Review of 2020 Annual Groundwater Report: Content satisfactory

1. Continue quarterly sampling for groundwater quality in 2021
2. OCD approves sampling termination for monitor wells MW-4, MW-5, MW-6, and MW-7
3. Sample monitor wells MW-1, MW-3, MW-8R for manganese on a semi-annual basis
4. OCD approves the elimination of selenium for further laboratory analysis per this event
5. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022

March 8, 2021

Ms. Clara Cardoza
Hilcorp Energy Company
PO Box 61229
Houston, TX 77208

Subject: **2020 Annual Groundwater Monitoring Report**
San Juan 29-7 Unit 37
Rio Arriba County, New Mexico
NMOCD Incident Number: NCS1904241144
NMOCD Administrative Order: 3R-425

Dear Ms. Cardoza:

WSP USA Inc. (WSP) presents this annual report on behalf of Hilcorp Energy Company (Hilcorp) to the New Mexico Oil Conservation Division (NMOCD) to document groundwater monitoring activities conducted at the San Juan 29-7 Unit 37 natural gas production well (Site) during 2020. The Site is located within Unit Letter N Section 12 within Township 29 North and Range 7 West, Rio Arriba County, New Mexico (Figure 1).

SITE BACKGROUND

A leaking inspection plate gasket on the above-ground condensate tank was discovered by ConocoPhillips (previous well owner) on August 26, 2010. Approximately 23 barrels of condensate was released and fully contained within the berm; however, no liquids were recovered. The release was reported by ConocoPhillips on September 16, 2010 to the New Mexico Oil Conservation Division (NMOCD) on a C-141 *Release Notification and Corrective Action* form.

After the discovery, delineation activities were conducted at the Site in 2010 and 2011 to characterize soil and groundwater impacted by the release. Site characterization indicated hydrocarbon impacts from the release exceeded NMOCD Table I Closure Criteria for soils (19.15.29.12 of the New Mexico Administrative Code [NMAC]) and New Mexico Water Quality Control Commission (NMWQCC) standards for groundwater. Based on the nature of the release, the original contaminants of concern at the Site included benzene, toluene, total xylenes, manganese, selenium, sulfate, and total dissolved solids (TDS) in groundwater, along with benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) in vadose zone soil.

Approximately 3,000 cubic yards of impacted soils were excavated from the release area and transported off-site for disposal. Impacted groundwater was present in the immediate area of the release and extended approximately 60 feet downgradient. Eight groundwater monitoring wells were installed to assess ongoing groundwater conditions at the Site. Soil and groundwater impacts remaining at the Site were additionally treated in 2012 and 2013 with the injection of the chemical oxidant CoolOx® in attempts to remediate residual impacts by chemical oxidation and enhanced bioremediation.

Hilcorp acquired the Site from ConocoPhillips in April 2017 and has continued to monitor groundwater conditions at the Site. GHD Services Inc. (GHD) prepared the *2018 Annual Groundwater Monitoring Report* (dated January 2019) on behalf of Hilcorp. Based on that report, the NMOCD concurred with the conclusions that sulfate and TDS were attributed to naturally-occurring background concentrations at the Site and these constituents could be removed as contaminants of concern. In addition, NMOCD agreed that BTEX constituents could be removed as contaminants of concern for all onsite wells with at least eight consecutive quarters with concentrations below NMWQCC standards (which included all wells except MW-8R). At that time, well MW-8R had achieved seven quarters with results below NMWQCC standards.

During sampling in 2019, BTEX concentrations remained below NMWQCC standards in groundwater collected from MW-8R, therefore removing BTEX as a contaminant of concern for groundwater in all wells at the Site. Additionally, based on historical data, manganese was eliminated as a contaminant of concern in all wells except MW-2 and selenium was eliminated as a contaminant of concern in all wells except MW-1, MW-3, MW-6, and MW-8R. Additional details regarding the history of the Site can be found in the *2019 Annual Groundwater Monitoring Report* prepared by GHD (dated March 25, 2020).

WSP USA
848 EAST 2ND AVENUE
DURANGO CO 81301

Tel.: 970-385-1096
wsp.com

Based on historical sampling results and prior agreements with NMOCD, manganese and selenium are considered contaminants of concern for groundwater in select wells at the Site (as presented below). Well locations and Site features are shown on Figure 2.

SITE GROUNDWATER CLEANUP STANDARDS

NMOCD requires that groundwater-quality standards presented in NMAC 20.6.2.3103 be met. Groundwater samples were analyzed for dissolved manganese and/or dissolved selenium based on historical sampling results. The following standards for the contaminants of concern at the Site in milligrams per liter (mg/L) are presented below:

ANALYTE	WELLS	LIMIT
Dissolved Manganese	All Wells	0.2 mg/L
Dissolved Selenium	MW-2, MW-4, and MW-6	0.05 mg/L

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater sampling events were conducted at the Site in March, May, August, and October of 2020. The following sections summarize the sampling procedures and results gathered during these events.

GROUNDWATER-LEVEL MEASUREMENTS

Prior to collection of groundwater samples, depth to groundwater in each well was measured using a Keck oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement to prevent cross-contamination. Groundwater elevations are detailed in Table 1.

Groundwater potentiometric surface maps from quarterly data are presented on Figures 3, 4, 5, and 6 respectively. The groundwater potentiometric surface elevations have been consistent with little variability by season and throughout the history of monitoring the wells at the Site. The inferred groundwater-flow direction is to the south-southwest with an approximate hydraulic gradient of 0.018 feet/foot.

GROUNDWATER SAMPLING

Groundwater 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, turbidity, electrical conductivity, dissolved oxygen, and oxidation-reduction potential, were collected during the purging process and are presented in Table 2.

Following well purging, groundwater samples were collected and placed directly into laboratory-provided bottles and labeled with the date and time of collection, well designation, project name, sample collector's name, and parameters to be analyzed. Sample bottles were immediately sealed, packed on ice, and submitted to Pace Analytical for analysis of dissolved manganese (all wells) and dissolved selenium (MW-2, MW-4, and MW-6) by EPA method 6010. Proper chain-of-custody (COC) 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. Analytical laboratory reports from the sampling events are included as Enclosure A.

GROUNDWATER ANALYTICAL RESULTS

During the 2020 groundwater sampling events, manganese concentrations exceeded NMWQCC standards in MW-1, MW-3 and MW-8R. Selenium also exceeded applicable standards in well MW-2. A summary of analytical results are presented in Table 3 and depicted on Figure 7.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater samples collected from wells MW-1, MW-3, MW-8R continue to contain manganese concentrations exceeding the NMWQCC groundwater quality standards. In addition, selenium concentrations continue to exceed the NMWQCC groundwater-quality standards in monitoring well MW-2. Conversely, wells MW-4, MW-5, MW-6, and MW-7 have achieved at least eight quarters

with manganese and/or selenium concentrations below the NMWQCC groundwater quality standards. WSP proposes that these wells be removed from the sampling program.

In their *2019 Annual Groundwater Monitoring Report* (March 25, 2020), GHD presented the conclusions of a Mann Kendall trend analysis performed for manganese concentrations at the Site. GHD concluded that elevated manganese concentrations were due to anaerobic groundwater conditions at the Site (caused by the biodegradation of petroleum hydrocarbon). As organic matter (e.g. petroleum hydrocarbons) decreases, dissolved oxygen increases and groundwater conditions become increasingly aerobic. As this happens, manganese precipitates out of solution and groundwater concentrations eventually decrease. This trend has already been documented in wells MW-2, MW-4, MW-5, MW-6, and MW-7.

In addition, WSP agrees with the following analysis of selenium concentrations present in groundwater at the Site, as presented by GHD in their 2019 report:

> "Selenium is also present at the Site, however, since selenium is not solubilized by anaerobic conditions, as is the case for manganese, it is likely that this selenium is naturally occurring and not related to the historical hydrocarbon impacts at the Site. Three wells at the Site had detectable concentrations of selenium and the Mann Kendall analysis found statistically significant decreasing trends in two out of the three wells (MW-1 and MW-6), however a statistically significant increasing trend was observed for the third well, MW-2. The solubilization of selenium is typically linked to pH rather than to oxidative-reductive processes with selenium being more soluble at higher pH. However, as pH has remained fairly stable at these wells since 2011 there does not appear to be any change in conditions that is causing selenium concentrations to change. Therefore, the selenium concentrations observed at the Site are more likely to be associated with different selenium concentrations in the aquifer matrix which may be the cause of the localized presence of selenium in the groundwater."

Based on these conclusions, WSP recommends that well MW-1, MW-3, MW-8R be sampled for manganese on a semi-annual basis. Additionally, WSP proposes to remove selenium as a contaminant of concern at the Site based on the above analysis.

WSP appreciates the opportunity to provide these environmental services to Hilcorp. Please contact either of the undersigned with any questions at (970) 385-1096.

Kind regards,

Stuart Hyde, L.G.
Environmental Geologist

Ashley Ager, M.S., P.G.
Regional Manager, Geologist

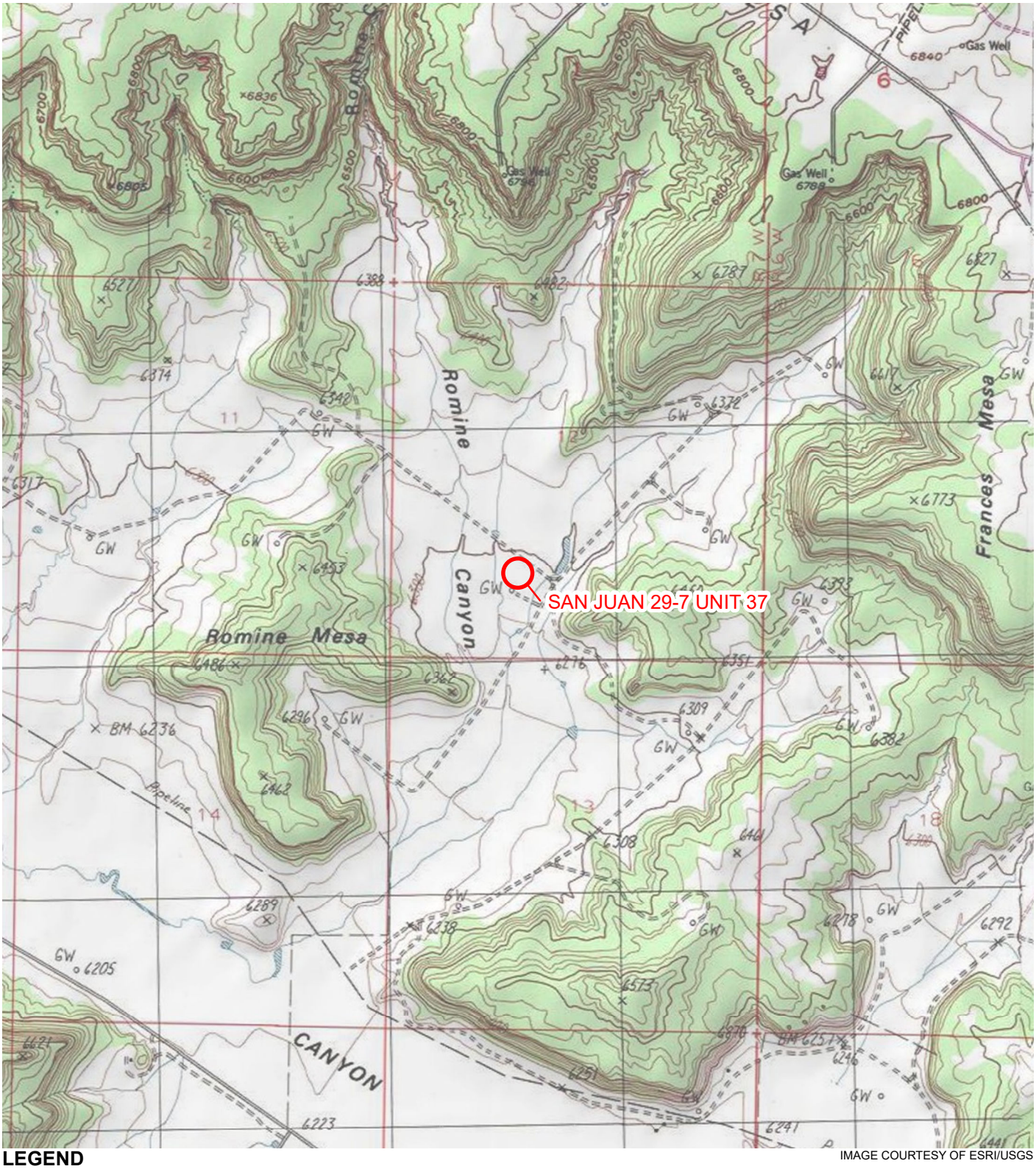
Enclosed:

Figure 1: Site Location Map
Figure 2: Site Map
Figure 3: Q1 Groundwater Elevation Map
Figure 4: Q2 Groundwater Elevation Map
Figure 5: Q3 Groundwater Elevation Map
Figure 6: Q4 Groundwater Elevation Map
Figure 7: Annual Groundwater Analytical Results

Table 1: Well Construction Information and Groundwater Elevations
Table 2: Field Parameter Results
Table 3: Petroleum Hydrocarbon and General Chemistry Groundwater Analytical Results

Enclosure A: Analytical Laboratory Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

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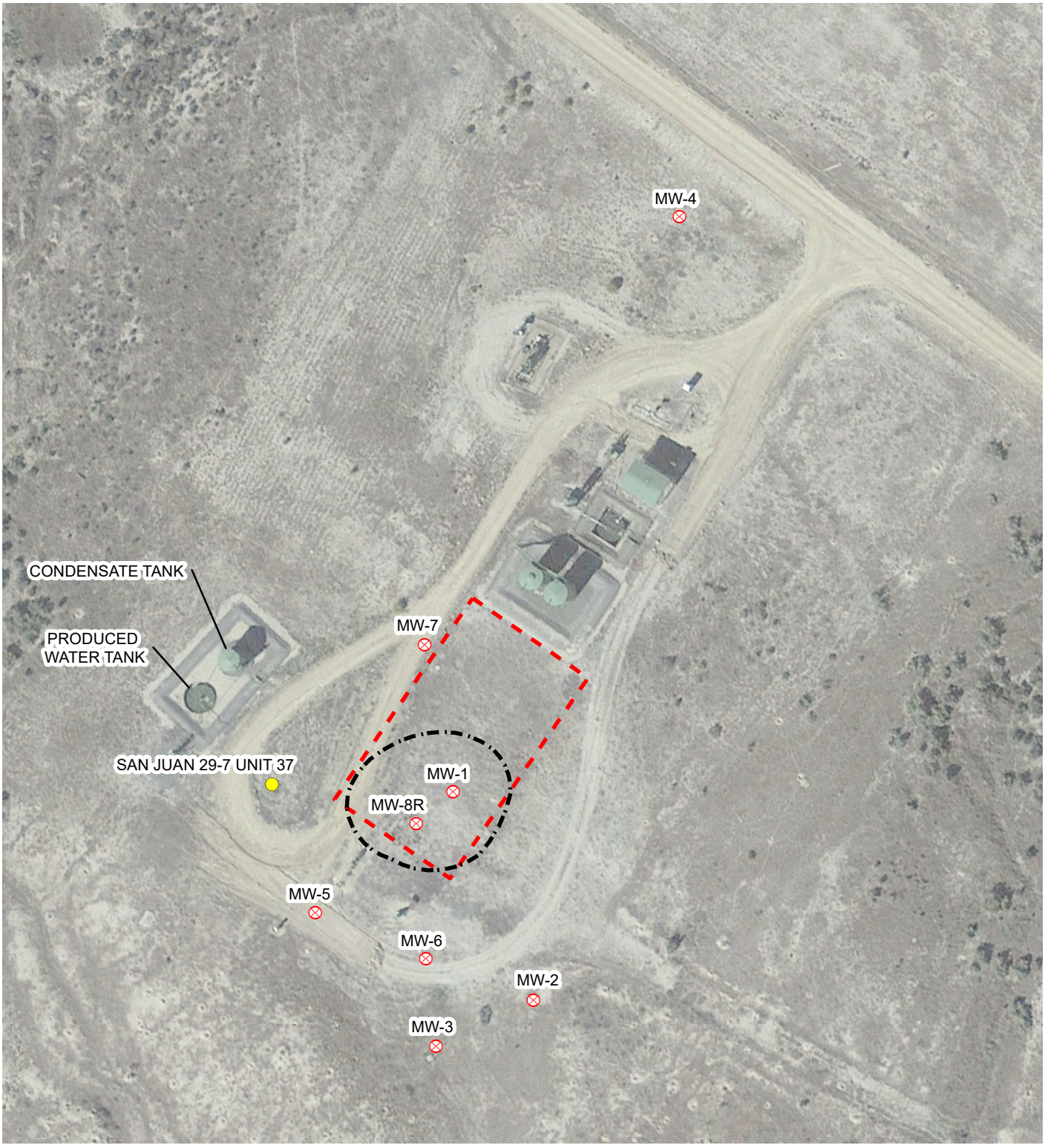

IMAGE COURTESY OF GOOGLE EARTH 2016

LEGEND

- MONITORING WELL
- WELLHEAD
- APPROXIMATE EXCAVATION EXTENT 2010
- APPROXIMATE COOL OX INJECTION EXTENT

0 80 160
Feet

N

FIGURE 2
SITE MAP
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819036_SAN JUAN 29-7 UNIT 37\017819036_FIG02_SJ29-7_SITE_2020.mxd

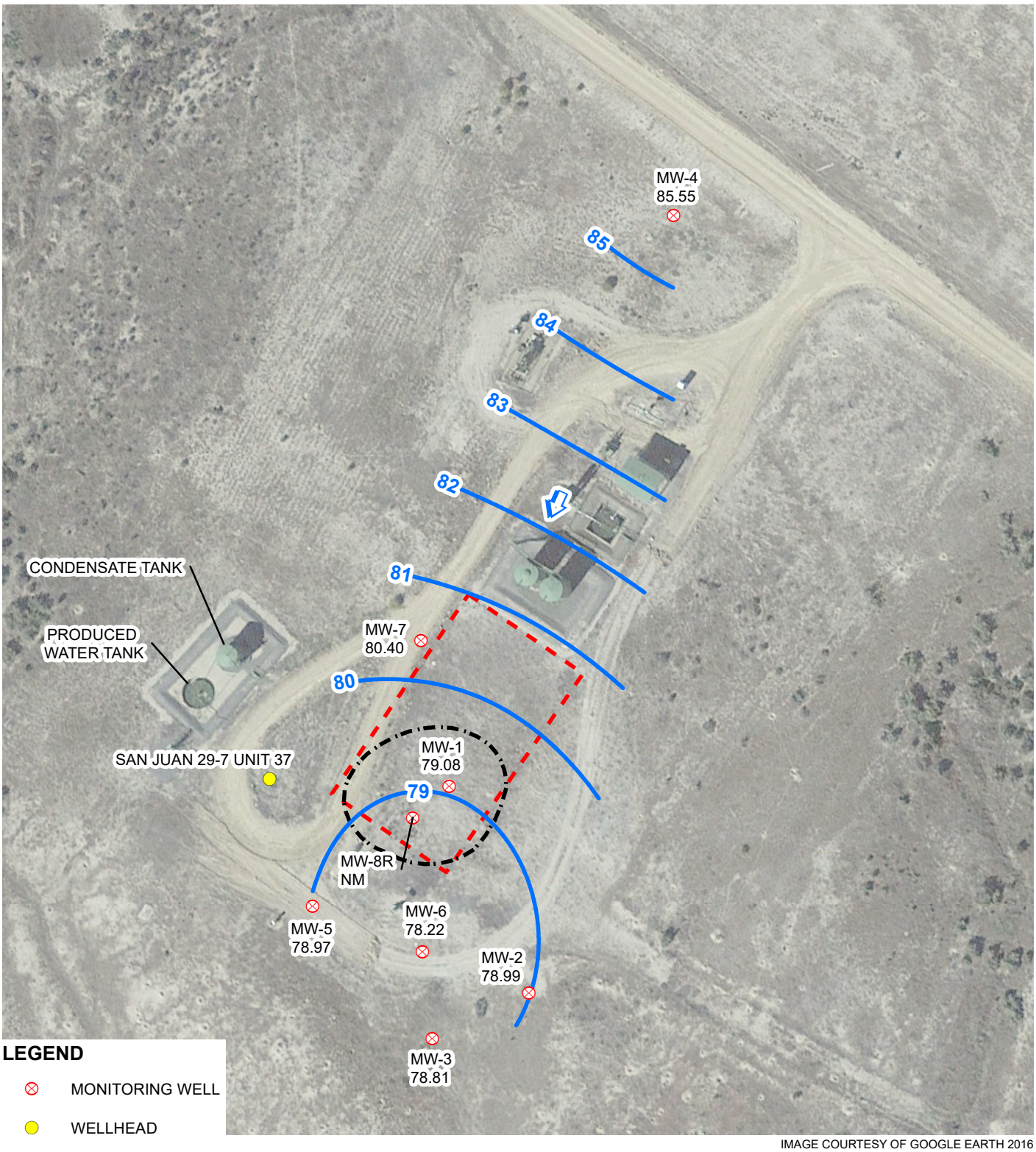

FIGURE 3
Q1 GROUNDWATER ELEVATION MAP
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819036_SAN JUAN 29-7 UNIT 37\017819036_FIG03_SJ29-7_GWE_MAR_2020.mxd

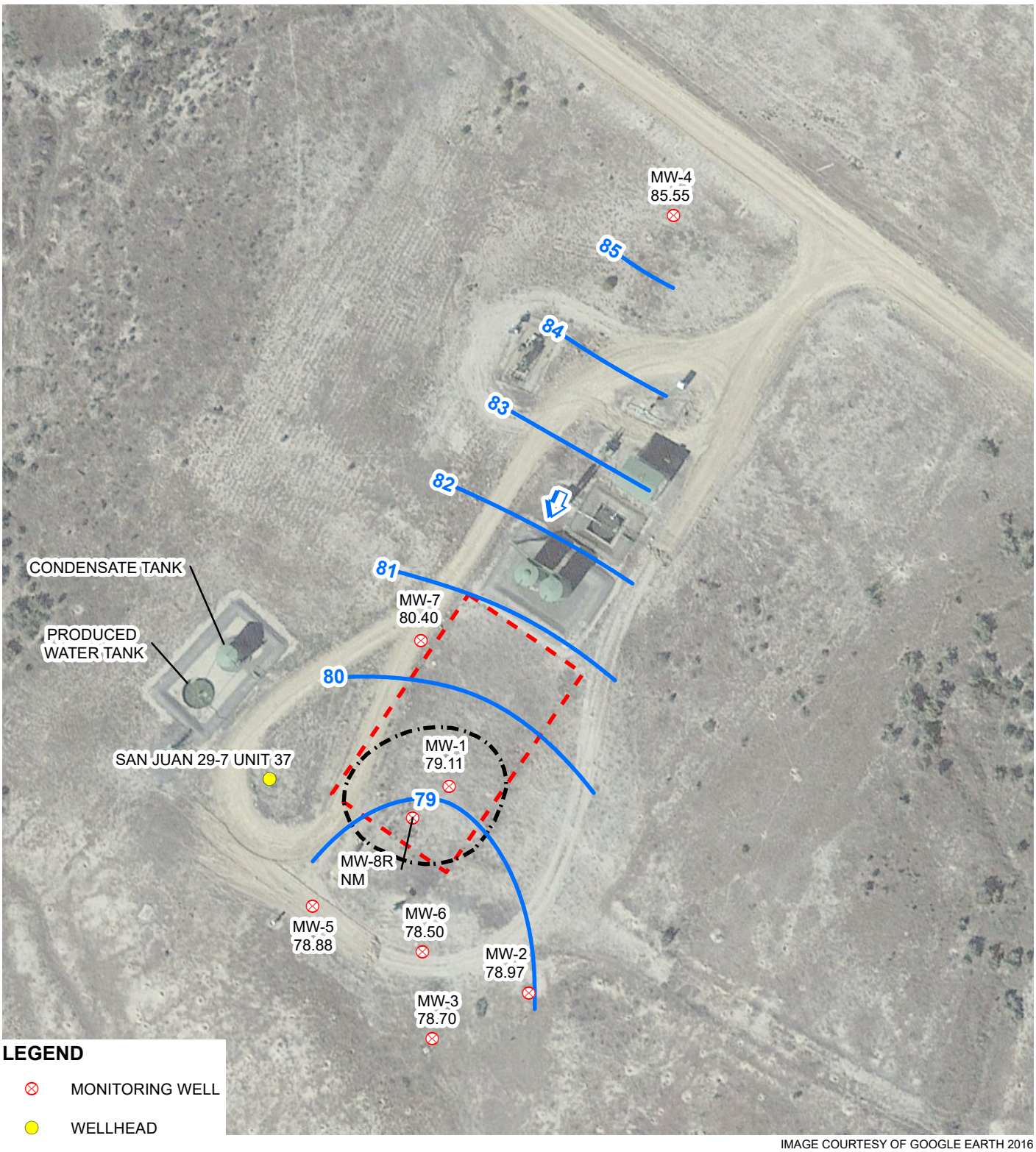

FIGURE 4
Q2 GROUNDWATER ELEVATION MAP
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

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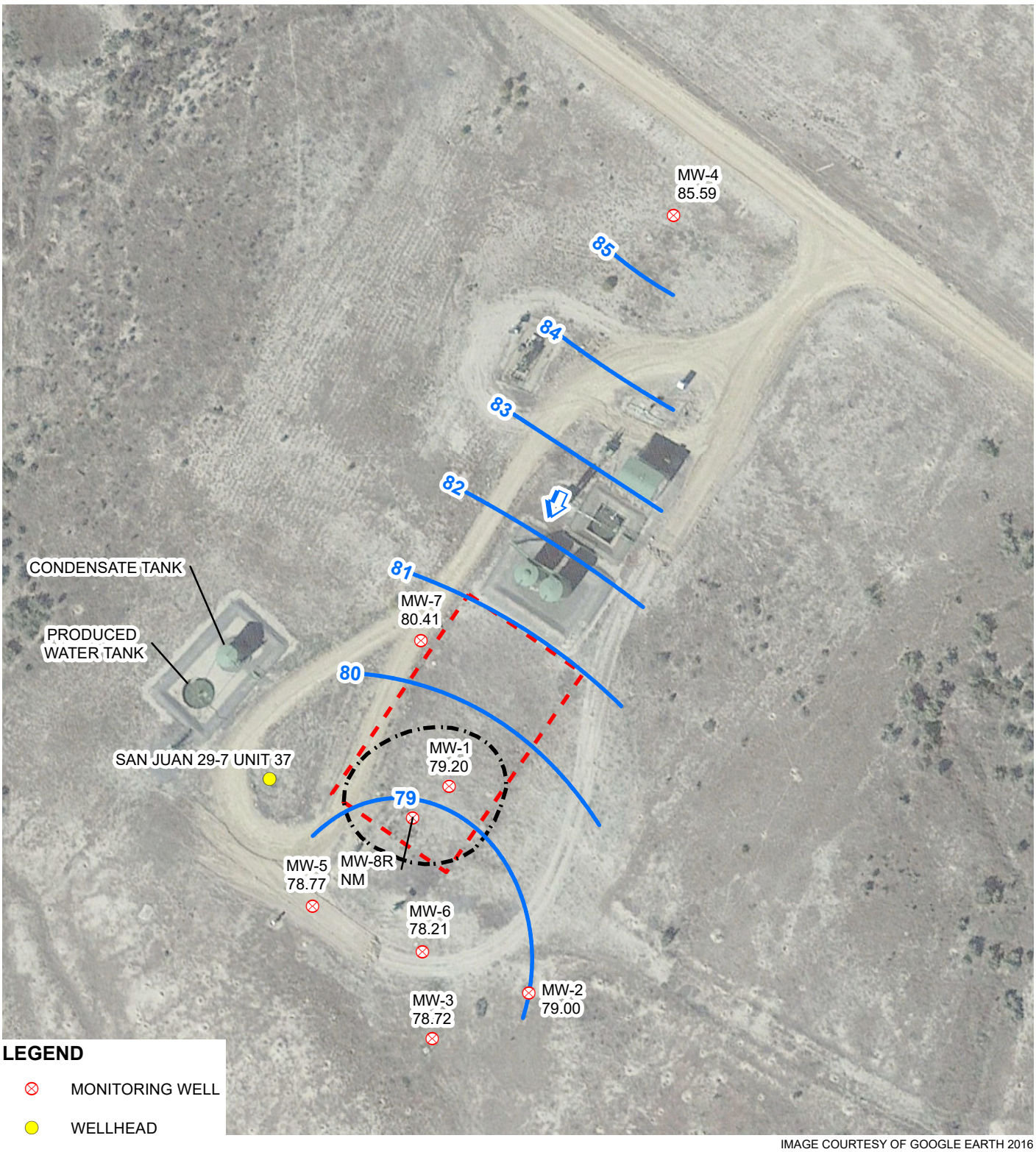

FIGURE 5
Q3 GROUNDWATER ELEVATION MAP
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

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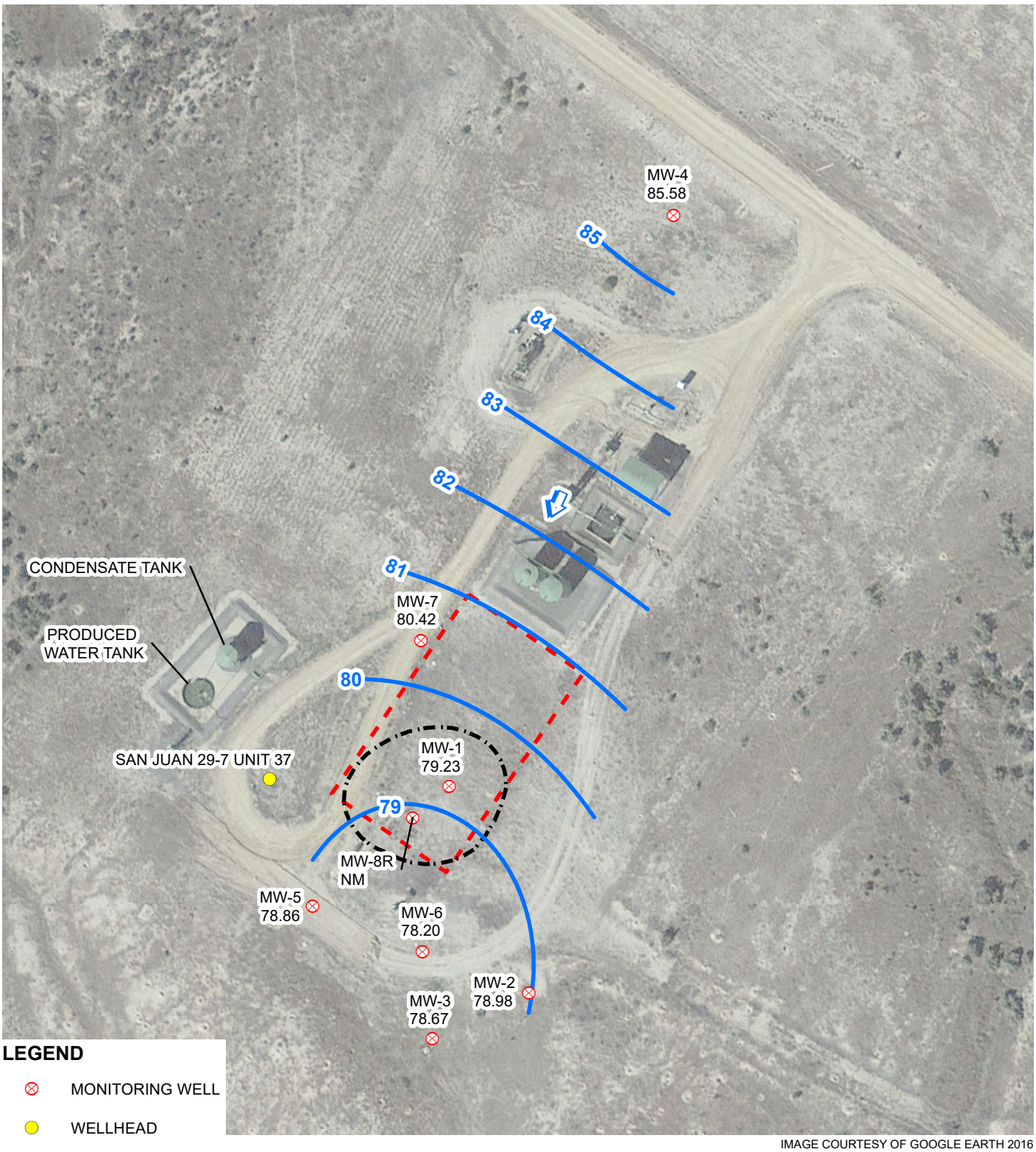

FIGURE 6
Q4 GROUNDWATER ELEVATION MAP
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

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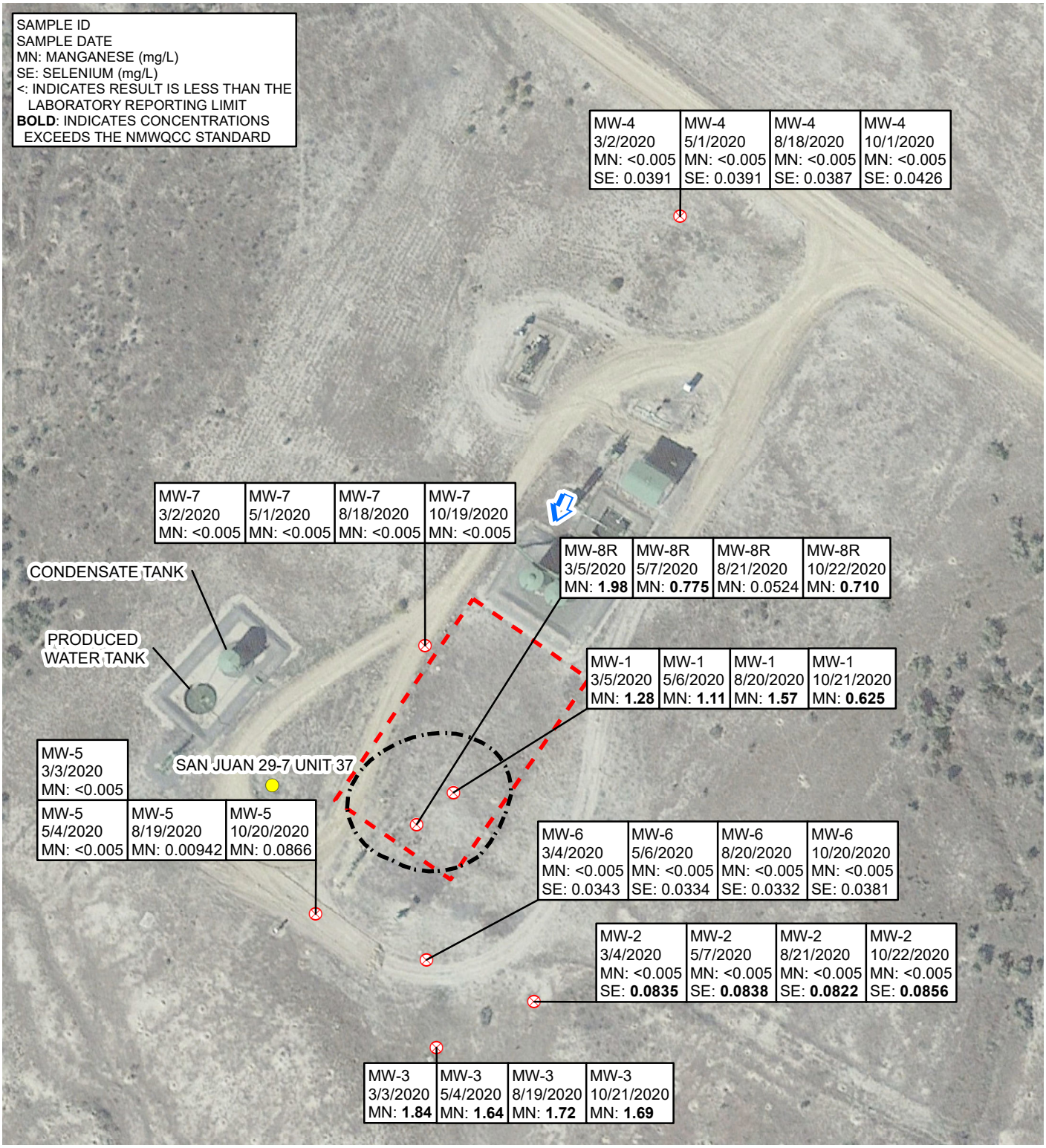


IMAGE COURTESY OF GOOGLE EARTH 2016

LEGEND

- MONITORING WELL
- WELLHEAD
- APPROXIMATE EXCAVATION EXTENT 2010
- APPROXIMATE COOL OX INJECTION EXTENT

0 80 160
Feet

N

FIGURE 7
ANNUAL GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
SEC 12-T29N-R7W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

P:\Hilcorp\GIS\MXD\017819036_SAN JUAN 29-7 UNIT 37\017819036_FIG07_SJ29-7_GWA_ALL_2020_UPDATES.mxd

TABLES

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Top of Casing Elevation (feet) (1)	Sample Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet) (1)
MW-1	189.24	3/17/2011	108.91	80.33
		8/17/2011	108.81	80.43
		10/18/2011	108.87	80.37
		2/23/2012	108.74	80.50
		6/5/2012	108.75	80.49
		9/18/2012	108.68	80.56
		1/8/2013	108.62	80.62
		3/26/2013	108.69	80.55
		6/11/2013	108.81	80.43
		9/10/2013	109.04	80.20
		1/7/2014	109.26	79.98
		3/18/2014	109.10	80.14
		6/16/2014	109.31	79.93
		9/25/2014	109.54	79.70
		12/16/2014	109.59	79.65
		3/17/2015	109.61	79.63
		6/16/2015	109.68	79.56
		9/15/2015	109.62	79.62
		12/1/2015	109.78	79.46
		3/29/2016	109.61	79.63
		6/21/2016	109.89	79.35
		9/7/2016	109.87	79.37
		11/30/2016	109.89	79.35
		3/7/2017	109.92	79.32
		6/13/2017	110.06	79.18
		9/26/2017	110.00	79.24
		12/19/2017	109.99	79.25
		3/14/2018	109.93	79.31
		6/26/2018	110.02	79.22
		9/5/2018	110.06	79.18
		12/14/2018	110.04	79.20
		3/29/2019	109.95	79.29
		6/24/2019	110.44	78.80
		9/13/2019	110.12	79.12
		11/6/2019	110.05	79.19
		3/5/2020	110.16	79.08
		5/6/2020	110.13	79.11
		8/20/2020	110.04	79.20
		10/21/2020	110.01	79.23

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-2	189.6	3/17/2011	109.20	80.40
		8/17/2011	109.10	80.50
		10/18/2011	109.13	80.47
		2/23/2012	109.05	80.55
		6/5/2012	109.10	80.50
		9/18/2012	109.28	80.32
		1/8/2013	109.07	80.53
		3/26/2013	109.12	80.48
		6/11/2013	109.32	80.28
		9/10/2013	109.32	80.28
		1/7/2014	109.71	79.89
		3/18/2014	109.71	79.89
		6/16/2014	109.83	79.77
		9/16/2014	109.94	79.66
		12/16/2014	110.04	79.56
		3/17/2015	110.09	79.51
		6/16/2015	110.17	79.43
		9/15/2015	110.14	79.46
		12/1/2015	110.23	79.37
		3/29/2016	110.26	79.34
		6/21/2016	110.31	79.29
		9/7/2016	110.33	79.27
		11/30/2016	110.39	79.21
		3/7/2017	110.37	79.23
		6/13/2017	110.35	79.25
		9/26/2017	110.54	79.06
		12/19/2017	110.50	79.10
		3/14/2018	110.54	79.06
		6/26/2018	110.55	79.05
		9/5/2018	110.60	79.00
		12/14/2018	110.51	79.09
		3/27/2019	110.57	79.03
		6/18/2019	110.55	79.05
		9/11/2019	110.57	79.03
		11/5/2019	110.56	79.04
		3/4/2020	110.61	78.99
		5/6/2020	110.63	78.97
		8/21/2020	110.60	79.00
		10/22/2020	110.62	78.98

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-3	189.13	3/17/2011	109.42	79.71
		8/17/2011	109.35	79.78
		10/18/2011	109.37	79.76
		2/23/2012	109.26	79.87
		6/5/2012	109.28	79.85
		9/18/2012	109.30	79.83
		1/8/2013	109.28	79.85
		3/26/2013	109.33	79.80
		6/11/2013	109.41	79.72
		9/10/2013	109.58	79.55
		1/7/2014	109.70	79.43
		3/18/2014	109.68	79.45
		6/16/2014	109.84	79.29
		9/16/2014	109.97	79.16
		12/16/2014	110.08	79.05
		3/17/2015	110.03	79.10
		6/16/2015	110.08	79.05
		9/15/2015	110.08	79.05
		12/1/2015	110.24	78.89
		3/29/2016	110.04	79.09
		6/21/2016	110.15	78.98
		9/7/2016	110.27	78.86
		11/30/2016	110.26	78.87
		3/7/2017	110.25	78.88
		6/13/2017	110.36	78.77
		9/26/2017	110.48	78.65
		12/19/2017	110.39	78.74
		3/14/2018	110.35	78.78
		6/26/2018	110.40	78.73
		9/5/2018	110.55	78.58
		12/14/2018	110.30	78.83
		3/26/2019	110.35	78.78
		6/17/2019	110.31	78.82
		9/10/2019	110.37	78.76
		11/4/2019	110.38	78.75
		3/3/2020	110.32	78.81
		5/4/2020	110.43	78.70
		8/19/2020	110.41	78.72
		10/21/2020	110.46	78.67

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-4	197.6	3/17/2011	111.11	86.49
		8/17/2011	111.10	86.50
		10/18/2011	111.16	86.44
		2/23/2012	111.14	86.46
		6/5/2012	111.20	86.40
		9/18/2012	111.12	86.48
		1/8/2013	111.14	86.46
		3/26/2013	111.23	86.37
		6/11/2013	111.41	86.19
		9/10/2013	111.47	86.13
		1/7/2014	111.66	85.94
		3/18/2014	111.60	86.00
		6/16/2014	111.68	85.92
		9/25/2014	111.77	85.83
		12/16/2014	111.80	85.80
		3/17/2015	111.77	85.83
		6/16/2015	111.78	85.82
		9/15/2015	111.76	85.84
		12/1/2015	111.89	85.71
		3/29/2016	111.92	85.68
		6/21/2016	111.95	85.65
		9/7/2016	111.33	86.27
		11/30/2016	112.03	85.57
		3/7/2017	111.90	85.70
		6/13/2017	111.92	85.68
		9/26/2017	112.01	85.59
		12/19/2017	112.05	85.55
		3/15/2018	112.02	85.58
		6/26/2018	112.02	85.58
		9/5/2018	112.05	85.55
		12/14/2018	112.02	85.58
		3/25/2019	112.04	85.56
		6/14/2019	112.03	85.57
		9/9/2019	110.57	87.03
		11/1/2019	112.07	85.53
		3/2/2020	112.05	85.55
		5/1/2020	112.05	85.55
		8/18/2020	112.01	85.59
		10/19/2020	112.02	85.58

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-5	188.7	10/18/2011	108.05	80.65
		2/23/2012	108.44	80.26
		6/5/2012	108.38	80.32
		9/18/2012	108.11	80.59
		1/8/2013	108.36	80.34
		3/26/2013	108.72	79.98
		6/11/2013	108.56	80.14
		9/10/2013	108.77	79.93
		1/7/2014	108.91	79.79
		3/18/2014	108.91	79.79
		6/16/2014	109.01	79.69
		9/16/2014	109.20	79.50
		12/16/2014	109.22	79.48
		3/17/2015	109.25	79.45
		6/16/2015	109.33	79.37
		9/15/2015	109.37	79.33
		12/1/2015	109.37	79.33
		3/29/2016	109.38	79.32
		6/21/2016	109.63	79.07
		9/7/2016	109.58	79.12
		11/30/2016	109.54	79.16
		3/7/2017	109.63	79.07
		6/13/2017	109.65	79.05
		9/26/2017	109.72	78.98
		12/19/2017	110.64	78.06
		3/14/2018	109.72	78.98
		6/26/2018	109.73	78.97
		9/5/2018	109.74	78.96
		12/14/2018	109.72	78.98
		3/26/2019	109.65	79.05
		6/14/2019	109.80	78.90
		9/10/2019	109.75	78.95
		11/4/2019	109.88	78.82
		3/3/2020	109.73	78.97
		5/4/2020	109.82	78.88
		8/19/2020	109.93	78.77
		10/20/2020	109.84	78.86

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-6	188.03	10/18/2011	109.55	78.48
		2/23/2012	108.01	80.02
		6/5/2012	108.05	79.98
		9/18/2012	108.06	79.97
		1/8/2013	108.07	79.96
		3/26/2013	108.09	79.94
		6/11/2013	108.25	79.78
		9/10/2013	108.43	79.60
		1/7/2014	108.70	79.33
		3/18/2014	108.70	79.33
		6/16/2014	108.85	79.18
		9/16/2014	108.99	79.04
		12/16/2014	109.10	78.93
		3/17/2015	109.14	78.89
		6/16/2015	109.23	78.80
		9/15/2015	109.20	78.83
		12/1/2015	109.30	78.73
		3/29/2016	109.34	78.69
		6/21/2016	108.58	79.45
		9/7/2016	109.47	78.56
		11/30/2016	109.51	78.52
		3/7/2017	109.47	78.56
		6/13/2017	109.48	78.55
		9/26/2017	109.64	78.39
		12/19/2017	109.64	78.39
		3/15/2018	109.66	78.37
		6/26/2018	109.99	78.04
		9/5/2018	109.75	78.28
		12/14/2018	109.64	78.39
		3/26/2019	109.65	78.38
		6/18/2019	109.73	78.30
		9/11/2019	109.75	78.28
		11/5/2019	109.76	78.27
		3/4/2020	109.81	78.22
		5/6/2020	109.53	78.50
		8/20/2020	109.82	78.21
		10/20/2020	109.83	78.20

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-7	189.93	10/18/2011	109.70	80.23
		2/23/2012	106.58	83.35
		6/5/2012	107.95	81.98
		9/18/2012	108.1	81.83
		1/8/2013	108.13	81.8
		3/26/2013	108.24	81.69
		6/11/2013	108.45	81.48
		9/10/2013	108.64	81.29
		1/7/2014	108.80	81.13
		3/18/2014	108.83	81.10
		6/16/2014	108.96	80.97
		9/25/2014	109.10	80.83
		12/16/2014	109.13	80.80
		3/17/2015	109.12	80.81
		6/16/2015	109.14	80.79
		9/15/2015	109.07	80.86
		12/1/2015	109.15	80.78
		3/29/2016	109.23	80.70
		6/21/2016	109.39	80.54
		9/7/2016	109.42	80.51
		11/30/2016	109.51	80.42
		3/7/2017	109.44	80.49
		6/13/2017	109.38	80.55
		9/26/2017	109.52	80.41
		12/19/2017	109.52	80.41
		3/14/2018	109.49	80.44
		6/26/2018	109.57	80.36
		9/5/2018	109.55	80.38
		12/14/2018	109.50	80.43
		3/25/2019	109.48	80.45
		6/14/2019	109.50	80.43
		9/9/2019	109.48	80.45
		11/1/2019	109.53	80.40
		3/2/2020	109.53	80.40
		5/1/2020	109.53	80.40
		8/18/2020	109.52	80.41
		10/19/2020	109.51	80.42

TABLE 1

WELL CONSTRUCTION INFORMATION AND GROUNDWATER ELEVATIONS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

MW-8	189.86	10/19/2011	--	--
		2/23/2012	108.71	81.15
		6/5/2012	108.65	81.21
		9/20/2012	108.64	81.22
		1/8/2013	108.56	81.30
		3/26/2013	108.63	81.23
		6/11/2013	108.85	81.01
		7/13/2013	**Plugged and Abandoned**	
MW-8R	--	9/10/2013	108.39	--
		1/7/2014	108.65	--
		3/18/2014	108.62	--
		6/16/2014	108.77	--
		9/25/2014	108.91	--
		12/16/2014	108.95	--
		3/17/2015	109.00	--
		6/16/2015	109.12	--
		9/15/2015	109.01	--
		12/1/2015	109.18	--
		3/29/2016	109.12	--
		6/21/2016	109.32	--
		9/7/2016	109.31	--
		11/30/2016	109.26	--
		3/7/2017	109.31	--
		6/13/2017	109.27	--
		9/26/2017	109.40	--
		12/19/2017	109.39	--
		3/14/2018	109.34	--
		6/26/2018	109.42	--
		9/5/2018	109.48	--
		12/14/2018	109.37	--
		3/28/2019	109.38	--
		6/24/2019	109.38	--
		9/13/2019	109.91	--
		11/6/2019	109.86	--
		3/5/2020	109.52	--
		5/7/2020	109.62	--
		8/21/2020	109.63	--
		10/22/2020	109.43	--

Notes:
(1) - surface elevation based on an arbitrary datum of 200 feet
BTOC - below top of casing
-- - not measured

TABLE 2

FIELD PARAMETER RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-1	3/17/2015	18.10	7.28	2,200	3,380	--	53.0	2.75
	6/16/2015	17.70	7.30	1,970	3,030	1.39	-12.4	7.00
	9/15/2015	16.12	7.13	2,212	3,403	1.09	50.2	7.00
	12/1/2015	16.63	7.72	2,361	3,632	1.08	-100.5	6.50
	3/29/2016	16.64	7.22	3,100	3,350	4.20	126.0	7.00
	6/21/2016	17.10	7.44	--	3,320	0.46	6.5	7.00
	9/7/2016	16.31	7.34	2,139	3,290	0.56	-66.0	6.75
	12/1/2016	12.71	7.55	--	2,989	5.29	23.5	7.00
	3/7/2017	15.36	7.55	2,377	3,657	1.25	-108.8	7.00
	6/13/2017	18.42	7.38	2,109	3,245	1.67	-103.7	1.50
	9/26/2017	21.00	7.05	--	2,844	--	--	--
	12/19/2017	13.89	7.37	--	3,232	--	--	--
	3/14/2018	17.90	7.41	--	3,141	0.28	3.5	--
	6/26/2018	21.15	7.37	--	3,101	0.29	23.1	--
	9/5/2018	20.93	7.64	--	2,913	0.03	44.9	1.50
	3/29/2019	12.10	7.75	1,520	3,040	--	-34.7	--
	6/24/2019	20.40	7.28	1,580	3,130	26.60	-38.0	--
	9/13/2019	17.80	6.28	1,550	3,100	25.30	-45.5	--
	11/6/2019	15.50	6.90	1,540	3,090	100.60	-45.6	--
	3/5/2020	14.90	6.73	1,530	3,060	5.99	-37.5	--
	5/6/2020	19.80	6.63	1,560	3,130	2.33	-30.4	--
	8/20/2020	21.30	6.95	1,520	3,030	1.21	-31.6	--
	10/21/2020	17.90	6.75	1,380	2,770	2.59	-30.3	--
MW-2	3/17/20015	14.80	7.30	2,200	3,430	--	165.0	5.00
	6/16/2015	14.90	6.91	1,925	2,961	6.23	25.2	5.25
	9/15/2015	14.62	6.99	2,162	3,327	6.27	75.5	3.75
	12/1/2015	13.50	7.61	2,277	3,504	5.27	80.8	5.25
	3/29/2016	--	--	--	--	--	--	5.25
	6/21/2016	15.40	7.38	--	2,850	0.56	-121.6	5.25
	9/7/2016	13.96	6.98	2,064	3,175	6.37	60.7	5.25
	12/1/2016	13.33	7.92	--	2,932	7.31	29.7	5.00
	3/7/2017	12.71	7.30	2,320	3,570	3.81	-84.5	5.00
	6/13/2017	15.03	7.24	2,075	3,191	5.55	-12.2	1.00
	9/26/2017	15.67	6.83	--	2,795	--	--	--
	12/19/2017	11.60	7.05	--	3,176	--	--	--
	3/14/2018	14.81	7.14	--	3,135	4.53	70.3	--
	6/26/2018	17.31	7.08	--	3,010	3.47	54.9	--
	9/5/2018	17.39	7.39	--	2,890	3.86	67.4	1.50
	3/27/2019	16.60	7.02	1,550	3,010	--	7.5	--
	6/18/2019	18.00	7.02	1,560	3,130	26.60	55.4	--
	9/11/2019	17.60	6.21	1,550	3,100	42.80	-23.2	--
	11/5/2019	15.20	6.39	1,560	3,120	46.00	-19.0	--
	3/4/2020	15.60	6.41	1,580	3,140	6.95	-17.4	--
	5/7/2020	16.10	6.46	1,550	3,080	3.28	-19.9	--
	8/21/2020	18.10	6.87	1,540	3,090	2.50	-18.0	--
	10/22/2020	15.50	6.47	1,370	2,750	4.05	-17.2	--

TABLE 2

FIELD PARAMETER RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-3	3/17/2015	15.10	7.45	1,900	3,040	--	-94.0	5.50
	6/16/2015	15.09	7.31	1,717	2,641	1.23	-123.5	5.50
	9/15/2015	15.03	7.30	1,912	2,941	1.39	-125.0	5.75
	12/1/2015	13.73	7.78	2,044	3,144	1.48	-164.2	5.50
	3/29/2016	15.82	7.34	1,900	2,940	5.66	-103.0	5.75
	6/21/2016	14.70	7.00	--	3,230	4.62	56.2	5.50
	9/7/2016	14.55	7.10	1,816	2,794	1.50	-102.7	5.50
	12/1/2016	14.91	7.74	--	2,556	1.97	-116.2	5.50
	3/7/2017	12.81	7.63	2,044	3,144	0.39	-192.6	5.00
	6/13/2017	14.77	7.58	1,819	2,801	0.42	-123.9	1.00
	9/26/2017	15.05	7.25	--	2,425	--	--	--
	12/19/2017	12.36	7.48	--	2,776	--	--	--
	3/14/2018	15.72	7.63	--	2,208	0.00	-139.6	--
	6/26/2018	18.48	7.63	--	2,589	0.22	-146.3	--
	9/5/2018	17.28	7.87	--	2,500	-0.07	-124.3	1.50
	3/26/2019	15.80	7.35	1,320	2,640	--	-32.6	--
	6/17/2019	18.70	7.35	1,350	2,740	17.00	-48.3	--
	9/10/2019	19.50	6.31	1,350	2,700	15.20	-57.6	--
	11/4/2019	15.90	6.70	1,340	2,660	54.20	-44.6	--
	3/3/2020	16.30	6.61	1,360	2,710	6.66	-33.6	--
	5/4/2020	18.30	6.72	1,330	2,620	1.92	-38.6	--
	8/19/2020	20.30	6.82	1,330	2,700	0.88	-34.4	--
	10/21/2020	15.80	6.73	1,170	2,340	3.47	-31.8	--
MW-4	3/17/2015	16.30	7.43	2,000	3,120	--	125.0	3.00
	6/16/2015	14.68	7.38	1,760	2,707	6.38	13.6	5.75
	9/15/2015	14.75	6.99	1,980	3,047	7.23	48.3	5.75
	12/1/2015	14.57	7.89	1,451	2,231	5.92	-12.2	5.50
	3/29/2016	16.94	7.33	1,900	3,030	7.71	110.0	5.50
	6/21/2016	15.30	7.62	--	2,980	4.10	58.9	5.50
	9/7/2016	14.52	7.50	1,919	2,953	6.36	65.1	5.75
	12/2/2016	12.48	7.81	--	2,688	9.18	76.9	5.50
	3/7/2017	--	--	--	--	--	--	--
	9/26/2017	12.75	7.25	--	2,537	--	--	6.00
	12/19/2017	12.22	7.49	--	2,914	--	--	--
	3/14/2018	14.13	7.57	--	28	5.95	55.1	--
	6/26/2018	15.95	7.64	--	2,682	4.63	33.8	--
	9/5/2018	14.99	7.84	--	2,625	6.35	51.2	6.00
	3/25/2019	15.60	7.77	1,400	2,570	--	-33.4	--
	6/14/2019	15.70	7.35	1,410	2,790	60.10	61.6	--
	9/9/2019	18.40	7.30	1,420	2,830	51.10	-56.7	--
	11/1/2019	12.50	7.03	1,380	2,770	49.10	-51.8	--
	3/2/2020	13.90	6.78	1,430	2,940	9.11	-42.6	--
	5/1/2020	18.40	6.47	1,410	2,790	5.62	-39.9	--
	8/18/2020	19.80	6.63	1,450	2,990	2.52	-40.0	--
	10/19/2020	16.40	6.46	1,220	2,430	2.97	-32.2	--

TABLE 2

FIELD PARAMETER RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-5	3/17/2015	18.00	6.80	2,400	3,790	--	87.0	3.50
	6/16/2015	17.17	6.49	2,174	3,345	2.36	63.2	5.00
	9/15/2015	16.10	6.64	2,468	3,796	1.97	**64.70**	5.00
	12/1/2015	15.73	7.10	2,603	4,004	2.66	168.2	5.00
	3/29/2016	19.44	6.87	2,400	3,750	3.01	66.0	5.00
	6/21/2016	18.00	6.68	--	3,660	0.92	91.1	5.00
	9/7/2016	15.71	6.89	2,331	3,586	3.99	55.4	5.00
	12/1/2016	16.15	7.40	--	3,266	3.55	22.4	5.00
	3/7/2017	13.27	7.64	2,617	4,026	3.10	-64.7	15.00
	9/26/2017	14.09	6.85	--	3,030	--	--	4.50
	12/19/2017	12.49	6.85	--	3,513	--	--	--
	3/14/2018	15.02	6.92	--	3,476	1.37	70.5	--
	6/26/2018	16.65	7.05	--	3,124	1.64	47.6	5.00
	9/5/2018	16.10	7.47	--	3,186	3.88	63.6	5.00
	3/26/2019	12.80	7.29	1,490	2,780	--	-3.3	--
	6/17/2019	17.20	7.25	1,740	3,460	31.60	-26.0	--
	9/10/2019	17.90	6.27	1,710	3,430	30.80	-27.7	--
	11/4/2019	15.10	6.77	1,710	3,370	-26.40	103.1	--
	3/3/2020	16.20	6.36	1,690	3,360	9.83	-16.7	--
	5/4/2020	16.20	6.69	1,670	3,340	2.66	-23.2	--
	8/19/2020	19.20	6.58	1,660	3,370	1.86	-13.4	--
	10/20/2020	17.10	6.51	1,480	3,030	1.78	-11.8	--
MW-6	3/17/2015	17.30	6.90	1,800	2,800	--	103.0	3.25
	6/16/2015	17.77	6.73	1,584	2,437	2.12	1.9	4.00
	9/15/2015	15.96	6.57	1,784	2,745	2.87	84.3	3.75
	12/1/2015	16.18	7.32	1,867	2,873	2.93	82.9	3.75
	3/29/2016	16.64	6.77	1,700	2,630	4.89	103.0	3.75
	6/21/2016	17.00	7.11	--	27	3.86	59.8	4.25
	9/7/2016	16.48	7.00	1,676	2,578	1.87	8.7	3.75
	12/2/2016	12.07	7.29	--	2,409	4.10	50.8	4.00
	3/7/2017	14.16	7.10	1,936	2,979	2.01	-63.8	3.50
	6/13/2017	16.86	7.00	1,716	2,640	2.29	-36.8	1.00
	9/26/2017	16.61	6.51	--	2,287	--	--	1.50
	12/19/2017	13.49	6.85	--	2,640	--	--	--
	3/14/2018	16.20	6.94	--	2,581	2.36	68.9	--
	6/26/2018	22.89	6.91	--	2,494	2.20	52.8	--
	9/5/2018	20.66	7.18	--	2,381	2.13	65.0	1.00
	3/26/2019	16.40	6.95	1,270	2,540	--	-0.6	--
	6/18/2020	17.20	7.19	1,280	2,570	38.70	-16.1	--
	9/11/2019	18.50	6.20	1,280	2,560	38.80	-13.4	--
	11/5/2019	16.90	6.31	1,300	2,620	94.90	-14.5	--
	3/4/2020	15.10	6.54	1,290	2,580	5.92	-8.7	--
	5/6/2020	17.40	6.39	1,280	2,570	3.26	-5.6	--
	8/20/2020	18.50	6.67	1,240	2,600	2.35	-11.6	--
	10/20/2020	18.10	6.39	1,150	2,270	3.52	-6.3	--

TABLE 2

FIELD PARAMETER RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-7	3/17/2015	17.40	7.64	2,600	4,100	--	118.0	3.50
	6/16/2015	17.05	8.28	2,366	3,639	3.73	-48.2	6.25
	9/15/2015	16.47	7.66	2,663	4,096	6.44	85.4	6.25
	12/1/2015	16.03	7.90	2,853	4,389	2.00	-65.0	6.00
	3/29/2016	18.42	7.45	2,600	4,050	7.12	108.0	6.25
	6/21/2016	16.40	7.50	--	3,990	5.73	58.1	6.00
	9/7/2016	16.04	7.54	2,571	3,970	6.15	59.2	6.00
	12/2/2016	14.19	7.57	--	3,604	5.91	47.7	6.00
	3/7/2017	13.80	7.59	2,853	4,390	8.58	-29.4	5.50
	6/13/2017	17.73	7.47	2,510	3,863	9.30	-2.2	1.00
	9/26/2017	16.71	7.07	--	3,337	--	--	--
	12/19/2017	13.35	7.33	--	3,799	--	--	--
	3/14/2018	16.21	7.26	--	3,674	8.57	71.9	--
	6/26/2018	18.13	7.20	--	3,596	8.44	56.5	--
	9/5/2018	21.46	7.59	--	3,438	6.08	65.5	1.75
	3/25/2019	16.20	7.37	1,770	3,560	--	-30.6	--
	6/14/2019	18.20	7.03	1,820	3,650	46.20	-22.5	--
	9/9/2019	18.10	7.23	1,810	3,620	35.60	-50.5	--
	11/1/2019	13.50	6.61	1,750	3,410	139.50	-32.2	--
	3/2/2020	14.50	6.61	1,760	3,500	8.71	-32.1	--
	5/1/2020	18.80	6.60	1,780	3,580	3.88	-25.3	--
	8/18/2020	20.30	6.99	1,800	3,510	2.35	-27.8	--
	10/19/2020	16.70	6.42	1,580	3,130	3.98	-22.5	--
MW-8R	3/17/2015	19.30	6.96	2,100	3,310	--	30.0	3.00
	6/16/2015	17.82	7.07	1,970	3,033	0.48	-50.3	5.00
	9/15/2015	18.30	6.91	2,222	3,431	1.20	-10.7	5.25
	12/1/2015	16.75	7.41	2,341	3,595	1.08	-91.3	5.00
	3/29/2016	15.86	7.24	2,100	3,340	4.49	-56.0	5.25
	6/21/2016	18.20	7.15	--	3,230	0.18	-104.8	5.00
	9/7/2016	17.21	7.07	2,128	3,274	0.53	-81.1	5.00
	12/1/2016	13.01	7.10	--	2,930	2.36	39.6	5.00
	3/7/2017	14.89	7.40	2,368	3,644	2.40	-144.1	5.00
	6/13/2017	17.30	7.13	2,061	3,171	0.49	-103.0	1.50
	9/26/2017	19.77	6.97	--	2,860	--	--	--
	12/19/2017	14.97	7.11	--	3,176	--	--	--
	3/14/2018	19.03	7.09	--	3,127	0.04	-3.6	--
	6/26/2018	21.51	7.04	--	3,015	0.26	-13.9	--
	9/5/2018	21.78	7.32	--	2,872	0.05	8.3	2.75
	3/28/2019	17.00	7.32	1,560	3,070	--	-11.4	--
	6/24/2019	17.60	7.25	1,580	3,160	23.60	-22.5	--
	9/13/2019	20.10	6.09	1,570	3,140	30.10	-27.2	--
	11/6/2019	15.90	6.37	1,540	3,120	118.20	-9.8	--
	3/5/2020	16.00	6.76	1,530	3,060	6.71	-32.1	--
	5/7/2020	20.04	6.51	1,610	3,240	--	-24.1	--
	8/21/2020	24.20	6.76	1,500	2,970	1.78	-14.3	--
	10/22/2020	15.90	6.76	1,430	2,840	4.04	-19.0	--

Notes:

mg/L - milligrams per liter

uS/cm - microsiemens per centimeter

mg/L - milligrams per liter

°C - degrees Celcius
DO - dissolved oxygen
mV - millivolts
ORP - oxidation-reduction potential
TDS - total dissolved solids
-- - data not collected

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-1	3/17/2011	(orig)	**0.066**	0.39	0.011	0.084	1.5	0.28	**2.77**	<0.500	< 0.01	**1,610**	**2,730**	--
	8/17/2011	(orig)	**0.0189**	0.0068	< 0.001	0.0044	< 0.50	< 0.50	**0.318**	0.25	< 0.015	**1,500**	**2,480**	180,000
	10/18/2011	(orig)	--	--	--	--	--	--	--	--	--	--	--	300,000
	2/23/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**6.40**	0.78	**0.055**	**1,710**	**2,480**	23,000
	6/5/2012	(orig)	< 0.001	0.002	< 0.001	< 0.003	--	--	**5.15**	9.4	0.033	**1,520**	--	93,000
	6/5/2012	(Duplicate)	< 0.001	0.002	< 0.001	< 0.003	--	--	--	--	--	--	--	--
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.60**	**27.5**	0.044	**1,070**	**2,140**	>80000
	9/18/2012	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--	--	>80,000
	1/8/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.10**	**25.3**	**0.568**	**1,150**	**2,180**	76,000
	1/8/2013	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--	--	142,000
	3/26/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.49**	**37**	**0.079**	**1,000**	**1,980**	280,000
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.52**	**31.1**	**0.056**	**1,050**	--	81,500
	6/11/2013	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--	--	--
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.164	**18.7**	0.0492	**1,130**	**2,090**	2,300
	1/7/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.132	**22.5**	0.0349	**1,040**	**1,990**	335,000
	3/18/2014	(orig)	0.0036	< 0.001	< 0.001	< 0.003	--	--	**0.643**	**20.1**	< 0.015	**1,170**	**2,270**	6,700
	6/16/2014	(orig)	--	--	--	--	--	--	**1.200**	5.7	< 0.015	**1,380**	**2,300**	--
	9/25/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.570**	4.4	< 0.015	**1,690**	--	--
	12/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.49**	2.9	< 0.015	**1,580**	**2,410**	--
	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.60**	3.4	< 0.015	**1,430**	**2,560**	--
	6/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.36**	2.5	< 0.015	**1,470**	**1,920**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.52**	2.8	< 0.015	**1,500**	**2,400**	--
	12/1/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.76**	1.2	< 0.015	**1,420**	**2,370**	--
	3/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.86**	0.4	< 0.015	**1,600**	**2,260**	--
	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.72**	1.1	< 0.015	**1,390**	**2,250**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.38**	1.7	< 0.015	**1,560**	**2,230**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	0.5	--	**1,450**	**2,410**	--
	3/7/2017	(orig)	--	--	--	--	--	--	**1.90**	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	**1.76**	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	**2.04**	--	< 0.015	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	**1.75**	--	--	--	--	--
	3/14/2018	(orig)	--	--	--	--	--	--	**1.94**	--	--	--	--	--
	6/26/2018	(orig)	--	--	--	--	--	--	**1.83**	--	--	--	--	--
	9/5/2018	(orig)	--	--	--	--	--	--	**1.83**	--	--	--	--	--
	12/14/2018	(orig)	--	--	--	--	--	--	**1.8**	--	--	--	--	--
	3/29/2019	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.056**	--	<0.01	--	--	--
	6/24/2019	(orig)	--	--	--	--	--	--	**2.00**	--	--	--	--	--
	9/13/2019	(orig)	--	--	--	--	--	--	**1.800**	--	--	--	--	--
	11/6/2019	(orig)	--	--	--	--	--	--	**0.608**	--	--	--	--	--
	3/5/2020	(orig)	--	--	--	--	--	--	**1.28**	--	--	--	--	--
	5/6/2020	(orig)	--	--	--	--	--	--	**1.11**	--	--	--	--	--
	8/20/2020	(orig)	--	--	--	--	--	--	**1.57**	--	--	--	--	--
	10/21/2020	(orig)	--	--	--	--	--	--	**0.625**	--	--	--	--	--
MW-2	3/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.1	< 0.11	**0.334**	**55.8**	**0.0664**	**1,000**	**2950**	--
	8/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.50	< 0.50	0.179	**71.9 E / 54.1**	**0.0726**	**1,040**	**2110**	61,000
	10/18/2011	(orig)	--	--	--	--	--	--	--	--	--	--	--	124,000
	2/23/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0360	**44.9**	**0.059**	**1,350**	**2,220**	14,900
	6/5/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0078	4.3	**0.061**	**1,500**	--	32,000
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0194	**42.5**	**0.067**	**1,150**	**2,440**	6,500
	1/8/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0057	**41.8**	**0.0688**	**1,230**	**2,590**	29,000
	3/26/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0188	**43.3**	**0.0728**	**1,200**	**1,930**	4,100
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0086	**40.6**	**0.0666**	**1,230**	--	18,000
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	< 0.0050	**35.6**	**0.0657**	**1,200**	**2,210**	160
	1/7/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0069	**33.5**	**0.0745**	**1,300**	**2,390**	2,435
	3/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.281**	**40.2**	**0.080**	**1,320**	**2,580**	670

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-2	6/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.09	**22.2**	**0.073**	**1,280**	**2,360**	--
	9/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.783**	**34**	**0.0734**	**1,140**	**2,440**	--
	12/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.746**	**31.0**	**0.0715**	**1,380**	**2,360**	--
	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0195	**38.3**	**0.0774**	**1,330**	**2,570**	--
	6/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0703	**32.7**	**0.0776**	**1,310**	**1,840**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	< 0.005	**37.4**	**0.0811**	**1,310**	**2,360**	--
	12/1/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0144	**34.7**	**0.0779**	**1,250**	**2,840**	--
	3/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	< 0.005	**36.1**	**0.0806**	**1,340**	**2,150**	--
	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0099	**40.6**	**0.0764**	**1,260**	**2,190**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0104	**29.9**	**0.074**	**1,390**	**2,320**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	< 0.005	**33.6**	**0.0759**	**1,290**	**2,410**	--
	3/7/2017	(orig)	--	--	--	--	--	--	< 0.005	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	< 0.005	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	< 0.005	--	**0.0725**	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	< 0.005	--	**0.0756**	--	--	--
	3/14/2018	(orig)	--	--	--	--	--	--	< 0.005	--	**0.0798**	--	--	--
	6/26/2018	(orig)	--	--	--	--	--	--	--	--	**0.0684**	--	--	--
	9/5/2018	(orig)	--	--	--	--	--	--	< 0.005	--	**0.0746**	--	--	--
	12/14/2016	(orig)	--	--	--	--	--	--	< 0.01	--	**0.0742**	--	--	--
	3/29/2019	(orig)	--	--	--	--	--	--	< 0.01	--	**0.0826**	--	--	--
	6/18/2019	(orig)	--	--	--	--	--	--	< 0.01	--	--	--	--	--
	9/11/2019	(orig)	--	--	--	--	--	--	< 0.01	--	**0.0811**	--	--	--
	11/5/2019	(orig)	--	--	--	--	--	--	< 0.01	--	**0.0862**	--	--	--
	3/4/2020	(orig)	--	--	--	--	--	--	<0.005	--	**0.0835**	--	--	--
	5/7/2020	(orig)	--	--	--	--	--	--	<0.005	--	**0.0838**	--	--	--
	8/21/2020	(orig)	--	--	--	--	--	--	<0.005	--	**0.0822**	--	--	--
	10/22/2020	(orig)	--	--	--	--	--	--	<0.005	--	**0.0856**	--	--	--
MW-3	3/17/2011	(orig)	< 0.001	0.013	< 0.001	0.0042	< 0.1	< 0.1	**1.79**	**29.7**	0.0316	**857**	**2360**	--
	8/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.50	< 0.50	**1.42**	**33**	**0.0524**	**972**	**1960**	18,000
	10/18/2011	(orig)	--	--	--	--	--	--	--	--	--	--	--	230,000
	2/23/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.60**	**22.0**	0.038	**1,140**	**2,050**	11,900
	6/5/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.43**	**15.0**	0.048	**1,380**	--	22,000
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.24**	**12.2**	0.032	**1,050**	**2,150**	23,000
	1/8/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.62**	**24.6**	**0.0673**	**1,140**	**2,240**	51,000
	3/26/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.83**	0.42	< 0.015	**1,080**	**2,030**	70
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.75**	0.76	< 0.015	**1,110**	--	830
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.7**	1.4	< 0.015	**1,120**	**1,910**	110
	1/7/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.77**	0.15	< 0.015	**1,180**	**1,970**	284
	1/7/2014	(Duplicate)	--	--	--	--	--	--	--	--	--	--	--	350
	3/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.81**	0.11	< 0.015	**1,150**	**2,050**	870
	6/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2**	8.8	0.024	**1,130**	**1,190**	--
	9/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.29**	**11.3**	0.0261	**1,060**	**2,240**	--
	12/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.06**	6.1	< 0.015	**1,210**	**2,110**	--
	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.06**	4.3	< 0.015	**1,150**	**2,100**	--
	6/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.88**	6	< 0.015	**1,120**	**1,380**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.1**	8.1	< 0.015	**1,120**	**2,040**	--
	12/1/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.17**	7.2	< 0.015	**1,040**	**2,210**	--
	3/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**2.14**	8.2	< 0.015	**1,130**	**2,020**	--
	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.92**	**10.6**	< 0.015	**1,060**	**1,930**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.88**	2.3	< 0.015	**1,190**	**1,780**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.98**	6.9	< 0.015	**1,080**	**1,970**	--
	3/7/2017	(orig)	--	--	--	--	--	--	**2.22**	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	**1.87**	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	**1.82**	--	<0.015	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	**1.82**	--	--	--	--	--

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-3	3/14/2018	(orig)	--	--	--	--	--	--	**1.97**	--	--	--	--	--
	6/26/2018	(orig)	--	--	--	--	--	--	**1.94**	--	--	--	--	--
	9/5/2018	(orig)	--	--	--	--	--	--	**1.88**	--	--	--	--	--
	12/14/2018	(orig)	--	--	--	--	--	--	**1.76**	--	--	--	--	--
	3/29/2019	(orig)	--	--	--	--	--	--	**1.75**	--	--	--	--	--
	6/17/2019	(orig)	--	--	--	--	--	--	**1.74**	--	--	--	--	--
	9/10/2019	(orig)	--	--	--	--	--	--	**1.74**	--	--	--	--	--
	11/4/2019	(orig)	--	--	--	--	--	--	**1.74**	--	--	--	--	--
	3/3/2020	(orig)	--	--	--	--	--	--	**1.84**	--	--	--	--	--
	5/4/2020	(orig)	--	--	--	--	--	--	**1.64**	--	--	--	--	--
	8/19/2020	(orig)	--	--	--	--	--	--	**1.72**	--	--	--	--	--
	10/21/2020	(orig)	--	--	--	--	--	--	**1.69**	--	--	--	--	--
MW-4	3/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.1	0.14	0.022	**10.4**	0.042	**1,290**	**2,650**	--
	8/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.50	< 0.50	0.0062	9.4	0.0402	**1,240**	**2,000**	9,800
	10/18/2011	(orig)	--	--	--	--	--	--	--	--	--	--	--	90,000
	2/23/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0170	8.6	0.0350	**1,380**	**2,070**	40,000
	6/5/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0814	7.5	0.0369	**1,540**	--	49,000
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.1030	7.8	0.0394	**1,190**	**2,180**	4,000
	1/8/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0289	9.3	0.0386	**1,240**	**2,230**	202,000
	3/26/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0605	8.9	0.0441	**1,200**	**1,950**	42,500
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0484	7.3	0.0369	**1,260**	--	33,000
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0303	8.6	0.0369	**1,180**	**2,090**	910
	1/7/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0265	5.5	0.0381	**1,350**	**1,960**	1,160
	3/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0227	8.2	0.0410	**1,280**	**2,180**	1,865
	6/16/2014	(orig)	--	--	--	--	--	--	0.0080	6.5	0.0340	**1,240**	**1,950**	--
	9/25/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0160	7	0.0335	**1,260**	--	--
	12/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0155	6.8	0.0314	**1,330**	**2,250**	--
	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0156	6.7	0.0432	**1,300**	**2,280**	--
	6/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0226	5.6	0.0408	**1,280**	**2,100**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0088	7.1	0.0406	**1,260**	**1,960**	--
	12/1/2015	(orig)	< 0.001	0.0023	< 0.001	< 0.003	--	--	0.0118	7.1	0.0402	**1,210**	**2,320**	--
	3/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0134	7.7	0.0416	**1,300**	**2,080**	--
	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0713	9.3	0.0427	**1,210**	**2,210**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0138	6.3	0.0354	**1,340**	**2,140**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	6.9	--	**1,250**	**1,950**	--
	3/7/2017	(orig)	--	--	--	--	--	--	--	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	0.0538	--	0.0358	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	0.1280	--	0.0433	--	--	--
	3/14/2018	(orig)	--	--	--	--	--	--	<0.005	--	0.0398	**1470**	**2160**	--
	6/26/2018	(orig)	--	--	--	--	--	--	--	--	0.0361	**1,320**	**2,290**	--
	9/5/2018	(orig)	--	--	--	--	--	--	**0.0217**	--	0.039	**1,400**	**2,580**	--
	12/14/2018	(orig)	--	--	--	--	--	--	<0.010	--	0.0366	**1,130**	**2,220**	--
	3/29/2019	(orig)	--	--	--	--	--	--	<0.010	--	0.0274	--	--	--
	6/14/2019	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	9/9/2019	(orig)	--	--	--	--	--	--	<0.010	--	0.0404	--	--	--
	11/4/2019	(orig)	--	--	--	--	--	--	<0.010	--	0.0398	**1,260**	**1,660**	--
	3/2/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0391	--	--	--
	5/1/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0391	--	--	--
	8/18/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0387	--	--	--
	10/19/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0426	--	--	--

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-5	10/18/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.5	< 0.5	--	--	--	--	--	970,000
	2/23/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.10**	0.12	< 0.015	**3,500**	**2,760**	252,000
	6/5/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.868**	< 0.10	< 0.015	**2,040**	--	63,000
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.791**	< 0.10	< 0.015	**1,620**	**2,830**	130,000
	1/8/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.58**	< 0.10	< 0.015	**1,710**	**2,950**	102,000
	3/26/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.356**	0.3	< 0.015	**1,700**	**2,370**	16,950
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.609**	0.25	< 0.015	**1,630**	--	20,500
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.368**	< 0.10	< 0.015	**1,640**	**2,540**	660
	1/7/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.396**	< 0.10	< 0.015	**1,740**	**2,770**	5,450
	3/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.606**	< 0.10	< 0.015	**1,760**	**2,800**	1,315
	6/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.93**	0.17	< 0.015	**1,730**	**2,320**	--
	9/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.433**	0.14	< 0.015	**1,490**	**2,850**	--
	12/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0706	0.13	< 0.015	**1,790**	**2,710**	--
	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0433	0.11	< 0.015	**1,730**	**3,030**	--
	6/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0331	< 0.10	< 0.015	**1,720**	**2,780**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0215	0.14	< 0.015	**1,810**	**3,180**	--
	12/1/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0163	0.16	< 0.015	**1,670**	**3,100**	--
	3/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.128	< 0.10	< 0.015	**1,760**	**2,700**	--
	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0109	0.11	< 0.015	**1,610**	**2,630**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.235**	< 0.10	< 0.015	**1,850**	**2,760**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.214**	< 0.10	< 0.015	**1,680**	**2,630**	--
	3/7/2017	(orig)	--	--	--	--	--	--	0.0405	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	**1.54**	--	<0.0015	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	0.182	--	--	--	--	--
	3/14/2018	(orig)	--	--	--	--	--	--	0.192	--	--	--	--	--
	6/26/2018	(orig)	--	--	--	--	--	--	0.0054	--	--	--	--	--
	9/5/2018	(orig)	--	--	--	--	--	--	0.02	--	--	--	--	--
	12/14/2018	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	3/29/2019	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	6/17/2019	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	9/10/2019	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	11/4/2019	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	3/3/2020	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
	5/4/2020	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
	8/19/2020	(orig)	--	--	--	--	--	--	0.00942	--	--	--	--	--
	10/20/2020	(orig)	--	--	--	--	--	--	0.0866	--	--	--	--	--
MW-6	10/18/2011	(orig)	**0.033**	< 0.001	< 0.001	0.012	< 0.5	< 0.5	--	--	--	--	--	720,000
	2/23/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	<0.005	**25.8**	**0.0590**	**950**	**1,760**	8,900
	6/5/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.600**	**35.0**	0.0454	**1,090**	--	35,000
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**1.110**	**29.5**	0.0460	**955**	**1,990**	12,000
	1/8/2013	(orig)	0.0012	< 0.001	< 0.001	< 0.003	--	--	0.158	**25.6**	**0.0536**	**978**	**1,980**	1,910,000
	3/26/2013	(orig)	0.0022	< 0.001	< 0.001	< 0.003	--	--	**0.282**	**30.9**	**0.0602**	**945**	**1,740**	25,500
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.328**	**27.6**	**0.0621**	**946**	--	4,750
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.299**	**22.7**	0.0389	**929**	**1,710**	65
	1/7/2014	(orig)	0.0026	< 0.001	< 0.001	0.0034	--	--	**0.268**	**19.5**	0.0417	**984**	**2,060**	2,460
	3/18/2014	(orig)	0.0012	< 0.001	< 0.001	< 0.003	--	--	**0.246**	**23.6**	0.0392	**1,000**	**2,000**	710
	6/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.140	4.6	0.0360	**955**	**1,780**	--
	9/16/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.115	**23.2**	0.0386	**846**	**1,930**	--
	12/16/2014	(orig)	0.0014	< 0.001	< 0.001	< 0.003	--	--	0.147	**27.2**	0.0343	**1,000**	**1,830**	--
	3/17/2015	(orig)	< 0.001	0.0018	< 0.001	< 0.003	--	--	0.114	**26**	0.0360	**986**	**1,990**	--
	6/16/2015	(orig)	< 0.001	0.002	< 0.001	0.0037	--	--	0.0917	**22.2**	0.0370	**988**	**1,400**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0456	**26.4**	0.0369	**980**	**1,940**	--
	12/1/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0396	**25.3**	0.0373	**904**	**2,130**	--
	3/29/2016	(orig)	0.0020	0.0034	0.0015	0.0048	--	--	0.0338	**24.6**	0.0364	**963**	**1,900**	--

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-6	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0819	**26.2**	0.0296	**884**	**1,880**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.1070	**22.4**	0.0272	**1,000**	**1,940**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	**24.8**	--	**936**	**1,860**	--
	3/7/2017	(orig)	--	--	--	--	--	--	0.1290	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	0.0734	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	0.0787	--	0.0277	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	0.0481	--	0.0358	**800**	**2060**	--
	3/14/2018	(orig)	--	--	--	--	--	--	0.0459	--	0.0329	**1050**	**2030**	--
	6/26/2018	(orig)	--	--	--	--	--	--	--	--	0.0284	**972**	**2,030**	--
	9/5/2018	(orig)	--	--	--	--	--	--	**0.024**	--	0.0322	**1,060**	**2,150**	--
	12/14/2018	(orig)	--	--	--	--	--	--	<0.010	--	0.0391	**1,010**	**2,060**	--
	3/29/2019	(orig)	--	--	--	--	--	--	<0.010	--	0.044	--	--	--
	6/18/2019	(orig)	--	--	--	--	--	--	<0.010	--	--	--	--	--
	9/11/2019	(orig)	--	--	--	--	--	--	<0.010	--	0.0341	--	--	--
	11/5/2019	(orig)	--	--	--	--	--	--	<0.010	--	0.0342	**1,000**	**1,690**	--
	3/4/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0343	--	--	--
	5/6/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0334	--	--	--
	8/20/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0332	--	--	--
	10/20/2020	(orig)	--	--	--	--	--	--	<0.005	--	0.0381	--	--	--
MW-7	10/18/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.5	< 0.5	--	--	--	--	--	2,000,000
	2/23/2012	(orig)	< 0.001	0.0011	< 0.001	0.0034	--	--	< 0.005	4.6	0.022	**3,320**	**4,660**	< 1
	6/5/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.019	1.1	0.030	**1,820**	--	8
	9/18/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.012	1.0	0.024	**1,610**	**4,280**	1,900
	1/8/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0093	1.3	0.0164	**1,770**	**3,400**	145,000
	3/26/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	<0.005	5.3	< 0.015	**1,730**	**3,050**	79
	6/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0082	**18.7**	< 0.015	**1,700**	--	18
	9/10/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.168	**31.4**	< 0.015	**1,740**	**3,080**	110
	1/7/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.452**	**28.5**	< 0.015	**1,950**	**3,320**	8,300
	3/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.438**	**35**	< 0.015	**1,920**	**3,350**	940
	6/16/2014	(orig)	--	--	--	--	--	--	**0.49**	2.7	< 0.015	**1,930**	**2,940**	--
	9/25/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.231**	**29.7**	< 0.015	**1,970**	--	--
	12/16/2014	(orig)	0.0013	0.0031	< 0.001	< 0.003	--	--	**0.435**	3.9	< 0.015	**2,140**	**2,610**	--
	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.321**	**23.9**	< 0.015	**2,030**	**3,530**	--
	6/16/2015	(orig)	0.0023	0.0071	< 0.001	0.0045	--	--	**0.256**	**18.2**	< 0.015	**1,970**	**2,300**	--
	9/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	**0.227**	**20.2**	< 0.015	**2,010**	**3,100**	--
	12/1/2015	(orig)	0.0012	0.0053	< 0.001	< 0.003	--	--	0.108	**20.2**	< 0.015	**1,900**	**2,600**	--
	3/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.102	**17.2**	< 0.015	**2,080**	**3,120**	--
	6/21/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0552	**21.2**	< 0.015	**1,900**	**2,960**	--
	9/7/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	0.0387	**16**	< 0.015	**2,160**	**2,910**	--
	12/2/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	**17.3**	--	**1,950**	**3,090**	--
	3/7/2017	(orig)	--	--	--	--	--	--	0.0077	--	--	--	--	--
	6/13/2017	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
	9/26/2017	(orig)	--	--	--	--	--	--	**0.2620**	--	<0.015	--	--	--
	12/19/2017	(orig)	--	--	--	--	--	--	<0 .0050	--	--	--	--	--
	3/14/2018	(orig)	--	--	--	--	--	--	0.0056	--	--	--	--	--

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-7	6/26/2018	(orig)	--	--	--	--	--	--	<0 .0050	--	--	--	--	--
	9/5/2018	(orig)	--	--	--	--	--	--	<0 .0050	--	--	--	--	--
	12/14/2018	(orig)	--	--	--	--	--	--	<0 .010	--	--	--	--	--
	3/29/2019	(orig)	--	--	--	--	--	--	<0 .010	--	--	--	--	--
	6/14/2019	(orig)	--	--	--	--	--	--	<0 .010	--	--	--	--	--
	9/9/2019	(orig)	--	--	--	--	--	--	<0 .010	--	--	--	--	--
	11/1/2019	(orig)	--	--	--	--	--	--	<0 .010	--	--	--	--	--
	3/2/2020	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
	5/1/2020	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
	8/18/2020	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
	10/19/2020	(orig)	--	--	--	--	--	--	<0.005	--	--	--	--	--
MW-8	10/19/2011	(orig)	**0.15**	**1.24**	0.070	**1.43**	7.1	< 0.5	--	--	--	--	--	2,300,000
	2/23/2012	(orig)	**0.036**	0.772	0.054	**1.35**	--	--	<0.005	3.2	0.049	**813**	**5,790**	14
	2/23/2012	(Duplicate)	**0.069**	0.876	0.109	**1.66**	--	--	--	--	--	--	--	--
	6/5/2012	(orig)	**0.013**	0.120	0.025	0.447	--	--	0.022	**18.1**	0.045	**793**	--	630
	9/20/2012	(orig)	**0.0098**	0.002	0.006	0.342	--	--	--	**21.8**	--	**1,130**	**2,960**	--
	1/8/2013	(orig)	**0.0369**	0.0199	0.0018	0.0488	--	--	--	**30.4**	--	**1,260**	**2,700**	222,000
	3/26/2013	(orig)	**Not sampled due to damaged well casing.**											
	6/11/2013	(orig)	**Not sampled due to damaged well casing.**											
	7/13/2013	(orig)	**Plugged and Abandoned**											
MW-8R	9/10/2013	(orig)	**0.0100**	0.0171	0.0017	0.0615	--	--	**0.395**	**38.6**	0.038	**1,230**	**2,430**	5,700
	9/10/2013	(Duplicate)	**0.0083**	0.0125	0.0018	0.0443	--	--	--	--	--	--	--	8,700
	1/7/2014	(orig)	**0.179**	0.353	0.0105	**0.69**	--	--	**0.255**	**28.3**	0.0374	**1,360**	**2,900**	425,000
	1/7/2014	(Duplicate)	**0.192**	0.344	0.0107	**0.715**	--	--	--	--	--	--	--	--
	3/18/2014	(orig)	**0.103**	0.154	0.0076	0.164	--	--	0.106	**35.0**	< 0.015	**1,290**	**2,460**	8,550
	3/18/2014	(Duplicate)	**0.116**	0.149	0.0077	0.156	--	--	--	--	--	--	--	--
	6/16/2014	(orig)	**0.319**	0.846	0.0305	0.505	--	--	**1.5**	4.4	< 0.015	**1,510**	**2,330**	--
	6/16/2014	(Duplicate)	**0.291**	0.816	0.0296	**0.642**	--	--	--	--	--	--	--	--
	9/25/2014	(orig)	**0.172**	0.0022	< 0.001	0.0067	--	--	**1.38**	6.6	< 0.015	**1,530**	--	--
	9/25/2014	(Duplicate)	**0.182**	0.0025	< 0.001	0.0068	--	--	--	--	--	--	--	--
	12/16/2014	(orig)	**0.187**	0.301	0.0248	0.368	--	--	**1.01**	**13**	< 0.015	**1,470**	**2,440**	--
	12/16/2014	(Duplicate)	**0.195**	0.283	0.0246	0.353	--	--	--	--	--	--	--	--
	3/17/2015	(orig)	**0.262**	0.0205	**0.714**	0.501	--	--	**0.323**	**27**	0.021	**1,320**	**2,240**	--
	3/17/2015	(Duplicate)	**0.263**	0.0205	**0.701**	0.494	--	--	--	--	--	--	--	--
	6/16/2015	(orig)	**0.191**	0.418	0.0147	0.300	--	--	**0.707**	**11.2**	< 0.015	**1,410**	**2,040**	--
	6/16/2015	(Duplicate)	**0.193**	0.412	0.0141	0.293	--	--	--	--	--	--	--	--
	9/15/2015	(orig)	**0.451**	**1.04**	0.0587	**0.881**	--	--	**0.7**	**18**	< 0.015	**1,340**	**2,340**	--
	9/15/2015	(Duplicate)	**0.449**	0.965	0.0603	**0.83**	--	--	--	--	--	--	--	--
	12/1/2015	(orig)	**0.412**	0.873	0.0257	0.508	--	--	**0.84**	**13.1**	< 0.015	**1,290**	**2,180**	--
	12/1/2015	(Duplicate)	**0.418**	0.922	0.0264	0.526	--	--	--	--	--	--	--	--
	3/29/2016	(orig)	**0.173**	0.313	0.0136	0.222	--	--	**1.16**	2.8	< 0.015	**1,560**	**2,280**	--
	3/29/2016	(Duplicate)	**0.17**	0.278	0.0148	0.247	--	--	--	--	--	--	--	--
	6/21/2016	(orig)	**0.193**	0.586	0.0168	0.466	--	--	**0.431**	**20.7**	< 0.015	**1,280**	**2,180**	--
	6/21/2016	(Duplicate)	**0.204**	0.625	0.0182	0.456	--	--	--	--	--	--	--	--
	9/7/2016	(orig)	**0.27**	0.901	0.0291	**0.670**	--	--	**0.758**	**13.7**	< 0.015	**1,500**	**2,300**	--
	9/7/2016	(Duplicate)	**0.3**	**1.12**	0.0372	**0.812**	--	--	--	--	--	--	--	--
	12/2/2016	(orig)	**0.162**	0.122	< 0.005	0.246	--	--	**0.488**	**17.6**	< 0.015	**1,320**	**2,260**	--
	3/7/2017	(orig)	**0.0186**	<0.001	<0.001	<0.003	--	--	**0.437**	--	--	--	--	--
	6/13/2017	(orig)	0.0037	0.0047	<0.001	0.0089	--	--	**0.396**	--	--	--	--	--
	9/26/2017	(orig)	0.0032	0.0029	<0.001	0.0088	--	--	0.0218	--	<0.015	--	--	--
	12/19/2017	(orig)	0.0014	0.0022	< 0.001	0.0059	--	--	**0.432**	--	--	--	--	--
	3/14/2018	(orig)	<0.001	0.0013	<0.001	<0.003	--	--	**0.364**	--	--	--	--	--
	6/26/2018	(orig)	<0.001	<0.001	<0.001	<0.003	--	--	**0.434**	--	--	--	--	--
	9/5/2018	(orig)	<0.001	<0.001	<0.001	<0.003	--	--	**0.442**	--	--	--	--	--
	12/14/2018	(orig)	<0.001	<0.001	<0.001	<0.003	--	--	**0.238**	--	--	--	--	--

TABLE 3

PETROLEUM HYDROCARBON AND GENERAL CHEMISTRY GROUNDWATER ANALYTICAL RESULTS
SAN JUAN 29-7 UNIT 37
RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Selenium (dissolved) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	NE	NE	**0.2**	**10**	**0.05**	**600**	**1,000**	
MW-8R	3/29/2019	(orig)	<0.001	<0.001	<0.001	<0.003	--	--	0.172	--	--	--	--	--
	6/24/2019	(orig)	--	--	--	--	--	--	**0.427**	--	--	--	--	--
	9/13/2019	(orig)	<0.001	<0.001	<0.001	<0.003	--	--	**0.357**	--	--	--	--	--
	11/6/2019	(orig)	<0.001	<0.001	<0.001	<0.003	--	--	0.0153	--	--	--	--	--
	3/5/2020	(orig)	--	--	--	--	--	--	**1.98**	--	--	--	--	--
	5/7/2020	(orig)	--	--	--	--	--	--	**0.775**	--	--	--	--	--
	8/21/2020	(orig)	--	--	--	--	--	--	0.0524	--	--	--	--	--
	10/22/2020	(orig)	--	--	--	--	--	--	**0.710**	--	--	--	--	--

Notes:

mg/L - milligrams per liter

CFU/mL - colony forming unit per milliliter

E = analyte concentration exceeded the calibration range

ND - not detected, practical quantitation limit unknown

NE - not established

NMWQCC - New Mexico Water Quality Control Commission

TPH DRO = total petroleum hydrocarbons diesel range organics

TPH GRO = total petroleum hydrocarbons gasoline range organics

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

BOLD - indicates concentration exceeds the NNEPA standard

-- - not analyzed

Cells shaded in gray indicate groundwater samples collected prior to CoolOx™ treatment

ENCLOSURE A – ANALYTICAL LABORATORY REPORTS

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 02, 2021

Revised Report

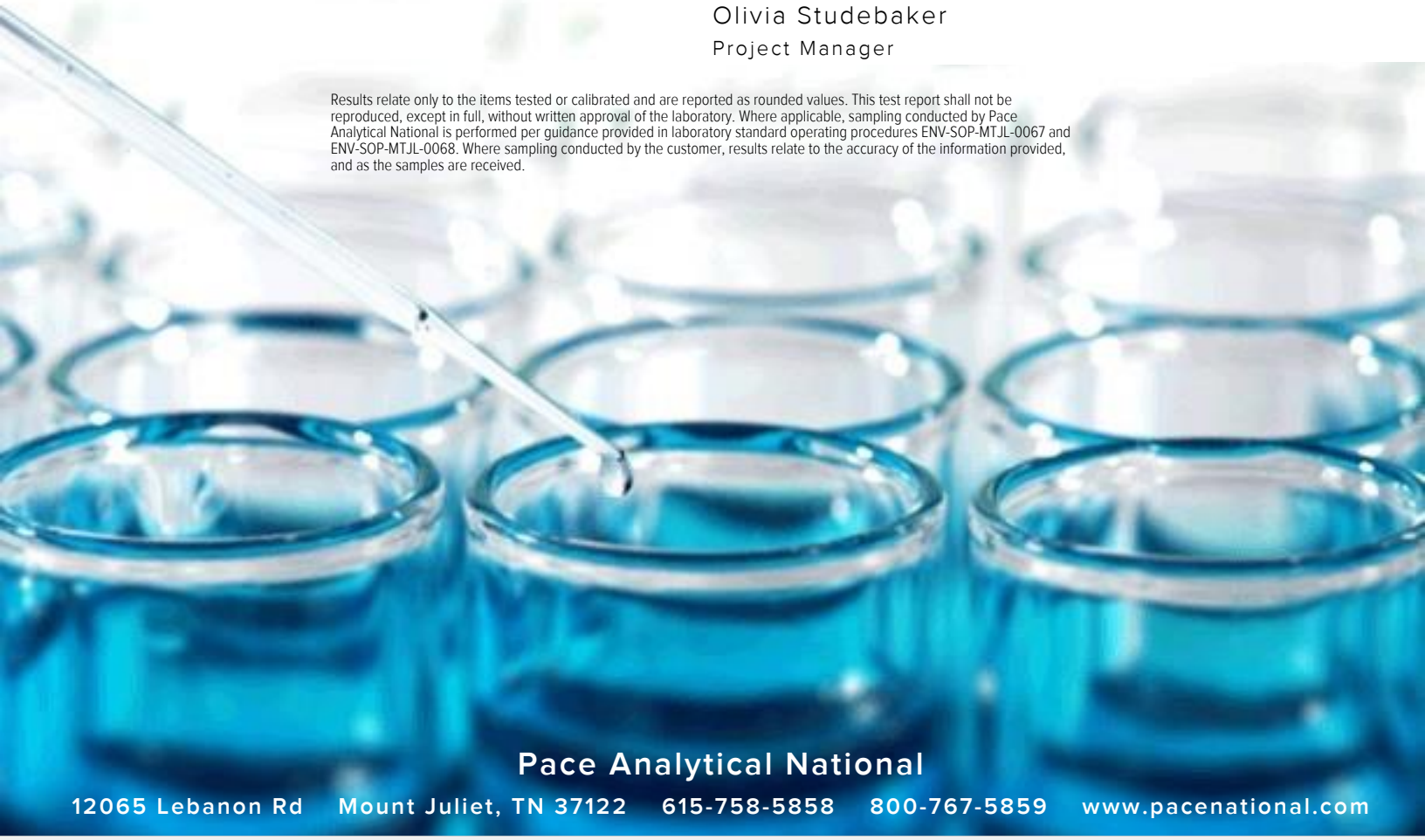
HilCorp-Farmington, NM

Sample Delivery Group:	L1196674
Samples Received:	03/07/2020
Project Number:	
Description:	San Juan 29-7 Unit 37
Site:	SJ 29-7 #37
Report To:	Kurt Hoekstra 382 Road 3100 Aztec, NM 87401

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW1 L1196674-01 GW

Collected by: Kurt | Collected date/time: 03/05/20 11:25 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:00	LD	Mt. Juliet, TN

MW2 L1196674-02 GW

Collected by: Kurt | Collected date/time: 03/04/20 13:35 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:03	LD	Mt. Juliet, TN

MW3 L1196674-03 GW

Collected by: Kurt | Collected date/time: 03/03/20 14:10 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:06	LD	Mt. Juliet, TN

MW4 L1196674-04 GW

Collected by: Kurt | Collected date/time: 03/02/20 11:30 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:10	LD	Mt. Juliet, TN

MW5 L1196674-05 GW

Collected by: Kurt | Collected date/time: 03/03/20 11:20 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:13	LD	Mt. Juliet, TN

MW6 L1196674-06 GW

Collected by: Kurt | Collected date/time: 03/04/20 11:05 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:16	LD	Mt. Juliet, TN

MW7 L1196674-07 GW

Collected by: Kurt | Collected date/time: 03/02/20 14:30 | Received date/time: 03/07/20 09:15

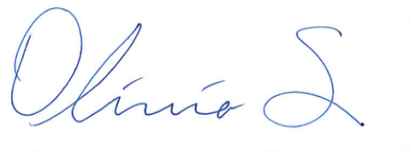
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:20	LD	Mt. Juliet, TN

MW8R L1196674-08 GW

Collected by: Kurt | Collected date/time: 03/05/20 14:00 | Received date/time: 03/07/20 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1440352	1	03/09/20 08:26	03/09/20 18:23	LD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

Report Revision History

Level II Report - Version 1: 03/12/20 16:38

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	1.28		0.00500	1	03/09/2020 18:00	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	03/09/2020 18:03	WG1440352
Selenium,Dissolved	0.0835		0.00200	1	03/09/2020 18:03	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	1.84		0.00500	1	03/09/2020 18:06	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	03/09/2020 18:10	WG1440352
Selenium,Dissolved	0.0391		0.00200	1	03/09/2020 18:10	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	03/09/2020 18:13	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	ND		0.00500	1	03/09/2020 18:16	WG1440352
Selenium,Dissolved	0.0343		0.00200	1	03/09/2020 18:16	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	03/09/2020 18:20	WG1440352

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	1.98		0.00500	1	03/09/2020 18:23	WG1440352

Method Blank (MB)

(MB) R3506857-6 03/09/20 17:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Manganese,Dissolved	U		0.000250	0.00500
Selenium,Dissolved	U		0.000380	0.00200

Laboratory Control Sample (LCS)

(LCS) R3506857-7 03/09/20 17:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	0.0500	0.0514	103	80.0-120	
Selenium,Dissolved	0.0500	0.0511	102	80.0-120	

L1196431-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1196431-09 03/09/20 17:35 • (MS) R3506857-9 03/09/20 17:42 • (MSD) R3506857-10 03/09/20 17:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	0.0500	0.274	0.315	0.318	82.9	88.4	1	75.0-125			0.855	20
Selenium,Dissolved	0.0500	ND	0.0511	0.0497	102	99.3	1	75.0-125			2.89	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Billing Information:
PO Box 61529
Houston, TX 77208

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Kurt Hoekstra

Email To: ccardoza@hilcorp.com;khoekstra@hilcorp.com;jde

Project Description: San Juan 29-7 Unit 37

City/State Collected:

Please Circle: PT MT CT ET

Phone: 505-486-9543
Fax:

Client Project #

Lab Project # HILCORANM-SANJUAN

SDG # L1196674

A209

Table #

Collected by (print): Kurt

Site/Facility ID # SJ 29-7 # 37

P.O. #

Acctnum: HILCORANM
Template: T157359
Prelogin: P750464
PM: 823 - Olivia Studebaker
PB:
Shipped Via:

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Dissolved Mn 250mlHDPE-NoPres	Dissolved Mn, Se 250mlHDPE-NoPres	SULFATE, TDS 125mlHDPE-NoPres	SULFATE, TDS 250mlHDPE-NoPres	V8260BTEX 40mlAmb-HCl	No Samples Field Filtered	Remarks	Sample # (lab only)
MW1		GW		3-5	11:25	1	X					X		-01
MW2		GW		3-4	1:35	1		X				X		-02
MW3		GW		3-3	2:10	1	X					X		-03
MW4		GW		3-2	11:30	2		X		X		X		-04
MW5		GW		3-3	11:20	1	X					X		-05
MW6		GW		3-4	11:05	2		X	X			X		-06
MW7		GW		3-2	2:30	1	X					X		-07
MW8R		GW		3-5	2:00	4	X				X	X		-08

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

Remarks:

pH ______ Temp ______
Flow ______ Other ______

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

Samples returned via: ___ UPS ___ FedEx ___ Courier ______

Tracking # 4794 8841 6048

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	
Kurt Hoekstra	3-6-20	6:50			
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp: °C** MBPAG 6+.3=.3	**Bottles Received:** 13
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date:**	**Time:**
			Sandy yossef	3/7/20	9:15

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 02, 2021

Revised Report

HilCorp-Farmington, NM

Sample Delivery Group:	L1216919
Samples Received:	05/09/2020
Project Number:	
Description:	San Juan 29-7 Unit 37
Site:	SJ 29-7 #37
Report To:	Kurt Hoekstra 382 Road 3100 Aztec, NM 87401

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

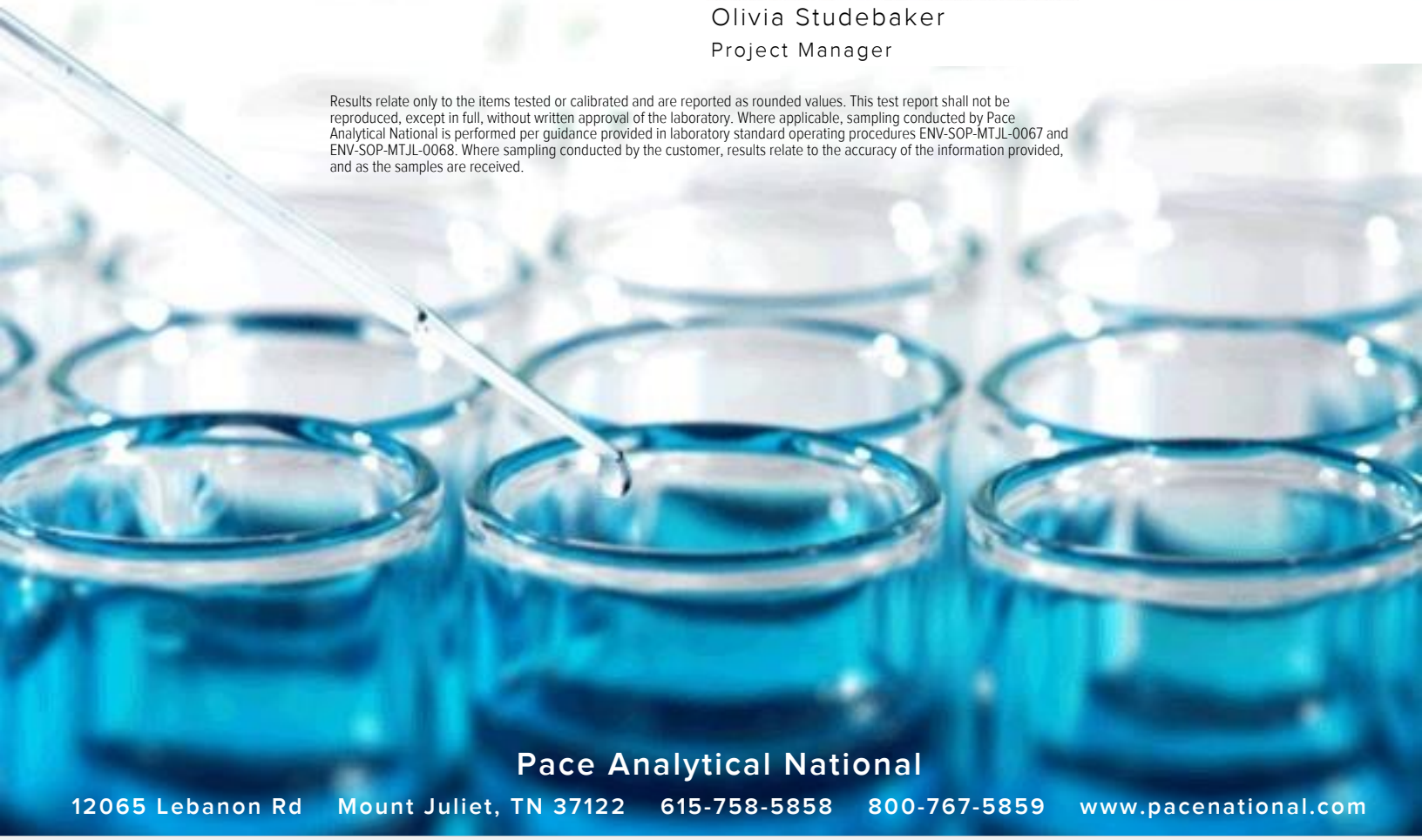


TABLE OF CONTENTS

MW1 L1216919-01 GW

Collected by: Kurt | Collected date/time: 05/06/20 13:20 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 12:53	LD	Mt. Juliet, TN

MW2 L1216919-02 GW

Collected by: Kurt | Collected date/time: 05/07/20 10:15 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 12:56	LD	Mt. Juliet, TN

MW3 L1216919-03 GW

Collected by: Kurt | Collected date/time: 05/04/20 14:45 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 13:00	LD	Mt. Juliet, TN

MW4 L1216919-04 GW

Collected by: Kurt | Collected date/time: 05/01/20 11:15 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 13:03	LD	Mt. Juliet, TN

MW5 L1216919-05 GW

Collected by: Kurt | Collected date/time: 05/04/20 11:45 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 13:24	LD	Mt. Juliet, TN

MW6 L1216919-06 GW

Collected by: Kurt | Collected date/time: 05/06/20 10:45 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 13:27	LD	Mt. Juliet, TN

MW7 L1216919-07 GW

Collected by: Kurt | Collected date/time: 05/01/20 13:45 | Received date/time: 05/09/20 08:45

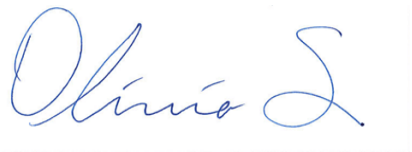
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 13:31	LD	Mt. Juliet, TN

MW8R L1216919-08 GW

Collected by: Kurt | Collected date/time: 05/07/20 13:35 | Received date/time: 05/09/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1473507	1	05/13/20 08:18	05/13/20 13:34	LD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

Report Revision History

Level II Report - Version 1: 05/18/20 12:05

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	1.11		0.00500	1	05/13/2020 12:53	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	05/13/2020 12:56	WG1473507
Selenium,Dissolved	0.0838		0.00200	1	05/13/2020 12:56	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	1.64		0.00500	1	05/13/2020 13:00	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	05/13/2020 13:03	WG1473507
Selenium,Dissolved	0.0391		0.00200	1	05/13/2020 13:03	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	05/13/2020 13:24	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	ND		0.00500	1	05/13/2020 13:27	WG1473507
Selenium,Dissolved	0.0334		0.00200	1	05/13/2020 13:27	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	05/13/2020 13:31	WG1473507

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	0.775		0.00500	1	05/13/2020 13:34	WG1473507

Method Blank (MB)

(MB) R3527569-1 05/13/20 12:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Manganese,Dissolved	U		0.00132	0.00500
Selenium,Dissolved	U		0.000657	0.00200

Laboratory Control Sample (LCS)

(LCS) R3527569-2 05/13/20 12:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	0.0500	0.0490	98.0	80.0-120	
Selenium,Dissolved	0.0500	0.0497	99.5	80.0-120	

L1217032-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1217032-08 05/13/20 12:39 • (MS) R3527569-4 05/13/20 12:46 • (MSD) R3527569-5 05/13/20 12:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	0.0500	0.361	0.408	0.400	93.7	76.7	1	75.0-125			2.11	20
Selenium,Dissolved	0.0500	ND	0.0525	0.0530	105	106	1	75.0-125			1.01	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
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Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Billing Information:

PO Box 61529
Houston, TX 77208

Pres Chk

Report to: **Kurt Hoekstra**

Email To: ccardoza@hilcorp.com;khoekstra@hilcorp.com;j

Project Description: **San Juan 29-7 Unit 37**

City/State Collected:

Please Circle: PT MT CT ET

Phone: **505-486-9543**

Client Project #

Lab Project # **HILCORANM-SANJUAN**

Collected by (print): Kurt

Site/Facility ID # SJ 29-7 # 37

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Dissolved Mn 250mlHDPE-NoPres	Dissolved Mn, Se 250mlHDPE-NoPres	SULFATE, TDS 125mlHDPE-NoPres	SULFATE, TDS 250mlHDPE-NoPres	V8260BTEX 40mlAmb-HCl	NO SAMPLES FIELD FILTERED					Remarks	Sample # (lab only)
MW1		GW		5-6	1:20	1	X					X						-01
MW2		GW		5-7	10:15	1		X				X						-02
MW3		GW		5-4	2:45	1	X					X						-03
MW4		GW		5-1	11:15	2		X		X		X						-04
MW5		GW		5-4	11:45	1	X					X						-05
MW6		GW		5-6	10:45	2		X	X			X						-06
MW7		GW		5-1	1:45	1	X					X						-07
MW8R		GW		5-7	1:35	4	X				X	X						-08

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1210919

Ta B014

Acctnum: **HILCORANM**

Template: **T157359**

Prelogin: **P768594**

PM: **823 - Olivia Studebaker**

PB:

Shipped Via:

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Kurt Hoekstra	5-8-20	11:15		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.4 -1 = 3.3 °C Bottles Received: 13
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5-9 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 02, 2021

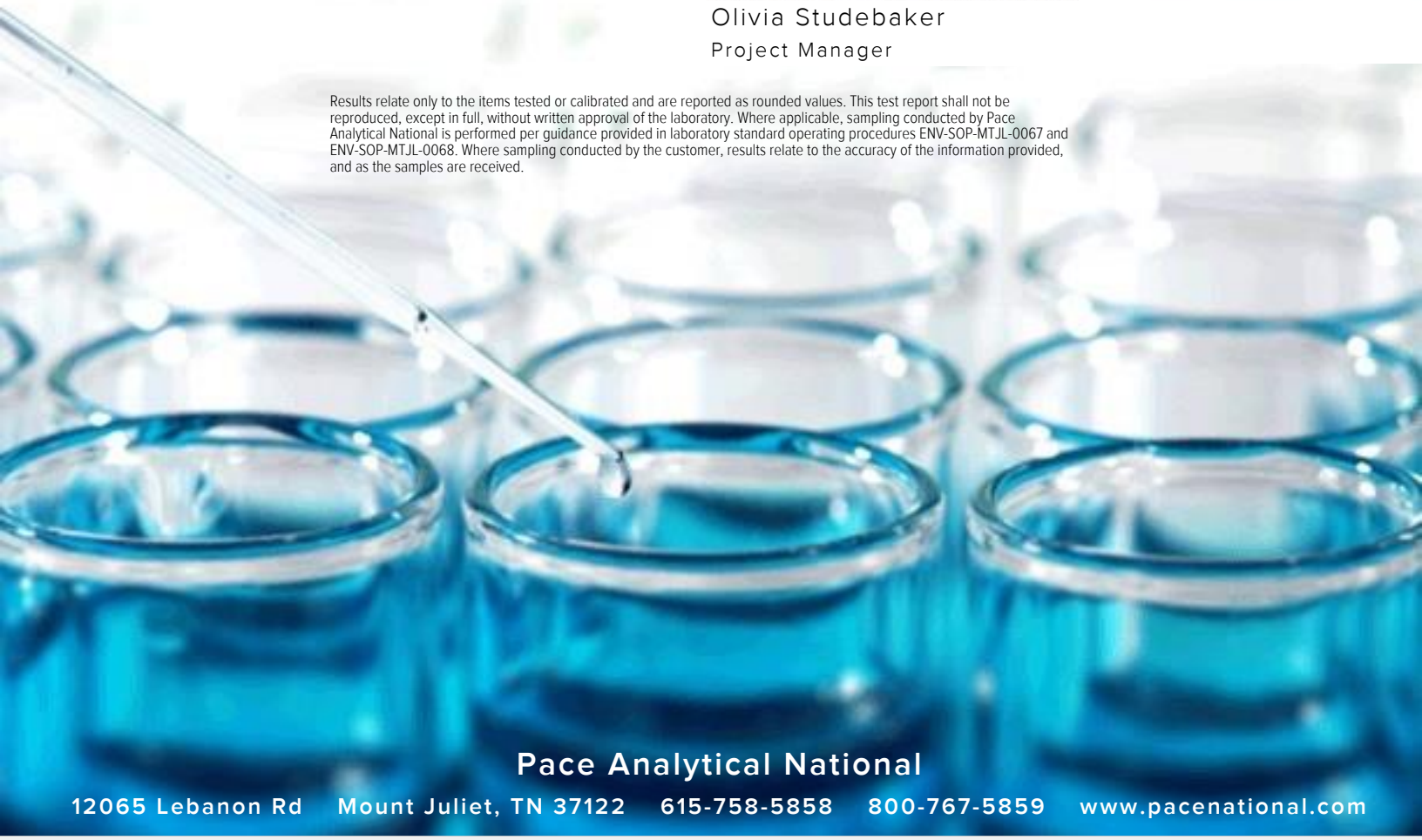
Revised Report

HilCorp-Farmington, NM

Sample Delivery Group:	L1254247
Samples Received:	08/25/2020
Project Number:	
Description:	San Juan 29-7 Unit 37
Site:	S.J. 29-7 #37
Report To:	Kurt Hoekstra 382 Road 3100 Aztec, NM 87401

Entire Report Reviewed By:

Olivia Studebaker
Project Manager



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SAMPLE SUMMARY

MW1 L1254247-01 GW

Collected by: Kurt | Collected date/time: 08/20/20 13:15 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:14	JPD	Mt. Juliet, TN

MW2 L1254247-02 GW

Collected by: Kurt | Collected date/time: 08/21/20 10:20 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:17	JPD	Mt. Juliet, TN

MW3 L1254247-03 GW

Collected by: Kurt | Collected date/time: 08/19/20 13:30 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:20	JPD	Mt. Juliet, TN

MW4 L1254247-04 GW

Collected by: Kurt | Collected date/time: 08/18/20 11:50 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:24	JPD	Mt. Juliet, TN

MW5 L1254247-05 GW

Collected by: Kurt | Collected date/time: 08/19/20 10:50 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:27	JPD	Mt. Juliet, TN

MW6 L1254247-06 GW

Collected by: Kurt | Collected date/time: 08/20/20 10:00 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:30	JPD	Mt. Juliet, TN

MW7 L1254247-07 GW

Collected by: Kurt | Collected date/time: 08/18/20 14:30 | Received date/time: 08/25/20 09:30

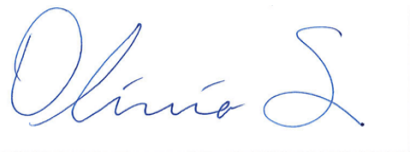
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:42	JPD	Mt. Juliet, TN

MW8R L1254247-08 GW

Collected by: Kurt | Collected date/time: 08/21/20 12:45 | Received date/time: 08/25/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1532396	1	08/27/20 00:35	08/27/20 13:46	JPD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

Report Revision History

Level II Report - Version 1: 09/03/20 14:38

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	1.57		0.00500	1	08/27/2020 13:14	WG1532396

MW2
Collected date/time: 08/21/20 10:20
L1254247

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	08/27/2020 13:17	WG1532396
Selenium,Dissolved	0.0822		0.00200	1	08/27/2020 13:17	WG1532396

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	1.72		0.00500	1	08/27/2020 13:20	WG1532396

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	08/27/2020 13:24	WG1532396
Selenium,Dissolved	0.0387		0.00200	1	08/27/2020 13:24	WG1532396

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	0.00942		0.00500	1	08/27/2020 13:27	WG1532396

Collected date/time: 08/20/20 10:00

L1254247

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	ND		0.00500	1	08/27/2020 13:30	WG1532396
Selenium,Dissolved	0.0332		0.00200	1	08/27/2020 13:30	WG1532396

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	08/27/2020 13:42	WG1532396

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	0.0524		0.00500	1	08/27/2020 13:46	WG1532396

Method Blank (MB)

(MB) R3564424-1 08/27/20 12:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Manganese,Dissolved	U		0.00132	0.00500
Selenium,Dissolved	U		0.000657	0.00200

Laboratory Control Sample (LCS)

(LCS) R3564424-2 08/27/20 12:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	0.0500	0.0473	94.6	80.0-120	
Selenium,Dissolved	0.0500	0.0495	99.0	80.0-120	

L1253765-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253765-01 08/27/20 12:26 • (MS) R3564424-4 08/27/20 12:32 • (MSD) R3564424-5 08/27/20 12:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	0.0500	ND	0.0483	0.0484	92.7	93.0	1	75.0-125			0.283	20
Selenium,Dissolved	0.0500	0.00333	0.0528	0.0527	99.0	98.8	1	75.0-125			0.244	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Billing Information:
Clara Cardoza
PO Box 61529
Houston, TX 77208
ccardoza@hilcorp.com

Report to: Kurt Hoekstra

Email To: @hilcorp.com;khoekstra@hilcorp.com
~~jdeal@hilcorp.com~~

Project Description: San Juan 29-7 Unit 37

City/State Collected:

Please Circle: PT MT CT ET

Phone: 505-486-9543

Client Project #

Lab Project # HILCORANM-SANJUAN

Collected by (print): KURT

Site/Facility ID # S.J. 29-7 # 37

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y ___

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

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # 1254247

G039

Acctnum: HILCORANM
Template: T157359
Prelogin: P784555
PM: 823 - Olivia Studebaker
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Dissolved Mn 250mlHDPE-NoPres	Dissolved Mn, Se 250mlHDPE-NoPres	SULFATE, TDS 125mlHDPE-NoPres	SULFATE, TDS 250mlHDPE-NoPres	V8260BTEX 40mlAmb-HCl	No SAMPLES FIELD FILTERED	Remarks	Sample # (lab only)
MW1		GW		8-20	1:15	1	X					X		-01
MW2		GW		8-21	10:20	1		X				X		-02
MW3		GW		8-19	1:30	1	X					X		-03
MW4		GW		8-18	11:50	2		X		X		X		-04
MW5		GW		8-19	10:50	1	X					X		-05
MW6		GW		8-20	10:00	2		X	X			X		-06
MW7		GW		8-18	2:30	1	X					X		-07
MW8R		GW		8-21	12:45	4	X				X	X		-08

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 1845 4325 2547

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Kurt Hoekstra	8-24-20	7:00		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.3 °C Bottles Received: 13
				1.0-4=-6
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8-21-20 Time: 4:00

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 02, 2021

Revised Report

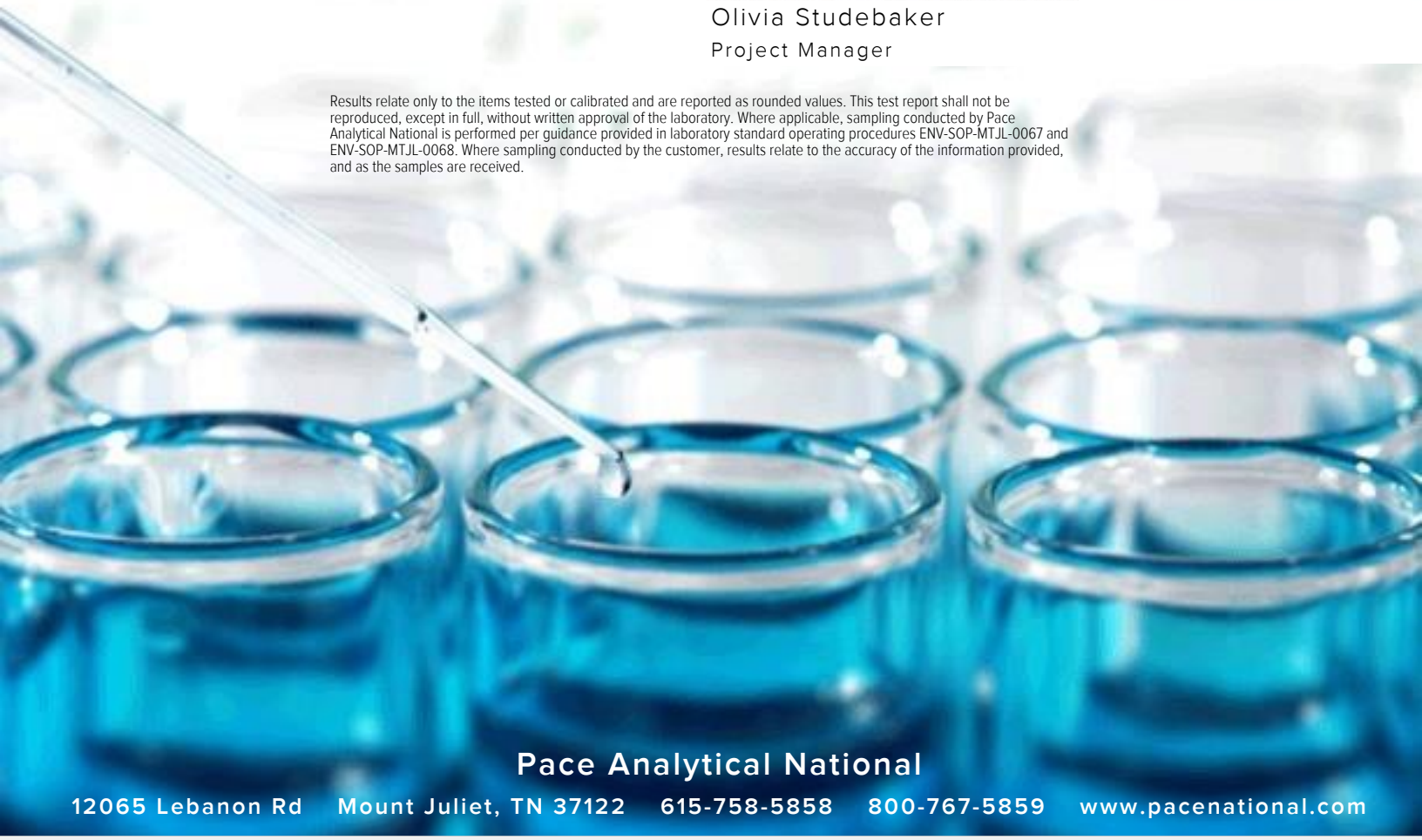
HilCorp-Farmington, NM

Sample Delivery Group:	L1277246
Samples Received:	10/23/2020
Project Number:	
Description:	San Juan 29-7 Unit 37
Site:	SJ29-7#37
Report To:	Kurt Hoekstra 382 Road 3100 Aztec, NM 87401

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW1 L1277246-01 GW

Collected by: Kurt | Collected date/time: 10/21/20 14:05 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 04:58	LAT	Mt. Juliet, TN

MW2 L1277246-02 GW

Collected by: Kurt | Collected date/time: 10/22/20 10:30 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:01	LAT	Mt. Juliet, TN

MW3 L1277246-03 GW

Collected by: Kurt | Collected date/time: 10/21/20 11:45 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:05	LAT	Mt. Juliet, TN

MW4 L1277246-04 GW

Collected by: Kurt | Collected date/time: 10/19/20 11:42 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:09	LAT	Mt. Juliet, TN

MW5 L1277246-05 GW

Collected by: Kurt | Collected date/time: 10/20/20 13:00 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:13	LAT	Mt. Juliet, TN

MW6 L1277246-06 GW

Collected by: Kurt | Collected date/time: 10/20/20 14:20 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:16	LAT	Mt. Juliet, TN

MW7 L1277246-07 GW

Collected by: Kurt | Collected date/time: 10/19/20 14:28 | Received date/time: 10/23/20 09:00

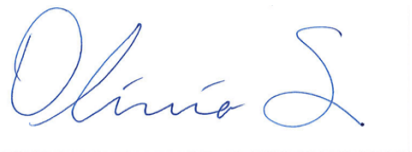
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:20	LAT	Mt. Juliet, TN

MW8R L1277246-08 GW

Collected by: Kurt | Collected date/time: 10/22/20 12:40 | Received date/time: 10/23/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1565900	1	10/27/20 22:46	10/28/20 05:24	LAT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

Report Revision History

Level II Report - Version 1: 11/02/20 17:40

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	0.625		0.00500	1	10/28/2020 04:58	WG1565900

MW2
Collected date/time: 10/22/20 10:30
L1277246

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	10/28/2020 05:01	WG1565900
Selenium,Dissolved	0.0856		0.00200	1	10/28/2020 05:01	WG1565900

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	1.69		0.00500	1	10/28/2020 05:05	WG1565900

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	ND		0.00500	1	10/28/2020 05:09	WG1565900
Selenium,Dissolved	0.0426		0.00200	1	10/28/2020 05:09	WG1565900

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	0.0866		0.00500	1	10/28/2020 05:13	WG1565900

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	ND		0.00500	1	10/28/2020 05:16	WG1565900
Selenium,Dissolved	0.0381		0.00200	1	10/28/2020 05:16	WG1565900

MW7
Collected date/time: 10/19/20 14:28
L1277246

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Manganese,Dissolved	ND		0.00500	1	10/28/2020 05:20	WG1565900

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	0.710		0.00500	1	10/28/2020 05:24	WG1565900

Method Blank (MB)

(MB) R3586333-1 10/28/20 04:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Manganese,Dissolved	0.00103	J	0.000704	0.00500
Selenium,Dissolved	U		0.000300	0.00200

Laboratory Control Sample (LCS)

(LCS) R3586333-2 10/28/20 04:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	0.0500	0.0503	101	80.0-120	
Selenium,Dissolved	0.0500	0.0523	105	80.0-120	

L1277245-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1277245-01 10/28/20 04:20 • (MS) R3586333-4 10/28/20 04:27 • (MSD) R3586333-5 10/28/20 04:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	0.0500	0.275	0.313	0.321	75.7	91.4	1	75.0-125			2.47	20
Selenium,Dissolved	0.0500	ND	0.0570	0.0522	114	104	1	75.0-125			8.73	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Chain of Custody

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Billing Information:
Clara Cardoza
PO Box 61529
Houston, TX 77208

Pres Chk

Report to: Kurt Hoekstra

Email To: khoekstra@hilcorp.com;ccardoza@hilcorp.com

Project Description: San Juan 29-7 Unit 37

City/State Collected:

Please Circle: PT MT CT ET

Phone: 505-486-9543

Client Project #

Lab Project # HILCORANM-SANJUAN

Collected by (print): Kurt

Site/Facility ID # SJ 29-7 # 37

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y ___

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

Quote #

Date Results Needed

SDG # L1277246
J125

Acctnum: HILCORANM
Template: T157359
Prelogin: P800117
PM: 823 - Olivia Studebaker
PB: 9/28/20 MG
Shipped Via: FedEX Standard

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Dissolved Mn 250mlHDPE-NoPres	Dissolved Mn, Se 250mlHDPE-NoPres	SULFATE, TDS 125mlHDPE-NoPres	SULFATE, TDS 250mlHDPE-NoPres	V8260BTEX 40mlAmb-HCl	NO SAMPLES FIELD FILTERED	Remarks	Sample # (lab only)
MW1		GW		10-21	2:05	1	X					X		-01
MW2		GW		10-22	10:30	1		X				X		02
MW3		GW		10-21	11:45	1	X					X		03
MW4		GW		10-19	11:42	2		X		X		X		04
MW5		GW		10-20	1:00	1	X					X		05
MW6		GW		10-20	2:20	2		X	X			X		06
MW7		GW		10-19	2:28	1	X					X		07
MW8R		GW		10-22	12:40	4	X				X	X		08

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

Remarks:

pH ___ Temp ___
Flow ___ Other ___

Samples returned via: __ UPS __ FedEx __ Courier ___

Tracking # 929652431122

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

	Date:	Time:		
Relinquished by: (Signature) Kurt Hoekstra	10-22-20	2:30	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7+0=3.7 °C CK Bottles Received: 13
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/23/2020 Time: 09:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

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 20501

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 20501
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2020 Annual Groundwater Report: Content satisfactory 1. Continue quarterly sampling for groundwater quality in 2021 2. OCD approves sampling termination for monitor wells MW-4, MW-5, MW-6, and MW-7 3. Sample monitor wells MW-1, MW-3, MW-8R for manganese on a semi-annual basis 4. OCD approves the elimination of selenium for further laboratory analysis per this event 5. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022	12/28/2021