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April 28, 2023

REVIEWED
By Mike Buchanan at 3:44 pm, Jul 07, 2023

**New Mexico Oil Conservation Division**
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Review of the 2022 Annual Groundwater Monitoring Report for Hilcorp Energy Hampton #4M
1. Continue to perform groundwater monitoring for wells: MW- 5, MW-12 and MW-16 (when recovery allows).
2. Submit report for 2023 Annual Groundwater Monitoring Report by April 1, 2024.

**Re: 2022 Annual Groundwater Monitoring Report**
Hampton #4M
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NAUTOFAB000251
NMOCD Administrative Order: 3R-069

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2022 Annual Groundwater Monitoring Report* to the New Mexico Oil Conservation Division (NMOCD) to document groundwater monitoring activities conducted at the Hampton #4M natural gas production well (Site) during 2022. The Site is located approximately 0.25 miles south of Hampton Arroyo on Bureau of Land Management (BLM) surface within Unit N, Section 13, Township 30 North and Range 11 West, San Juan County, New Mexico (Figure 1).

## SITE BACKGROUND

The Site production well was spudded by the Southland Royal Company (Southland) in 1983. Since then, the well has changed ownership from Southland to Burlington Resources (Burlington) in 1996, ConocoPhillips in 2006, and Hilcorp in 2017. In addition, the Public Service Company of New Mexico (PNM) operated a dehydration unit and unlined earthen pit at the Site between 1990 and 1996 (located on the north end of the well pad). Petroleum hydrocarbon impacted soil and groundwater were encountered during pit-closure activities performed in 1996. In response, PNM conducted a subsurface investigation and installed several wells in the northern portion of the well pad to assess soil and groundwater conditions. Further investigations performed in 1997 and 1998 revealed a separate source of petroleum hydrocarbon contamination at the southern end of the well pad (upgradient of the PNM pit), located near equipment owned by Burlington. The 1997 investigation also discovered a surface seep to the northwest of the well pad (downgradient of the well pad) that contained phase separated hydrocarbons (PSH).

Based on the investigations conducted at the Site, NMOCD issued Administrative Order Number R-11134-A to Burlington and PNM. Burlington was assigned responsibility of soil and groundwater impacts south/upgradient of the PNM dehydrator pit and PNM responsibility of impacts north/downgradient of the dehydrator pit. Several attempts to remediate the Site have been performed between 1997 and 2017 and include excavation, application of potassium permanganate within the excavations, manual PSH recovery (bailing/adsorbent socks), mobile dual-phase extraction, and PSH recovery using a skimmer pump. ConocoPhillips also installed a solar-powered skimmer in 2016 to recover PSH from well MW-16; however, the system was

removed in 2019 due to poor PSH recovery. Since the system removal, adsorbent socks have been placed into this well and replaced quarterly to address residual PSH.

Since 1997, several former wells at the Site have been damaged and/or removed during excavation. Currently, eight wells remain at the Site and include MW-1, MW-5, MW-9, MW-11, MW-12, MW-15, MW-16, and TMW-1. Based on results and conclusions presented in WSP's *2020 Annual Groundwater Monitoring Report* (dated March 22, 2021), the NMOCD approved the plugging and abandonment of wells MW-1, MW-9, MW-11, MW-15, and TMW-1, which is scheduled to be performed in 2023. Well locations and Site features are shown on Figure 2.

## SITE GROUNDWATER CLEANUP STANDARDS

The NMOCD requires groundwater-quality standards be met as presented by the New Mexico Water Quality Control Commission (NMWQCC) and listed in Title 20, Chapter 6, Part 2, Section 3103 (20.6.2.3103) of the New Mexico Administrative Code (NMAC). The following standards are presented for constituents of concern (COCs) at the Site in milligrams per liter (mg/L).

- Benzene: 0.005 mg/L
- Toluene: 1.0 mg/L
- Ethylbenzene: 0.70 mg/L
- Total Xylenes: 0.62 mg/L

In addition, NMWQCC standards state light non-aqueous phase liquids (LNAPLs) or PSH, as referenced in this report, shall not be present floating on the groundwater table.

## GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater monitoring at the Site included quarterly gauging and sampling from wells MW-5 and MW-12, as well as PSH recovery from well MW-16. Groundwater-level measurements and samples were collected in March, May, August, and November 2022. A sample was not collected from well MW-5 during the March 2022 sampling event due to insufficient water volumes. Samples were also not collected for laboratory analysis from MW-16 due to the presence of PSH during each sampling event. Static groundwater-level measurements included recording depth-to-groundwater and PSH, where detected, using a Keck oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with distilled water prior to each measurement to prevent cross-contamination. Measured depths-to-groundwater and PSH and associated calculated groundwater elevations are presented in Table 1. Based on historical Site-wide depth-to-groundwater measurements, the inferred groundwater flow direction is to the north.

### GROUNDWATER SAMPLING

Groundwater from monitoring wells MW-5 and MW-12 was purged and sampled using a disposable bailer. Purging was accomplished by removing stagnant groundwater from the monitoring well prior to collecting a sample. Field measurements of groundwater quality parameters, including temperature, pH, electrical conductivity, and total dissolved solids were collected during the quarterly sampling events.

Following well purging, groundwater samples were placed directly into laboratory-provided containers and labeled with the date and time of collection, well designation, project name, sample collector's name, and parameters to be analyzed. They were immediately sealed, packed on ice,

and submitted to Hall Environmental Analysis Laboratory (Hall) for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B or 8015B. Proper chain-of-custody procedures were followed documenting the date and time sampled, sample number, type of sample, sample collector's name, preservative used, analyses required, and sample collector's signature.

### GROUNDWATER ANALYTICAL RESULTS

Based on the analytical results, BTEX constituents were in compliance with NMWQCC standards in wells MW-5 and MW-12 during all sampling events. Additionally, PSH was encountered in well MW-16 during all sampling events at thicknesses ranging from 0.18 feet to 0.52 feet. A summary of analytical results are presented in Table 3 and depicted on Figure 3, with complete laboratory analytical reports attached as Appendix A.

### PHASE SEPARATED HYDROCARBON RECOVERY

A solar-powered skimmer was previously used to recover PSH from well MW-16 at the Site. The system was subsequently removed in 2019 due to poor PSH recovery. Since the system removal, adsorbent socks have been placed into this well to address the residual PSH. During sampling events, residual PSH still present in the well is also removed using a disposable bailer. In 2022, approximately 38 ounces of PSH was removed from MW-16. Table 4 presents the volume of PSH recovered during each monitoring event between 2019 and 2022.

## CONCLUSIONS

Overall, the presence of PSH and BTEX concentrations have decreased over time at the Site. BTEX concentrations in wells MW-5 and MW-12 have been in compliance with NMWQCC standards since September 2021 and August 2019, respectively. PSH remains in well MW-16; however, the volume of recoverable PSH has also decreased over time. Data collected at the Site suggests that the petroleum-hydrocarbon plume is stable and reducing.

Based on these conclusions, Hilcorp will continue quarterly sampling of wells MW-5 and MW-12 until BTEX concentrations are in compliance with NMWQCC standards for eight consecutive quarters. PSH will also be monitored and recovered from well MW-16 during the quarterly sampling events. Hilcorp plans to plug and abandon wells MW-1, MW-9, MW-11, and MW-15, and TMW-1 in 2023, as approved by the NMOCD.

Ensolum appreciates the opportunity to provide these environmental services to Hilcorp. Please contact either of the undersigned with any questions.

Sincerely,

**Ensolum, LLC**

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**Attachments:**

| | |
|---|---|
| Figure 1 | Site Location Map |
| Figure 2 | Site Map |
| Figure 3 | Groundwater Analytical Results |
| | |
| Table 1 | Groundwater Elevations |
| Table 2 | Groundwater Quality Measurements |
| Table 3 | Groundwater Analytical Results |
| Table 4 | PSH Recovery |
| | |
| Appendix A | Laboratory Analytical Reports |

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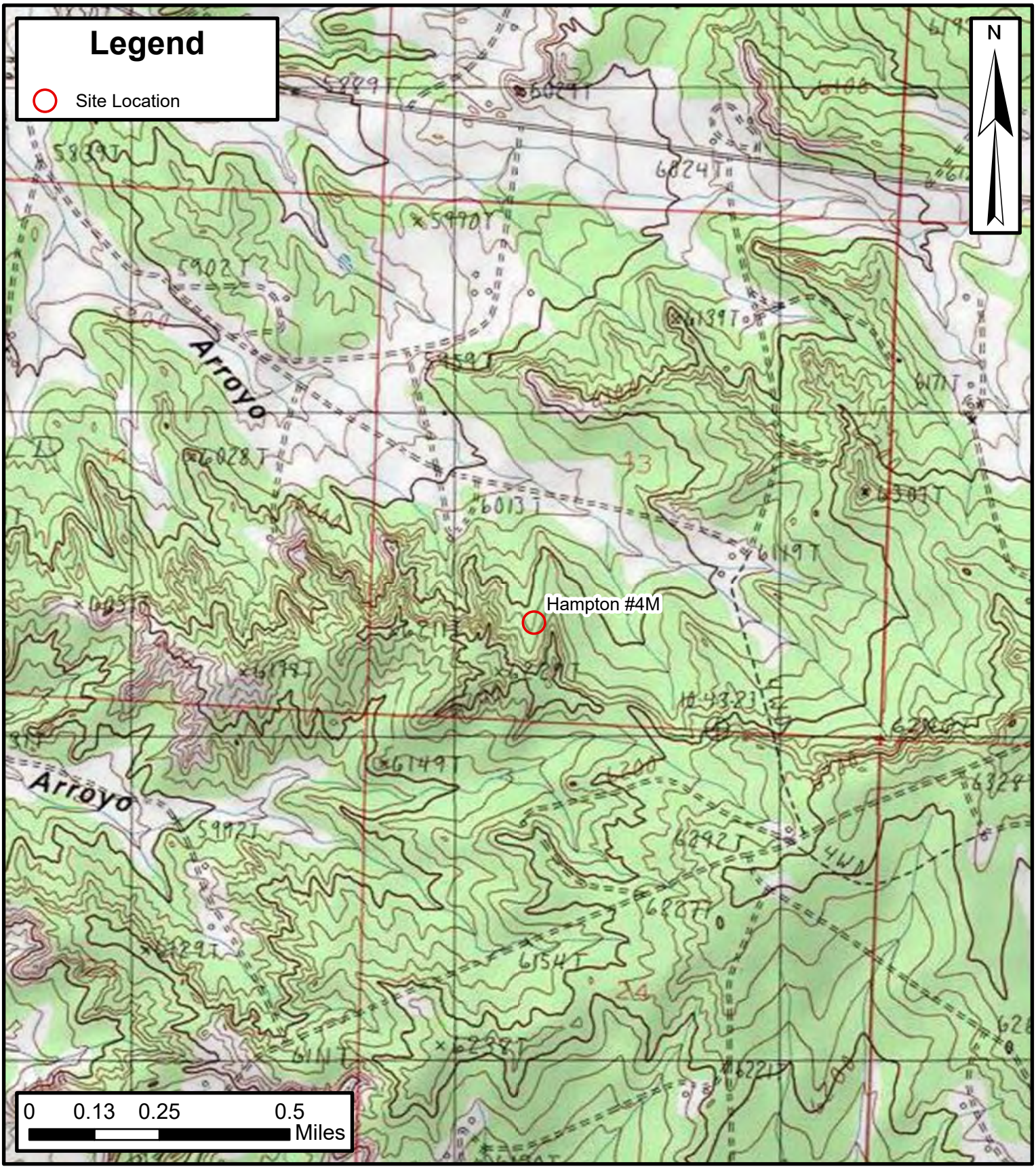
# FIGURES

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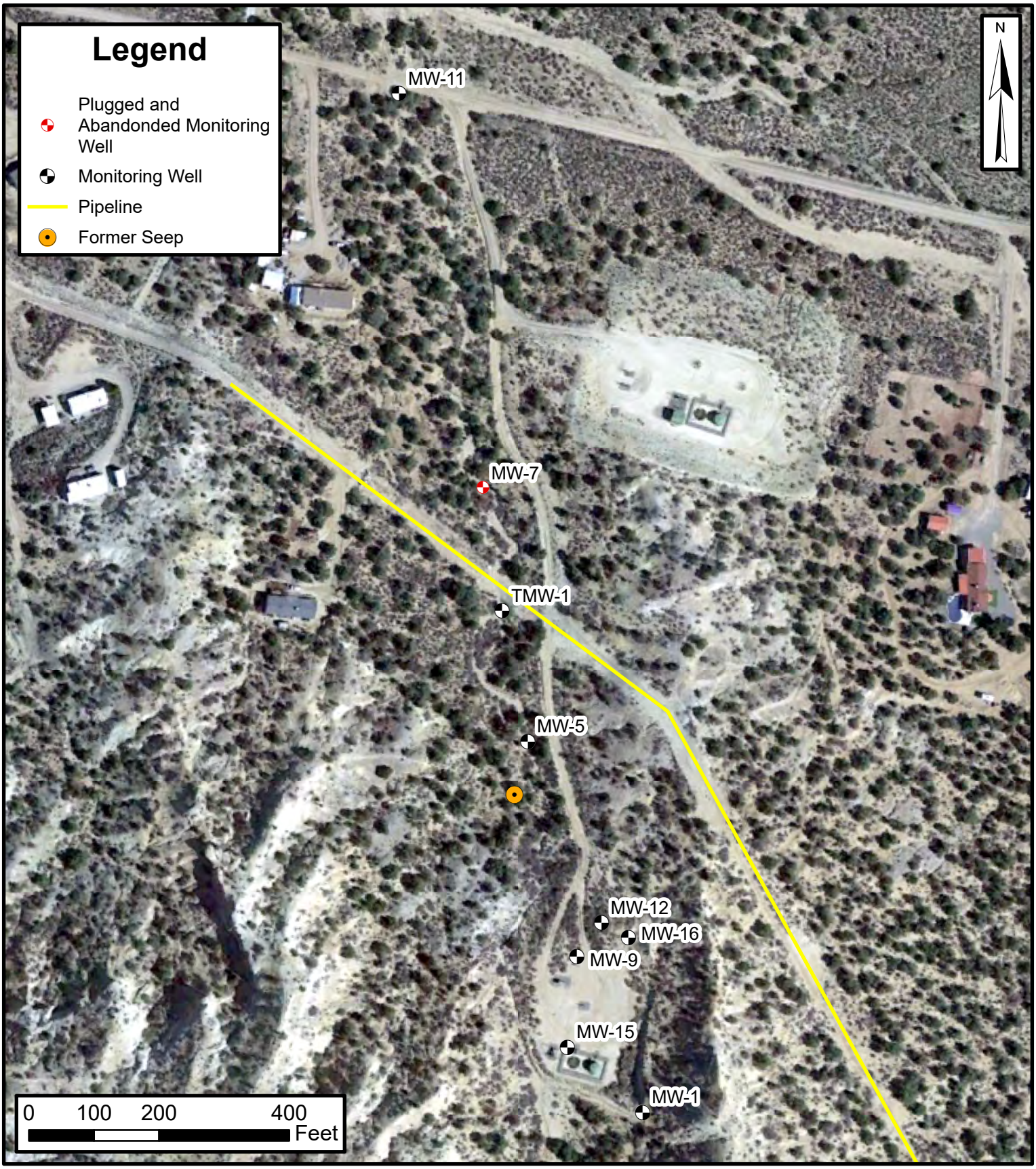
# Site Location Map

Hampton #4M
Hilcorp Energy Company
36.80719, -107.94582
San Juan County, New Mexico

FIGURE
1


Sources: Environmental Systems Research Institute (ESRI), National Geographic Society, i-cubed

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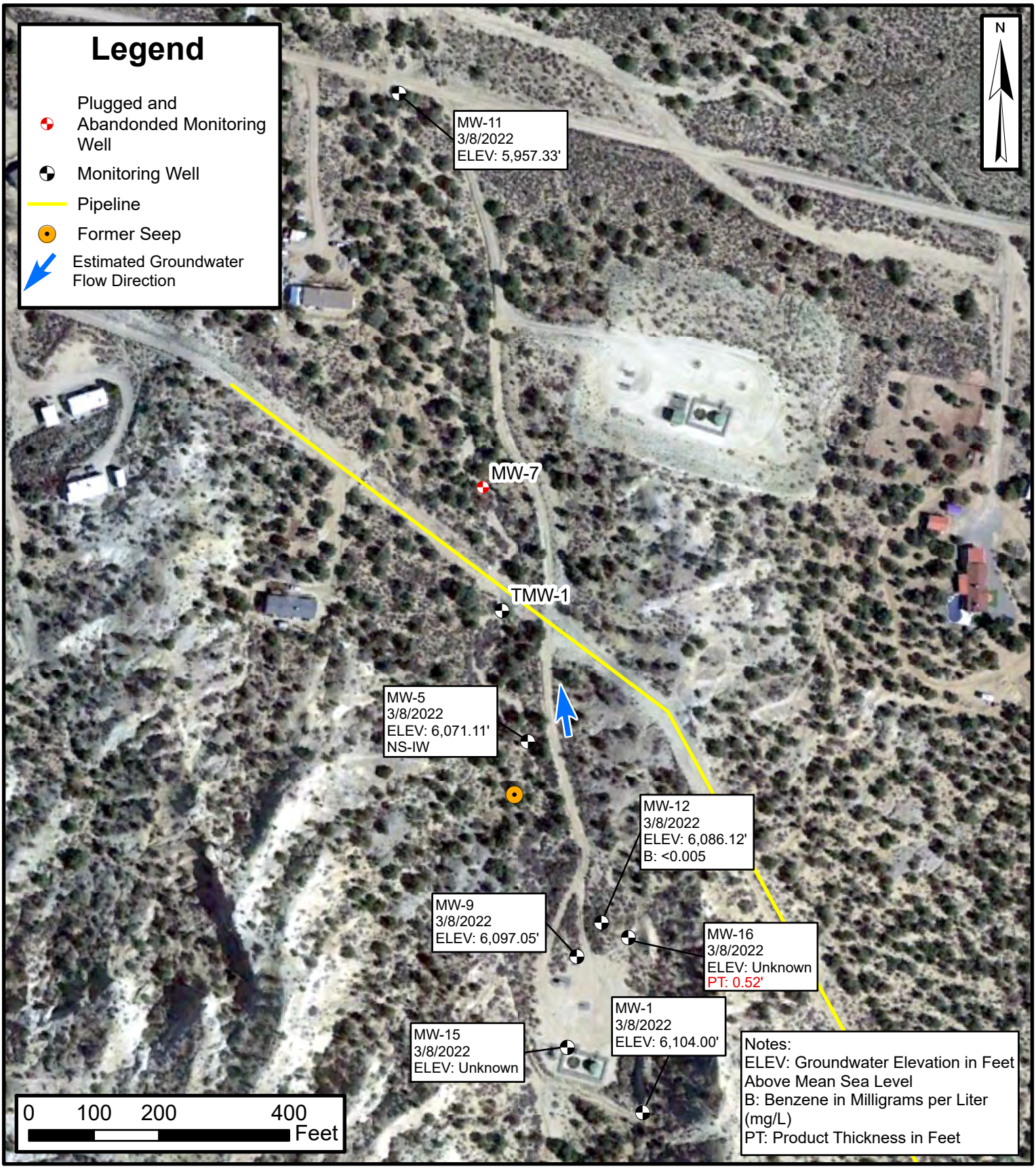
# Site Map

Hampton #4M
Hilcorp Energy Company

36.80719, -107.94582
San Juan County, New Mexico

FIGURE
2

Sources: Google Earth

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# Groundwater Analytical Results

Hampton #4M
Hilcorp Energy Company

36.80719, -107.94582
San Juan County, New Mexico

**FIGURE**

**3**



Sources: Google Earth

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# TABLES

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# TABLE 1
## GROUNDWATER ELEVATIONS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Top of Casing Elevation (feet amsl) | Date | Depth to Product (feet BTOC) | Depth to Groundwater (feet BTOC) | Product Thickness (feet) | Groundwater Elevation (feet AMSL) |
|---|---|---|---|---|---|---|
| MW-1 | 6,149.42 | 11/8/2007 | -- | 42.81 | -- | 6,106.61 |
| | | 1/17/2008 | -- | 42.96 | -- | 6,106.46 |
| | | 3/19/2008 | -- | 42.93 | -- | 6,106.49 |
| | | 7/22/2008 | -- | 42.74 | -- | 6,106.68 |
| | | 10/23/2008 | -- | 32.80 | -- | 6,116.62 |
| | | 1/21/2009 | -- | 42.90 | -- | 6,106.52 |
| | | 9/24/2009 | -- | 43.09 | -- | 6,106.33 |
| | | 9/28/2010 | -- | 43.19 | -- | 6,106.23 |
| | | 10/11/2011 | -- | 43.55 | -- | 6,105.87 |
| | | 9/25/2012 | -- | 43.88 | -- | 6,105.54 |
| | | 9/18/2013 | -- | 44.32 | -- | 6,105.10 |
| | | 3/24/2014 | -- | 44.10 | -- | 6,105.32 |
| | | 9/24/2014 | -- | 44.69 | -- | 6,104.73 |
| | | 9/23/2015 | -- | 44.95 | -- | 6,104.47 |
| | | 9/15/2016 | -- | 45.11 | -- | 6,104.31 |
| | | 10/26/2017 | -- | 45.16 | -- | 6,104.26 |
| | | 9/6/2018 | -- | 45.52 | -- | 6,103.90 |
| | | 8/8/2019 | -- | 45.28 | -- | 6,104.14 |
| | | 8/4/2020 | -- | 45.56 | -- | 6,103.86 |
| MW-5 | 6,090.83 | 11/8/2007 | -- | 16.52 | -- | 6,074.31 |
| | | 1/17/2008 | -- | 15.65 | -- | 6,075.18 |
| | | 3/19/2008 | -- | 13.64 | -- | 6,077.19 |
| | | 7/22/2008 | -- | 15.72 | -- | 6,075.11 |
| | | 10/23/2008 | -- | 16.53 | -- | 6,074.30 |
| | | 1/21/2009 | -- | 16.04 | -- | 6,074.79 |
| | | 9/24/2009 | -- | 16.89 | -- | 6,073.94 |
| | | 9/28/2010 | -- | 16.55 | -- | 6,074.28 |
| | | 10/11/2011 | -- | 17.39 | -- | 6,073.44 |
| | | 9/25/2012 | -- | 17.46 | -- | 6,073.37 |
| | | 9/18/2013 | -- | 16.78 | -- | 6,074.05 |
| | | 9/24/2014 | -- | 17.50 | -- | 6,073.33 |
| | | 9/23/2015 | -- | 17.17 | -- | 6,073.66 |
| | | 9/15/2016 | -- | 17.24 | -- | 6,073.59 |
| | | 10/26/2017 | -- | 17.69 | -- | 6,073.14 |
| | | 9/6/2018 | -- | 18.12 | -- | 6,072.71 |
| | | 8/7/2019 | -- | 16.87 | -- | 6,073.96 |
| | | 8/6/2020 | -- | 17.62 | -- | 6,073.21 |
| | | 9/30/2021 | -- | 18.51 | -- | 6,072.32 |
| | | 3/8/2022 | -- | 19.72 | -- | 6,071.11 |
| | | 5/9/2022 | -- | 16.86 | -- | 6,073.97 |
| | | 8/10/2022 | -- | 18.09 | -- | 6,072.74 |
| | | 11/30/2022 | -- | 19.38 | -- | 6,071.45 |
| MW-7 | 6,066.91 | 11/8/2007 | -- | 20.22 | -- | 6,046.69 |
| | | 1/17/2008 | -- | 20.50 | -- | 6,046.41 |
| | | 3/19/2008 | -- | 20.02 | -- | 6,046.89 |
| | | 7/22/2008 | -- | 19.29 | -- | 6,047.62 |
| | | 10/23/2008 | -- | 19.95 | -- | 6,046.96 |
| | | 1/21/2009 | -- | 20.44 | -- | 6,046.47 |
| | | 9/24/2009 | -- | 20.55 | -- | 6,046.36 |
| | | 9/28/2010 | -- | 21.24 | -- | 6,045.67 |
| | | 10/11/2011 | -- | DRY | -- | -- |
| | | 9/25/2012 | -- | DRY | -- | -- |
| | | 9/18/2013 | -- | DRY | -- | -- |
| | | 5/9/2014 | Well Plugged and Abandoned | | | |

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# TABLE 1
## GROUNDWATER ELEVATIONS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Top of Casing Elevation (feet amsl) | Date | Depth to Product (feet BTOC) | Depth to Groundwater (feet BTOC) | Product Thickness (feet) | Groundwater Elevation (feet AMSL) |
|---|---|---|---|---|---|---|
| MW-9 | 6,122.52 | 11/8/2007 | -- | 22.91 | -- | 6,099.61 |
| | | 1/17/2008 | -- | 22.76 | -- | 6,099.76 |
| | | 3/19/2008 | -- | 22.38 | -- | 6,100.14 |
| | | 7/22/2008 | -- | 23.10 | -- | 6,099.42 |
| | | 10/23/2008 | -- | 23.02 | -- | 6,099.50 |
| | | 1/21/2009 | -- | 22.85 | -- | 6,099.67 |
| | | 9/24/2009 | -- | 23.64 | -- | 6,098.88 |
| | | 9/28/2010 | -- | 23.70 | -- | 6,098.82 |
| | | 10/11/2011 | -- | 24.03 | -- | 6,098.49 |
| | | 9/25/2012 | -- | 24.61 | -- | 6,097.91 |
| | | 9/18/2013 | -- | 24.61 | -- | 6,097.91 |
| | | 9/24/2014 | -- | 25.18 | -- | 6,097.34 |
| | | 9/23/2015 | -- | 25.32 | -- | 6,097.20 |
| | | 9/15/2016 | -- | 25.82 | -- | 6,096.70 |
| | | 10/26/2017 | -- | 25.35 | -- | 6,097.17 |
| | | 9/6/2018 | -- | 26.00 | -- | 6,096.52 |
| | | 8/8/2019 | -- | 25.56 | -- | 6,096.96 |
| | | 8/4/2020 | -- | 25.96 | -- | 6,096.56 |
| MW-11 | 6,015.75 | 11/8/2007 | -- | 56.00 | -- | 5,959.75 |
| | | 1/17/2008 | -- | 55.86 | -- | 5,959.89 |
| | | 3/19/2008 | -- | 55.88 | -- | 5,959.87 |
| | | 7/22/2008 | -- | 55.71 | -- | 5,960.04 |
| | | 10/23/2008 | -- | 55.91 | -- | 5,959.84 |
| | | 1/21/2009 | -- | 55.75 | -- | 5,960.00 |
| | | 9/24/2009 | -- | 56.02 | -- | 5,959.73 |
| | | 9/28/2010 | -- | 56.06 | -- | 5,959.69 |
| | | 10/11/2011 | -- | 56.21 | -- | 5,959.54 |
| | | 9/25/2012 | -- | 56.41 | -- | 5,959.34 |
| | | 9/18/2013 | -- | 56.73 | -- | 5,959.02 |
| | | 9/24/2014 | -- | 56.91 | -- | 5,958.84 |
| | | 9/23/2015 | -- | 57.20 | -- | 5,958.55 |
| | | 9/15/2016 | -- | 58.37 | -- | 5,957.38 |
| | | 10/26/2017 | -- | 57.42 | -- | 5,958.33 |
| | | 9/6/2018 | -- | 57.84 | -- | 5,957.91 |
| | | 8/7/2019 | -- | 57.86 | -- | 5,957.89 |
| | | 8/6/2020 | -- | 58.04 | -- | 5,957.71 |

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# TABLE 1
## GROUNDWATER ELEVATIONS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Top of Casing Elevation (feet amsl) | Date | Depth to Product (feet BTOC) | Depth to Groundwater (feet BTOC) | Product Thickness (feet) | Groundwater Elevation (feet AMSL) |
|---|---|---|---|---|---|---|
| MW-12 | 6,109.02 | 11/8/2007 | -- | 20.46 | -- | 6,088.56 |
| | | 1/17/2008 | -- | 20.24 | -- | 6,088.78 |
| | | 3/19/2008 | -- | 19.85 | -- | 6,089.17 |
| | | 7/22/2008 | -- | 20.54 | -- | 6,088.48 |
| | | 10/23/2008 | -- | 20.61 | -- | 6,088.41 |
| | | 1/21/2009 | -- | 20.37 | -- | 6,088.65 |
| | | 9/24/2009 | -- | 21.23 | -- | 6,087.79 |
| | | 9/28/2010 | -- | 21.27 | -- | 6,087.75 |
| | | 10/11/2011 | -- | 21.58 | -- | 6,087.44 |
| | | 9/25/2012 | -- | 22.14 | -- | 6,086.88 |
| | | 9/18/2013 | -- | 22.17 | -- | 6,086.85 |
| | | 3/24/2014 | -- | 21.64 | -- | 6,087.38 |
| | | 9/24/2014 | -- | 22.70 | -- | 6,086.32 |
| | | 9/23/2015 | -- | 22.84 | -- | 6,086.18 |
| | | 9/15/2016 | -- | 22.21 | -- | 6,086.81 |
| | | 10/26/2017 | -- | 22.82 | -- | 6,086.20 |
| | | 9/6/2018 | -- | 23.53 | -- | 6,085.49 |
| | | 8/8/2019 | -- | 23.08 | -- | 6,085.94 |
| | | 8/4/2020 | -- | 23.47 | -- | 6,085.55 |
| | | 9/30/2021 | -- | 23.75 | -- | 6,085.27 |
| | | 3/8/2022 | -- | 22.90 | -- | 6,086.12 |
| | | 5/9/2022 | -- | 22.96 | -- | 6,086.06 |
| | | 8/10/2022 | -- | 23.74 | -- | 6,085.28 |
| | | 11/30/2022 | -- | 23.39 | -- | 6,085.63 |
| MW-15 | No Survey Data | 11/8/2007 | -- | 18.03 | -- | -- |
| | | 1/17/2008 | -- | 18.20 | -- | -- |
| | | 3/19/2008 | -- | 17.60 | -- | -- |
| | | 7/22/2008 | -- | 17.79 | -- | -- |
| | | 10/23/2008 | -- | 18.01 | -- | -- |
| | | 1/21/2009 | -- | 18.20 | -- | -- |
| | | 9/24/2009 | -- | 18.33 | -- | -- |
| | | 9/28/2010 | -- | 18.25 | -- | -- |
| | | 10/11/2011 | -- | 18.65 | -- | -- |
| | | 9/25/2012 | -- | 18.97 | -- | -- |
| | | 9/18/2013 | -- | 19.23 | -- | -- |
| | | 9/24/2014 | -- | 19.43 | -- | -- |
| | | 9/23/2015 | -- | 19.58 | -- | -- |
| | | 9/15/2016 | -- | 19.69 | -- | -- |
| | | 10/26/2017 | -- | 19.60 | -- | -- |
| | | 9/6/2018 | -- | 20.05 | -- | -- |
| | | 8/8/2019 | -- | 19.68 | -- | -- |
| | | 8/4/2020 | -- | 20.05 | -- | -- |

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# TABLE 1
## GROUNDWATER ELEVATIONS
**Hampton #4M**
**Hilcorp Energy Company**
**San Juan County, New Mexico**

| Well Identification | Top of Casing Elevation (feet amsl) | Date | Depth to Product (feet BTOC) | Depth to Groundwater (feet BTOC) | Product Thickness (feet) | Groundwater Elevation (feet AMSL) |
|---|---|---|---|---|---|---|
| MW-16 | No Survey Data | 11/8/2007 | -- | 25.03 | -- | -- |
| | | 1/17/2008 | -- | 24.88 | -- | -- |
| | | 3/19/2008 | -- | 24.37 | -- | -- |
| | | 7/22/2008 | -- | 25.00 | -- | -- |
| | | 10/23/2008 | -- | 25.57 | -- | -- |
| | | 1/21/2009 | -- | 24.97 | -- | -- |
| | | 9/24/2009 | -- | 25.75 | -- | -- |
| | | 9/28/2010 | -- | 25.41 | -- | -- |
| | | 10/11/2011 | -- | 28.26 | -- | -- |
| | | 9/25/2012 | 26.57 | 27.38 | 0.81 | -- |
| | | 9/18/2013 | 27.34 | 28.15 | 0.81 | -- |
| | | 3/24/2014 | 25.96 | 28.20 | 2.24 | -- |
| | | 9/24/2014 | 28.00 | 28.84 | 0.84 | -- |
| | | 9/23/2015 | 26.83 | 29.27 | 2.44 | -- |
| | | 9/15/2016* | 33.25 | 33.34 | 0.09 | -- |
| | | 10/27/2016* | 33.25 | 33.42 | 0.17 | -- |
| | | 6/14/2017 | -- | 30.58 | -- | -- |
| | | 10/26/2017 | 31.39 | -- | -- | -- |
| | | 9/6/2018 | 33.49 | 33.51 | 0.02 | -- |
| | | 8/8/2019 | -- | 31.86 | -- | -- |
| | | 8/5/2020 | 31.70 | 33.36 | 1.66 | -- |
| | | 9/30/2021 | 32.94 | 33.77 | 0.83 | -- |
| | | 3/8/2022 | 33.23 | 33.75 | 0.52 | -- |
| | | 5/9/2022 | 33.53 | 33.86 | 0.33 | -- |
| | | 8/10/2022 | 33.58 | 33.84 | 0.26 | -- |
| | | 11/30/202 | 33.70 | 33.88 | 0.18 | -- |
| TMW-1 | No Survey Data | 11/8/2007 | -- | 19.06 | -- | -- |
| | | 1/17/2008 | -- | 19.37 | -- | -- |
| | | 3/19/2008 | -- | 18.55 | -- | -- |
| | | 7/22/2008 | -- | 18.10 | -- | -- |
| | | 10/23/2008 | -- | 19.19 | -- | -- |
| | | 1/21/2009 | -- | 19.25 | -- | -- |
| | | 9/24/2009 | -- | 19.61 | -- | -- |
| | | 9/28/2010 | -- | 19.11 | -- | -- |
| | | 10/11/2011 | -- | 19.39 | -- | -- |
| | | 9/25/2012 | -- | DRY | -- | -- |
| | | 9/18/2013 | -- | DRY | -- | -- |
| | | 9/24/2014 | -- | DRY | -- | -- |
| | | 9/23/2015 | -- | DRY | -- | -- |

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## TABLE 1
## GROUNDWATER ELEVATIONS
**Hampton #4M**
**Hilcorp Energy Company**
**San Juan County, New Mexico**

| Well Identification | Top of Casing Elevation (feet amsl) | Date | Depth to Product (feet BTOC) | Depth to Groundwater (feet BTOC) | Product Thickness (feet) | Groundwater Elevation (feet AMSL) |
|---|---|---|---|---|---|---|
| TMW-1 | No Survey Data | 10/26/2017 | -- | DRY | -- | -- |
| | | 9/6/2018 | -- | DRY | -- | -- |
| | | 8/8/2019 | -- | DRY | -- | -- |
| | | 8/6/2020 | -- | DRY | -- | -- |

***Notes:***

**: extension added to top of PVC casing resulting in greater depths to groundwater*

*amsl: above mean sea level*

*BTOC: below top of casing*

*--: indicates no GWEL or PSH measured*

*Groundwater elevation is adjusted using a density correction factor of 0.8 when product is present*

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# TABLE 2
## GROUNDWATER QUALITY MEASUREMENTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Date | Temperature (°C) | pH | TDS (g/L) | Conductivity (uS/cm) | DO (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|---|
| MW-1 | 9/23/2015 | 12.65 | 5.20 | 2.10 | 3,226 | 2.75 | -26.0 |
| | 10/26/2017 | 13.26 | 4.37 | -- | 2,522 | 2.29 | 204.8 |
| | 9/6/2018 | 17.53 | 4.82 | -- | 2,775 | 6.22 | 260.7 |
| | 8/8/2019 | 20.20 | 4.66 | 1.53 | 3,020 | -- | 73.5 |
| | 8/4/2020 | 19.70 | 4.77 | 1.41 | 2,870 | 2.64 | 91.5 |
| MW-5 | 9/23/2015 | 15.63 | 5.85 | 2.85 | 4,377 | 3.10 | -114.9 |
| | 9/15/2016 | -- | -- | -- | -- | -- | -- |
| | 9/6/2018 | Sample volume insufficient to analyze field parameters | | | | | |
| | 8/7/2019 | 21.30 | 4.42 | 2.41 | 4,900 | -- | 142.6 |
| | 8/6/2020 | 18.70 | 5.20 | 2.01 | 4,020 | 2.09 | 61.2 |
| | 9/30/2021 | No Parameters taken due to equipment malfunction | | | | | |
| | 3/8/2022 | 7.80 | 3.78 | -- | 3,570 | -- | -- |
| | 5/9/2022 | 16.70 | 3.39 | 2.11 | 4,210 | -- | -- |
| | 8/10/2022 | 18.30 | 3.48 | 1.73 | 3,460 | -- | -- |
| | 11/30/2022 | 13.30 | 4.16 | 1.55 | 3,090 | -- | -- |
| MW-9 | 9/23/2015 | 14.50 | 5.19 | 2.48 | 3,819 | 2.15 | -35.2 |
| | 9/15/2016 | 13.67 | 4.97 | 2.51 | 3,856 | 1.64 | 111.6 |
| | 10/26/2017 | 14.93 | 5.73 | -- | 3,020 | 2.85 | 120.5 |
| | 9/6/2018 | 16.56 | 6.16 | -- | 3,191 | 1.96 | 94.4 |
| | 8/8/2019 | 25.00 | 5.12 | 1.73 | 3,450 | -- | 53.5 |
| | 8/4/2020 | 20.20 | 4.90 | 1.65 | 3,240 | 1.12 | 65.1 |
| MW-11 | 9/23/2015 | 13.82 | 6.37 | 1.88 | 2,895 | 1.71 | -88.6 |
| | 9/15/2016 | 13.20 | 6.43 | 1.91 | 2,938 | 1.47 | -73.2 |
| | 10/26/2017 | 14.07 | 6.44 | -- | 2,271 | 2.55 | 19.7 |
| | 9/6/2018 | 18.46 | 6.70 | -- | 2,372 | 0.93 | 9.3 |
| | 8/7/2019 | 18.10 | 7.10 | 1.33 | 8,660 | -- | 19.6 |
| | 8/6/2020 | 18.80 | 5.54 | 1.25 | 2,490 | 1.83 | 27.9 |
| MW-12 | 9/23/2015 | 14.31 | 6.00 | 2.36 | 3,630 | 1.65 | -44.0 |
| | 9/15/2016 | 13.65 | 5.74 | 2.41 | 3,710 | 0.73 | -148.7 |
| | 10/26/2017 | 14.78 | 6.47 | -- | 2,932 | 1.56 | 50.0 |
| | 9/6/2018 | 16.56 | 6.45 | -- | 3,148 | 5.85 | 16.5 |
| | 8/8/2019 | 22.40 | 6.11 | 1.69 | 3,370 | -- | 13.0 |
| | 8/4/2020 | 22.10 | 5.42 | 1.59 | 3,190 | 1.13 | 17.2 |
| | 9/30/2021 | No Parameters taken due to equipment malfunction | | | | | |
| | 3/8/2022 | 13.30 | 5.57 | -- | 2,660 | -- | -- |
| | 5/9/2022 | 17.70 | 6.21 | 1.32 | 2,640 | -- | -- |
| | 8/10/2022 | 18.50 | 6.15 | 1.24 | 2,510 | -- | -- |
| | 11/30/2022 | 10.90 | 6.31 | 1.22 | 2,440 | -- | -- |

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# TABLE 2
## GROUNDWATER QUALITY MEASUREMENTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Date | Temperature (°C) | pH | TDS (g/L) | Conductivity (uS/cm) | DO (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|---|
| MW-15 | 9/23/2015 | 15.05 | 3.84 | 2.28 | 3,502 | 3.59 | 5.9 |
| | 9/15/2016 | 14.10 | 3.88 | 2.33 | 3,591 | 3.17 | 307.9 |
| | 10/26/2017 | 15.76 | 4.15 | -- | 2,954 | 3.62 | 339.0 |
| | 9/6/2018 | 17.80 | 4.49 | -- | 3,006 | 3.10 | 305.7 |
| | 8/8/2019 | 22.40 | 3.95 | 1.62 | 3,240 | -- | 145.5 |
| | 8/4/2020 | 21.80 | 3.51 | 1.52 | 3,030 | 2.51 | 147.5 |

***Notes:***

*°C: degrees Celcius*

*DO: dissolved oxygen*

*g/L: grams per liter*

*uS/cm: microsiemens per centimeter*

*mg/L: milligrams per liter*

*mV: millivolts*

*ORP: oxidation-reduction potential*

*TDS: total dissolved solids*

*--: data not collected*

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-1 | MW-1 | 10/30/1997 | 0.0024 | 0.0023 | < 0.0002 | 0.0011 |
| | MW-1 | 1/12/1998 | 0.0043 | 0.0033 | 0.0002 | 0.001 |
| | MW-1 | 4/14/1998 | 0.001 | 0.0013 | < 0.0005 | < 0.0005 |
| | MW-1 | 7/1/1998 | 0.0013 | 0.001 | < 0.0005 | 0.0037 |
| | MW-1 | 10/5/1998 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-1 | 1/27/1999 | 0.0008 | 0.0009 | < 0.0005 | < 0.0015 |
| | MW-1 | 7/12/1999 | 0.0011 | 0.0005 | < 0.0005 | < 0.0005 |
| | MW-1 | 9/24/2003 | 0.0009 J | 0.001 | ND | 0.0004 J |
| | MW-1 | 12/15/2003 | 0.0011 | 0.0009 J | ND | ND |
| | MW-1 | 3/15/2004 | ND | ND | ND | ND |
| | MW-1 | 6/21/2004 | ND | ND | ND | ND |
| | MW-1 | 9/29/2004 | ND | ND | ND | ND |
| | MW-1 | 12/31/2004 | ND | 0.0009 J | ND | 0.0033 J |
| | MW-1 | 3/22/2005 | ND | 0.0003 J | ND | ND |
| | MW-1 | 10/24/2005 | ND | ND | ND | ND |
| | MW-1 | 12/12/2005 | ND | 0.0007 J | ND | 0.0006 J |
| | MW-1 | 3/20/2006 | 0.0011 | 0.0009 J | ND | 0.0006 J |
| | MW-1 | 6/21/2006 | 0.0003 J | 0.0014 | 0.0004 J | 0.0018 J |
| | MW-1 | 10/18/2006 | ND | 0.0002 | 0.0002 | 0.0013 |
| | MW-1 | 12/12/2006 | ND | 0.0002 | 0.0002 | 0.0014 |
| | MW-1 | 3/26/2007 | < 0.0003 | 0.0003 J | 0.0002 J | 0.0004 J |
| | MW-1 | 6/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | MW-1 | 11/8/2007 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-1 | 1/15/2008 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-1 | 3/19/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-1 | 7/22/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-1 | 10/23/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-1 | 1/21/2009 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-1 | 9/24/2009 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | MW-1 | 9/28/2010 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | GW-074927-100411-CM-002 | 10/4/2011 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092612-CM-MW-1 | 9/26/2012 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091813-CM-MW-1 | 9/18/2013 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-032414-CM-MW-1 | 3/24/2014 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092414-CM-MW-1 | 9/24/2014 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092315-CB-MW-1 | 9/23/2015 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-11145958-102617-CM-MW-1 | 10/26/2017 | -- | -- | -- | -- |
| | GW-11145958-090618-CN-MW-1 | 9/6/2017 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-1 | 10/12/2018 | -- | -- | -- | -- |
| | MW-1 | 8/8/2019 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-1 | 8/4/2020 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| MW-5 | MW-5 | 10/29/1997 | **5.934** | **10.024** | **0.709** | **8.188** |
| | MW-5 | 1/12/1998 | **7.521** | **11.213** | **0.779** | **8.436** |
| | MW-5 | 4/14/1998 | **7.0** | **11** | **0.72** | **7.8** |
| | MW-5 | 7/1/1998 | **6.5** | **10** | **0.78** | **7.5** |
| | MW-5 | 10/5/1998 | **6.8** | **8.4** | **0.74** | **6.9** |
| | MW-5 | 11/9/1998 | **6.2** | **8.2** | 0.67 | **6.5** |
| | MW-5 | 1/27/1999 | **6.4** | **8.9** | 0.66 | **6.7** |
| | MW-5 | 5/5/1999 | **6.8** | **9.8** | 0.9 | **7.8** |
| | MW-5 | 5/26/1999 | **6.6** | **10** | 0.65 | **8.1** |
| | MW-5 | 7/12/1999 | **6.3** | **10** | 0.75 | **8.8** |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-5 | MW-5 | 8/17/1999 | **5.4** | **9.8** | 0.67 | **7.5** |
| | MW-5 | 8/17/1999 | **5.9** | **8.9** | 0.5 | **6.2** |
| | MW-5 | 10/21/1999 | **5.2** | **9.6** | 0.65 | **6.9** |
| | MW-5 | 1/27/2000 | **4.7** | **10** | 0.68 | **7.4** |
| | MW-5 | 6/13/2000 | **8.4** | **19** | **1.7** | **22** |
| | MW-5 | 3/29/2001 | **3.89** | **9.6** | 0.64 | **7.73** |
| | MW-5 | 6/26/2001 | **3.8** | **11** | 0.7 | **9** |
| | MW-5 | 9/18/2001 | **4.1** | **11** | **0.76** | **10** |
| | MW-5 | 12/18/2001 | **3.2** | **9.7** | 0.6 | **7.8** |
| | MW-5 | 3/22/2002 | **3.5** | **10** | **0.83** | **8.5** |
| | MW-5 | 6/28/2002 | **3.7** | **12** | **0.76** | **10** |
| | MW-5 | 9/23/2002 | **3.0** | **9.8** | 0.64 | **8.3** |
| | MW-5 | 12/31/2002 | **2.9** | **8.9** | 0.58 | **7.3** |
| | MW-5 | 3/27/2003 | **1.22** | **4.87** | 0.487 | **6.01** |
| | MW-5 | 6/27/2003 | **2.04** | **8.55** | 0.64 | **8.05** |
| | MW-5 | 9/24/2003 | **2.11** | **9.09** | 0.7 | **9.2** |
| | MW-5 | 12/15/2003 | **2.15** | **9.24** | **0.72** | **8.81** |
| | MW-5 | 6/21/2004 | **1.61** | **8.74** | 0.64 | **8.22** |
| | MW-5 | 9/29/2004 | **1.71** | **7.25** | 0.67 | **8.09** |
| | MW-5 | 12/31/2004 | **1.82** | **9.15** | **0.73** | **9.03** |
| | MW-5 | 3/15/2005 | **1.37** | **8.1** | 0.66 | **8.71** |
| | MW-5 | 3/22/2005 | **0.42** | **1.42** | 0.11 | **1.16** |
| | MW-5 | 10/24/2005 | **1.07** | **6.66** | 0.61 | **7.62** |
| | MW-5 | 12/12/2005 | **0.90** | **5.93** | 0.52 | **6.28** |
| | MW-5 | 3/20/2006 | **0.82** | **6.27** | 0.51 | **6.04** |
| | MW-5 | 6/21/2006 | **0.93** | **6.11** | 0.58 | **6.69** |
| | MW-5 | 10/18/2006 | **0.69** | **5.14** | 0.5 | **5.87** |
| | MW-5 | 12/18/2006 | **0.64** | **5.09** | 0.5 | **5.61** |
| | MW-5 | 3/26/2007 | **0.66** | **6.47** | 0.53 | **5.45** |
| | MW-5 | 6/26/2007 | **0.74** | **8.07** | 0.64 | **7.32** |
| | MW-5 | 11/8/2007 | **0.41** | **4.8** | 0.39 | **5** |
| | MW-5 | 1/17/2008 | **0.44** | **6.4** | 0.51 | **6.1** |
| | MW-5 | 3/19/2008 | **0.37** | **2.9** | 0.24 | **2.57** |
| | MW-5 | 7/22/2008 | **0.34** | **6.1** | 0.55 | **6.4** |
| | MW-5 | 10/23/2008 | **0.27** | **6.2** | 0.44 | **6.3** |
| | MW-5 | 1/21/2009 | **0.25** | **3.8** | 0.51 | **5.2** |
| | MW-5 | 9/24/2009 | **0.19** | **4.3** | 0.47 | **5.1** |
| | MW-5 | 9/28/2010 | **0.13** | **2.4** | 0.6 | **5.2** |
| | GW-074927-100411-CM-006 | 10/12/2011 | **0.0652** | **1.22** | 0.443 | **3.21** |
| | GW-074927-100411-CM-007 | 10/12/2011 | **0.0796** | **1.22** | 0.488 | **3.46** |
| | GW-074927-092612-CM-MW-5 | 9/26/2012 | **0.0898** | 0.626 | 0.551 | **3.59** |
| | GW-074927-091813-CM-MW-5 | 9/18/2013 | **0.0359** | 0.154 | 0.227 | **1.32** |
| | GW-074927-092414-CM-MW-5 | 9/24/2014 | 0.0041 | 0.0052 | 0.0338 | 0.106 |
| | GW-074927-092315-CB-MW-5 | 9/23/2015 | **0.015** | 0.0072 | 0.154 | 0.138 |
| | GW-074927-091516-CM-MW-5 | 9/15/2016 | **0.011** | 0.0153 | 0.166 | 0.0414 |
| | GW-11145958-102617-CM-MW-5 | 10/26/2017 | **0.0074** | 0.0118 | 0.0563 | 0.0236 |
| | GW-11145958-090618-CN-MW-5 | 9/6/2018 | **0.0059** | 0.0019 | 0.0346 | 0.0193 |
| | MW-5 | 10/12/2018 | -- | -- | -- | -- |
| | MW-5 | 8/7/2019 | 0.0025 | 0.0058 | 0.006 | 0.009 |
| | MW-5 | 8/6/2020 | **0.00537** | 0.0211 | 0.0104 | 0.0635 |
| | MW-5 | 9/30/2021 | < 0.005 | 0.005 | < 0.005 | < 0.0075 |
| | MW-5 | 3/8/2022 | **Insufficient Water Volumes to Collect Sample** | | | |
| | MW-5 | 5/9/2022 | <0.001 | <0.001 | <0.001 | <0.0015 |
| | MW-5 | 8/10/2022 | 0.0020 | 0.0050 | 0.0019 | 0.0060 |
| | MW-5 | 11/30/2022 | 0.0038 | 0.0082 | 0.0062 | 0.0130 |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-7 | MW-7 | 1/12/1998 | **0.78** | 0.246 | 0.258 | **3.942** |
| | MW-7 | 4/14/1998 | **0.82** | 0.34 | 0.19 | **2.45** |
| | MW-7 | 7/1/1998 | **0.95** | 0.44 | 0.2 | **3.02** |
| | MW-7 | 10/5/1998 | **1.6** | 0.93 | 0.18 | **1.53** |
| | MW-7 | 11/9/1998 | **1.8** | 1 | 0.16 | **1.24** |
| | MW-7 | 1/27/1999 | **2.1** | 1 | 0.16 | **1.05** |
| | MW-7 | 5/5/1999 | **0.21** | 0.0029 | 0.03 | 0.147 |
| | MW-7 | 5/26/1999 | **0.19** | 0.0074 | 0.032 | 0.15 |
| | MW-7 | 7/12/1999 | **0.13** | 0.0072 | 0.022 | 0.1013 |
| | MW-7 | 10/21/1999 | **0.26** | 0.011 | 0.015 | 0.089 |
| | MW-7 | 1/27/2000 | **0.67** | 0.58 | 0.054 | **0.68** |
| | MW-7 | 6/17/2000 | **0.42** | **1.1** | 0.075 | **1.4** |
| | MW-7 | 3/29/2001 | **0.83** | 0.15 | 0.32 | **1.79** |
| | MW-7 | 6/26/2001 | **0.54** | 0.33 | 0.25 | **1.41** |
| | MW-7 | 9/18/2001 | **0.87** | 0.56 | 0.32 | **2.02** |
| | MW-7 | 12/18/2001 | **0.40** | 0.03 | 0.16 | **0.885** |
| | MW-7 | 3/22/2002 | **0.18** | ND | 0.078 | 0.26 |
| | MW-7 | 6/28/2002 | **0.089** | 0.001 | 0.041 | 0.079 |
| | MW-7 | 9/23/2002 | **0.08** | 0.003 | 0.031 | 0.01889 |
| | MW-7 | 12/31/2002 | **0.16** | 0.0022 | 0.074 | 0.0315 |
| | MW-7 | 3/27/2003 | **0.195** | 0.0004 | 0.0442 | 0.109 |
| | MW-7 | 6/27/2003 | **0.30** | 0.0014 J | 0.117 | 0.4616 |
| | MW-7 | 9/24/2003 | **0.09** | 0.012 | 0.002 | **0.694** |
| | MW-7 | 3/15/2004 | **0.056** | 0.001 J | 0.006 | 0.003 |
| | MW-7 | 6/21/2004 | **0.18** | ND | 0.055 | 0.058 J |
| | MW-7 | 9/29/2004 | **0.163** | 0.0009 J | 0.0545 | 0.0698 |
| | MW-7 | 12/15/2004 | **0.15** | 0.004 J | 0.115 | 0.549 |
| | MW-7 | 12/31/2004 | **0.094** | 0.003 J | 0.01 | 0.024 J |
| | MW-7 | 3/22/2005 | **0.0208** | ND | 0.0024 | 0.0048 |
| | MW-7 | 10/24/2005 | **0.0652** | 0.0007 J | 0.002 | 0.0027 J |
| | MW-7 | 12/12/2005 | **0.0662** | 0.001 J | 0.0087 | 0.0085 J |
| | MW-7 | 3/20/2006 | **0.072** | ND | 0.0126 | 0.0169 |
| | MW-7 | 6/21/2006 | **0.0899** | 0.0106 | 0.0048 | 0.0145 |
| | MW-7 | 10/18/2006 | **0.0319** | 0.0004 J | 0.0018 | 0.0041 |
| | MW-7 | 12/12/2006 | **0.0294** | 0.0015 | 0.0031 | 0.0057 |
| | MW-7 | 3/26/2007 | **0.0115** | 0.001 | 0.0006 J | 0.0008 J |
| | MW-7 | 6/26/2007 | **0.056** | 0.0004 J | 0.0177 | 0.0013 |
| | MW-7 | 11/8/2007 | **0.044** | < 0.0007 | 0.002 | < 0.0008 |
| | MW-7 | 1/17/2008 | **0.017** | < 0.0007 | 0.003 | < 0.0008 |
| | MW-7 | 3/19/2008 | **0.005** | < 0.005 | < 0.005 | < 0.005 |
| | MW-7 | 7/22/2008 | **0.032** | < 0.005 | 0.012 | 0.007 |
| | MW-7 | 10/23/2008 | **0.017** | < 0.005 | < 0.005 | < 0.005 |
| | MW-7 | 1/21/2009 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-7 | 9/24/2009 | 0.0037 | < 0.001 | < 0.001 | < 0.001 |
| | MW-7 | 9/28/2010 | 0.0013 | < 0.001 | 0.0023 | < 0.001 |
| | MW-7 | 10/11/2011 | **No sample collected; well dry** | | | |
| | MW-7 | 9/26/2012 | **No sample collected; well dry** | | | |
| | MW-7 | 9/18/2013 | **No sample collected; well dry** | | | |
| | MW-7 | 5/9/2014 | **Well plugged and abandoned** | | | |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-9 | MW-9 | 7/1/1998 | **0.012** | < 0.001 | < 0.001 | < 0.003 |
| | MW-9 | 10/5/1998 | 0.0008 | < 0.0005 | < 0.0005 | 0.0022 |
| | MW-9 | 11/9/1998 | **0.073** | < 0.0005 | 0.0022 | 0.0016 |
| | MW-9 | 1/27/1999 | **0.12** | < 0.0005 | 0.0025 | 0.0018 |
| | MW-9 | 5/5/1999 | **0.12** | < 0.0005 | 0.0016 | 0.0008 |
| | MW-9 | 5/26/1999 | **0.14** | < 0.0005 | 0.0015 | < 0.0005 |
| | MW-9 | 5/26/1999 | **0.29** | < 0.0005 | 0.0006 | < 0.0015 |
| | MW-9 | 7/12/1999 | **0.32** | < 0.0005 | 0.0006 | < 0.0015 |
| | MW-9 | 8/17/1999 | **0.13** | ND | ND | ND |
| | MW-9 | 10/21/1999 | < 0.0005 | 0.0019 | < 0.0005 | 0.0025 |
| | MW-9 | 1/27/2000 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| | MW-9 | 6/13/2000 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | MW-9 | 3/29/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | MW-9 | 6/26/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | MW-9 | 9/18/2001 | ND | ND | ND | ND |
| | MW-9 | 12/18/2001 | ND | ND | ND | ND |
| | MW-9 | 3/22/2002 | ND | ND | ND | ND |
| | MW-9 | 6/28/2002 | ND | ND | ND | ND |
| | MW-9 | 9/23/2002 | 0.0004 J | ND | ND | ND |
| | MW-9 | 3/27/2003 | ND | ND | ND | ND |
| | MW-9 | 6/27/2003 | 0.0005 J | ND | ND | ND |
| | MW-9 | 9/24/2003 | ND | ND | ND | ND |
| | MW-9 | 12/15/2003 | ND | ND | ND | ND |
| | MW-9 | 3/15/2004 | ND | ND | ND | ND |
| | MW-9 | 6/21/2004 | ND | 0.0004 J | ND | 0.0007 J |
| | MW-9 | 9/29/2004 | ND | ND | ND | ND |
| | MW-9 | 3/22/2005 | ND | ND | ND | ND |
| | MW-9 | 6/23/2005 | ND | 0.0003 J | ND | ND |
| | MW-9 | 3/20/2006 | ND | ND | ND | ND |
| | MW-9 | 6/21/2006 | ND | ND | ND | ND |
| | MW-9 | 10/18/2006 | ND | ND | ND | 0.0003 J |
| | MW-9 | 12/12/2006 | 0.0003 J | 0.0007 J | 0.0003 J | 0.0012 J |
| | MW-9 | 3/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | MW-9 | 6/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | MW-9 | 11/8/2007 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-9 | 1/17/2008 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-9 | 3/19/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-9 | 7/22/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-9 | 10/23/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-9 | 1/21/2009 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-9 | 9/24/2009 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | MW-9 | 9/28/2010 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | GW-074927-100411-CM-004 | 10/4/2011 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092612-CM-MW-9 | 9/26/2012 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091813-CM-MW-9 | 9/18/2013 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092414-CM-MW-9 | 9/24/2014 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092315-CB-MW-9 | 9/23/2015 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091516-CM-MW-9 | 9/15/2016 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-11145958-102617-CM-MW-9 | 10/26/2017 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-11145958-090618-CN-MW-9 | 9/6/2018 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-9 | 10/12/2018 | -- | -- | -- | -- |
| | MW-9 | 8/8/2019 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-9 | 8/4/2020 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-11 | MW-11 | 1/27/1999 | < 0.0005 | 0.0025 | 0.0007 | 0.0131 |
| | MW-11 | 5/5/1999 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0015 |
| | MW-11 | 5/26/1999 | 0.0008 | 0.0017 | < 0.0005 | 0.0011 |
| | MW-11 | 10/21/1999 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0015 |
| | MW-11 | 1/27/2000 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| | MW-11 | 6/13/2000 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0009 |
| | MW-11 | 3/29/2001 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| | MW-11 | 6/26/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | MW-11 | 9/18/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | MW-11 | 12/18/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | MW-11 | 12/19/2001 | ND | ND | ND | ND |
| | MW-11 | 12/20/2001 | ND | ND | ND | ND |
| | MW-11 | 12/21/2001 | ND | ND | ND | ND |
| | MW-11 | 12/22/2001 | ND | ND | ND | ND |
| | MW-11 | 5/24/2003 | ND | ND | ND | ND |
| | MW-11 | 6/27/2003 | 0.0004 J | 0.0003 J | ND | 0.0004 J |
| | MW-11 | 9/24/2003 | ND | ND | ND | ND |
| | MW-11 | 12/15/2003 | 0.0005 J | ND | ND | ND |
| | MW-11 | 3/15/2004 | ND | ND | ND | ND |
| | MW-11 | 6/21/2004 | ND | ND | ND | 0.0005 J |
| | MW-11 | 9/29/2004 | ND | ND | ND | ND |
| | MW-11 | 12/31/2004 | ND | ND | ND | ND |
| | MW-11 | 3/22/2005 | ND | ND | ND | ND |
| | MW-11 | 10/24/2005 | ND | ND | ND | ND |
| | MW-11 | 12/12/2005 | ND | 0.0003 J | ND | ND |
| | MW-11 | 3/20/2006 | ND | ND | ND | ND |
| | MW-11 | 6/21/2006 | ND | 0.0003 J | ND | 0.0008 J |
| | MW-11 | 10/18/2006 | ND | 0.0003 J | 0.0004 J | 0.0012 J |
| | MW-11 | 12/12/2006 | ND | ND | ND | 0.0003 J |
| | MW-11 | 3/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | MW-11 | 6/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | MW-11 | 11/8/2007 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-11 | 1/17/2008 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-11 | 3/19/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-11 | 7/22/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-11 | 10/23/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-11 | 1/21/2009 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-11 | 9/24/2009 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | MW-11 | 9/28/2010 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | GW-074927-100411-CM-005 | 10/11/2011 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092612-CM-MW-11 | 9/26/2012 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091813-CM-MW-11 | 9/18/2013 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092414-CM-MW-11 | 9/24/2014 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092315-CB-MW-11 | 9/23/2015 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091516-CM-MW-11 | 9/15/2016 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-11145958-102617-CM-MW-11 | 10/26/2017 | -- | -- | -- | -- |
| | GW-11145958-090618-CN-MW-11 | 9/6/2018 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-11 | 10/12/2018 | -- | -- | -- | -- |
| | MW-11 | 8/7/2019 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-11 | 8/6/2020 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-12 | MW-12 | 5/5/1999 | **0.79** | 0.84 | 0.26 | **2.88** |
| | MW-12 | 5/5/1999 | **1.2** | **13** | 0.51 | **0.68** |
| | MW-12 | 5/26/1999 | **1.9** | 0.82 | 0.2 | **1.72** |
| | MW-12 | 5/26/1999 | **1.8** | 0.64 | 0.16 | **1.6** |
| | MW-12 | 7/12/1999 | **4.5** | 0.76 | 0.4 | **3.1** |
| | MW-12 | 7/12/1999 | **4.6** | 0.73 | 0.39 | **3.08** |
| | MW-12 | 8/17/1999 | **4.8** | **5** | 0.32 | **3.39** |
| | MW-12 | 8/17/1999 | **5.9** | **6.1** | 0.39 | **4.1** |
| | MW-12 | 10/21/1999 | **5.6** | 0.65 | 0.54 | **2.89** |
| | MW-12 | 1/27/2000 | **4.1** | 0.55 | 0.43 | **2.379** |
| | MW-12 | 6/13/2000 | **5** | **1.3** | 0.49 | **2.7** |
| | MW-12 | 3/29/2001 | **5.17** | **1.79** | 0.366 | **2.62** |
| | MW-12 | 6/26/2001 | **4.8** | **1.9** | 0.39 | **2.56** |
| | MW-12 | 9/18/2001 | **5.1** | **2.4** | 0.43 | **2.82** |
| | MW-12 | 12/18/2001 | **4** | **1.5** | 0.32 | **1.88** |
| | MW-12 | 3/22/2002 | **3.3** | 0.93 | 0.29 | **1.27** |
| | MW-12 | 6/28/2002 | **4.2** | **1.8** | 0.41 | **1.94** |
| | MW-12 | 9/23/2002 | **3.8** | **1.5** | 0.31 | **1.51** |
| | MW-12 | 12/31/2002 | **3.6** | 0.84 | 0.28 | **1.01** |
| | MW-12 | 5/24/2003 | **3.99** | **2.23** | 0.299 | **1.47** |
| | MW-12 | 6/27/2003 | **5.29** | **2.75** | 0.36 | **1.6** |
| | MW-12 | 9/24/2003 | **4.6** | **1.69** | 0.29 | **1.15** |
| | MW-12 | 12/15/2003 | **4.2** | **1.36** | 0.24 | **1.15** |
| | MW-12 | 3/15/2004 | **2.09** | **1.12** | 0.3 | **1.25** |
| | MW-12 | 6/21/2004 | **3.87** | **1.82** | 0.28 | **1.5** |
| | MW-12 | 6/29/2004 | **5.14** | **2.22** | 0.24 | **1.28** |
| | MW-12 | 12/31/2004 | **4.16** | **1.22** | 0.25 | **1.15** |
| | MW-12 | 3/22/2005 | **2.38** | **1.1** | 0.13 | **0.71** |
| | MW-12 | 10/24/2005 | **1.35** | 0.15 | 0.08 | 0.33 |
| | MW-12 | 12/16/2005 | **2.38** | 0.422 | 0.111 | 0.341 |
| | MW-12 | 3/20/2006 | **2.1** | 0.21 | 0.071 | 0.225 |
| | MW-12 | 6/21/2006 | **2.27** | 0.385 | 0.085 | 0.355 |
| | MW-12 | 10/18/2006 | **1.74** | 0.477 | 0.112 | 0.399 |
| | MW-12 | 12/12/2006 | **2.4** | **1.11** | 0.142 | **0.668** |
| | MW-12 | 3/26/2007 | **4.13** | **1.68** | 0.34 | **1.18** |
| | MW-12 | 6/26/2007 | **1.52** | 0.432 | 0.118 | 0.34 |
| | MW-12 | 11/8/2007 | **0.78** | 0.31 | 0.043 | 0.17 |
| | MW-12 | 1/17/2008 | **2** | **1.4** | 0.18 | **0.79** |
| | MW-12 | 3/19/2008 | **1.6** | 0.56 | 0.16 | 0.53 |
| | MW-12 | 7/22/2008 | **0.73** | 0.022 | 0.014 | 0.021 |
| | MW-12 | 10/23/2008 | **0.5** | 0.03 | 0.022 | 0.04 |
| | MW-12 | 1/21/2009 | **1.1** | 0.43 | 0.11 | 0.41 |
| | MW-12 | 9/24/2009 | **0.61** | 0.0083 | 0.01 | 0.0195 |
| | MW-12 | 9/28/2010 | **0.55** | < 0.001 | 0.015 | 0.016 |
| | GW-074927-100411-CM-003 | 10/4/2011 | **0.494** | < 0.01 | 0.0235 | < 0.03 |
| | GW-074927-092612-CM-MW-12 | 9/26/2012 | **0.617** | <0.001 | 0.015 | 0.0207 |
| | GW-074927-091813-CM-MW-12 | 9/18/2013 | **0.202** | <0.005 | <0.005 | <0.015 |
| | GW-074927-091813-CM-DUP | 9/18/2013 | **0.21** | <0.005 | <0.005 | <0.015 |
| | GW-074927-032414-CM-MW-12 | 3/24/2014 | **0.0559** | 0.0067 | <0.005 | <0.015 |
| | GW-074927-032414-CM-DUP | 3/24/2014 | **0.0508** | 0.0056 | <0.005 | <0.015 |
| | GW-074927-092414-CM-MW-12 | 9/24/2014 | **0.83** | 0.0013 | 0.011 | 0.0171 |
| | GW-074927-092414-CM-DUP | 9/24/2014 | **0.882** | 0.0015 | 0.0121 | 0.0179 |
| | GW-074927-092315-CB-MW-12 | 9/23/2015 | **0.246** | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092315-CB-MW-12 | 9/23/2015 | **0.258** | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091516-CM-MW-12 | 9/15/2016 | **0.0568** | < 0.0005 | < 0.0005 | < 0.015 |
| | GW-11145958-102617-CM-MW-12 | 10/26/2017 | **0.0379** | <0.002 | <0.002 | <0.006 |
| | GW-11145958-102617-CM-DUP | 10/26/2017 | **0.0447** | <0.001 | <0.001 | <0.003 |
| | GW-11145958-090618-CN-MW-12 | 9/6/2018 | 0.0022 | <0.001 | <0.001 | <0.003 |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-12 | MW-12 | 10/12/2018 | -- | -- | -- | -- |
| | MW-12 | 8/8/2019 | **0.0708** | <0.0200 | <0.0200 | <0.0600 |
| | MW-12 | 8/4/2020 | 0.00434 | <0.0010 | <0.0010 | <0.003 |
| | MW-12 | 9/30/2021 | <0.005 | < 0.005 | < 0.005 | < 0.0075 |
| | MW-12 | 3/8/2022 | <0.005 | < 0.005 | < 0.005 | < 0.0075 |
| | MW-12 | 5/9/2022 | <0.001 | 0.0024 | <0.001 | 0.0073 |
| | MW-12 | 8/10/2022 | <0.002 | <0.002 | <0.002 | <0.003 |
| | MW-12 | 11/30/2022 | <0.001 | 0.0011 | <0.001 | 0.0043 |
| MW-15 | MW-15 | 10/21/1999 | < 0.0005 | 0.0012 | < 0.0005 | 0.0015 |
| | MW-15 | 1/27/2000 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| | MW-15 | 6/13/2000 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| | MW-15 | 3/29/2001 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| | MW-15 | 6/26/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| | MW-15 | 9/18/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| | MW-15 | 12/18/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| | MW-15 | 3/22/2002 | ND | ND | ND | ND |
| | MW-15 | 6/28/2002 | ND | ND | ND | ND |
| | MW-15 | 9/23/2002 | ND | ND | ND | ND |
| | MW-15 | 12/31/2002 | ND | ND | ND | ND |
| | MW-15 | 3/27/2003 | ND | 0.0003 J | ND | 0.0009 J |
| | MW-15 | 6/27/2003 | 0.0004 J | ND | ND | ND |
| | MW-15 | 9/24/2003 | ND | ND | ND | ND |
| | MW-15 | 3/15/2004 | ND | 0.0003 J | ND | ND |
| | MW-15 | 6/21/2004 | ND | ND | ND | ND |
| | MW-15 | 9/29/2004 | ND | ND | ND | ND |
| | MW-15 | 12/15/2004 | 0.0007 J | ND | ND | ND |
| | MW-15 | 12/31/2004 | ND | 0.0009 J | 0.0003 J | 0.0014 J |
| | MW-15 | 3/22/2005 | ND | ND | ND | ND |
| | MW-15 | 10/24/2005 | ND | ND | ND | ND |
| | MW-15 | 12/12/2005 | ND | 0.0003 J | ND | 0.0004 J |
| | MW-15 | 3/20/2006 | ND | ND | ND | ND |
| | MW-15 | 6/21/2006 | 0.0007 J | ND | 0.0003 J | ND |
| | MW-15 | 10/18/2006 | ND | 0.0003 J | ND | 0.0002 J |
| | MW-15 | 12/12/2006 | ND | ND | ND | ND |
| | MW-15 | 3/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | MW-15 | 6/26/2007 | < 0.0003 | 0.0005 J | < 0.0002 | < 0.0006 |
| | MW-15 | 11/8/2007 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-15 | 1/17/2008 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | MW-15 | 3/19/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-15 | 7/22/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-15 | 10/23/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-15 | 1/21/2009 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | MW-15 | 9/24/2009 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | MW-15 | 9/28/2010 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | GW-074927-100411-CM-001 | 10/4/2011 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092612-CM-MW-15 | 9/26/2012 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-091813-CM-MW-15 | 9/18/2013 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092414-CM-MW-15 | 9/24/2014 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-074927-092315-CB-MW-15 | 9/23/2015 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW074927-091516-CM-MW-15 | 9/15/0216 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | GW-11145958-102617-CM-MW-15 | 10/26/2017 | -- | -- | -- | -- |
| | GW-11145958-090618-CN-MW-15 | 9/6/2018 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-15 | 10/12/2018 | -- | -- | -- | -- |
| | MW-15 | 8/8/2019 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |
| | MW-15 | 8/4/2020 | < 0.001 | < 0.001 | < 0.001 | < 0.003 |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| MW-16 | MW-16 | 10/21/1999 | **0.22** | 0.3 | 0.0054 | 0.142 |
| | MW-16 | 10/21/1999 | **0.214** | 0.268 | 0.004 | 0.151 |
| | MW-16 | 1/27/2000 | **1.6** | 0.17 | 0.056 | 0.225 |
| | MW-16 | 6/13/2000 | **8.7** | 0.43 | 0.68 | **2.2** |
| | MW-16 | 6/26/2001 | **9.3** | **1.1** | **0.81** | **3.41** |
| | MW-16 | 9/18/2001 | **11** | **6.4** | 0.59 | **6.4** |
| | MW-16 | 12/18/2001 | **9.9** | **6.9** | 0.57 | **7.4** |
| | MW-16 | 6/28/2002 | **11** | **7** | **0.77** | **5.7** |
| | MW-16 | 9/23/2002 | **8.9** | **9.9** | 0.61 | **8.5** |
| | MW-16 | 12/31/2002 | **8.8** | **7.9** | **0.77** | **7.4** |
| | MW-16 | 3/22/2003 | **10** | **6.6** | **1.1** | **7.4** |
| | MW-16 | 3/27/2003 | **10.4** | **11.2** | **0.84** | **8.67** |
| | MW-16 | 9/24/2003 | **10.3** | **15.4** | **0.87** | **10.59** |
| | MW-16 | 3/15/2004 | **9.2** | **16** | **1.31** | **12** |
| | MW-16 | 6/21/2004 | **8.04** | **18.1** | **2.45** | **18.58** |
| | MW-16 | 9/29/2004 | **8.33** | **14** | **0.76** | **8.23** |
| | MW-16 | 12/15/2004 | **9.64** | **12.6** | **0.72** | **1.55** |
| | MW-16 | 12/31/2004 | **8.34** | **17.1** | **1.55** | **18.83** |
| | MW-16 | 3/28/2005 | **4.14** | **5.81** | **0.76** | **10.48** |
| | MW-16 | 10/24/2005 | **6.28** | **9.8** | 0.67 | **6.91** |
| | MW-16 | 12/12/2005 | **6.94** | **11.5** | **0.75** | **8.06** |
| | MW-16 | 3/20/2006 | **6.82** | **11.5** | **0.83** | **8.55** |
| | MW-16 | 6/21/2006 | **6.64** | **11.2** | 0.69 | **7.57** |
| | MW-16 | 10/18/2006 | **5.7** | **10.2** | 0.62 | **6.52** |
| | MW-16 | 12/12/2006 | **4.6** | **10** | 0.55 | **6.83** |
| | MW-16 | 3/26/2007 | **2.97** | **2.82** | 0.26 | **5.22** |
| | MW-16 | 6/26/2007 | **5.23** | **9.11** | **0.77** | **7.76** |
| | MW-16 | 11/8/2007 | **5.5** | **12** | 0.57 | **6.2** |
| | MW-16 | 1/17/2008 | **4.6** | **9.1** | 0.55 | **5.6** |
| | MW-16 | 3/19/2008 | **5.5** | **9.6** | 0.51 | **6.9** |
| | MW-16 | 7/22/2008 | **3.6** | **6.1** | 0.43 | **4.5** |
| | MW-16 | 10/23/2008 | **4.7** | **9.1** | 0.48 | **6.6** |
| | MW-16 | 1/21/2009 | **4.2** | **7.5** | 0.48 J | **6.9** |
| | MW-16 | 9/24/2009 | **3.2** | **4.6** | 0.34 | **3.5** |
| | MW-16 | 9/29/2010 | **3.0** | **4.6** | **3.4** | **23.6** |
| | MW-16 | 12/15/2010 | **5.2** | **13** | **1.1** | **14.5** |
| | MW-16 | 10/11/2011 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/26/2012 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/18/2013 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/24/2014 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/23/2015 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/15/0216 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 10/26/2017 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/6/2018 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 8/8/2019 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 8/4/2020 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 9/30/2021 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 3/8/2022 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 5/9/2022 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 8/10/2022 | **No sample collected due to presence of LNAPL** | | | |
| | MW-16 | 11/30/2022 | **No sample collected due to presence of LNAPL** | | | |

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# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
**Hampton #4M**
**Hilcorp Energy Company**
**San Juan County, New Mexico**

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| **NMWQCC Standards** | | | **0.005** | **1.0** | **0.70** | **0.62** |
| **Seep** | Seep | 7/1/1998 | 0.0016 | 0.0007 | 0.0006 | 0.00036 |
| | Seep | 4/14/1999 | **0.04** | 0.0022 | 0.0021 | 0.019 |
| | Seep | 10/21/1999 | **0.065** | 0.23 | 0.011 | 0.434 |
| | Seep | 3/29/2001 | **0.0116** | < 0.0002 | 0.0007 J | 0.0254 |
| | Seep | 6/26/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | Seep | 9/18/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | Seep | 12/18/2001 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 |
| | Seep | 3/22/2002 | **0.0059** | ND | 0.0008 | 0.0034 |
| | Seep | 6/28/2002 | ND | ND | ND | ND |
| | Seep | 9/23/2002 | ND | ND | ND | ND |
| | Seep | 12/31/2002 | 0.0007 | ND | ND | ND |
| | Seep | 3/27/2003 | **0.0063** | 0.0002 J | 0.0018 | 0.0101 |
| | Seep | 9/24/2003 | ND | 0.0003 J | ND | ND |
| | Seep | 12/15/2003 | 0.0004 J | 0.0003 J | ND | ND |
| | Seep | 3/15/2004 | ND | ND | ND | ND |
| | Seep | 6/21/2004 | ND | ND | ND | ND |
| | Seep | 9/29/2004 | ND | ND | ND | ND |
| | Seep | 12/31/2004 | ND | 0.0002 J | ND | 0.0004 J |
| | Seep | 3/28/2005 | ND | ND | ND | ND |
| | Seep | 10/24/2005 | ND | J | ND | ND |
| | Seep | 12/12/2005 | ND | 0.0005 J | 0.0003 J | 0.0009 J |
| | Seep | 3/20/2006 | ND | ND | ND | ND |
| | Seep | 6/21/2006 | 0.004 | 0.0129 | 0.0008 J | 0.015 |
| | Seep | 10/18/2006 | ND | 0.0005 J | 0.0003 J | 0.0014 J |
| | Seep | 12/12/2006 | ND | ND | ND | ND |
| | Seep | 3/26/2007 | < 0.0003 | 0.0003 J | < 0.0002 | < 0.0006 |
| | Seep | 6/26/2007 | < 0.0003 | < 0.0002 | < 0.0002 | < 0.0006 |
| | Seep | 11/8/2007 | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 |
| | Seep | 3/19/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | Seep | 10/23/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | Seep | 1/21/2009 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | Seep | 9/24/2009 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | Seep | 9/28/2010 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| | Seep | 10/11/2011 | **No sample collected; seep dry** | | | |
| | Seep | 9/26/2012 | **No sample collected; seep dry** | | | |
| | Seep | 9/18/2013 | **No sample collected; seep dry** | | | |
| | Seep | 9/24/2014 | **No sample collected; seep dry** | | | |
| | Seep | 9/23/2015 | **No sample collected; seep dry** | | | |

ENSOLUM

# TABLE 3
## GROUNDWATER ANALYTICAL RESULTS
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Sample ID | Sample Date | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) |
|---|---|---|---|---|---|---|
| NMWQCC Standards | | | 0.005 | 1.0 | 0.70 | 0.62 |
| TMW-1 | TMW-1 | 1/27/2000 | **0.93** | **1.4** | 0.35 | **6.7** |
| | TMW-1 | 6/13/2000 | **2.4** | **3.4** | 0.55 | **9.1** |
| | TMW-1 | 6/26/2001 | **1.1** | **3.5** | 0.33 | **5.5** |
| | TMW-1 | 5/23/2003 | **0.83** | 0.123 | 0.107 | **1.0** |
| | TMW-1 | 6/27/2003 | **0.474** | 0.0366 | 0.0596 | 0.491 |
| | TMW-1 | 9/24/2003 | **0.292** | 0.139 | 0.017 | 0.221 |
| | TMW-1 | 12/15/2003 | **0.0559** | 0.0013 | 0.0039 | 0.0425 |
| | TMW-1 | 6/21/2004 | **0.0406** | ND | 0.0141 | 0.0147 |
| | TMW-1 | 9/29/2004 | **0.41** | 0.0087 | 0.0596 | 0.459 |
| | TMW-1 | 12/31/2004 | 0.003 J | 0.005 J | 0.001 J | 0.011 J |
| | TMW-1 | 3/22/2005 | **0.0678** | 0.0133 | 0.0081 | 0.102 |
| | TMW-1 | 10/24/2005 | **0.483** | 0.705 | 0.045 | 0.328 |
| | TMW-1 | 12/12/2005 | **0.122** | 0.317 | 0.019 | 0.16 |
| | TMW-1 | 3/20/2006 | **0.071** | 0.082 | 0.016 | 0.151 |
| | TMW-1 | 6/21/2006 | **0.159** | 0.0657 | 0.0569 | 0.36 |
| | TMW-1 | 10/18/2006 | **0.0064** | 0.0016 | 0.0021 | 0.0138 |
| | TMW-1 | 6/26/2007 | **0.269** | 0.0026 | 0.0049 | 0.0157 |
| | TMW-1 | 11/8/2007 | **0.3** | 0.012 | 0.006 | 0.038 |
| | TMW-1 | 1/17/2008 | 0.0008 | < 0.0007 | < 0.0008 | 0.001 |
| | TMW-1 | 3/19/2008 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| | TMW-1 | 7/22/2008 | **0.13** | 0.029 | 0.011 | 0.022 |
| | TMW-1 | 1/21/2009 | **0.013** | < 0.005 | < 0.005 | < 0.005 |
| | TMW-1 | 9/28/2010 | **0.013** | < 0.001 | < 0.001 | 0.0032 |
| | TMW-1 | 10/11/2011 | **No sample collected; insufficient water present in well** | | | |
| | TMW-1 | 9/26/2012 | **No sample collected; well dry** | | | |
| | TMW-1 | 9/18/2013 | **No sample collected; well dry** | | | |
| | TMW-1 | 9/24/2014 | **No sample collected; well dry** | | | |
| | TMW-1 | 9/23/2015 | **No sample collected; well dry** | | | |
| | TMW-1 | 9/15/0216 | **No sample collected; well dry** | | | |
| | TMW-1 | 10/26/2017 | **No sample collected; well dry** | | | |
| | TMW-1 | 9/6/2018 | **No sample collected; well dry** | | | |
| | TMW-1 | 8/8/2019 | **No sample collected; well dry** | | | |
| | TMW-1 | 8/4/2020 | **No sample collected; well dry** | | | |

***Notes:***

*mg/L: milligrams per liter*

*J: The target analyte was positively identified below the quantitation limit and above the detection limit.*

*ND: not detected, practical quantitation limit unknown*

*NMWQCC: New Mexico Water Quality Control Commission*

*--: not analyzed*

*<0.037: indicates result less than the stated laboratory reporting limit (PQL)*

*Concentrations in **bold** and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code*

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# TABLE 4
## PSH RECOVERY
### Hampton #4M
### Hilcorp Energy Company
### San Juan County, New Mexico

| Well Identification | Date | Product Removed (ounces) |
|---|---|---|
| MW-16 | 1/22/2019 | 6 |
| | 2/15/2019 | 10 |
| | 4/5/2019 | 28 |
| | 8/8/2019 | 32 |
| | 11/7/2019 | 24 |
| | 3/27/2020 | 16 |
| | 5/29/2020 | 26 |
| | 8/5/2020 | 176 |
| | 10/9/2020 | 12 |
| | 9/30/2021 | 12 |
| | 3/8/2022 | 32 |
| | 5/9/2022 | 1 |
| | 8/10/2022 | 1 |
| | 11/30/2022 | 4 |

***Notes:***

*PSH removed using an adsorbent sock and/or disposable bailer*

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# APPENDIX A

# Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 17, 2022

Kate Kaufman
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Hampton 4M OrderNo.: 2203514

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/9/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **2203514**
Date Reported: **3/17/2022**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** HILCORP ENERGY **Client Sample ID:** MW-12
**Project:** Hampton 4M **Collection Date:** 3/8/2022 1:30:00 PM
**Lab ID:** 2203514-001 **Matrix:** AQUEOUS **Received Date:** 3/9/2022 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **BRM** |
| Benzene | ND | 5.0 | D | µg/L | 5 | 3/16/2022 4:04:30 PM |
| Toluene | ND | 5.0 | D | µg/L | 5 | 3/16/2022 4:04:30 PM |
| Ethylbenzene | ND | 5.0 | D | µg/L | 5 | 3/16/2022 4:04:30 PM |
| Xylenes, Total | ND | 7.5 | D | µg/L | 5 | 3/16/2022 4:04:30 PM |
| Surr: 1,2-Dichloroethane-d4 | 113 | 70-130 | D | %Rec | 5 | 3/16/2022 4:04:30 PM |
| Surr: 4-Bromofluorobenzene | 116 | 70-130 | D | %Rec | 5 | 3/16/2022 4:04:30 PM |
| Surr: Dibromofluoromethane | 112 | 70-130 | D | %Rec | 5 | 3/16/2022 4:04:30 PM |
| Surr: Toluene-d8 | 97.0 | 70-130 | D | %Rec | 5 | 3/16/2022 4:04:30 PM |

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

**Qualifiers:**

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

# QC SUMMARY REPORT
## Hall Environmental Analysis Laboratory, Inc.

WO#: **2203514**
***17-Mar-22***

**Client:** HILCORP ENERGY
**Project:** Hampton 4M

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **B86489** RunNo: **86489**
Prep Date: Analysis Date: **3/15/2022** SeqNo: **3051894** Units: **%Rec**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **B86489** RunNo: **86489**
Prep Date: Analysis Date: **3/15/2022** SeqNo: **3051895** Units: **%Rec**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 112 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 116 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **E86526** RunNo: **86526**
Prep Date: Analysis Date: **3/16/2022** SeqNo: **3053455** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 95.0 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.3 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **E86526** RunNo: **86526**
Prep Date: Analysis Date: **3/16/2022** SeqNo: **3053456** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.3 | | 10.00 | | 93.4 | 70 | 130 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2203514 RcptNo: 1

Received By: Tracy Casarrubias 3/9/2022 8:00:00 AM

Completed By: Tracy Casarrubias 3/9/2022 10:12:53 AM

Reviewed By: KDG 3/9/22

## Chain of Custody

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

## Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: CMC 3/9/22

## Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.9 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: khoekstra@hilcorp.com

QA/QC Package: kkaufman@hilcorp.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name: Hampton 4M

Project #:

Project Manager: KATE KAUFMAN

Sampler: Kurt Hoekstra

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.9-0=1.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 2203514 | BTEX Method 8260 |
|---|---|---|---|---|---|---|---|
| ~~3-8~~ | | ~~Water~~ | ~~MW-5~~ | ~~(3) 40ml VOA~~ | ~~HCL~~ | | ~~X~~ |
| 3-8 | 1:30 | Water | MW-12 | (3) 40ml VOA | HCL | 001 | X |
| ~~3-8~~ | | ~~Water~~ | ~~MW-16~~ | ~~(3) 40ml VOA~~ | ~~HCL~~ | | ~~X~~ |

| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 3-8 | 1510 | Kurt Hoekstra | Chris Walls | | 3/8/22 | 1510 |
| 3/8/22 | 1810 | Chris Walls | | | 3/9/22 | 8:00 |

Remarks: Special Pricing See Andy

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 13, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Hampton 4M OrderNo.: 2205434

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/10/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **2205434**
Date Reported: **5/13/2022**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** HILCORP ENERGY **Client Sample ID:** MW-5
**Project:** Hampton 4M **Collection Date:** 5/9/2022 3:18:00 PM
**Lab ID:** 2205434-001 **Matrix:** AQUEOUS **Received Date:** 5/10/2022 7:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **JR** |
| Benzene | ND | 1.0 | | µg/L | 1 | 5/11/2022 12:02:51 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 5/11/2022 12:02:51 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 5/11/2022 12:02:51 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 5/11/2022 12:02:51 PM |
| Surr: 1,2-Dichloroethane-d4 | 96.0 | 70-130 | | %Rec | 1 | 5/11/2022 12:02:51 PM |
| Surr: 4-Bromofluorobenzene | 96.9 | 70-130 | | %Rec | 1 | 5/11/2022 12:02:51 PM |
| Surr: Dibromofluoromethane | 116 | 70-130 | | %Rec | 1 | 5/11/2022 12:02:51 PM |
| Surr: Toluene-d8 | 95.5 | 70-130 | | %Rec | 1 | 5/11/2022 12:02:51 PM |

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

**Qualifiers:**

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

**Analytical Report**
Lab Order **2205434**
Date Reported: **5/13/2022**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** HILCORP ENERGY **Client Sample ID:** MW-12
**Project:** Hampton 4M **Collection Date:** 5/9/2022 2:47:00 PM
**Lab ID:** 2205434-002 **Matrix:** AQUEOUS **Received Date:** 5/10/2022 7:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **JR** |
| Benzene | ND | 1.0 | | µg/L | 1 | 5/11/2022 12:31:22 PM |
| Toluene | 2.4 | 1.0 | | µg/L | 1 | 5/11/2022 12:31:22 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 5/11/2022 12:31:22 PM |
| Xylenes, Total | 7.3 | 1.5 | | µg/L | 1 | 5/11/2022 12:31:22 PM |
| Surr: 1,2-Dichloroethane-d4 | 91.2 | 70-130 | | %Rec | 1 | 5/11/2022 12:31:22 PM |
| Surr: 4-Bromofluorobenzene | 97.7 | 70-130 | | %Rec | 1 | 5/11/2022 12:31:22 PM |
| Surr: Dibromofluoromethane | 113 | 70-130 | | %Rec | 1 | 5/11/2022 12:31:22 PM |
| Surr: Toluene-d8 | 93.5 | 70-130 | | %Rec | 1 | 5/11/2022 12:31:22 PM |

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

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2205434**

***13-May-22***

**Client:** HILCORP ENERGY

**Project:** Hampton 4M

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **LCSW** Batch ID: **S87890** RunNo: **87890**

Prep Date: Analysis Date: **5/10/2022** SeqNo: **3115786** Units: **%Rec**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 1,2-Dichloroethane-d4 | 9.2 | | 10.00 | | 92.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.3 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.3 | | 10.00 | | 92.7 | 70 | 130 | | | |

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **PBW** Batch ID: **S87890** RunNo: **87890**

Prep Date: Analysis Date: **5/10/2022** SeqNo: **3115787** Units: **%Rec**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 92.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.3 | | 10.00 | | 92.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 95.0 | 70 | 130 | | | |

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **PBW** Batch ID: **S87923** RunNo: **87923**

Prep Date: Analysis Date: **5/11/2022** SeqNo: **3116621** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.4 | | 10.00 | | 94.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 114 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **LCSW** Batch ID: **S87923** RunNo: **87923**

Prep Date: Analysis Date: **5/11/2022** SeqNo: **3116986** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.2 | 70 | 130 | | | |
| Toluene | 17 | 1.0 | 20.00 | 0 | 87.4 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.2 | | 10.00 | | 91.8 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.4 | | 10.00 | | 94.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.3 | | 10.00 | | 92.7 | 70 | 130 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: HILCORP ENERGY  Work Order Number: 2205434  RcptNo: 1

Received By: Juan Rojas  5/10/2022 7:00:00 AM

Completed By: Sean Livingston  5/10/2022 8:38:39 AM

Reviewed By: JR 5/10/22

## Chain of Custody

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

## Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: KPG 5-10-22

## Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 3.8 | Good | | | | |

# Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: Brandon.Sinclair@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

Hampton 4M

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ~~☐~~ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.5-0=3.5


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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


**Analysis Request**

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 2205434 | BTEX Method 8260 | |
|---|---|---|---|---|---|---|---|---|
| 5-9 | 1518 | Water | MW-5 | (3) 40ml VOA | HCL | 001 | X | |
| 5-9 | 1447 | Water | MW-12 | (3) 40ml VOA | HCL | 002 | X | |
| ~~—~~ | | Water | ~~MW-16~~ | ~~(3) 40ml VOA~~ | ~~HCL~~ | | ~~X~~ | DW |

| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 5-9 | 1609 | | | | 5/9/22 | 1609 |
| 5/9/22 | 1811 | | | courier | 5/10/22 | 7:00 |

Remarks: Special Pricing See Andy

CC: mkillough@hilcorp.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
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*Website: www.hallenvironmental.com*

August 16, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX

RE: Hampton 4M OrderNo.: 2208725

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/11/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **2208725**
Date Reported: **8/16/2022**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** HILCORP ENERGY
**Client Sample ID:** MW-5
**Project:** Hampton 4M
**Collection Date:** 8/10/2022 12:35:00 PM
**Lab ID:** 2208725-001 **Matrix:** AQUEOUS **Received Date:** 8/11/2022 6:35:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **CCM** |
| Benzene | 2.0 | 1.0 | | µg/L | 1 | 8/12/2022 10:00:00 PM |
| Toluene | 5.0 | 1.0 | | µg/L | 1 | 8/12/2022 10:00:00 PM |
| Ethylbenzene | 1.9 | 1.0 | | µg/L | 1 | 8/12/2022 10:00:00 PM |
| Xylenes, Total | 6.0 | 1.5 | | µg/L | 1 | 8/12/2022 10:00:00 PM |
| Surr: 1,2-Dichloroethane-d4 | 113 | 70-130 | | %Rec | 1 | 8/12/2022 10:00:00 PM |
| Surr: 4-Bromofluorobenzene | 99.3 | 70-130 | | %Rec | 1 | 8/12/2022 10:00:00 PM |
| Surr: Dibromofluoromethane | 108 | 70-130 | | %Rec | 1 | 8/12/2022 10:00:00 PM |
| Surr: Toluene-d8 | 94.6 | 70-130 | | %Rec | 1 | 8/12/2022 10:00:00 PM |

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

**Qualifiers:**

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

**Analytical Report**
Lab Order **2208725**
Date Reported: **8/16/2022**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** HILCORP ENERGY
**Client Sample ID:** MW-12
**Project:** Hampton 4M
**Collection Date:** 8/10/2022 12:05:00 PM
**Lab ID:** 2208725-002 **Matrix:** AQUEOUS **Received Date:** 8/11/2022 6:35:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **CCM** |
| Benzene | ND | 2.0 | D | µg/L | 2 | 8/12/2022 10:23:00 PM |
| Toluene | ND | 2.0 | D | µg/L | 2 | 8/12/2022 10:23:00 PM |
| Ethylbenzene | ND | 2.0 | D | µg/L | 2 | 8/12/2022 10:23:00 PM |
| Xylenes, Total | ND | 3.0 | D | µg/L | 2 | 8/12/2022 10:23:00 PM |
| Surr: 1,2-Dichloroethane-d4 | 112 | 70-130 | D | %Rec | 2 | 8/12/2022 10:23:00 PM |
| Surr: 4-Bromofluorobenzene | 98.0 | 70-130 | D | %Rec | 2 | 8/12/2022 10:23:00 PM |
| Surr: Dibromofluoromethane | 108 | 70-130 | D | %Rec | 2 | 8/12/2022 10:23:00 PM |
| Surr: Toluene-d8 | 90.2 | 70-130 | D | %Rec | 2 | 8/12/2022 10:23:00 PM |

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

**Qualifiers:**

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

# QC SUMMARY REPORT
## Hall Environmental Analysis Laboratory, Inc.

WO#: **2208725**
***16-Aug-22***

**Client:** HILCORP ENERGY
**Project:** Hampton 4M

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **R90225** RunNo: **90225**
Prep Date: Analysis Date: **8/12/2022** SeqNo: **3218547** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.1 | | 10.00 | | 90.9 | 70 | 130 | | | |

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **R90225** RunNo: **90225**
Prep Date: Analysis Date: **8/12/2022** SeqNo: **3218548** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.2 | | 10.00 | | 91.9 | 70 | 130 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: **HILCORP ENERGY** Work Order Number: **2208725** RcptNo: 1

Received By: **Juan Rojas** **8/11/2022 6:35:00 AM**

Completed By: **Cheyenne Cason** **8/11/2022 10:28:22 AM**

Reviewed By: SVL 8/11/22

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: CM 8/11/22

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 0.9 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: Brandon.Sinclair@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Hampton 4M

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.9-0=0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 2208725 | BTEX Method 8260 |
|---|---|---|---|---|---|---|---|
| 8-10 | 1235 | Water | MW-5 | (3) 40ml VOA | HCL | 001 | X |
| 8-10 | 1205 | Water | MW-12 | (3) 40ml VOA | HCL | 002 | X |
| | | ~~Water~~ | ~~MW-16~~ | ~~(3) 40ml VOA~~ | ~~HCL~~ | | ~~X~~ |

| Date | Time | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 8-10 | 1327 | | | Walk | 8/10/22 | 1327 |
| 8/10/22 | 1810 | | | courier | 8/11/22 | 6:35 |

Remarks: Special Pricing See Andy

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 22, 2023

Kate Kaufman

Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX

RE: Hampton 4M OrderNo.: 2212012

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/1/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 08, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **2212012**
Date Reported: **2/22/2023**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Hilcorp Energy
**Client Sample ID:** MW-12
**Project:** Hampton 4M
**Collection Date:** 11/30/2022 1:00:00 PM
**Lab ID:** 2212012-001 **Matrix:** AQUEOUS **Received Date:** 12/1/2022 7:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 12/2/2022 7:38:08 PM | C92974 |
| Toluene | 1.1 | 1.0 | | µg/L | 1 | 12/2/2022 7:38:08 PM | C92974 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 12/2/2022 7:38:08 PM | C92974 |
| Xylenes, Total | 4.3 | 2.0 | | µg/L | 1 | 12/2/2022 7:38:08 PM | C92974 |
| Surr: 4-Bromofluorobenzene | 92.7 | 70-130 | | %Rec | 1 | 12/2/2022 7:38:08 PM | C92974 |

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

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

**Analytical Report**
Lab Order **2212012**
Date Reported: **2/22/2023**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Hilcorp Energy
**Project:** Hampton 4M
**Lab ID:** 2212012-002 **Matrix:** AQUEOUS

**Client Sample ID:** MW-5
**Collection Date:** 11/30/2022 2:00:00 PM
**Received Date:** 12/1/2022 7:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | 3.8 | 1.0 | | µg/L | 1 | 12/2/2022 8:01:38 PM | C92974 |
| Toluene | 8.2 | 1.0 | | µg/L | 1 | 12/2/2022 8:01:38 PM | C92974 |
| Ethylbenzene | 6.2 | 1.0 | | µg/L | 1 | 12/2/2022 8:01:38 PM | C92974 |
| Xylenes, Total | 13 | 2.0 | | µg/L | 1 | 12/2/2022 8:01:38 PM | C92974 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | | %Rec | 1 | 12/2/2022 8:01:38 PM | C92974 |

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

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# QC SUMMARY REPORT
## Hall Environmental Analysis Laboratory, Inc.

WO#: **2212012**
***22-Feb-23***

**Client:** Hilcorp Energy
**Project:** Hampton 4M

| Sample ID: **mb** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **C92974** | RunNo: **92974** |
| Prep Date: | Analysis Date: **12/2/2022** | SeqNo: **3348449** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 18 | | 20.00 | | 91.6 | 70 | 130 | | | |

| Sample ID: **100ng btex lcs** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **C92974** | RunNo: **92974** |
| Prep Date: | Analysis Date: **12/2/2022** | SeqNo: **3348450** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 18 | 1.0 | 20.00 | 0 | 88.9 | 70 | 130 | | | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 91.3 | 70 | 130 | | | |
| Ethylbenzene | 18 | 1.0 | 20.00 | 0 | 91.2 | 70 | 130 | | | |
| Xylenes, Total | 55 | 2.0 | 60.00 | 0 | 91.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 19 | | 20.00 | | 95.4 | 70 | 130 | | | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: Hilcorp Energy | Work Order Number: 2212012 | RcptNo: 1

Received By: Juan Rojas 12/1/2022 7:10:00 AM

Completed By: Tracy Casarrubias 12/1/2022 8:45:40 AM

Reviewed By: JA 12-1-22

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: JA 12/1/22

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 0 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclair@hilcorp.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Hampton 4M

Project #:

Project Manager: Kate Kaufman

Sampler: Brandon Sinclair

On Ice: ~~☑ Yes~~ ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 0.1-0.1=0 (°C)

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

Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 2212012 | BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, $NO_3$, $NO_2$, $PO_4$, $SO_4$ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11-30 | 1300 | Aq | MW-12 | 3x40mL VOA | HCL | 001 | ✓ | | | | | | | | | |
| 11-30 | 1400 | Aq | MW-5 | 3x40mL VOA | HCL | 002 | ✓ | | | | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 11-30 | | | | courier | 12/1/22 | 7:10 |
| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |

Remarks:

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

**District I**
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
**District II**
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
**District III**
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
**District IV**
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 201672

## CONDITIONS

| | |
|---|---|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171 |
| | Action Number:<br>201672 |
| | Action Type:<br>[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| michael.buchanan | Review of the 2022 Annual Groundwater Monitoring Report for Hilcorp Energy Hampton #4M 1. Continue to perform groundwater monitoring for wells: MW- 5, MW-12 and MW-16 (when recovery allows). 2. Submit report for 2023 Annual Groundwater Monitoring Report by April 1, 2024. | 7/7/2023 |