0.00200	J	mg/L	1	09/25/19 04:44 PM
Surr: 1,2-Dichloroethane-d4	92.3	0	72-119		%REC	1	09/25/19 04:44 PM
Surr: 4-Bromofluorobenzene	100	0	76-119		%REC	1	09/25/19 04:44 PM
Surr: Dibromofluoromethane	99.4	0	85-115		%REC	1	09/25/19 04:44 PM
Surr: Toluene-d8	101	0	81-120		%REC	1	09/25/19 04:44 PM

Qualifiers:

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

DHL Analytical, Inc. **Date:** *01-Oct-19*

CLIENT: GHD
Work Order: 1909207
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_190929A

The QC data in batch 92949 applies to the following samples: 1909207-01C, 1909207-02C, 1909207-03C, 1909207-04C, 1909207-05C

Sample ID **MB-92949** Batch ID: **92949** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_190929A** Analysis Date: **9/29/2019 9:37:35 AM** Prep Date: **9/26/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0662		0.1000		66.2	47	142			
Surr: Octacosane	0.0862		0.1000		86.2	51	124			

Sample ID **LCS-92949** Batch ID: **92949** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_190929A** Analysis Date: **9/29/2019 10:04:45 AM** Prep Date: **9/26/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.937	0.100	1.250	0	75.0	50	114			
Surr: Isopropylbenzene	0.0698		0.1000		69.8	47	142			
Surr: Octacosane	0.0901		0.1000		90.1	51	124			

Sample ID **1909178-01DMS** Batch ID: **92949** TestNo: **M8015D** Units: **mg/L**
SampType: **MS** Run ID: **GC15_190929A** Analysis Date: **9/29/2019 12:38:32 PM** Prep Date: **9/26/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	8.65	0.877	10.96	2.571	55.5	50	114			
Surr: Isopropylbenzene	0.461		0.8772		52.6	47	142			
Surr: Octacosane	0.668		0.8772		76.2	51	124			

Sample ID **1909178-01DMSD** Batch ID: **92949** TestNo: **M8015D** Units: **mg/L**
SampType: **MSD** Run ID: **GC15_190929A** Analysis Date: **9/29/2019 12:47:35 PM** Prep Date: **9/26/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	9.65	0.867	10.83	2.571	65.3	50	114	10.9	30	
Surr: Isopropylbenzene	0.545		0.8666		62.9	47	142	0	0	
Surr: Octacosane	0.755		0.8666		87.2	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: 1909207
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_190927A

The QC data in batch 92969 applies to the following samples: 1909207-01B, 1909207-02B, 1909207-03B, 1909207-04B, 1909207-05B, 1909207-06B, 1909207-07B

Sample ID	**LCS-92969**	Batch ID:	**92969**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**GC4_190927A**	Analysis Date:	**9/27/2019 9:07:48 AM**	Prep Date:	**9/27/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.77	0.100	2.500	0	111	67	136			
Surr: Tetrachlorethene	0.362		0.4000		90.5	74	138			

Sample ID	**LCSD-92969**	Batch ID:	**92969**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**GC4_190927A**	Analysis Date:	**9/27/2019 9:31:57 AM**	Prep Date:	**9/27/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.77	0.100	2.500	0	111	67	136	0.111	30	
Surr: Tetrachlorethene	0.378		0.4000		94.5	74	138	0	0	

Sample ID	**MB-92969**	Batch ID:	**92969**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**GC4_190927A**	Analysis Date:	**9/27/2019 10:44:27 AM**	Prep Date:	**9/27/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.479		0.4000		120	74	138			

Sample ID	**1909207-01BMS**	Batch ID:	**92969**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**GC4_190927A**	Analysis Date:	**9/27/2019 1:57:52 PM**	Prep Date:	**9/27/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.73	0.100	2.500	0	109	67	136			
Surr: Tetrachlorethene	0.457		0.4000		114	74	138			

Sample ID	**1909207-01BMSD**	Batch ID:	**92969**	TestNo:	**M8015V**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**GC4_190927A**	Analysis Date:	**9/27/2019 2:22:06 PM**	Prep Date:	**9/27/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.83	0.100	2.500	0	113	67	136	3.73	30	
Surr: Tetrachlorethene	0.478		0.4000		119	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: 1909207
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_190925A

The QC data in batch 92929 applies to the following samples: 1909207-01A, 1909207-02A, 1909207-03A, 1909207-04A, 1909207-05A, 1909207-06A, 1909207-07A

Sample ID **LCS-92929** Batch ID: **92929** TestNo: **SW8260C** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_190925A** Analysis Date: **9/25/2019 9:54:00 AM** Prep Date: **9/25/2019**

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	0.0261	0.00100	0.0232	0	112	80	120			
m,p-Xylene	0.0529	0.00200	0.0464	0	114	80	120			
o-Xylene	0.0261	0.00100	0.0232	0	113	80	120			
Toluene	0.0270	0.00200	0.0232	0	116	80	120			
Surr: 1,2-Dichloroethane-d4	200		200.0		100	72	119			
Surr: 4-Bromofluorobenzene	195		200.0		97.3	76	119			
Surr: Dibromofluoromethane	208		200.0		104	85	115			
Surr: Toluene-d8	197		200.0		98.4	81	120			

Sample ID **MB-92929** Batch ID: **92929** TestNo: **SW8260C** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_190925A** Analysis Date: **9/25/2019 10:42:00 AM** Prep Date: **9/25/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	190		200.0		95.2	72	119			
Surr: 4-Bromofluorobenzene	200		200.0		99.8	76	119			
Surr: Dibromofluoromethane	203		200.0		101	85	115			
Surr: Toluene-d8	202		200.0		101	81	120			

Sample ID **1909206-01AMSD** Batch ID: **92929** TestNo: **SW8260C** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_190925A** Analysis Date: **9/25/2019 5:32:00 PM** Prep Date: **9/25/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0238	0.00100	0.0232	0	103	81	120	2.44	20	
Ethylbenzene	0.0229	0.00100	0.0232	0	98.8	80	120	3.82	20	
m,p-Xylene	0.0464	0.00200	0.0464	0	99.9	80	120	4.11	20	
o-Xylene	0.0229	0.00100	0.0232	0	98.6	80	120	3.93	20	
Toluene	0.0238	0.00200	0.0232	0	103	80	120	2.28	20	
Surr: 1,2-Dichloroethane-d4	197		200.0		98.5	72	119	0	0	
Surr: 4-Bromofluorobenzene	192		200.0		95.8	76	119	0	0	
Surr: Dibromofluoromethane	202		200.0		101	85	115	0	0	
Surr: Toluene-d8	195		200.0		97.4	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: 1909207
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_190925A

Sample ID	**SBLK**	Batch ID:	**92929**	TestNo:	**SW8260C**	Units:	**mg/L**
SampType:	**SBLK**	Run ID:	**GCMS5_190925A**	Analysis Date:	**9/26/2019 11:20:00 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100	0							
Ethylbenzene	<0.000300	0.00100	0							
m,p-Xylene	<0.000600	0.00200	0							
o-Xylene	<0.000300	0.00100	0							
Toluene	<0.000600	0.00200	0							
Surr: 1,2-Dichloroethane-d4	190		0							
Surr: 4-Bromofluorobenzene	200		0							
Surr: Dibromofluoromethane	201		0							
Surr: Toluene-d8	200		0							

Sample ID	**1909206-01AMS**	Batch ID:	**92929**	TestNo:	**SW8260C**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**GCMS5_190925A**	Analysis Date:	**9/26/2019 2:32:00 PM**	Prep Date:	**9/25/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0232	0.00100	0.0232	0	100	81	122			
Ethylbenzene	0.0221	0.00100	0.0232	0	95.1	80	120			
m,p-Xylene	0.0445	0.00200	0.0464	0	95.9	80	120			
o-Xylene	0.0220	0.00100	0.0232	0	94.8	80	120			
Toluene	0.0233	0.00200	0.0232	0	100	80	120			
Surr: 1,2-Dichloroethane-d4	199		200.0		99.6	72	119			
Surr: 4-Bromofluorobenzene	194		200.0		96.8	76	119			
Surr: Dibromofluoromethane	202		200.0		101	85	115			
Surr: Toluene-d8	194		200.0		96.8	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

December 13, 2019

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

Order No.: 1912037

RE: Hobbs South

Dear Brad Stephenson:

DHL Analytical, Inc. received 6 sample(s) on 12/5/2019 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: T104704211-19-24

Table of Contents

DHL ANALYTICAL
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E-Mail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

№ 80159

CLIENT: GHD
ADDRESS: 1409 S W 6TH AVE GOODENCO
PHONE: 303 941-6156 FAX/E-MAIL: BRAD.STEPHENSON@GHD.COM
DATA REPORTED TO: BRAD STEPHENSON
ADDITIONAL REPORT COPIES TO: JC COOP

DATE: 12/4/19 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1912037
PROJECT LOCATION OR NAME: HOBBS SOUTH
CLENT PROJECT #: 078807-06-01 COLLECTOR: B STEPHENSON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ☑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO [METHOD 8015] ☑ DRO [METHOD 8105] ☑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ ____ ❑ | RCRA ☑ TX1 ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ☑ ANIONS ____ ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ☑ TSS ❑ % MOISTURE ❑ CYANIDE ❑

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
MW-1	01	12/4/19	1315	W		10						X X X X X	
MW-2	02	"	1420	"		10						X X X X X	
MW-3R	03	"	1340	"		10						X X X X X	
MW-4	04	"	1400	"		10						X X X X X	
MW-4D	05	12/4/19	1400	"		10						X X X X X	
TRIP	06	12/4/19		W		2					X	X X	

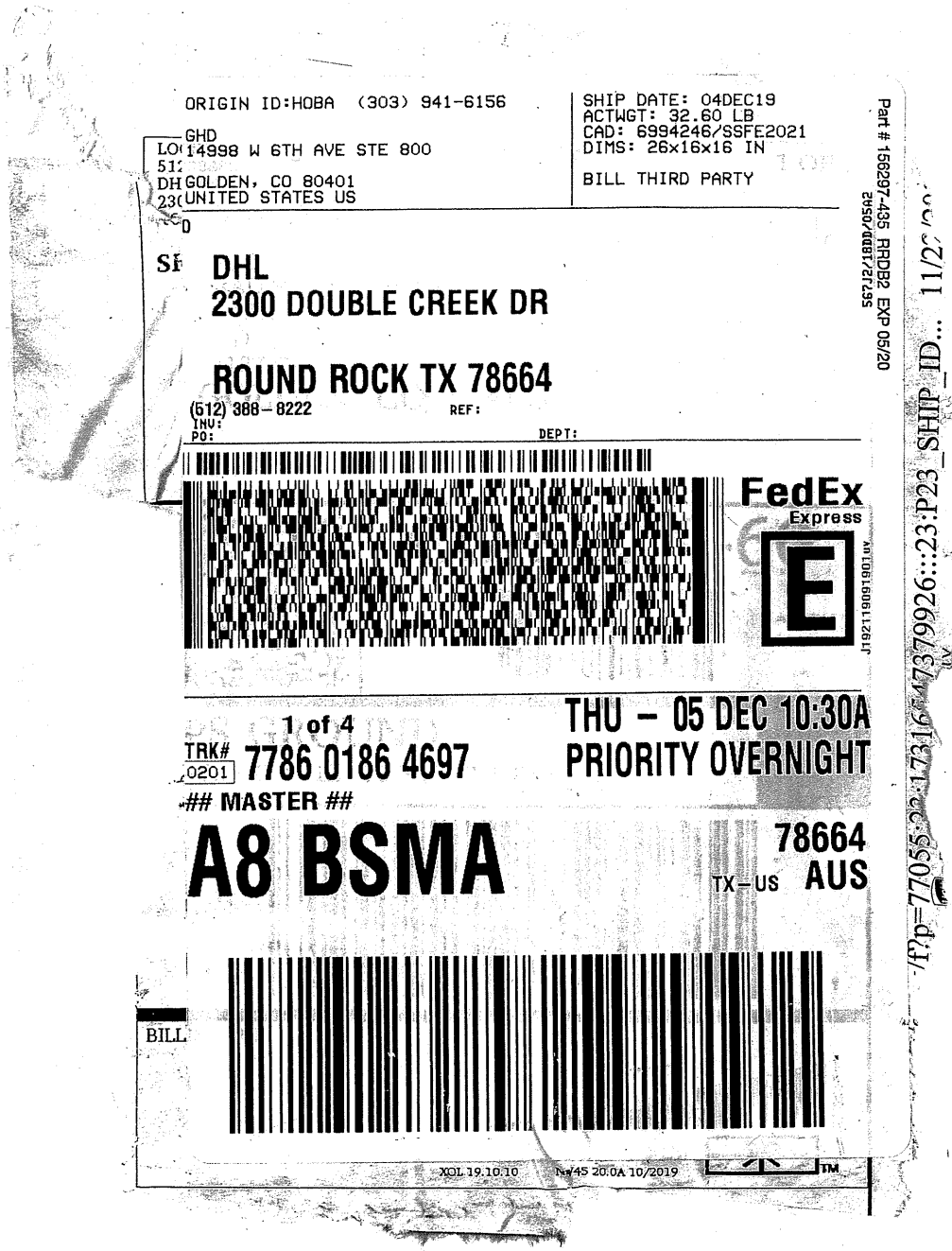
RELINQUISHED BY: (Signature) DATE/TIME 12/4/19 1600 RECEIVED BY: (Signature) TO FED EX
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
Fed Ex 12/5/19 0940
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 2.4/3.3 C THERM #: 28
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☑ NOT USED
CARRIER: ❑ LONE STAR ☑ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL COC Rev 1 | FEB 2010



ORIGIN ID:HOBA (303) 941-6156
GHD
LO 14998 W 6TH AVE STE 800
51
DH GOLDEN, CO 80401
23 UNITED STATES US

SHIP DATE: 04DEC19
ACTWGT: 32.60 LB
CAD: 6994246/SSFE2021
DIMS: 26x16x16 IN

BILL THIRD PARTY

Part # 156297-435 RRDB2 EXP 05/20

SH DHL
2300 DOUBLE CREEK DR

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

FedEx Express

1 of 4
TRK# 0201 7786 0186 4697
MASTER

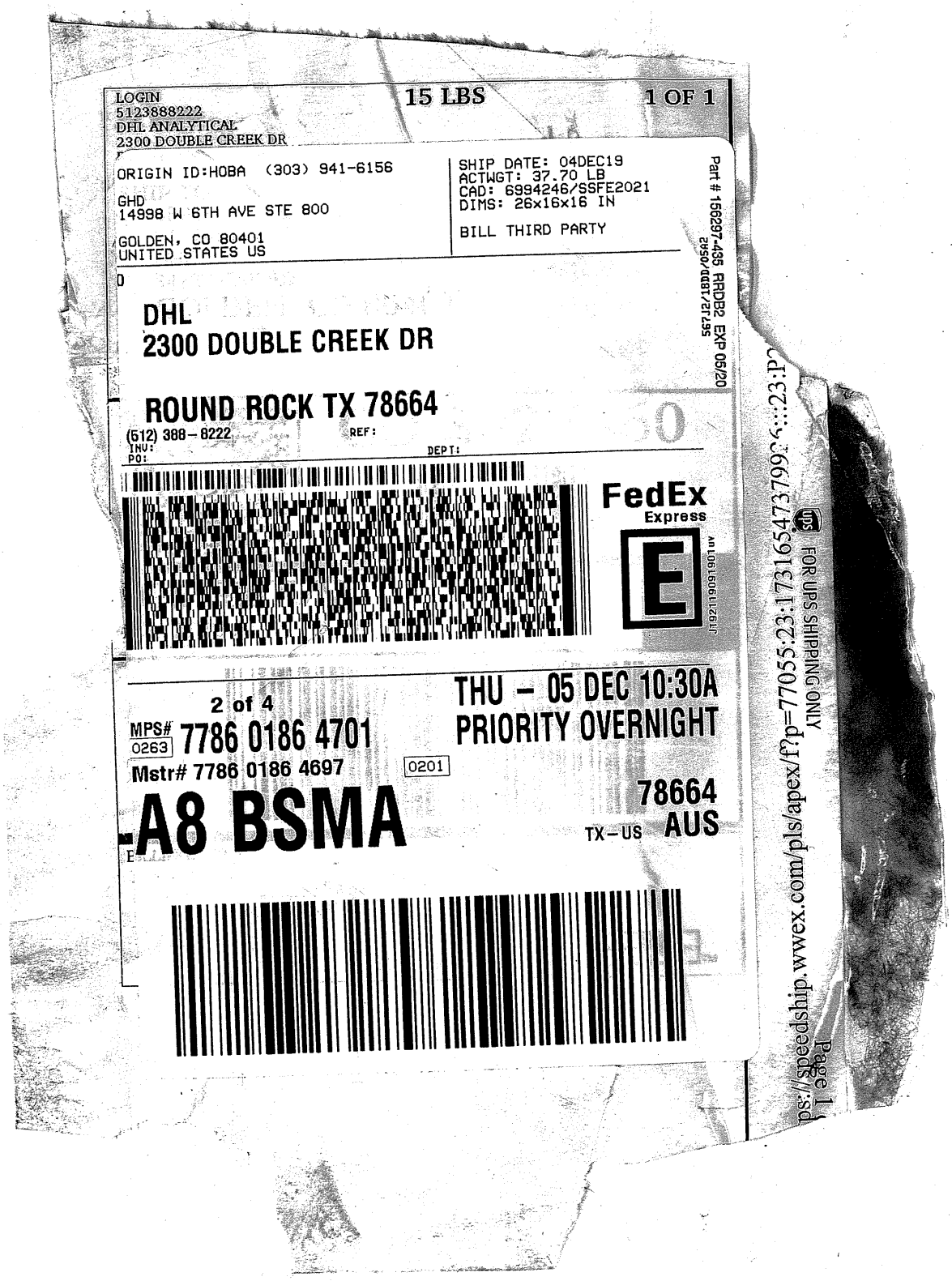
THU - 05 DEC 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

BILL

XOL 19.10.10 Na4S 20.0A 10/2019


LOGIN
5123888222
DHL ANALYTICAL
2300 DOUBLE CREEK DR
15 LBS
1 OF 1
ORIGIN ID:HOBA (303) 941-6156
GHD
14998 W 6TH AVE STE 800
GOLDEN, CO 80401
UNITED STATES US
SHIP DATE: 04DEC19
ACTWGT: 37.70 LB
CAD: 6994246/SSFE2021
DIMS: 26x16x16 IN
BILL THIRD PARTY
Part # 156297-435 RRDB2 EXP 05/20
DHL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
REF:
INV:
PO:
DEPT:
FedEx
Express
2 of 4
MPS# 0263 7786 0186 4701
Mstr# 7786 0186 4697
0201
THU - 05 DEC 10:30A
PRIORITY OVERNIGHT
A8 BSMA
78664
TX-US AUS
FOR UPS SHIPPING ONLY
https://speedship.wwex.com/pls/apex/f?p=77055:23:17316547379023:::23:P
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DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GHD Date Received: 12/5/2019

Work Order Number 1912037 Received by: EL

Checklist completed by: _____ 12/5/2019 Reviewed by PL 12/5/2019
Signature | Date | Initials | Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 ☑ EL 12/5/19	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☐	No ☑	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	2.4 °C
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? No		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by

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

Client contacted: _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: all Trip Blank vials in cooler one and 3 of 4 vials in cooler 2 broken in transit. Sample "MW-3" on COC labeled as "MW-3R" on bottles.

Corrective Action Proceed w/ unbroken vial. Used ID MW-3R as per historical data.

DHL Analytical, Inc. **Date:** *13-Dec-19*

CLIENT: GHD
Project: Hobbs South
Lab Order: 1912037

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, EPA and Standard Methods.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For Anions Analysis, the recovery of Chloride for the Matrix Spike and Matrix Spike Duplicate(s) (1912029-01, -02 MS/MSD) was below the method control limits. This is flagged accordingly in the QC Summary Report. This anion was within method control limits in the associated LCS. No further corrective action was taken.

DHL Analytical, Inc.

Date: *13-Dec-19*

CLIENT:	GHD	**Client Sample ID:**	MW-1
Project:	Hobbs South	**Lab ID:**	1912037-01
Project No:	078807-06-01	**Collection Date:**	12/04/19 01:15 PM
Lab Order:	1912037	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.148	0.148	0.185		mg/L	1	12/10/19 01:39 PM
Surr: Isopropylbenzene	93.1	0	47-142		%REC	1	12/10/19 01:39 PM
Surr: Octacosane	96.4	0	51-124		%REC	1	12/10/19 01:39 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/10/19 07:18 PM
Surr: Tetrachlorethene	112	0	74-138		%REC	1	12/10/19 07:18 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.00862	0.00200	0.00500		mg/L	1	12/09/19 12:57 PM
Barium	0.111	0.00300	0.0100		mg/L	1	12/09/19 12:57 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/09/19 12:57 PM
Chromium	0.0105	0.00200	0.00500		mg/L	1	12/09/19 12:57 PM
Lead	0.00262	0.000300	0.00100		mg/L	1	12/09/19 12:57 PM
Selenium	0.00734	0.00200	0.00500		mg/L	1	12/09/19 12:57 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/09/19 12:57 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/10/19 09:59 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:09 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:09 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 09:09 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:09 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 09:09 PM
Surr: 1,2-Dichloroethane-d4	99.2	0	72-119		%REC	1	12/05/19 09:09 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/05/19 09:09 PM
Surr: Dibromofluoromethane	96.6	0	85-115		%REC	1	12/05/19 09:09 PM
Surr: Toluene-d8	110	0	81-120		%REC	1	12/05/19 09:09 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	57.6	3.00	10.0		mg/L	10	12/09/19 06:36 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	615	10.0	10.0		mg/L	1	12/09/19 05:05 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-Dec-19*

CLIENT:	GHD	**Client Sample ID:**	MW-2
Project:	Hobbs South	**Lab ID:**	1912037-02
Project No:	078807-06-01	**Collection Date:**	12/04/19 02:20 PM
Lab Order:	1912037	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.370	0.148	0.185		mg/L	1	12/10/19 01:48 PM
Surr: Isopropylbenzene	85.3	0	47-142		%REC	1	12/10/19 01:48 PM
Surr: Octacosane	105	0	51-124		%REC	1	12/10/19 01:48 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/10/19 07:42 PM
Surr: Tetrachlorethene	82.6	0	74-138		%REC	1	12/10/19 07:42 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.00971	0.00200	0.00500		mg/L	1	12/09/19 01:00 PM
Barium	0.377	0.00300	0.0100		mg/L	1	12/09/19 01:00 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/09/19 01:00 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:00 PM
Lead	0.00136	0.000300	0.00100		mg/L	1	12/09/19 01:00 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:00 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/09/19 01:00 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/10/19 10:01 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:33 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:33 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 09:33 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:33 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 09:33 PM
Surr: 1,2-Dichloroethane-d4	100	0	72-119		%REC	1	12/05/19 09:33 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	12/05/19 09:33 PM
Surr: Dibromofluoromethane	96.7	0	85-115		%REC	1	12/05/19 09:33 PM
Surr: Toluene-d8	109	0	81-120		%REC	1	12/05/19 09:33 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	97.6	3.00	10.0		mg/L	10	12/09/19 06:52 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	737	10.0	10.0		mg/L	1	12/09/19 05:05 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-Dec-19*

CLIENT:	GHD	**Client Sample ID:**	MW-3R
Project:	Hobbs South	**Lab ID:**	1912037-03
Project No:	078807-06-01	**Collection Date:**	12/04/19 01:40 PM
Lab Order:	1912037	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	<0.147	0.147	0.184		mg/L	1	12/10/19 01:57 PM
Surr: Isopropylbenzene	82.1	0	47-142		%REC	1	12/10/19 01:57 PM
Surr: Octacosane	90.1	0	51-124		%REC	1	12/10/19 01:57 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/10/19 08:05 PM
Surr: Tetrachlorethene	79.7	0	74-138		%REC	1	12/10/19 08:05 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0778	0.00200	0.00500		mg/L	1	12/09/19 01:02 PM
Barium	0.397	0.00300	0.0100		mg/L	1	12/09/19 01:02 PM
Cadmium	0.000929	0.000300	0.00100	J	mg/L	1	12/09/19 01:02 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:02 PM
Lead	0.00394	0.000300	0.00100		mg/L	1	12/09/19 01:02 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:02 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/09/19 01:02 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/10/19 10:04 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:57 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:57 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 09:57 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 09:57 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 09:57 PM
Surr: 1,2-Dichloroethane-d4	100	0	72-119		%REC	1	12/05/19 09:57 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	12/05/19 09:57 PM
Surr: Dibromofluoromethane	96.2	0	85-115		%REC	1	12/05/19 09:57 PM
Surr: Toluene-d8	109	0	81-120		%REC	1	12/05/19 09:57 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	62.4	3.00	10.0		mg/L	10	12/09/19 07:08 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	643	10.0	10.0		mg/L	1	12/09/19 05:05 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-Dec-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4
Project:	Hobbs South	**Lab ID:**	1912037-04
Project No:	078807-06-01	**Collection Date:**	12/04/19 02:00 PM
Lab Order:	1912037	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.663	0.148	0.185		mg/L	1	12/10/19 02:06 PM
Surr: Isopropylbenzene	85.7	0	47-142		%REC	1	12/10/19 02:06 PM
Surr: Octacosane	116	0	51-124		%REC	1	12/10/19 02:06 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	12/10/19 08:29 PM
Surr: Tetrachlorethene	114	0	74-138		%REC	1	12/10/19 08:29 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0363	0.00200	0.00500		mg/L	1	12/09/19 01:04 PM
Barium	0.401	0.00300	0.0100		mg/L	1	12/09/19 01:04 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/09/19 01:04 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:04 PM
Lead	0.000432	0.000300	0.00100	J	mg/L	1	12/09/19 01:04 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:04 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/09/19 01:04 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/10/19 10:06 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 10:21 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 10:21 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 10:21 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 10:21 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 10:21 PM
Surr: 1,2-Dichloroethane-d4	98.9	0	72-119		%REC	1	12/05/19 10:21 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	12/05/19 10:21 PM
Surr: Dibromofluoromethane	96.7	0	85-115		%REC	1	12/05/19 10:21 PM
Surr: Toluene-d8	110	0	81-120		%REC	1	12/05/19 10:21 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	111	3.00	10.0		mg/L	10	12/09/19 07:24 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	722	10.0	10.0		mg/L	1	12/09/19 05:05 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-Dec-19*

CLIENT:	GHD	**Client Sample ID:**	MW-4D
Project:	Hobbs South	**Lab ID:**	1912037-05
Project No:	078807-06-01	**Collection Date:**	12/04/19 02:00 PM
Lab Order:	1912037	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	0.609	0.148	0.185		mg/L	1	12/10/19 02:29 PM
Surr: Isopropylbenzene	87.3	0	47-142		%REC	1	12/10/19 02:29 PM
Surr: Octacosane	104	0	51-124		%REC	1	12/10/19 02:29 PM
TPH PURGEABLE BY GC - WATER		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	0.0990	0.0600	0.100	J	mg/L	1	12/10/19 08:53 PM
Surr: Tetrachlorethene	80.3	0	74-138		%REC	1	12/10/19 08:53 PM
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Arsenic	0.0374	0.00200	0.00500		mg/L	1	12/09/19 01:06 PM
Barium	0.403	0.00300	0.0100		mg/L	1	12/09/19 01:06 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	12/09/19 01:06 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:06 PM
Lead	0.000607	0.000300	0.00100	J	mg/L	1	12/09/19 01:06 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	12/09/19 01:06 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	12/09/19 01:06 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **BM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/10/19 10:08 AM
8260 WATER VOLATILES BY GC/MS		**SW8260D**					Analyst: **DEW**
Benzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 10:45 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 10:45 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 10:45 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 10:45 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 10:45 PM
Surr: 1,2-Dichloroethane-d4	98.4	0	72-119		%REC	1	12/05/19 10:45 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/05/19 10:45 PM
Surr: Dibromofluoromethane	96.1	0	85-115		%REC	1	12/05/19 10:45 PM
Surr: Toluene-d8	110	0	81-120		%REC	1	12/05/19 10:45 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **SNM**
Chloride	109	3.00	10.0		mg/L	10	12/09/19 07:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	724	10.0	10.0		mg/L	1	12/09/19 05:05 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-Dec-19*

CLIENT:	GHD	**Client Sample ID:**	Trip
Project:	Hobbs South	**Lab ID:**	1912037-06
Project No:	078807-06-01	**Collection Date:**	12/04/19
Lab Order:	1912037	**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	12/05/19 11:09 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 11:09 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 11:09 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	12/05/19 11:09 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	12/05/19 11:09 PM
Surr: 1,2-Dichloroethane-d4	99.4	0	72-119		%REC	1	12/05/19 11:09 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	12/05/19 11:09 PM
Surr: Dibromofluoromethane	96.5	0	85-115		%REC	1	12/05/19 11:09 PM
Surr: Toluene-d8	109	0	81-120		%REC	1	12/05/19 11:09 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-Dec-19*

CLIENT: GHD
Work Order: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_191210A

The QC data in batch 93971 applies to the following samples: 1912037-01E, 1912037-02E, 1912037-03E, 1912037-04E, 1912037-05E

Sample ID: **MB-93971** Batch ID: **93971** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_191210A** Analysis Date: **12/10/2019 11:24:36 A** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0621		0.1000		62.1	47	142			
Surr: Octacosane	0.0749		0.1000		74.9	51	124			

Sample ID: **LCS-93971** Batch ID: **93971** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_191210A** Analysis Date: **12/10/2019 11:33:40 A** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.02	0.100	1.250	0	81.3	50	114			
Surr: Isopropylbenzene	0.0624		0.1000		62.4	47	142			
Surr: Octacosane	0.0941		0.1000		94.1	51	124			

Sample ID: **LCSD-93971** Batch ID: **93971** TestNo: **M8015D** Units: **mg/L**
SampType: **LCSD** Run ID: **GC15_191210A** Analysis Date: **12/10/2019 11:42:43 A** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.08	0.100	1.250	0	86.1	50	114	5.82	30	
Surr: Isopropylbenzene	0.0749		0.1000		74.9	47	142	0	0	
Surr: Octacosane	0.0936		0.1000		93.6	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: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_191210A

The QC data in batch 94032 applies to the following samples: 1912037-01B, 1912037-02B, 1912037-03B, 1912037-04B, 1912037-05B

Sample ID: **LCS-94032**	Batch ID: **94032**	TestNo: **M8015V**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC4_191210A**	Analysis Date: **12/10/2019 10:32:39 A**	Prep Date: **12/10/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.57	0.100	2.500	0	103	67	136			
Surr: Tetrachlorethene	0.420		0.4000		105	74	138			

Sample ID: **MB-94032**	Batch ID: **94032**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC4_191210A**	Analysis Date: **12/10/2019 11:44:25 A**	Prep Date: **12/10/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<0.0600	0.100								
Surr: Tetrachlorethene	0.474		0.4000		119	74	138			

Sample ID: **1912029-01BMS**	Batch ID: **94032**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MS**	Run ID: **GC4_191210A**	Analysis Date: **12/10/2019 4:30:48 PM**	Prep Date: **12/10/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.50	0.100	2.500	0	100	67	136			
Surr: Tetrachlorethene	0.450		0.4000		113	74	138			

Sample ID: **1912029-01BMSD**	Batch ID: **94032**	TestNo: **M8015V**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC4_191210A**	Analysis Date: **12/10/2019 4:54:54 PM**	Prep Date: **12/10/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.74	0.100	2.500	0	109	67	136	8.81	30	
Surr: Tetrachlorethene	0.455		0.4000		114	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: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_191210A

The QC data in batch 94001 applies to the following samples: 1912037-01C, 1912037-02C, 1912037-03C, 1912037-04C, 1912037-05C

Sample ID: **MB-94001**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:16:21 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-94001**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:18:37 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00185	0.000200	0.00200	0	92.5	85	115			

Sample ID: **LCSD-94001**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:20:53 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00181	0.000200	0.00200	0	90.5	85	115	2.19	15	

Sample ID: **1912029-02C MS**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:25:26 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00177	0.000200	0.00200	0	88.5	80	120			

Sample ID: **1912029-02C MSD**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:27:41 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00175	0.000200	0.00200	0	87.5	80	120	1.14	15	

Sample ID: **1912029-02C SD**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:29:56 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID: **1912029-02C PDS**	Batch ID: **94001**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_191210A**	Analysis Date: **12/10/2019 9:32:12 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00223	0.000200	0.00250	0	89.2	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: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_191209A

The QC data in batch 93982 applies to the following samples: 1912037-01C, 1912037-02C, 1912037-03C, 1912037-04C, 1912037-05C

Sample ID: **MB-93982** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:02:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								

Sample ID: **LCS-93982** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:04:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.202	0.00500	0.200	0	101	80	120			
Barium	0.203	0.0100	0.200	0	102	80	120			
Cadmium	0.202	0.00100	0.200	0	101	80	120			
Chromium	0.197	0.00500	0.200	0	98.7	80	120			
Lead	0.194	0.00100	0.200	0	96.8	80	120			
Selenium	0.200	0.00500	0.200	0	99.9	80	120			
Silver	0.204	0.00200	0.200	0	102	80	120			

Sample ID: **LCSD-93982** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:06:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.206	0.00500	0.200	0	103	80	120	2.08	15	
Barium	0.203	0.0100	0.200	0	102	80	120	0.130	15	
Cadmium	0.203	0.00100	0.200	0	102	80	120	0.548	15	
Chromium	0.199	0.00500	0.200	0	99.5	80	120	0.861	15	
Lead	0.195	0.00100	0.200	0	97.5	80	120	0.658	15	
Selenium	0.202	0.00500	0.200	0	101	80	120	0.836	15	
Silver	0.205	0.00200	0.200	0	102	80	120	0.690	15	

Sample ID: **1912036-02C SD** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:13:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0113	0.0250	0	0.0107				5.30	20	
Barium	0.161	0.0500	0	0.157				2.37	20	
Cadmium	<0.00150	0.00500	0	0.000305				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	

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: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_191209A

Sample ID: **1912036-02C SD** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:13:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.00150	0.00500	0	0.00132				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Silver	<0.00500	0.0100	0	0				0	20	

Sample ID: **1912036-02C PDS** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:35:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.197	0.00500	0.200	0.0107	93.1	75	125			
Barium	0.347	0.0100	0.200	0.157	94.9	75	125			
Cadmium	0.196	0.00100	0.200	0.000305	97.7	75	125			
Chromium	0.198	0.00500	0.200	0	98.8	75	125			
Lead	0.194	0.00100	0.200	0.00132	96.5	75	125			
Selenium	0.182	0.00500	0.200	0	91.0	75	125			
Silver	0.207	0.00200	0.200	0	103	75	125			

Sample ID: **1912036-02C MS** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:37:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0.0107	95.2	75	125			
Barium	0.361	0.0100	0.200	0.157	102	75	125			
Cadmium	0.199	0.00100	0.200	0.000305	99.3	75	125			
Chromium	0.196	0.00500	0.200	0	98.1	75	125			
Lead	0.198	0.00100	0.200	0.00132	98.2	75	125			
Selenium	0.185	0.00500	0.200	0	92.4	75	125			
Silver	0.201	0.00200	0.200	0	100	75	125			

Sample ID: **1912036-02C MSD** Batch ID: **93982** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_191209A** Analysis Date: **12/9/2019 12:39:00 PM** Prep Date: **12/6/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.203	0.00500	0.200	0.0107	96.4	75	125	1.11	15	
Barium	0.359	0.0100	0.200	0.157	101	75	125	0.504	15	
Cadmium	0.198	0.00100	0.200	0.000305	99.0	75	125	0.334	15	
Chromium	0.197	0.00500	0.200	0	98.6	75	125	0.566	15	
Lead	0.198	0.00100	0.200	0.00132	98.6	75	125	0.356	15	
Selenium	0.182	0.00500	0.200	0	90.9	75	125	1.61	15	
Silver	0.201	0.00200	0.200	0	100	75	125	0.063	15	

Qualifiers:

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

CLIENT: GHD
Work Order: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_191205A

The QC data in batch 93974 applies to the following samples: 1912037-01A, 1912037-02A, 1912037-03A, 1912037-04A, 1912037-05A, 1912037-06A

Sample ID: **LCS-93974** Batch ID: **93974** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS5_191205A** Analysis Date: **12/5/2019 2:43:00 PM** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0202	0.00100	0.0232	0	86.9	81	122			
Ethylbenzene	0.0221	0.00100	0.0232	0	95.4	80	120			
m,p-Xylene	0.0449	0.00200	0.0464	0	96.8	80	120			
o-Xylene	0.0231	0.00100	0.0232	0	99.6	80	120			
Toluene	0.0203	0.00200	0.0232	0	87.4	80	120			
Surr: 1,2-Dichloroethane-d4	204		200.0		102	72	119			
Surr: 4-Bromofluorobenzene	201		200.0		101	76	119			
Surr: Dibromofluoromethane	197		200.0		98.3	85	115			
Surr: Toluene-d8	211		200.0		106	81	120			

Sample ID: **MB-93974** Batch ID: **93974** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS5_191205A** Analysis Date: **12/5/2019 3:07:00 PM** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.000300	0.00100								
Ethylbenzene	<0.000300	0.00100								
m,p-Xylene	<0.000600	0.00200								
o-Xylene	<0.000300	0.00100								
Toluene	<0.000600	0.00200								
Surr: 1,2-Dichloroethane-d4	196		200.0		98.1	72	119			
Surr: 4-Bromofluorobenzene	210		200.0		105	76	119			
Surr: Dibromofluoromethane	192		200.0		95.9	85	115			
Surr: Toluene-d8	219		200.0		109	81	120			

Sample ID: **1912029-01AMS** Batch ID: **93974** TestNo: **SW8260D** Units: **mg/L**
SampType: **MS** Run ID: **GCMS5_191205A** Analysis Date: **12/6/2019 12:21:00 AM** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0211	0.00100	0.0232	0	90.9	81	122			
Ethylbenzene	0.0225	0.00100	0.0232	0	97.1	80	120			
m,p-Xylene	0.0459	0.00200	0.0464	0	98.9	80	120			
o-Xylene	0.0231	0.00100	0.0232	0	99.4	80	120			
Toluene	0.0211	0.00200	0.0232	0	90.9	80	120			
Surr: 1,2-Dichloroethane-d4	210		200.0		105	72	119			
Surr: 4-Bromofluorobenzene	198		200.0		99.2	76	119			
Surr: Dibromofluoromethane	199		200.0		99.4	85	115			
Surr: Toluene-d8	210		200.0		105	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

CLIENT: GHD
Work Order: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS5_191205A

Sample ID: **1912029-01AMSD** Batch ID: **93974** TestNo: **SW8260D** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS5_191205A** Analysis Date: **12/6/2019 12:45:00 AM** Prep Date: **12/5/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0212	0.00100	0.0232	0	91.3	81	120	0.454	20	
Ethylbenzene	0.0223	0.00100	0.0232	0	96.3	80	120	0.807	20	
m,p-Xylene	0.0457	0.00200	0.0464	0	98.5	80	120	0.395	20	
o-Xylene	0.0232	0.00100	0.0232	0	100	80	120	0.545	20	
Toluene	0.0209	0.00200	0.0232	0	89.9	80	120	1.07	20	
Surr: 1,2-Dichloroethane-d4	205		200.0		103	72	119	0	0	
Surr: 4-Bromofluorobenzene	200		200.0		100	76	119	0	0	
Surr: Dibromofluoromethane	198		200.0		98.8	85	115	0	0	
Surr: Toluene-d8	209		200.0		105	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: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_191209A

The QC data in batch 93997 applies to the following samples: 1912037-01D, 1912037-02D, 1912037-03D, 1912037-04D, 1912037-05D

Sample ID: **MB-93997**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 9:41:45 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-93997**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 9:57:45 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.41	1.00	10.00	0	94.1	90	110			

Sample ID: **LCSD-93997**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 10:13:45 AM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.43	1.00	10.00	0	94.3	90	110	0.218	20	

Sample ID: **1912029-01DMS**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 12:14:13 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	265	10.0	200.0	87.86	88.8	90	110			S

Sample ID: **1912029-01DMSD**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 12:30:13 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	279	10.0	200.0	87.86	95.3	90	110	4.84	20	

Sample ID: **1912029-02DMS**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 1:02:13 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	432	10.0	200.0	280.9	75.4	90	110			S

Sample ID: **1912029-02DMSD**	Batch ID: **93997**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_191209A**	Analysis Date: **12/9/2019 1:18:13 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	449	10.0	200.0	280.9	84.0	90	110	3.91	20	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: 1912037
Project: Hobbs South

ANALYTICAL QC SUMMARY REPORT

RunID: WC_191209B

The QC data in batch 94016 applies to the following samples: 1912037-01D, 1912037-02D, 1912037-03D, 1912037-04D, 1912037-05D

Sample ID: **MB-94016**	Batch ID: **94016**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_191209B**	Analysis Date: **12/9/2019 5:05:00 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-94016**	Batch ID: **94016**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_191209B**	Analysis Date: **12/9/2019 5:05:00 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	756	10.0	745.6	0	101	90	113			

Sample ID: **1912025-02A-DUP**	Batch ID: **94016**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_191209B**	Analysis Date: **12/9/2019 5:05:00 PM**	Prep Date: **12/9/2019**

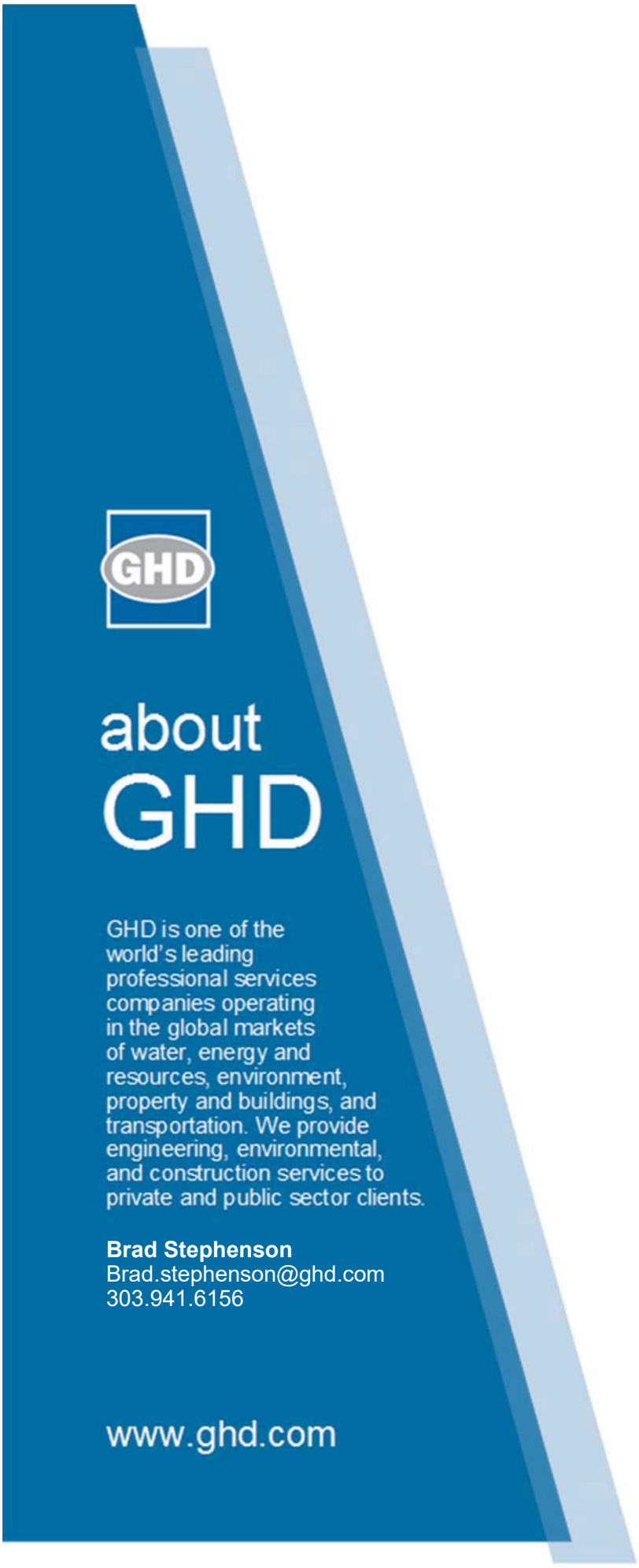
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1070	50.0	0	1040				2.38	5	

Sample ID: **1912030-02D-DUP**	Batch ID: **94016**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_191209B**	Analysis Date: **12/9/2019 5:05:00 PM**	Prep Date: **12/9/2019**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	39800	1000	0	39800				0	5	

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


GHD
about
GHD
GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.
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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 32271

CONDITIONS

Operator: NAVAJO REFINING COMPANY, L.L.C. P.O. Box 159 Artesia, NM 88211	OGRID: 15694
	Action Number: 32271
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	Please make sure OCD is made aware when monitor wells are lugged and do so as per OSE rules.	8/27/2021