APPROVED
By Nelson Velez at 2:49 pm, Dec 28, 2021

Review of Annual Report for 2020 Quarterly Groundwater Monitoring and Sampling: Content satisfactory

1. Continue gauging of all site wells and sampling of MW-1, MW-3, MW-4, and MW-9—for laboratory analysis of full list volatile organics per USEPA Method 8260
2. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022

January 25, 2021

John Bruner
Logos Resources
2110 Afton Place
Farmington, New Mexico 87401

RE: Annual Report for 2020 Quarterly Groundwater Monitoring and Sampling
Logos Julander Federal #1E
NMOCD Order Number: 3RP-445-0
San Juan County, New Mexico

Dear Mr. Bruner:

Animas Environmental Services, LLC (AES) has prepared this Annual Report detailing quarterly groundwater monitoring and sampling during 2020 at the Logos Julander Federal #1E. The work is associated with a previous condensate tank release that was discovered at the Logos Resources (previously Energen) Julander Federal #1E in January 2013. A topographic site location map and an aerial site location map are included as Figures 1 and 1A, and a site plan with monitor well locations is presented as Figure 2.

1.0 Site History

1.1 Initial Release

As the result of the freezing and breaking of a production tank valve, a release of approximately 96 bbls of natural gas condensate within the production tank secondary containment area occurred and was discovered on January 14, 2013. Subsequently, Energen excavated and transported off-site approximately 3,356 cubic yards (yds^3) of petroleum hydrocarbon contaminated soil for disposal. The excavation extended to an approximate depth of 45 feet (ft) below ground surface (bgs), where groundwater seepage into the excavation occurred, and excavation conditions became unstable. Therefore, the excavation was backfilled, and one investigation well, MW-1, was installed by Envirotech, Inc. (Envirotech) to determine if groundwater had been impacted.

Groundwater laboratory analytical results from MW-1 reported 23.8 µg/L benzene, 289 µg/L toluene, 401 µg/L ethylbenzene, and 3,290 µg/L xylene concentrations. Benzene and xylene concentrations exceeded the applicable New Mexico Water Quality Control Commission (WQCC) standards for benzene and xylenes. Further site investigation was recommended.

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1.2 Site Investigation, 2013

Between April and August 2013, AES installed seven soil borings (SB-1 through SB-7) which were completed as 1- and 2-inch diameter monitor wells (MW-2 through MW-8) in the vicinity of the release location. Soils were observed to consist primarily of clayey sand fill and native poorly graded sand with varying amounts of clay. A lens of clayey sand to lean clay was observed in each of the wells near the transition between the vadose zone and fluctuating groundwater table. Groundwater was encountered at depths ranging from approximately 37 ft to 40 ft bgs during drilling and monitor well installation. The groundwater gradient was generally flat at 0.001 ft/ft from east to west but varied in direction based on seasonal conditions.

1.2.1 Soil Field Screening and Laboratory Analytical Results

Soil field screening results showed volatile organic compound (VOC) concentrations below the New Mexico Oil Conservation Division (NMOCD) action level of 100 parts per million (ppm) in the soil samples from SB-4 through SB-7, except for SB-6 at 38 to 39.5 ft (393 ppm). Soil laboratory analytical results were below detection limits or applicable NMOCD action levels in all samples, except for SB-2 at 40 to 41 ft with 187 mg/kg total benzene, toluene, ethylbenzene and xylene (BTEX) and 2,174 mg/kg TPH (GRO/DRO) and in SB-3 with 99 mg/kg total BTEX and 1,380 mg/kg TPH (GRO/DRO).

1.2.2 Groundwater Laboratory Analytical Results

Laboratory analytical results from samples collected in August 2013 confirmed dissolved phase BTEX concentrations above applicable WQCC standards in four monitor wells, including MW-1 (primarily xylene), MW-3, MW-4 and MW-7. The highest concentrations were reported in MW-3 for benzene (18,000 µg/L), ethylbenzene (1,300 µg/L) and xylene (12,000 µg/L). The highest toluene concentration was reported in MW-4 with 28,000 µg/L.

1.3 Continued Groundwater Monitoring and Sampling, 2013 through 2019

1.3.1 2013

AES conducted groundwater monitoring and sampling in MW-1, MW-3, and MW-4 in October and November 2013, before and after completion of a soil vapor extraction pilot study. Laboratory analytical results from the latter sampling event showed that the highest dissolved phase contaminant concentrations above applicable WQCC standards were reported in MW-3 with 1,500 µg/L benzene and in MW-4 with 3,500 µg/L xylenes.

1.3.2 2014

On February 10, 2014, AES conducted additional groundwater monitoring and sampling in site monitor wells. Laboratory analytical results showed that the highest dissolved phase contaminant concentrations were all reported in MW-3 with 9,100 µg/L benzene, 8,800 µg/L toluene, 670 µg/L ethylbenzene, and 5,300 µg/L xylenes. Dissolved phase benzene,

toluene, ethylbenzene, and xylene concentrations were below WQCC standards in MW-2, MW-5, MW-6, and MW-8.

AES installed monitor well MW-9 to the north of the condensate tank in May 2014 and subsequently conducted groundwater monitoring and sampling of all site monitor wells. The May 2014 laboratory analytical results showed that the highest dissolved phase contaminant concentrations were again reported in MW-3, with 14,000 µg/L benzene, 22,000 µg/L toluene, 860 µg/L ethylbenzene, and 6,300 µg/L xylenes. A slight measurable thickness of free product (0.02 ft) was reported in the newly installed MW-9.

AES began multiphase extraction (MPE) operations utilizing an RSI high vacuum multiphase extraction (MPE) unit to treat residual contaminants from MW-1, MW-3, MW-4, and MW-9 in September 2014. The unit was rotated between wells from September 20 to November 18. An estimated 62 gallons of free product were removed utilizing the MPE unit.

On December 18, 2014, one month after taking the MPE remediation unit off-line, AES conducted additional groundwater monitoring and sampling. Well MW-9 reported the highest dissolved phase contaminant concentrations with 6,600 µg/L benzene, 17,000 µg/L toluene, 750 µg/L ethylbenzene, and 7,400 µg/L xylenes.

1.3.3 2015

AES conducted groundwater monitoring and sampling of all nine monitor wells in June 2015, and eight monitor wells (MW-1, MW-3 through MW-9) in September and December 2015, as MW-2 had not exceeded WQCC standards for eight consecutive events. Average groundwater elevation fluctuated quarterly by three to four ft, with an average annual drop of 0.5 ft since 2014. Seasonal fluctuations are believed to be associated with the nearby San Juan River, as well as local irrigation activity.

Groundwater analytical results at MW-6 through MW-8 were reported below WQCC standards during 2015, and as of December 2015, MW-6 and MW-8 had not exceeded WQCC standards for eight consecutive events, so groundwater sampling in these wells was suspended. Field measurements and laboratory analytical results are included in Tables 1 and 2, respectively.

1.3.4 2016

AES conducted groundwater monitoring and sampling of six monitor wells (MW-1, MW-3 through MW-5, MW-7, and MW-9) in March, June, September/October, and December 2016. Note that MW-6 and MW-8 were re-sampled in December 2016 to confirm that concentrations remained below WQCC standards. Average groundwater elevation fluctuated quarterly by one to four ft, with an average annual drop of 1.09 ft since 2015.

1.3.5 2017

AES conducted groundwater monitoring and sampling of six monitor wells (MW-1, MW-3 through MW-5, MW-7, and MW-9) in March 2017, and four monitor wells (MW-1, MW-3, MW-4, and MW-5) in June, September/October, and December 2017 (MW-7 had not exceeded WQCC standards for eight consecutive events, and NAPL was detected in in MW-9). Average groundwater elevation fluctuated quarterly by one to three ft, with a year-on-year decrease of 1.56 ft in December 2017. Seasonal fluctuations are believed to be associated with the nearby San Juan River, as well as local irrigation activity. Field measurements and laboratory analytical results are included in Tables 1 and 2, respectively.

1.3.6 2018

AES conducted groundwater monitoring and sampling of six monitor wells (MW-1, MW-3 through MW-5, MW-7, and MW-9) in March, June, September, and December 2018. Site groundwater elevations reached the lowest recorded measurements in June 2018 for most of the site wells; MW-2 was dry during the March, June and December sampling events. Fluctuations are believed to be associated with the nearby San Juan River, as well as local irrigation activity. Contaminant concentrations were summarized as follows:

- **MW-1** – all BTEX concentrations were reported below WQCC standards;
- **MW-3** – the highest BTEX concentrations were reported in June, with 17,000 µg/L benzene, 15,000 µg/L toluene, 970 µg/L ethylbenzene, and 9,100 µg/L total xylenes;
- **MW-4** – 0.07 ft of NAPL was noted in June;
- **MW-5** – September benzene (39 µg/L) exceeded the WQCC standard;
- **MW-9** – 0.11 ft and 0.56 ft of NAPL were noted in March and June, respectively.

1.3.7 2019

AES conducted groundwater monitoring and sampling of five monitor wells (MW-1, MW-3 through MW-5, and MW-9) in March, July, and September 2019. The same wells, except MW-5 (frozen solid), were monitored and sampled in December 2019. Average groundwater elevation fluctuated quarterly by zero to three ft, with a year-on-year decrease of 0.08 ft in December 2019. Seasonal fluctuations are believed to be associated with the nearby San Juan River, as well as local irrigation activity. The March 2019 benzene concentration (6.4 µg/L) was recorded slightly above the WQCC standard for the first time since March 2013. Field measurements and laboratory analytical results are included in Tables 1 and 2, respectively.

2.0 Groundwater Monitoring and Sampling, 2020

AES conducted groundwater monitoring and sampling of five monitor wells (MW-1, MW-3, MW-4, MW-5, and MW-9) during the March, June, October, and December quarterly sampling events.

All site monitor wells were gauged for depth to groundwater in order to monitor season groundwater fluctuations and calculate gradient. Samples were collected with new disposable bailers and transferred into 40-mL vials, which were labeled and stored at less than 6°C in an insulated cooler until delivered to Hall in Albuquerque, New Mexico. Groundwater samples were analyzed for BTEX per U.S. Environmental Protection Agency (USEPA) Method 8260.

2.1 Groundwater Measurement and Water Quality Data

2.1.1 March 2020 Groundwater Elevations and Water Quality Measurements

Based on data collected during the March 2020 sampling event, groundwater elevations decreased by approximately 3.35 ft across the site since the December 2019 sampling event. Groundwater elevations ranged between 5,413.80 ft above mean sea level (AMSL) in MW-6 and 5,415.97 ft AMSL in MW-1. Groundwater gradient was calculated to be in a northern direction with a magnitude of 0.028 ft/ft.

A residual NAPL sheen was detected in MW-4 and MW-9. Conductivity measurements ranged from 0.852 mS/cm in MW-5 to 1.067 mS/cm in MW-3. Temperature readings ranged from 13.7˚C to 14.8˚C, and oxidation reduction potential (ORP) readings were between -148.9 mV in MW-1 and 188.4 mV in MW-5. Measured pH ranged from 6.97 in MW-3 to 7.02 in MW-1.

2.1.2 June 2020 Groundwater Elevations and Water Quality Measurements

June 2020 average groundwater elevations increased by 0.53 ft across the site since the March sampling event. Groundwater elevations ranged between 5,414.32 ft AMSL in MW-5 and 5,416.54 ft AMSL in MW-1. Groundwater gradient was in a northern direction with a magnitude of 0.024 ft/ft.

A residual sheen was detected in MW-4 and MW-9, and conductivity measurements ranged from 1.10 mS/cm in MW-1 and MW-5 to 1.28 mS/cm in MW-3. Temperature readings varied from 15.0˚C to 15.9˚C, and ORP readings were between -76.2 mV in MW-3 and 227.3 mV in MW-5. Measured pH ranged from 6.66 in MW-3 to 6.94 in MW-1.

2.1.3 October 2020 Groundwater Elevations and Water Quality Measurements

October 2020 average groundwater elevations increased by 2.65 ft across the site since the June sampling event. Groundwater elevations ranged between 5,412.07 ft AMSL in MW-2 to 5,419.98 ft AMSL in MW-1. Groundwater gradient was calculated in a northwesterly direction with a magnitude of 0.026 ft/ft.

A residual sheen was detected in MW-4 and MW-9. Conductivity measurements ranged from 0.824 mS/cm in MW-1 to 0.982 mS/cm in MW-3. Temperature readings varied from

14.5˚C to 15.5˚C, and ORP readings were between -72.0 mV in MW-1 and 195.4 mV in MW-5. Groundwater pH ranged from 6.70 in MW-3 and MW-5 to 6.93 in MW-1.

2.1.4 December 2020 Groundwater Elevations and Water Quality Measurements

Based on data collected during the December 2020 sampling event, groundwater elevations decreased by approximately 0.64 ft across the site since the October sampling event. Groundwater elevations ranged between 5,416.40 ft AMSL in MW-3 and 5,418.54 ft AMSL in MW-1. Groundwater gradient was in a northwesterly direction with a magnitude of 0.022 ft/ft.

A residual sheen was detected in MW-4 and MW-9, and conductivity measurements ranged from 0.777 mS/cm in MW-1 to 1.105 mS/cm in MW-3. Temperature readings varied from 14.0˚C to 15.0˚C, and ORP readings were between -95.7 mV in MW-1 and 198.7 mV in MW-5. Measured pH ranged from 6.39 in MW-3 to 7.07 in MW-5.

Groundwater elevations and contours from March, June, October, and December 2020 are presented on Figure 3. Depth to groundwater measurements and water quality data are summarized and presented in Table 1. Groundwater sample collection forms are attached.

2.2 Groundwater Analytical Results

2.2.1 March 2020 Results

March 2020 groundwater analytical results showed that dissolved phase benzene concentrations were reported above the WQCC standard of 5 µg/L in MW-3 (6,900 µg/L), MW-4 (70 µg/L), and MW-9 (5,900 µg/L). Toluene concentrations exceeded the WQCC standard of 1,000 µg/L in MW-3 with 3,000 µg/L and MW-9 with 19,000 µg/L. Ethylbenzene concentrations exceeded the WQCC standard of 700 µg/L in MW-9 (1,100 µg/L). Xylene concentrations were above the WQCC standard of 620 µg/L in two wells: MW-3 (4,100 µg/L) and MW-9 (11,000 µg/L).

2.2.2 June 2020 Results

Groundwater analytical results showed that dissolved phase the dissolved phase ethylbenzene concentration in MW-3 (830 µg/L) increased to above the WQCC standard. Otherwise, BTEX concentrations were comparable to those of March 2020. Well MW-3 had the highest benzene concentration (13,000 µg/L); and MW-9 had the highest toluene (23,000 µg/L), ethylbenzene (1,200 µg/L), and total xylene (12,000 µg/L) concentrations.

2.2.3 October 2020 Results

October 2020 dissolved phase BTEX concentrations were comparable to those of June 2020. Well MW-3 and MW-9 had equally high benzene concentrations (10,000 µg/L), and MW-9 again had the highest toluene (29,000 µg/L), ethylbenzene (1,200 µg/L), and total xylene (13,000 µg/L) concentrations.

2.2.4 December 2020 Results

Groundwater analytical results showed that dissolved phase benzene concentrations were reported above the WQCC standard in MW-3 (11,000 µg/L), MW-4 (11 µg/L), and MW-9 (7,800 µg/L). Toluene concentrations exceeded the WQCC standard in MW-3 (8,300 µg/L) and MW-9 (20,000 µg/L). Similarly, ethylbenzene concentrations were above the WQCC standard in MW-3 (770 µg/L) and MW-9 (1,000 µg/L). Xylene concentrations were above the WQCC standard in MW-3 (9,100 µg/L) and MW-9 (11,000 µg/L).

Laboratory analytical results are presented in Table 2, and contaminant concentrations are included on Figure 4. Dissolved benzene, toluene, and xylene concentration contours are shown on Figures 5, 6, and 7, respectively. Groundwater contaminant concentrations over time for MW-1, MW-3, MW-4 and MW-9 are included as Graphs 1 through 4. Laboratory analytical reports are attached.

3.0 Conclusions and Scheduled Site Activities

3.1 Conclusions

Groundwater monitoring and sampling at the site was conducted quarterly in 2020 by AES. Of the nine monitor wells at this site (MW-1 through MW-9), five wells have had at least eight consecutive sampling events with concentrations below applicable WQCC standards, including MW-2, MW-5, MW-6, MW-7, and MW-8. These wells continue to be gauged for depth to groundwater on a quarterly basis in order to assist with calculation of site hydraulic direction and magnitude.

Site groundwater elevations in 2020 were stable compared year-on-year to 2019 groundwater elevations. Groundwater fluctuations are most likely responses to seasonal groundwater variations associated with the nearby San Juan River, as well as local irrigation activity.

Overall, dissolved phase concentrations in **MW-1** are declining over time. Dissolved phase concentrations in **MW-3** and **MW-4** remained elevated and above applicable WQCC standards for BTEX compounds for most of 2019; MW-4 showed the presence of residual NAPL sheens during all sampling events. MW-4 concentrations also fluctuate on a seasonal basis. Contaminant concentrations in **MW-5** are declining and remained below WQCC standards for the eight consecutive sampling events as of December 2020. In contrast, concentrations in **MW-9** have generally remained consistently above WQCC standards, and the well has had the presence of residual NAPL sheens throughout the year.

3.2 Scheduled Site Activities

The next sampling event is tentatively scheduled for March 2021 and will include gauging of all site wells and sampling of four wells—MW-1, MW-3, MW-4, and MW-9—for laboratory analysis of full list volatile organics per USEPA Method 8260.

If you have any questions about this report or site conditions, please feel free to contact Elizabeth McNally at (505) 564-2281.

Respectfully Submitted,

David J. Reese
Environmental Scientist

Elizabeth McNally, P.E.

Attachments:

Table 1. Groundwater Measurements and Water Quality Data
Table 2. Groundwater Laboratory Analytical Results
Figure 1. Topographic Site Location Map
Figure 1A. Aerial Site Location Map
Figure 2. Site Plan with Monitor Well Locations
Figure 3. 2020 Groundwater Elevation Contours
Figure 4. 2020 Groundwater Contaminant Concentrations
Figure 5. 2020 Dissolved Benzene Concentration Contours
Figure 6. 2020 Dissolved Toluene Concentration Contours
Figure 7. 2020 Dissolved Xylenes Concentration Contours
Graphs 1 through 4 – Groundwater Elevations and Contaminant Concentrations over Time
Groundwater Sample Collection Forms
Laboratory Analytical Reports (Hall Nos. 2003992, 2006D81, 2010115, and 2012771)

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-1	4-Jan-00	5455.49		41.87		5413.62		14.6	0.865	6.95	-59.6
MW-1	23-Aug-13	5455.49		37.50		5417.99		15.1	1.661	6.86	84.9
MW-1	11-Nov-13	5455.49		36.97		5418.52		13.7	*NM*		
MW-1	14-Nov-13	5455.49		36.63		5418.86		13.9	0.916	7.12	*NM*
MW-1	10-Feb-14	5455.49		40.10		5415.39		14.1	0.818	7.54	*NM*
MW-1	27-May-14	5455.49		42.36		5413.13		16.2	0.920	7.06	-80.0
MW-1	18-Dec-14	5455.49		37.97		5417.52		13.1	0.984	7.35	73.3
MW-1	3-Jun-15	5455.49		42.02		5413.47		18.4	0.909	6.73	-151.3
MW-1	17-Sep-15	5455.49		38.86		5416.63		15.3	1.516	7.02	-129.4
MW-1	8-Dec-15	5455.49		38.45		5417.04		14.5	0.773	7.50	-238.2
MW-1	10-Mar-16	5455.49		41.62		5413.87		14.8	0.969	7.02	-108.1
MW-1	15-Jun-16	5455.49		42.90		5412.59		15.9	0.953	6.82	-229.7
MW-1	28-Sep-16	5456.49		39.00		5417.49		15.4	0.846	7.18	-107.6
MW-1	20-Dec-16	5457.49		39.80		5417.69		14.5	0.868	7.45	-116.6
MW-1	14-Mar-17	5457.49		42.56		5414.93		15.0	0.895	7.79	-175.9
MW-1	16-Jun-17	5457.49		43.99		5413.50		16.0	0.874	6.87	-148.9
MW-1	15-Sep-17	5457.49		40.96		5416.53		15.5	0.963	6.82	-167.5
MW-1	12-Dec-17	5457.49		41.30		5416.19		14.4	0.889	7.04	-129.5
MW-1	9-Mar-18	5457.49		43.85		5413.64		14.0	0.770	7.01	-85.4
MW-1	5-Jun-18	5457.49		44.53		5412.96		15.7	1.05	6.75	-187.5
MW-1	5-Sep-18	5457.49		39.99		5417.50		16.1	0.91	6.72	-126.8

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MW-1	6-Dec-18	5457.49		37.30		5420.19		14.7	0.86	7.20	-146.7
MW-1	7-Mar-19	5457.49		41.36		5416.13		14.7	0.770	7.14	-93.7
MW-1	2-Jul-19	5457.49		41.32		5416.17		15.7	1.08	6.73	-83.4
MW-1	24-Sep-19	5457.49		37.70		5419.79		15.0	0.965	6.11	-79.8
MW-1	19-Dec-19	5457.49		38.23		5419.26		14.3	1.148	7.12	-74.8
MW-1	20-Mar-20	5457.49		41.52		5415.97		14.7	0.887	7.02	-148.9
MW-1	25-Jun-20	5457.49		40.95		5416.54		15.9	1.10	6.94	-61.6
MW-1	1-Oct-20	5457.49		37.51		5419.98		15.2	0.824	6.93	-55.5
MW-1	15-Dec-20	5457.49		38.95		5418.54		14.1	0.777	6.60	-95.7
MW-2	6-May-13	5452.05		38.48		5413.57		16.9	0.542	7.44	-18.6
MW-2	23-Aug-13	5452.05		34.29		5417.76		16.3	1.124	7.19	52.5
MW-2	11-Nov-13	5452.05		33.35		5418.70		13.5	*NM*		
MW-2	10-Feb-14	5452.05		36.71		5415.34		14.9	0.537	7.62	*NM*
MW-2	27-May-14	5452.05		38.83		5413.22		*NM*			
MW-2	18-Dec-14	5452.05		34.45		5417.60		12.4	0.676	7.46	-100.1
MW-2	3-Jun-15	5452.05		38.09		5413.96		*NM*			
MW-2	17-Sep-15	5452.05		35.46		5416.59		*NM - Gauge Only*			
MW-2	8-Dec-15	5452.05		34.95		5417.10		*NM - Gauge Only*			
MW-2	10-Mar-16	5452.05		38.35		5413.70		*NM - Gauge Only*			
MW-2	15-Jun-16	5452.05		DRY		DRY		*NM - Gauge Only*			

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MW-2	28-Sep-16	5452.05		35.70		5416.35		*NM - Gauge Only*			
MW-2	20-Dec-16	5452.05		36.22		5415.83		*NM - Gauge Only*			
MW-2	14-Mar-17	5452.05		39.25		5412.80		*NM - Gauge Only*			
MW-2	16-Jun-17	5452.05		DRY		DRY		*NM - Gauge Only*			
MW-2	15-Sep-17	5452.05		37.69		5414.36		*NM - Gauge Only*			
MW-2	12-Dec-17	5452.05		37.93		5414.12		*NM - Gauge Only*			
MW-2	9-Mar-18	5452.05		DRY		DRY		*NM - Gauge Only*			
MW-2	5-Jun-18	5452.05		DRY		DRY		*NM - Gauge Only*			
MW-2	5-Sep-18	5452.05		36.91		5415.14		*NM - Gauge Only*			
MW-2	6-Dec-18	5452.05		DRY		DRY		*NM - Gauge Only*			
MW-2	7-Mar-19	5452.05		38.08		5413.97		*NM - Gauge Only*			
MW-2	2-Jul-19	5452.05		37.79		5414.26		*NM - Gauge Only*			
MW-2	24-Sep-19	5452.05		34.31		5417.74		*NM - Gauge Only*			
MW-2	19-Dec-19	5452.05		34.76		5417.29		*NM - Gauge Only*			
MW-2	20-Mar-20	5452.05		38.22		5413.83		*NM - Gauge Only*			
MW-2	25-Jun-20	5452.05		37.64		5414.41		*NM - Gauge Only*			
MW-2	1-Oct-20	5452.05		39.98		5412.07		*NM - Gauge Only*			
MW-2	15-Dec-20	5452.05		35.12		5416.93		*NM - Gauge Only*			
MW-3	6-May-13	5453.98		40.47		5413.51		14.8	1.575	6.70	-43.5
MW-3	23-Aug-13	5453.98		36.16		5417.82		14.8	1.783	6.70	-48.7

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MW-3	11-Nov-13	5453.98		35.53		5418.45		13.7	*NM*		
MW-3	14-Nov-13	5453.98	35.61	35.62	0.01	5418.36	5418.37	13.6	1.393	6.89	*NM*
MW-3	10-Feb-14	5453.98		38.70		5415.28		14.2	0.993	7.17	*NM*
MW-3	27-May-14	5453.98		40.94		5413.04		16.4	0.935	6.78	-42.2
MW-3	18-Dec-14	5453.98		36.56		5417.42		12.6	1.239	7.40	25.8
MW-3	3-Jun-15	5453.98		40.54		5413.44		15.1	0.853	6.65	-79.9
MW-3	17-Sep-15	5453.98		37.55		5416.43		15.6	1.653	6.60	-78.6
MW-3	8-Dec-15	5453.98		37.02		5416.96		14.7	1.003	7.06	-251.6
MW-3	10-Mar-16	5453.98		40.25		5413.73		15.0	1.503	6.61	-71.2
MW-3	15-Jun-16	5453.98		41.56		5412.42		15.9	1.101	6.58	-114.5
MW-3	28-Sep-16	5453.98		37.68		5416.30		15.8	1.227	6.78	-83.2
MW-3	20-Dec-16	5453.98		38.36		5415.62		15.1	1.403	7.06	-111.1
MW-3	14-Mar-17	5453.98		41.20		5412.78		15.3	1.136	7.50	-136.9
MW-3	16-Jun-17	5453.98		42.11		5411.87		15.8	1.208	6.90	-85.9
MW-3	15-Sep-17	5453.98		39.68		5414.30		15.7	1.221	6.80	-97.5
MW-3	12-Dec-17	5453.98		39.91		5414.07		14.7	1.410	6.84	-113.3
MW-3	9-Mar-18	5453.98		42.46		5411.52		15.4	0.940	6.88	-96.2
MW-3	5-Jun-18	5453.98		43.12		5410.86		16.7	1.219	6.80	-129.4
MW-3	5-Sep-18	5453.98		38.70		5415.28		16.0	1.19	6.50	-73.1
MW-3	6-Dec-18	5453.98		37.00		5416.98		15.2	1.33	6.95	-121.3
MW-3	7-Mar-19	5453.98		40.01		5413.97		15.2	1.014	6.98	-77.2

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-3	2-Jul-19	5453.98		39.80		5414.18		15.9	1.176	6.23	-80.4
MW-3	24-Sep-19	5453.98		36.35		5417.63		15.3	1.106	6.24	-76.5
MW-3	19-Dec-19	5453.98		36.81		5417.17		14.8	1.544	6.90	-23.7
MW-3	20-Mar-20	5453.98		40.14		5413.84		14.8	1.067	6.97	70.7
MW-3	25-Jun-20	5453.98		39.54		5414.44		15.7	1.28	6.66	-76.2
MW-3	1-Oct-20	5453.98		36.18		5417.80		15.5	0.982	6.70	-72.0
MW-3	15-Dec-20	5453.98		37.58		5416.40		15.0	1.105	6.39	-93.2
MW-4	6-May-13	5453.72		40.17		5413.55		14.9	1.123	7.03	-28.7
MW-4	23-Aug-13	5453.72		35.93		5417.79		15.3	1.409	6.80	-63.0
MW-4	11-Nov-13	5453.72		35.20		5418.52		14.5	*NM*		
MW-4	14-Nov-13	5453.72		35.07		5418.65		14.4	0.936	7.14	*NM*
MW-4	10-Feb-14	5453.72		38.41		5415.31		14.3	0.920	7.32	*NM*
MW-4	27-May-14	5453.72		40.47		5413.25		15.3	0.797	7.14	-31.5
MW-4	18-Dec-14	5453.72		35.97		5417.75		13.1	0.960	7.44	58.7
MW-4	3-Jun-15	5453.72		39.90		5413.82		17.0	0.791	6.67	-58.3
MW-4	17-Sep-15	5453.72		37.05		5416.67		15.7	1.397	6.77	-84.3
MW-4	8-Dec-15	5453.72		36.47		5417.25		15.1	0.777	7.42	-174.4
MW-4	10-Mar-16	5453.72		39.85		5413.87		15.0	0.985	6.90	-90.7
MW-4	15-Jun-16	5453.72		41.09		5412.63		16.5	0.903	6.48	-75.4
MW-4	28-Sep-16	5453.72		37.14		5416.58		15.4	1.163	6.85	-78.6

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-4	20-Dec-16	5453.72		37.91		5415.81		15.0	0.999	7.33	-123.3
MW-4	14-Mar-17	5453.72		40.79		5412.93		15.0	1.003	7.53	-71.4
MW-4	16-Jun-17	5453.72		41.50		5412.22		16.7	0.845	6.91	-85.8
MW-4	15-Sep-17	5453.72		39.15		5414.57		15.6	1.160	6.90	-130.9
MW-4	12-Dec-17	5453.72		39.47		5414.25		14.5	1.064	6.98	-111.0
MW-4	9-Mar-18	5453.72		42.08		5411.64		15.1	0.870	6.89	-111.9
MW-4	5-Jun-18	5453.72	43.55	43.62	0.07	5410.10	5410.15	*NM - 0.07 ft NAPL*			
MW-4	5-Sep-18	5453.72	38.21	38.21		5415.51		*NM - NAPL SHEEN*			
MW-4	6-Dec-18	5453.72	36.49	36.49		5417.23		*NM - NAPL SHEEN*			
MW-4	7-Mar-19	5453.72	39.64	39.64		5414.08		*NM - NAPL SHEEN*			
MW-4	2-Jul-19	5453.72	39.41	39.42	0.01	5414.30	5414.31	*NM - NAPL SHEEN*			
MW-4	24-Sep-19	5453.72	35.99	36.00	0.01	5417.72	5417.73	*NM - NAPL SHEEN*			
MW-4	19-Dec-19	5453.72		36.09		5417.63		14.8	1.05	7.07	-1.5
MW-4	20-Mar-20	5453.72		39.75		5413.97		*NM - SHEEN*			
MW-4	25-Jun-20	5453.72		38.90		5414.82		*NM - SHEEN*			
MW-4	1-Oct-20	5453.72		35.55		5418.17		*NM - SHEEN*			
MW-4	15-Dec-20	5453.72		37.11		5416.61		*NM - SHEEN*			
MW-5	23-Aug-13	5453.77		36.00		5417.77		15.1	1.686	6.82	113.2
MW-5	11-Nov-13	5453.77		35.44		5418.33		13.2	*NM*		
MW-5	10-Feb-14	5453.77		38.45		5415.32		13.4	0.908	7.46	*NM*

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-5	27-May-14	5453.77		40.75		5413.02		15.8	1.007	7.21	63.8
MW-5	18-Dec-14	5453.77		36.30		5417.47		12.7	1.249	7.30	62.8
MW-5	3-Jun-15	5453.77		40.47		5413.30		16.8	1.136	6.25	132.0
MW-5	17-Sep-15	5453.77		37.42		5416.35		14.9	1.882	6.45	44.7
MW-5	8-Dec-15	5453.77		36.84		5416.93		14.1	0.902	7.35	-267.2
MW-5	10-Mar-16	5453.77		39.99		5413.78		14.4	1.135	6.65	72.6
MW-5	15-Jun-16	5453.77		41.38		5412.39		15.0	1.121	6.33	150.2
MW-5	28-Sep-16	5453.77		37.60		5417.19		14.8	1.018	6.69	20.6
MW-5	13-Oct-16	5453.77		36.58		5415.57		15.3	1.016	6.80	50.9
MW-5	20-Dec-16	5453.77		38.20		5415.57		14.3	1.097	6.97	132.1
MW-5	14-Mar-17	5453.77		40.94		5412.83		14.6	1.138	7.20	47.2
MW-5	16-Jun-17	5453.77		41.99		5411.78		15.9	1.150	6.71	89.9
MW-5	22-Sep-17	5453.77		39.32		5414.45		14.9	1.154	6.74	37.9
MW-5	12-Dec-17	5453.77		39.71		5414.06		14.1	1.156	6.76	-49.4
MW-5	9-Mar-18	5453.77		42.20		5411.57		14.4	1.030	6.82	30.3
MW-5	5-Jun-18	5453.77		43.02		5410.75		15.7	1.26	6.71	28.2
MW-5	5-Sep-18	5453.77		38.55		5415.22		15.5	0.551	6.75	118.7
MW-5	6-Dec-18	5453.77		36.76		5417.01		13.8	1.14	7.16	190.7
MW-5	7-Mar-19	5453.77		39.75		5414.02		14.6	0.901	7.14	216.1
MW-5	12-Jul-19	5453.77		38.52		5415.25		15.1	0.981	6.96	149.5
MW-5	24-Sep-19	5453.77		36.15		5417.62		14.4	0.898	6.04	161.5

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-5	19-Dec-19	5453.77		*NM - Well Frozen*							
MW-5	20-Mar-20	5453.77		39.86		5413.91		13.7	0.852	7.01	188.4
MW-5	25-Jun-20	5453.77		39.45		5414.32		15.0	1.10	6.67	227.3
MW-5	1-Oct-20	5453.77		36.16		5417.61		14.5	0.889	6.70	195.4
MW-5	15-Dec-20	5453.77		37.35		5416.42		14.0	0.938	7.07	198.7
MW-6	23-Aug-13	5452.29		34.56		5417.73		15.5	1.638	7.01	108.8
MW-6	11-Nov-13	5452.29		33.84		5418.45		13.2	*NM*		
MW-6	10-Feb-14	5452.29		37.06		5415.23		13.2	0.922	7.38	*NM*
MW-6	27-May-14	5452.29		39.25		5413.04		15.6	1.018	7.64	143.1
MW-6	18-Dec-14	5452.29		34.79		5417.50		12.7	1.098	7.34	71.7
MW-6	3-Jun-15	5452.29		38.81		5413.48		16.7	0.900	6.46	81.6
MW-6	17-Sep-15	5452.29		35.94		5416.35		14.9	1.431	6.92	-36.7
MW-6	8-Dec-15	5452.29		35.34		5416.95		14.2	0.931	7.65	-219.3
MW-6	10-Mar-16	5452.29		38.62		5413.67		*NM - Gauge only*			
MW-6	15-Jun-16	5452.29		39.92		5412.37		*NM - Gauge only*			
MW-6	28-Sep-16	5452.29		36.12		5416.17		*NM - Gauge only*			
MW-6	20-Dec-16	5452.29		36.73		5415.56		14.4	1.299	7.33	99.9
MW-6	14-Mar-17	5452.29		39.58		5412.71		*NM - Gauge only*			
MW-6	16-Jun-17	5452.29		40.42		5411.87		*NM - Gauge only*			
MW-6	22-Sep-17	5452.29		37.82		5414.47		*NM - Gauge only*			

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-6	12-Dec-17	5452.29		38.31		5413.98		*NM - Gauge only*			
MW-6	9-Mar-18	5452.29		40.81		5411.48		*NM - Gauge only*			
MW-6	5-Jun-18	5452.29		41.41		5410.88		*NM - Gauge only*			
MW-6	5-Sep-18	5452.29		37.18		5415.11		*NM - Gauge only*			
MW-6	6-Dec-18	5452.29		35.31		5416.98		*NM - Gauge only*			
MW-6	7-Mar-19	5452.29		38.39		5413.90		*NM - Gauge only*			
MW-6	12-Jul-19	5452.29		37.17		5415.12		*NM - Gauge only*			
MW-6	24-Sep-19	5452.29		34.73		5417.56		*NM - Gauge only*			
MW-6	19-Dec-19	5452.29		34.88		5417.41		*NM - Gauge only*			
MW-6	20-Mar-20	5452.29		38.49		5413.80		*NM - Gauge only*			
MW-6	25-Jun-20	5452.29		37.85		5414.44		*NM - Gauge only*			
MW-6	1-Oct-20	5452.29		34.81		5417.48		*NM - Gauge only*			
MW-6	15-Dec-20	5452.29		35.88		5416.41		*NM - Gauge only*			
MW-7	23-Aug-13	5454.98		37.11		5417.87		15.6	1.337	7.06	-3.6
MW-7	11-Nov-13	5454.98		36.42		5418.56		14.4	*NM*		
MW-7	10-Feb-14	5454.98		39.66		5415.32		14.5	0.698	7.50	*NM*
MW-7	27-May-14	5454.98		41.88		5413.10		17.1	0.711	6.65	-89.0
MW-7	18-Dec-14	5454.98		37.47		5417.51		13.3	0.902	7.40	74.0
MW-7	3-Jun-15	5454.98		41.41		5413.57		16.2	0.742	6.58	-117.1
MW-7	17-Sep-15	5454.98		38.38		5416.60		15.2	1.255	6.71	-76.0

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-7	8-Dec-15	5454.98		37.95		5417.03		14.7	0.709	7.56	-279.8
MW-7	10-Mar-16	5454.98		41.23		5413.75		14.6	0.806	7.07	-99.9
MW-7	15-Jun-16	5454.98		42.47		5412.51		15.5	0.760	6.78	-84.4
MW-7	13-Oct-16	5454.98		37.22		5417.76		15.6	0.765	7.15	-49.6
MW-7	20-Dec-16	5454.98		39.28		5415.70		14.4	0.808	7.39	-47.1
MW-7	14-Mar-17	5454.98		42.17		5412.81		14.8	0.756	7.67	-71.4
MW-7	16-Jun-17	5454.98		42.94		5412.04		*NM - Gauge only*			
MW-7	15-Sep-17	5454.98		40.44		5414.54		*NM - Gauge only*			
MW-7	12-Dec-17	5454.98		40.87		5414.11		*NM - Gauge only*			
MW-7	9-Mar-18	5454.98		43.42		5411.56		*NM - Gauge only*			
MW-7	5-Jun-18	5454.98		44.00		5410.98		*NM - Gauge only*			
MW-7	5-Sep-18	5454.98		39.51		5415.47		*NM - Gauge only*			
MW-7	6-Dec-18	5454.98		37.84		5417.14		*NM - Gauge only*			
MW-7	7-Mar-19	5454.98		40.95		5414.03		*NM - Gauge only*			
MW-7	2-Jul-19	5454.98		40.93		5414.05		*NM - Gauge only*			
MW-7	24-Sep-19	5454.98		37.18		5417.80		*NM - Gauge only*			
MW-7	19-Dec-19	5454.98		37.74		5417.24		*NM - Gauge only*			
MW-7	20-Mar-20	5454.98		41.13		5413.85		*NM - Gauge only*			
MW-7	25-Jun-20	5454.98		40.34		5414.64		*NM - Gauge only*			
MW-7	1-Oct-20	5454.98		36.82		5418.16		*NM - Gauge only*			
MW-7	15-Dec-20	5454.98		38.39		5416.59		*NM - Gauge only*			

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-8	23-Aug-13	5453.20		35.41		5417.79		16.1	1.261	7.29	89.4
MW-8	11-Nov-13	5453.20		34.31		5418.89		14.9	*NM*		
MW-8	10-Feb-14	5453.20		37.86		5415.34		14.5	0.552	8.01	*NM*
MW-8	27-May-14	5453.20		39.99		5413.21		16.1	0.622	6.93	67.0
MW-8	18-Dec-14	5453.20		35.51		5417.69		13.5	0.670	7.50	69.0
MW-8	3-Jun-15	5453.20		39.20		5414.00		17.2	0.652	6.95	114.2
MW-8	17-Sep-15	5453.20		36.55		5416.65		15.0	1.065	7.06	101.4
MW-8	8-Dec-15	5453.20		35.95		5417.25		14.6	0.532	8.09	-201.4
MW-8	10-Mar-16	5453.20		39.41		5413.79		*NM - Gauge only*			
MW-8	15-Jun-16	5453.20		40.65		5412.55		*NM - Gauge only*			
MW-8	28-Sep-16	5453.20		36.69		5416.51		*NM - Gauge only*			
MW-8	20-Dec-16	5453.20		37.24		5415.96		14.3	0.621	7.54	174.9
MW-8	14-Mar-17	5453.20		40.38		5412.82		*NM - Gauge only*			
MW-8	16-Jun-17	5453.20		39.88		5413.32		*NM - Gauge only*			
MW-8	15-Sep-17	5453.20		38.61		5414.59		*NM - Gauge only*			
MW-8	12-Dec-17	5453.20		39.01		5414.19		*NM - Gauge only*			
MW-8	9-Mar-18	5453.20		41.69		5411.51		*NM - Gauge only*			
MW-8	5-Jun-18	5453.20		42.05		5411.15		*NM - Gauge only*			
MW-8	5-Sep-18	5453.20		37.77		5415.43		*NM - Gauge only*			
MW-8	6-Dec-18	5453.20		35.95		5417.25		*NM - Gauge only*			

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-8	7-Mar-19	5453.20		39.20		5414.00		*NM - Gauge only*			
MW-8	2-Jul-19	5453.20		39.00		5414.20		*NM - Gauge only*			
MW-8	24-Sep-19	5453.20		35.34		5417.86		*NM - Gauge only*			
MW-8	19-Dec-19	5453.20		35.83		5417.37		*NM - Gauge only*			
MW-8	20-Mar-20	5453.20		38.51		5414.69		*NM - Gauge only*			
MW-8	25-Jun-20	5453.20		38.32		5414.88		*NM - Gauge only*			
MW-8	1-Oct-20	5453.20		34.75		5418.45		*NM - Gauge only*			
MW-8	15-Dec-20	5453.20		36.50		5416.70		*NM - Gauge only*			
MW-9	27-May-14	*NS*		44.47	0.02	--	--	*NM*			
MW-9	18-Dec-14	*NS*		40.08		--		12.0	0.942	7.44	105.2
MW-9	3-Jun-15	*NS*		44.00		--		17.4	0.860	6.47	-76.1
MW-9	17-Sep-15	*NS*		41.01		--		16.5	1.438	6.64	-92.8
MW-9	8-Dec-15	*NS*		40.52		--		15.0	0.849	7.26	-166.4
MW-9	10-Mar-16	*NS*		43.78		--		15.5	1.048	6.67	-81.4
MW-9	15-Jun-16	*NS*		45.03		--		16.4	1.109	6.53	-89.3
MW-9	28-Sep-16	*NS*		41.09		--		15.9	1.047	6.87	-89.2
MW-9	20-Dec-16	*NS*		41.86		--		15.1	0.995	7.16	-92.4
MW-9	14-Mar-17	*NS*		44.72		--		15.8	1.046	7.55	-87.0
MW-9	16-Jun-17	*NS*	45.46	45.88	0.42	--	--	*NM - 0.42 ft NAPL*			
MW-9	15-Sep-17	*NS*	43.08	43.09	0.01	--	--	*NM - 0.01 ft NAPL*			

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL thickness (ft)	Water Level Elevation (ft amsl)	Corrected Water Level Elevation (ft amsl)	Temp. (˚C)	Specific Conduct. (mS)	pH	ORP (mV)
MW-9	12-Dec-17	*NS*	43.43	43.45	0.02	--	--	*NM - 0.02 ft NAPL*			
MW-9	9-Mar-18	*NS*	45.65	45.76	0.11	--	--	*NM - 0.11 ft NAPL*			
MW-9	5-Jun-18	*NS*	46.45	47.01	0.56	--	--	*NM - 0.56 ft NAPL*			
MW-9	5-Sep-18	*NS*	42.10	42.11	0.01	--	--	*NM - 0.01 ft NAPL*			
MW-9	6-Dec-18	*NS*	40.45	40.45		--	--	*NM - NAPL SHEEN*			
MW-9	7-Mar-19	*NS*	43.53	43.53		--	--	*NM - NAPL SHEEN*			
MW-9	2-Jul-19	*NS*	43.34	43.35	0.01	--	--	*NM - 0.01 ft NAPL*			
MW-9	24-Sep-19	*NS*	39.76	39.76	0.01	--	--	*NM - NAPL SHEEN*			
MW-9	19-Dec-19	*NS*	--	40.32		--	--	*NM - NAPL SHEEN*			
MW-9	20-Mar-20	*NS*	--	43.66		--	--	*NM - NAPL SHEEN*			
MW-9	25-Jun-20	*NS*	42.92	42.92		--	--	*NM - NAPL SHEEN*			
MW-9	1-Oct-20	*NS*	--	39.54		--	--	*NM - NAPL SHEEN*			
MW-9	15-Dec-20	*NS*	--	41.03		--	--	*NM - NAPL SHEEN*			

Notes: **NM - Not Measured**
NS - Not Surveyed (MW-9)
ORP - Oxidation Reduction Potential

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYTICAL RESULTS
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)
Sample Method		EPA Method 8021B/8260B			
WQCC Standards		5	1,000	700	620
MW-1*	14-Mar-13	**24**	289	401	**3,290**
MW-1	6-May-13	<10	77	470	**3,900**
MW-1	23-Aug-13	<10	110	470	**4,000**
MW-1	11-Nov-13	<5.0	92	360	**3,200**
MW-1	14-Nov-13	<10	85	220	**2,300**
MW-1	10-Feb-14	<5.0	42	470	**4,100**
MW-1	27-May-14	<5.0	8.7	260	**1,700**
MW-1	18-Dec-14	<5.0	5.5	78	600
MW-1	3-Jun-15	<5.0	6.4	250	**1,100**
MW-1	17-Sep-15	<5.0	<5.0	240	580
MW-1	8-Dec-15	<5.0	<5.0	300	**2,100**
MW-1	10-Mar-16	<5.0	<5.0	520	**3,400**
MW-1	15-Jun-16	<5.0	<5.0	110	130
MW-1	28-Sep-16	<5.0	<5.0	120	400
MW-1	20-Dec-16	<1.0	<1.0	270	**1,400**
MW-1	14-Mar-17	<2.0	<2.0	130	**730**
MW-1	15-Jun-17	<2.0	<2.0	50	< 4.0
MW-1	15-Sep-17	1.6	<1.0	65	280
MW-1	12-Dec-17	1.8	<1.0	94	230
MW-1	9-Mar-18	<1.0	<1.0	17	2.2
MW-1	5-Jun-18	1.0	<1.0	22	14
MW-1	5-Sep-18	<1.0	<1.0	27	43
MW-1	6-Dec-18	4.2	5.5	110	260
MW-1	7-Mar-19	**6.4**	3.1	130	300
MW-1	2-Jul-19	1.5	<1.0	39	22
MW-1	24-Sep-19	1.9	4.2	54	160
MW-1	19-Dec-19	1.2	4.6	55	220
MW-1	20-Mar-20	<1.0	1.6	110	410
MW-1	25-Jun-20	<2.0	<2.0	47	75
MW-1	1-Oct-20	1.1	<2.0	110	84

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYTICAL RESULTS
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)
Sample Method		EPA Method 8021B/8260B			
WQCC Standards		5	1,000	700	620
MW-1	15-Dec-20	<2.0	<2.0	140	420
MW-3	6-May-13	**16,000**	**27,000**	**1,000**	**9,500**
MW-3	23-Aug-13	**18,000**	**27,000**	**1,300**	**12,000**
MW-3	11-Nov-13	**2,300**	320	170	**910**
MW-3	14-Nov-13	**1,500**	280	54	550
MW-3	10-Feb-14	**9,100**	**8,800**	670	**5,300**
MW-3	27-May-14	**14,000**	**22,000**	**860**	**6,300**
MW-3	18-Dec-14	**1,500**	**1,000**	61	610
MW-3	3-Jun-15	**14,000**	**16,000**	**860**	**7,800**
MW-3	17-Sep-15	**13,000**	**16,000**	**970**	**9,100**
MW-3	8-Dec-15	**10,000**	**8,700**	620	**6,100**
MW-3	10-Mar-16	**10,000**	**7,200**	**760**	**7,300**
MW-3	15-Jun-16	**15,000**	**16,000**	**900**	**8,700**
MW-3	28-Sep-16	**10,000**	**15,000**	**910**	**11,000**
MW-3	20-Dec-16	**13,000**	**17,000**	**940**	**9,500**
MW-3	14-Mar-17	**13,000**	**6,300**	**860**	**8,500**
MW-3	15-Jun-17	**14,000**	**13,000**	**820**	**7,700**
MW-3	15-Sep-17	**12,000**	**16,000**	**950**	**10,000**
MW-3	12-Dec-17	**12,000**	**16,000**	**850**	**9,200**
MW-3	9-Mar-18	**14,000**	**14,000**	**880**	**8,700**
MW-3	5-Jun-18	**17,000**	**15,000**	**970**	**9,100**
MW-3	5-Sep-18	**53**	42	2.9	43
MW-3	6-Dec-18	**10,000**	**10,000**	570	**8,700**
MW-3	7-Mar-19	**8,400**	**5,400**	510	**6,800**
MW-3	2-Jul-19	**7,500**	**4,100**	310	**6,500**
MW-3	24-Sep-19	**9,600**	**4,600**	680	**8,400**
MW-3	19-Dec-19	**2,300**	530	190	**1,700**
MW-3	20-Mar-20	**6,900**	**3,000**	440	**4,100**
MW-3	25-Jun-20	**13,000**	**16,000**	**830**	**8,200**

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYTICAL RESULTS
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)
Sample Method		EPA Method 8021B/8260B			
WQCC Standards		5	1,000	700	620
MW-3	1-Oct-20	**10,000**	**12,000**	**800**	**9,200**
MW-3	15-Dec-20	**11,000**	**8,300**	**770**	**9,100**
MW-4	6-May-13	**8,500**	**29,000**	**1,100**	**10,000**
MW-4	23-Aug-13	**15,000**	**28,000**	**1,200**	**11,000**
MW-4	11-Oct-13	**9,300**	**16,000**	**720**	**6,800**
MW-4	11-Nov-13	**89**	87	8.8	68
MW-4	14-Nov-13	<5.0	140	350	**3,500**
MW-4	10-Feb-14	**1,300**	**1,100**	150	**1,300**
MW-4	27-May-14	**610**	**3,300**	220	**1,800**
MW-4	18-Dec-14	**28**	35	5.5	46
MW-4	3-Jun-15	**2,400**	**7,000**	320	**2,400**
MW-4	17-Sep-15	**6,400**	**22,000**	**700**	**5,900**
MW-4	8-Dec-15	**22**	39	7.6	70
MW-4	10-Mar-16	**100**	290	97	430
MW-4	15-Jun-16	**210**	270	120	550
MW-4	28-Sep-16	**3,400**	**4,600**	380	**2,700**
MW-4	20-Dec-16	**90**	68	34	230
MW-4	14-Mar-17	**180**	190	87	530
MW-4	15-Jun-17	**550**	350	120	**740**
MW-4	15-Sep-17	**2,400**	**4,300**	300	**2,700**
MW-4	12-Dec-17	**2,300**	**4,600**	290	**2,400**
MW-4	9-Mar-18	**1,600**	**2,900**	240	**2,400**
MW-4	5-Jun-18	0.07 FEET NAPL			
MW-4	5-Sep-18	**83**	**15,000**	19	180
MW-4	6-Dec-18	**67**	230	41	440
MW-4	7-Mar-19	**480**	**2,700**	310	**2,600**
MW-4	2-Jul-19	**1,100**	**2,800**	270	**3,200**
MW-4	24-Sep-19	**2,600**	**9,000**	490	**4,900**
MW-4	19-Dec-19	2.3	7.7	12	100

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYTICAL RESULTS
Logos Julander Federal #1E
San Juan County, New Mexico

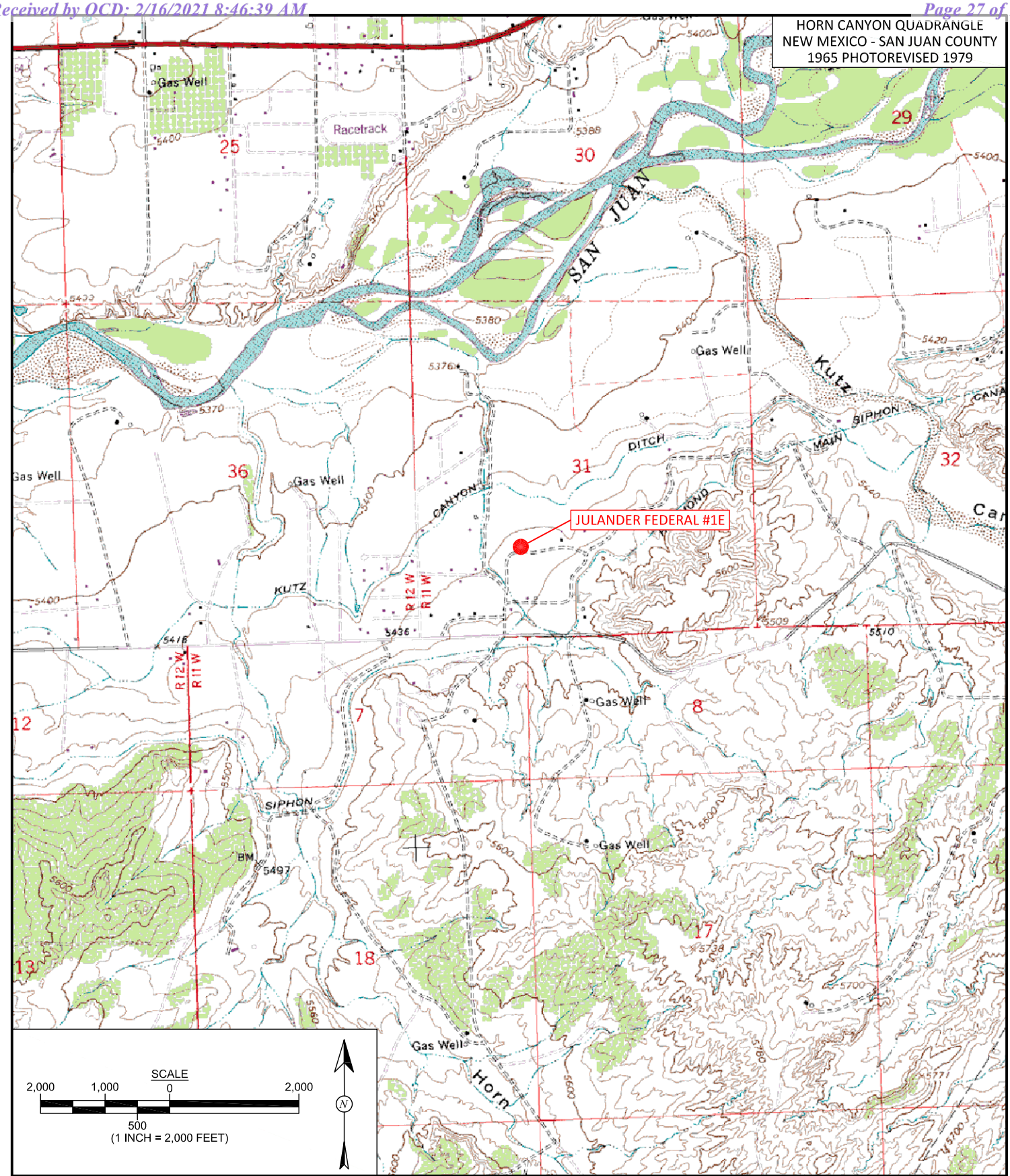
Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)
Sample Method		EPA Method 8021B/8260B			
WQCC Standards		5	1,000	700	620
MW-4	20-Mar-20	**70**	290	54	340
MW-4	25-Jun-20	**230**	180	50	430
MW-4	1-Oct-20	**13**	7.6	7.4	51
MW-4	15-Dec-20	**11**	<1.0	6.9	31
MW-5	23-Aug-13	**5.3**	<2.0	<2.0	29
MW-5	11-Nov-13	<1.0	<1.0	<1.0	<2.0
MW-5	10-Feb-14	1.1	<1.0	<1.0	110
MW-5	27-May-14	<2.0	<2.0	<2.0	<4.0
MW-5	18-Dec-14	**11**	<1.0	<1.0	<2.0
MW-5	3-Jun-15	<2.0	<1.0	<1.0	24.0
MW-5	17-Sep-15	1.8	<1.0	<1.0	<1.5
MW-5	8-Dec-15	**200**	<1.0	1.4	<2.0
MW-5	10-Mar-16	1.2	<1.0	<1.0	<2.0
MW-5	15-Jun-16	<1.0	<1.0	<1.0	<2.0
MW-5	28-Sep-16	**1,300**	68	230	250
MW-5	13-Oct-16	**1,600**	<5.0	330	530
MW-5	20-Dec-16	**110**	<1.0	18	<1.5
MW-5	14-Mar-17	<1.0	<1.0	<1.0	<1.5
MW-5	15-Jun-17	1.8	<1.0	<1.0	<2.0
MW-5	22-Sep-17	**54**	<1.0	6.5	31
MW-5	12-Dec-17	**66**	<1.0	<1.0	<2.0
MW-5	9-Mar-18	<1.0	<1.0	<1.0	<2.0
MW-5	5-Jun-18	<1.0	<1.0	<1.0	<1.5
MW-5	5-Sep-18	**39**	<1.0	5.1	6.8
MW-5	6-Dec-18	<1.0	<1.0	<1.0	<2.0
MW-5	7-Mar-19	<1.0	<1.0	<1.0	<2.0
MW-5	12-Jul-19	<1.0	<1.0	<1.0	<2.0
MW-5	24-Sep-19	<1.0	<1.0	<1.0	<2.0
MW-5	20-Mar-20	<1.0	<1.0	<1.0	<1.5

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYTICAL RESULTS
Logos Julander Federal #1E
San Juan County, New Mexico

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)
Sample Method		EPA Method 8021B/8260B			
WQCC Standards		5	1,000	700	620
MW-5	25-Jun-20	<1.0	<1.0	<1.0	<1.5
MW-5	1-Oct-20	<1.0	<1.0	<1.0	<1.5
MW-5	15-Dec-20	1.7	<1.0	<1.0	<1.5
MW-9	27-May-14	0.02 FEET NAPL			
MW-9	18-Dec-14	**6,600**	**17,000**	**750**	**7,400**
MW-9	3-Jun-15	**4,000**	**13,000**	610	**5,600**
MW-9	17-Sep-15	**6,400**	**13,000**	560	**5,000**
MW-9	8-Dec-15	**9,600**	**17,000**	620	**5,600**
MW-9	10-Mar-16	**9,600**	**18,000**	690	**6,800**
MW-9	15-Jun-16	**6,800**	**13,000**	620	**6,000**
MW-9	28-Sep-16	**8,600**	**17,000**	680	**7,100**
MW-9	20-Dec-16	**10,000**	**21,000**	**840**	**7,700**
MW-9	14-Mar-17	**9,300**	**17,000**	**710**	**7,000**
MW-9	15-Jun-17	0.42 FEET NAPL			
MW-9	15-Sep-17	0.01 FEET NAPL			
MW-9	12-Dec-17	0.02 FEET NAPL			
MW-9	9-Mar-18	0.11 FEET NAPL			
MW-9	5-Jun-18	0.56 FEET NAPL			
MW-9	5-Sep-18	**9,400**	**31,000**	**1,300**	**11,000**
MW-9	6-Dec-18	**7,400**	**24,000**	**1,100**	**11,000**
MW-9	7-Mar-19	**8,400**	**25,000**	**1,100**	**9,800**
MW-9	2-Jul-19	**7,000**	**21,000**	**1,000**	**9,800**
MW-9	24-Sep-19	**9,400**	**31,000**	**1,300**	**13,000**
MW-9	19-Dec-19	**9,100**	**27,000**	**1,000**	**10,000**
MW-9	20-Mar-20	**5,900**	**19,000**	**1,100**	**11,000**
MW-9	25-Jun-20	**7,200**	**23,000**	**1,200**	**12,000**
MW-9	1-Oct-20	**10,000**	**29,000**	**1,200**	**13,000**
MW-9	15-Dec-20	**7,800**	**20,000**	**1,000**	**11,000**

Notes: *Sample collected and analyzed by Envirotech, Inc.

**** Sample collected by AES and analyzed at Envirotech, Inc.**



DRAWN BY: C. Lameman	**DATE DRAWN:** November 16, 2018
REVISIONS BY: C. Lameman	**DATE REVISED:** January 5, 2021
CHECKED BY: D. Reese	**DATE CHECKED:** January 5, 2021
APPROVED BY: E. McNally	**DATE APPROVED:** January 5, 2021

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FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

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DRAWN BY: C. Lameman	**DATE DRAWN:** February 6, 2017
REVISIONS BY: C. Lameman	**DATE REVISED:** January 5, 2021
CHECKED BY: D. Reese	**DATE CHECKED:** January 5, 2021
APPROVED BY: E. McNally	**DATE APPROVED:** January 5, 2021

FIGURE 1A

AERIAL SITE LOCATION MAP

LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

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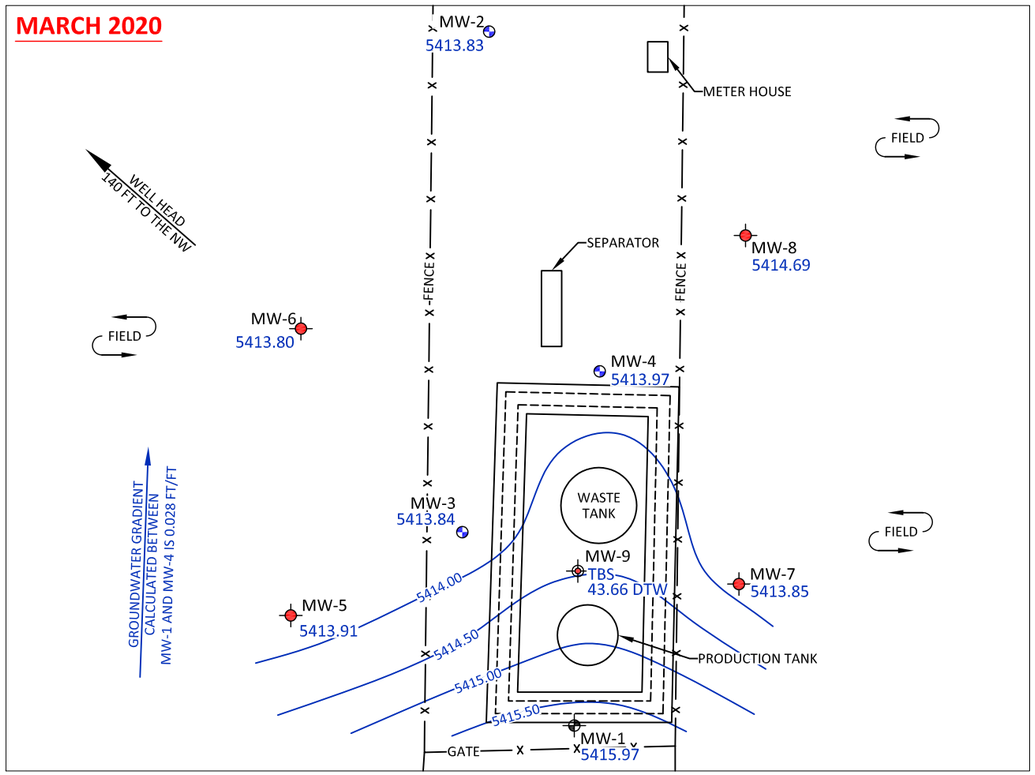
DRAWN BY: C. Lameman	**DATE DRAWN:** June 4, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** January 5, 2021
CHECKED BY: D. Reese	**DATE CHECKED:** January 5, 2021
APPROVED BY: E. McNally	**DATE APPROVED:** January 5, 2021

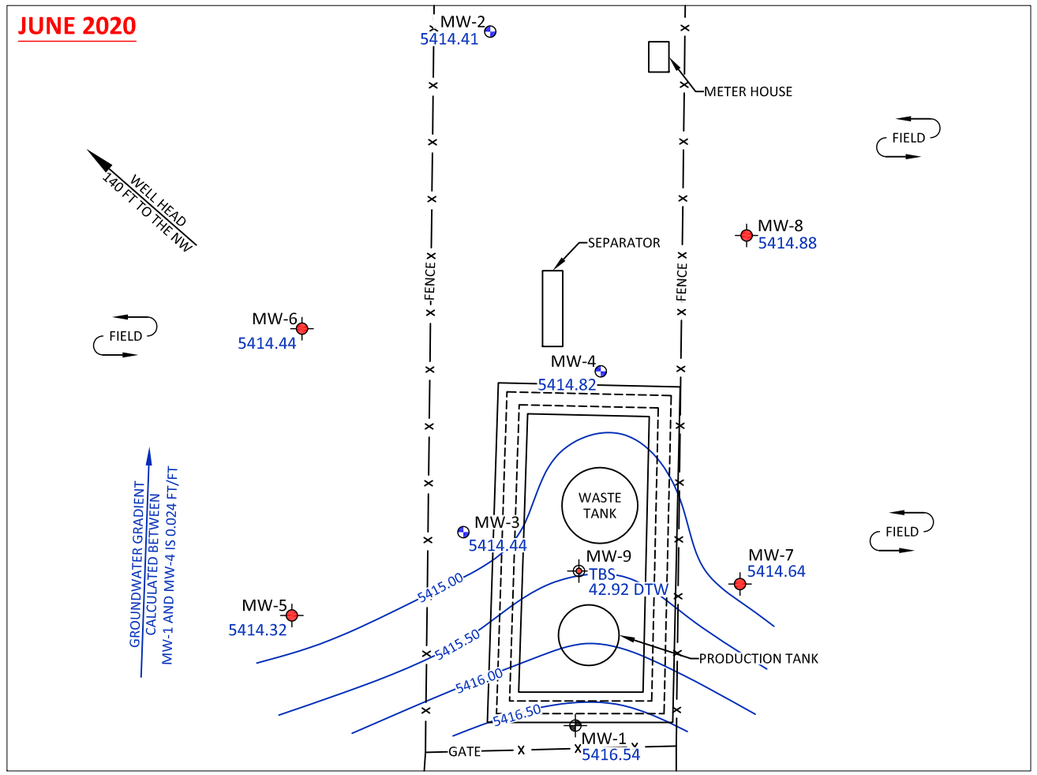
FIGURE 2

SITE PLAN WITH MONITOR WELL LOCATIONS
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

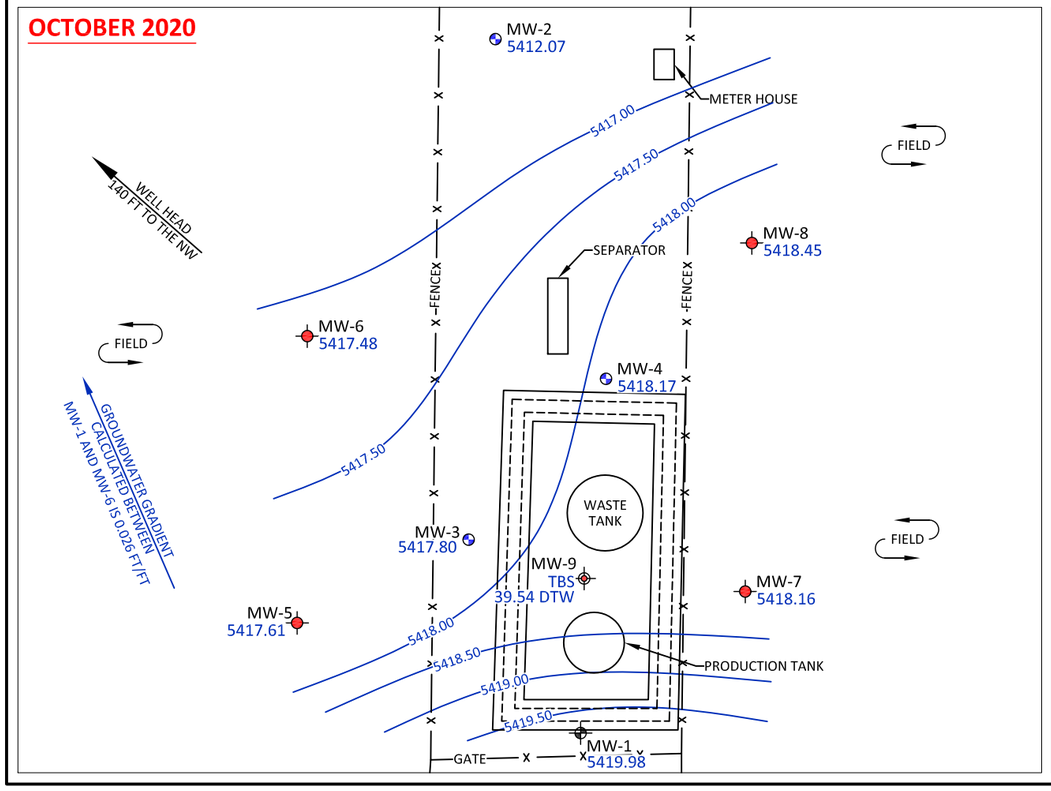
MARCH 2020



JUNE 2020



OCTOBER 2020



DECEMBER 2020

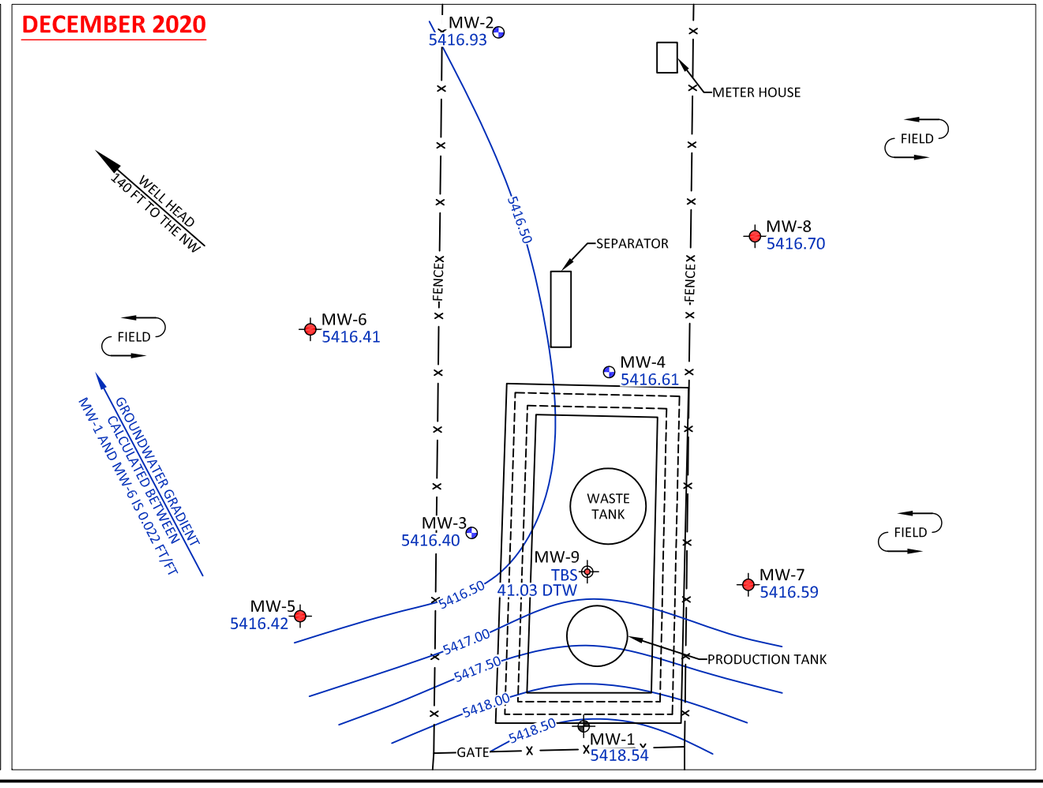


FIGURE 3

2020 GROUNDWATER ELEVATION CONTOURS
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

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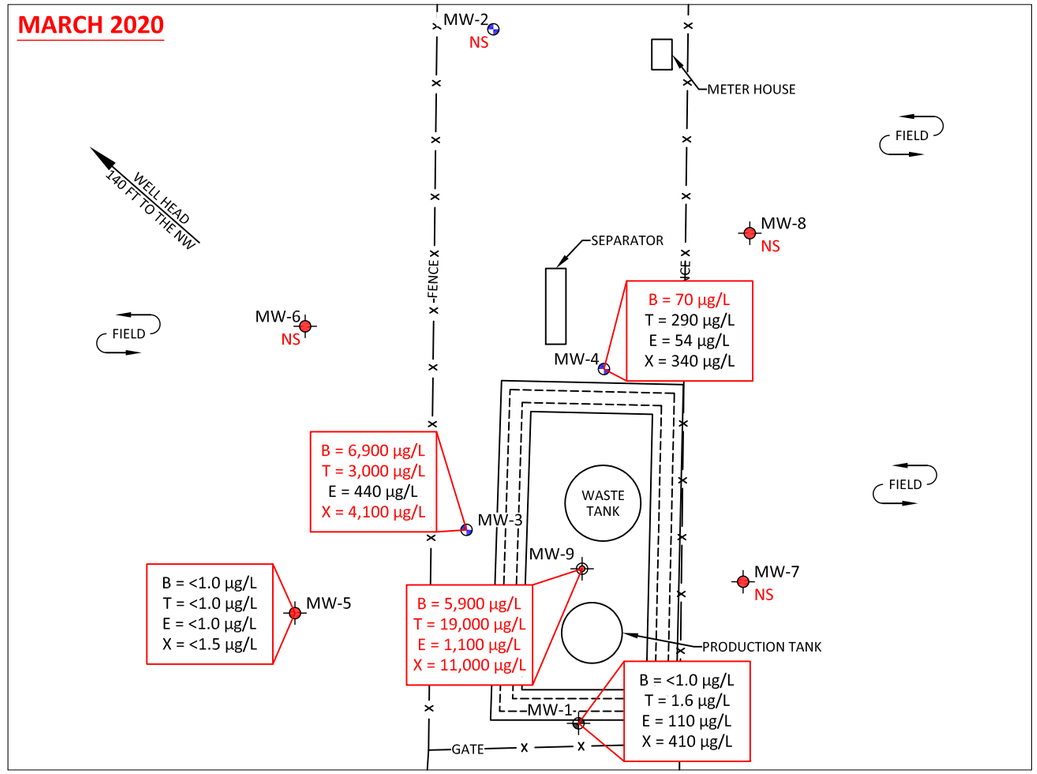
DRAWN BY:	DATE DRAWN:
C. Lameman	January 8, 2016
REVISIONS BY:	**DATE REVISED:**
C. Lameman	January 5, 2021
CHECKED BY:	**DATE CHECKED:**
D. Reese	January 5, 2021
APPROVED BY:	**DATE APPROVED:**
E. McNally	January 5, 2021

LEGEND

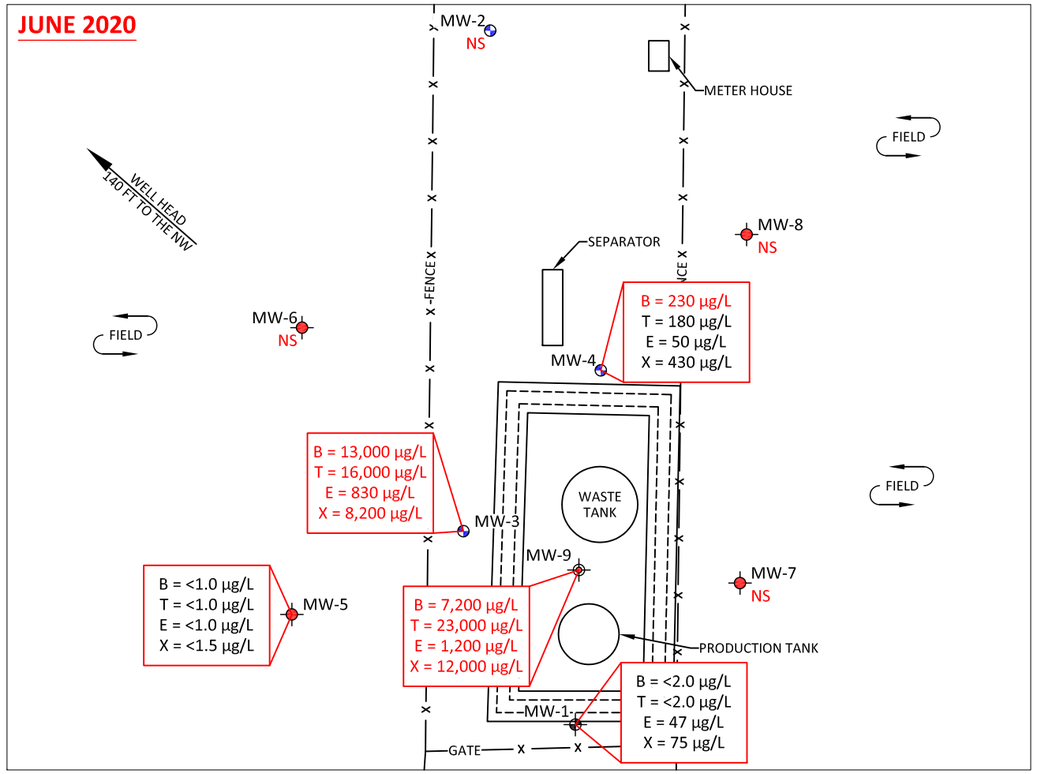
- EXISTING INVESTIGATION WELL
- MONITOR WELL INSTALLED IN APRIL AND MAY 2013
- MONITOR WELL INSTALLED IN AUGUST 2013
- MONITOR WELL INSTALLED IN JUNE 2014
- 5414.64 GROUNDWATER ELEVATIONS IN FEET (AMSL)
- –5417.00– GROUNDWATER ELEVATIONS CONTOURS IN FEET (AMSL)

SCALE
30 20 0 30
10
(1 INCH = 30 FEET)

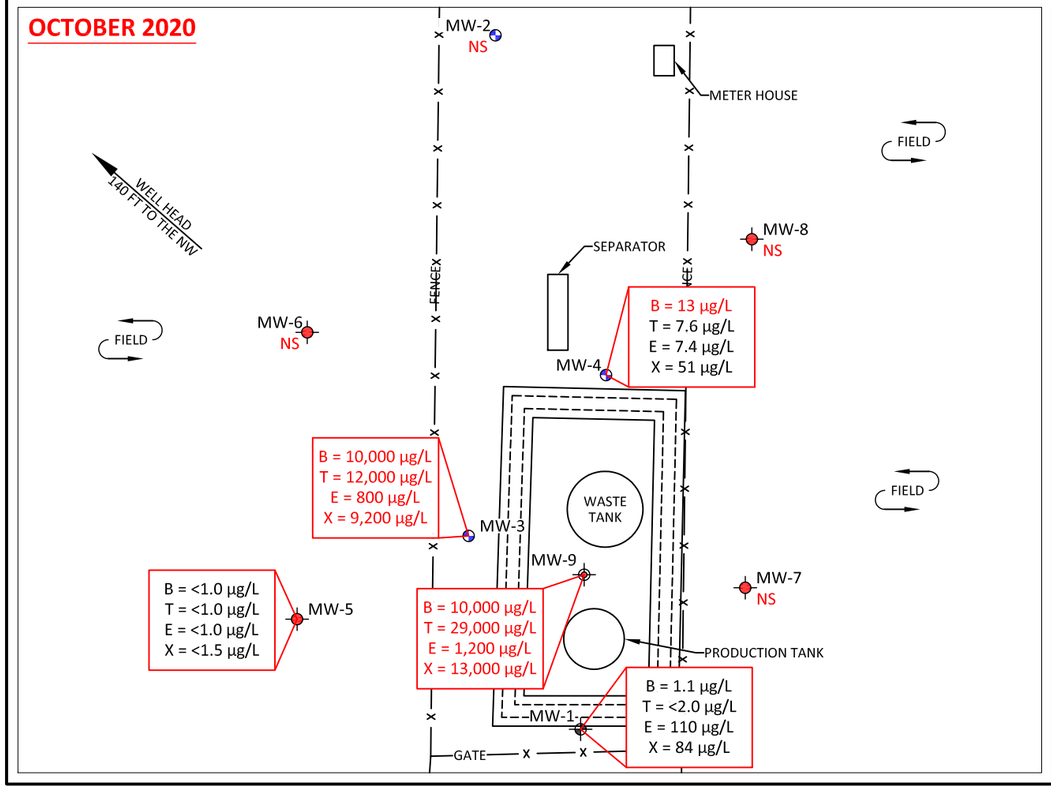
MARCH 2020



JUNE 2020



OCTOBER 2020



DECEMBER 2020

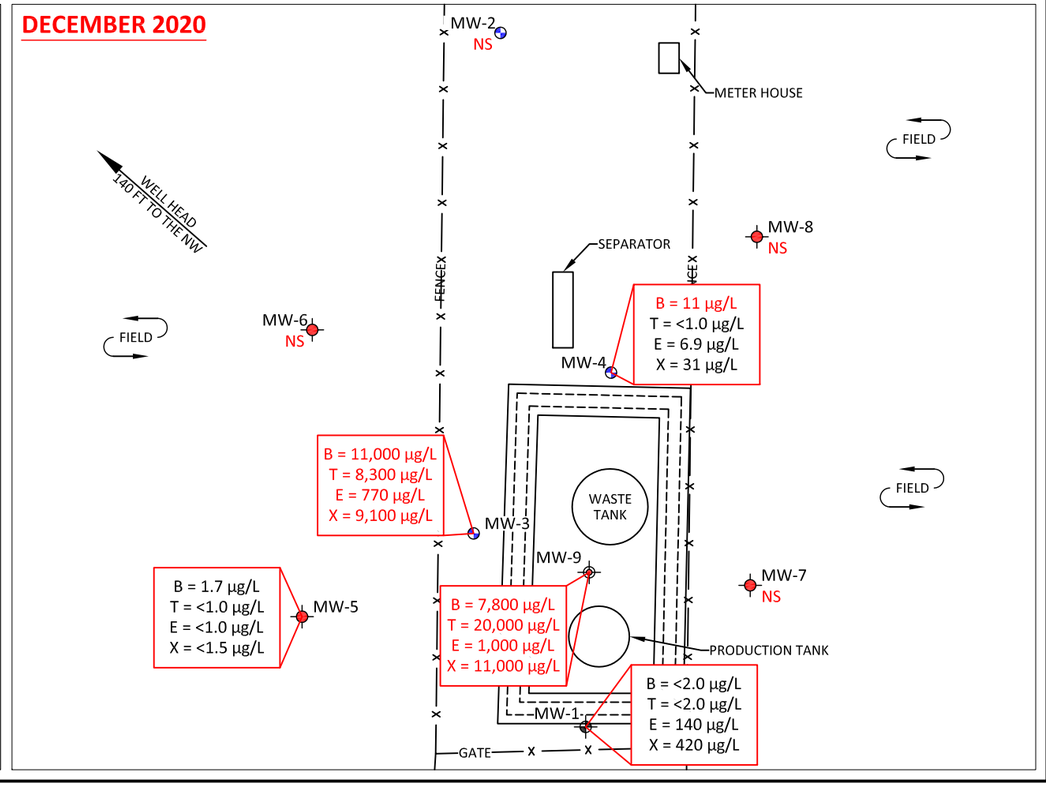


FIGURE 4

2020 GROUNDWATER CONTAMINANT CONCENTRATIONS
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	January 8, 2016
REVISIONS BY:	**DATE REVISED:**
C. Lameman	January 5, 2021
CHECKED BY:	**DATE CHECKED:**
D. Reese	January 5, 2021
APPROVED BY:	**DATE APPROVED:**
E. McNally	January 5, 2021

LEGEND

- EXISTING INVESTIGATION WELL
- MONITOR WELL INSTALLED IN APRIL AND MAY 2013
- MONITOR WELL INSTALLED IN AUGUST 2013
- MONITOR WELL INSTALLED IN JUNE 2014

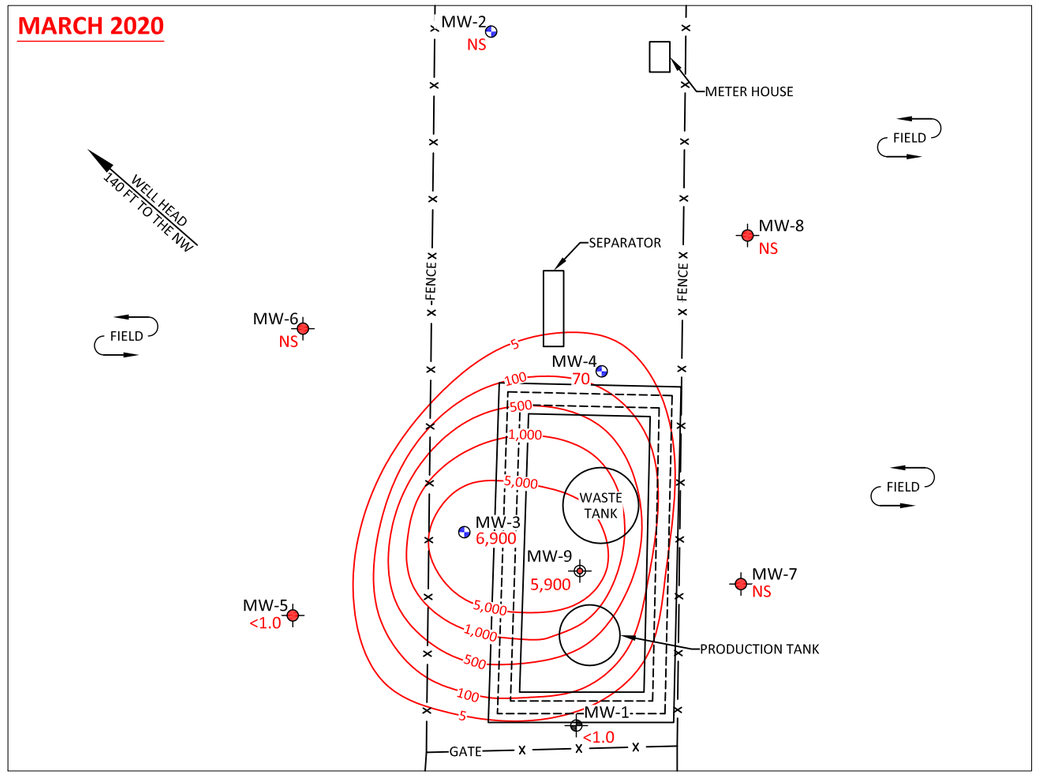
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES
µg/L	MICROGRAM PER LITER (ppb)
<	BELOW DETECTION LIMIT
NS	NOT SAMPLED

NOTE: ALL SAMPLES ANALYZED PER EPA METHOD 8021B.

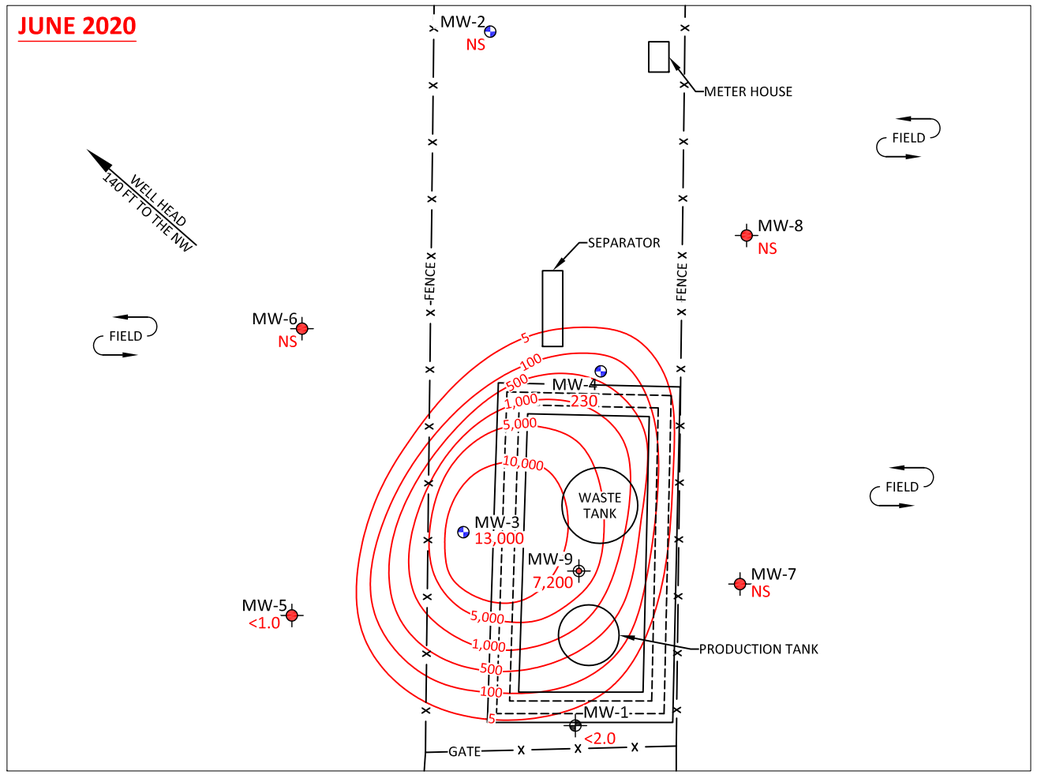
N

SCALE
30 20 0 30
10
(1 INCH = 30 FEET)

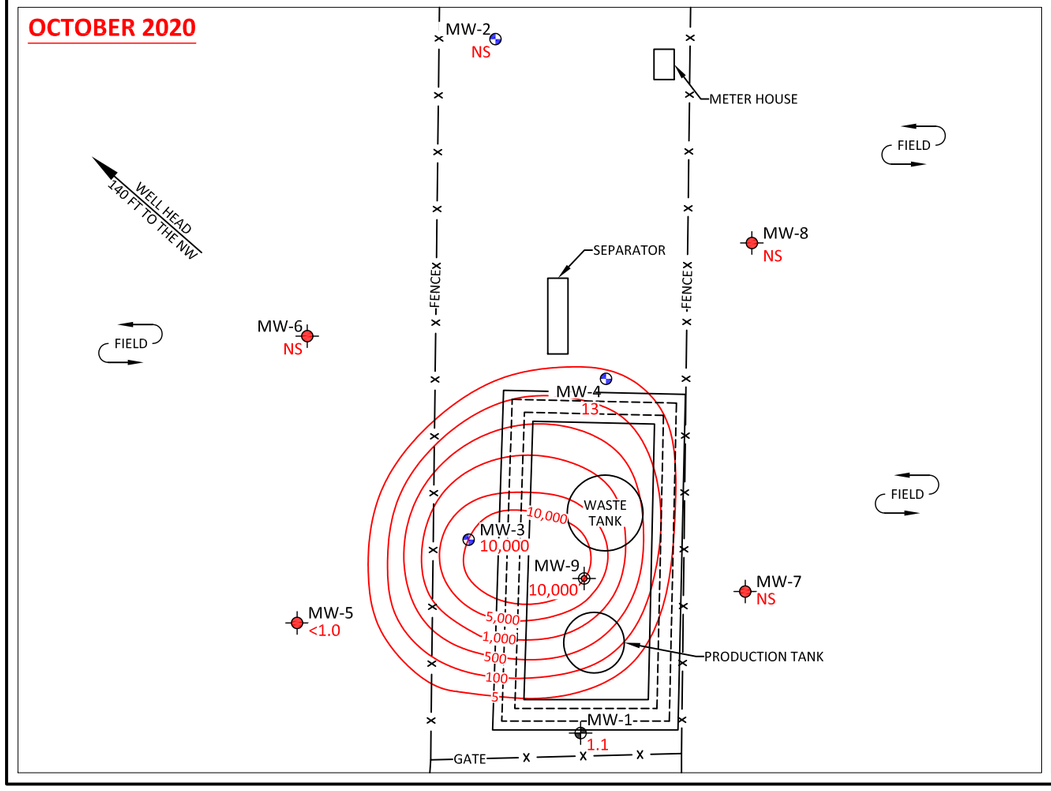
MARCH 2020



JUNE 2020



OCTOBER 2020



DECEMBER 2020

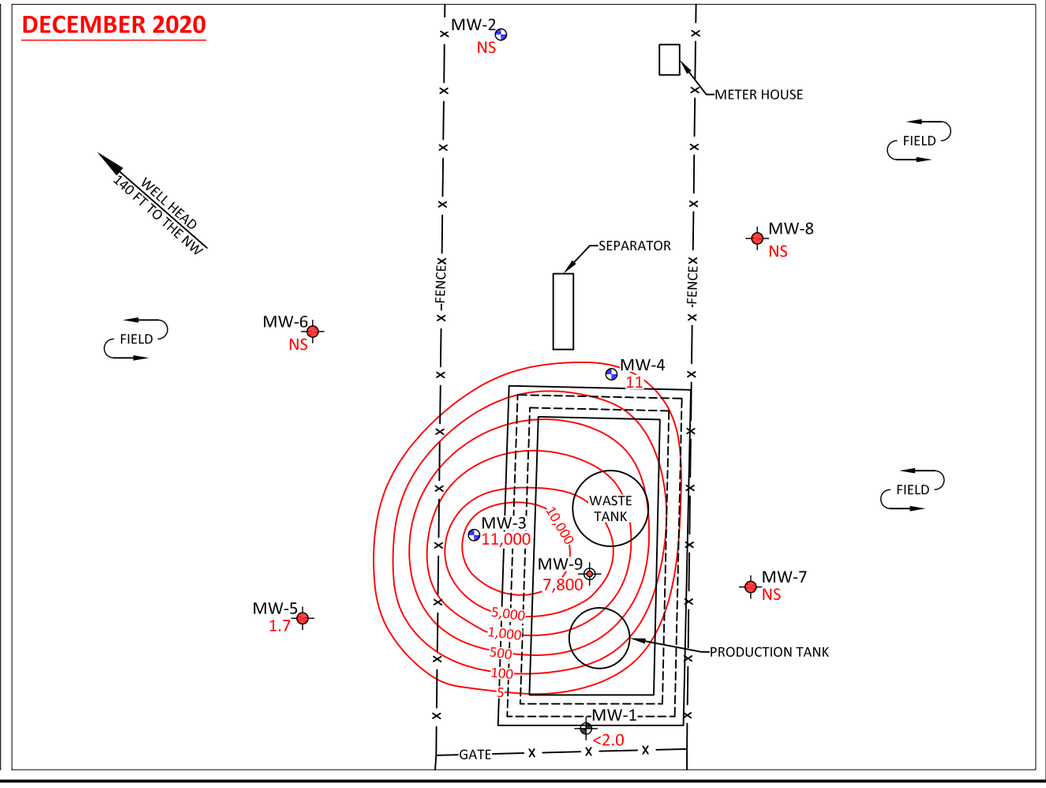


FIGURE 5

2020 DISSOLVED BENZENE CONCENTRATION CONTOURS
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	January 8, 2016
REVISIONS BY:	**DATE REVISED:**
C. Lameman	January 5, 2021
CHECKED BY:	**DATE CHECKED:**
D. Reese	January 5, 2021
APPROVED BY:	**DATE APPROVED:**
E. McNally	January 5, 2021

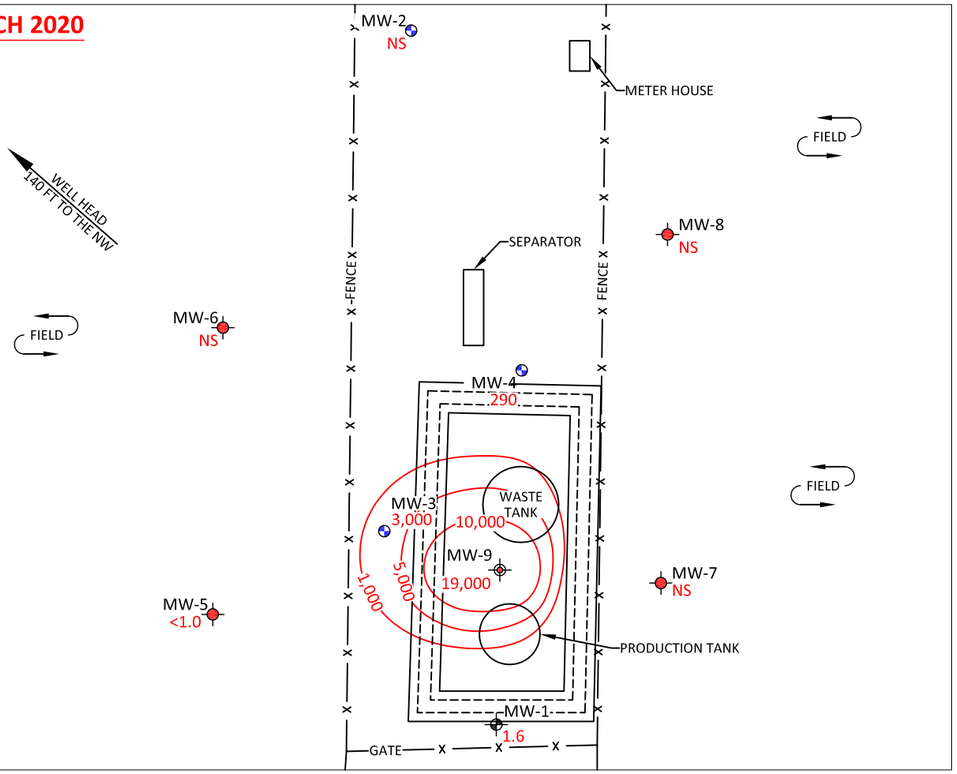
LEGEND

- EXISTING INVESTIGATION WELL
- MONITOR WELL INSTALLED IN APRIL AND MAY 2013
- MONITOR WELL INSTALLED IN AUGUST 2013
- MONITOR WELL INSTALLED IN JUNE 2014
- 1,100 — DISSOLVED BENZENE CONCENTRATIONS IN µg/L
- 5 — DISSOLVED BENZENE CONCENTRATIONS CONTOURS IN µg/L
- NS — NOT SAMPLED

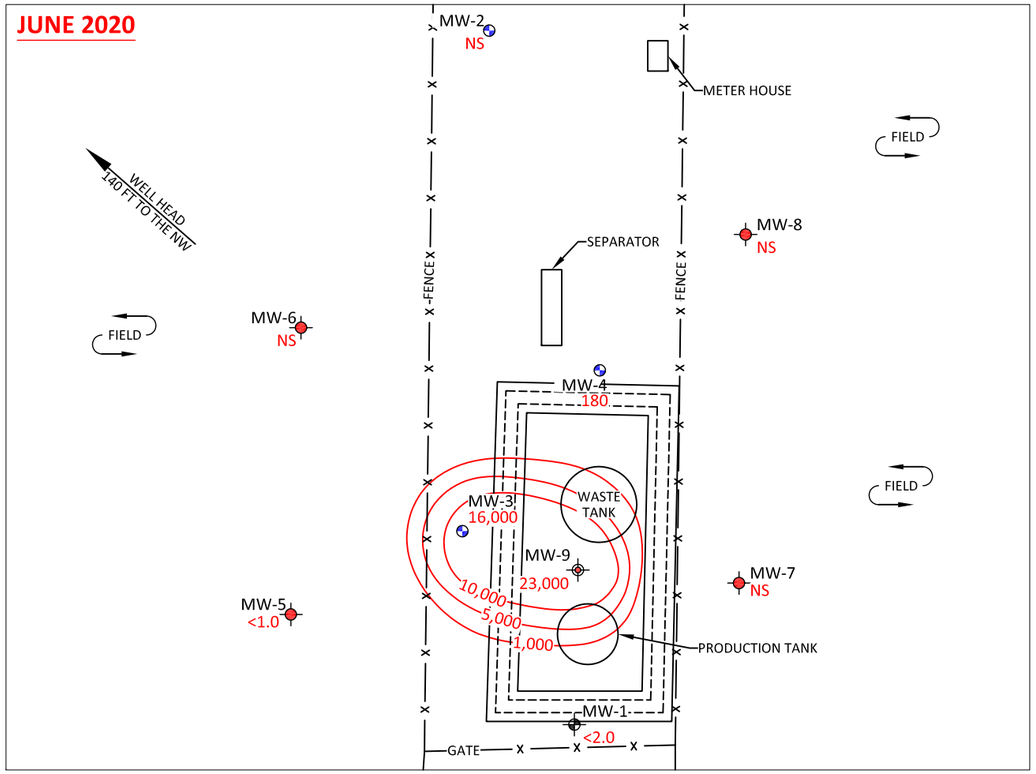
NOTE: ALL SAMPLES ANALYZED PER USEPA METHOD 8021B.

SCALE
30 20 0 30
10
(1 INCH = 30 FEET)

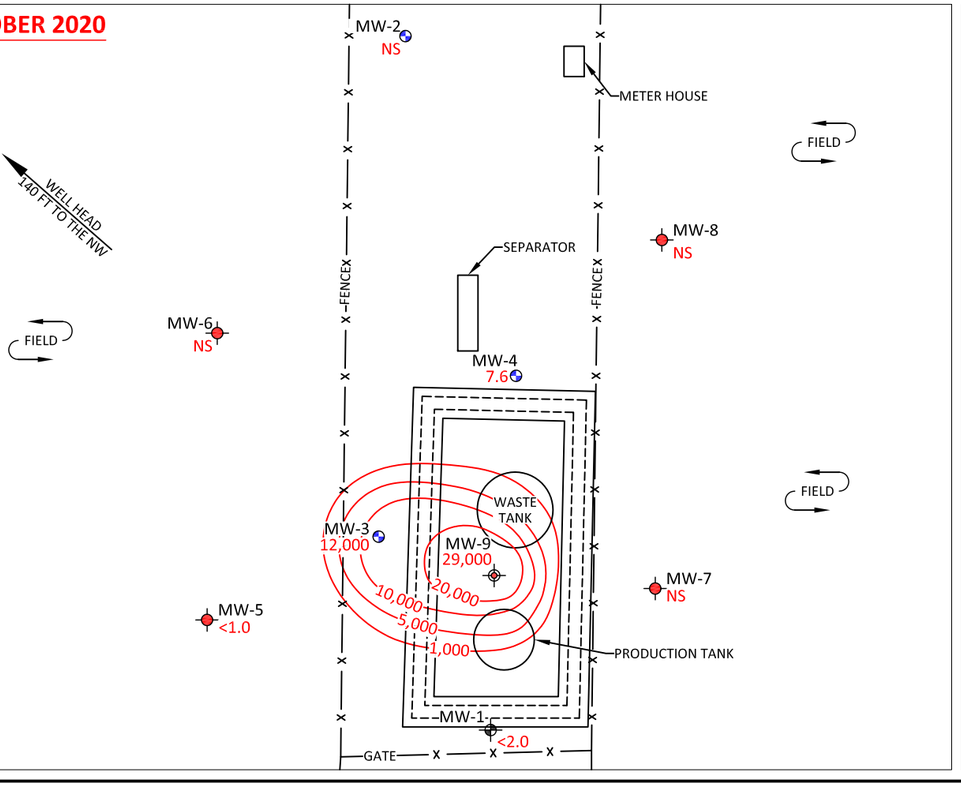
MARCH 2020



JUNE 2020



OCTOBER 2020



DECEMBER 2020

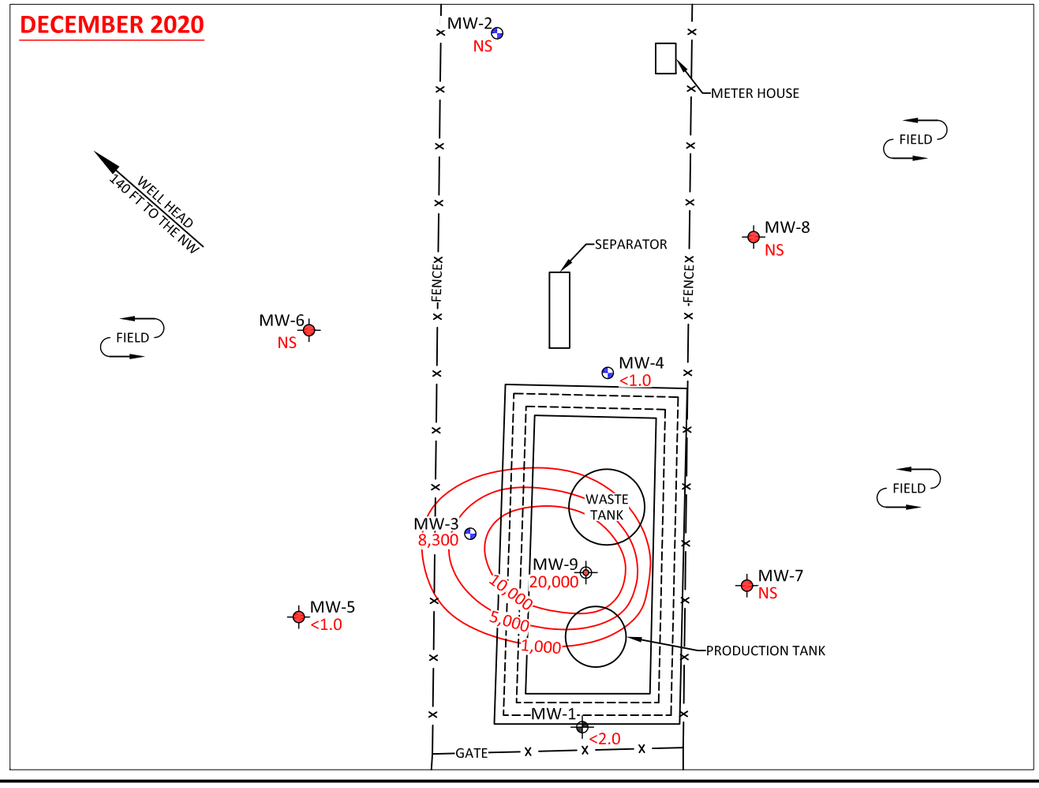


FIGURE 6

2020 DISSOLVED TOLUENE CONCENTRATION CONTOURS
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

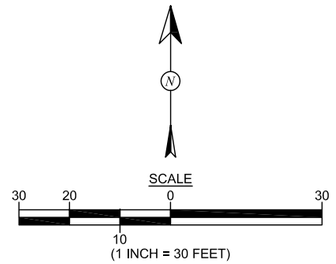
animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	January 8, 2016
REVISIONS BY:	**DATE REVISED:**
C. Lameman	January 5, 2021
CHECKED BY:	**DATE CHECKED:**
D. Reese	January 5, 2021
APPROVED BY:	**DATE APPROVED:**
E. McNally	January 5, 2021

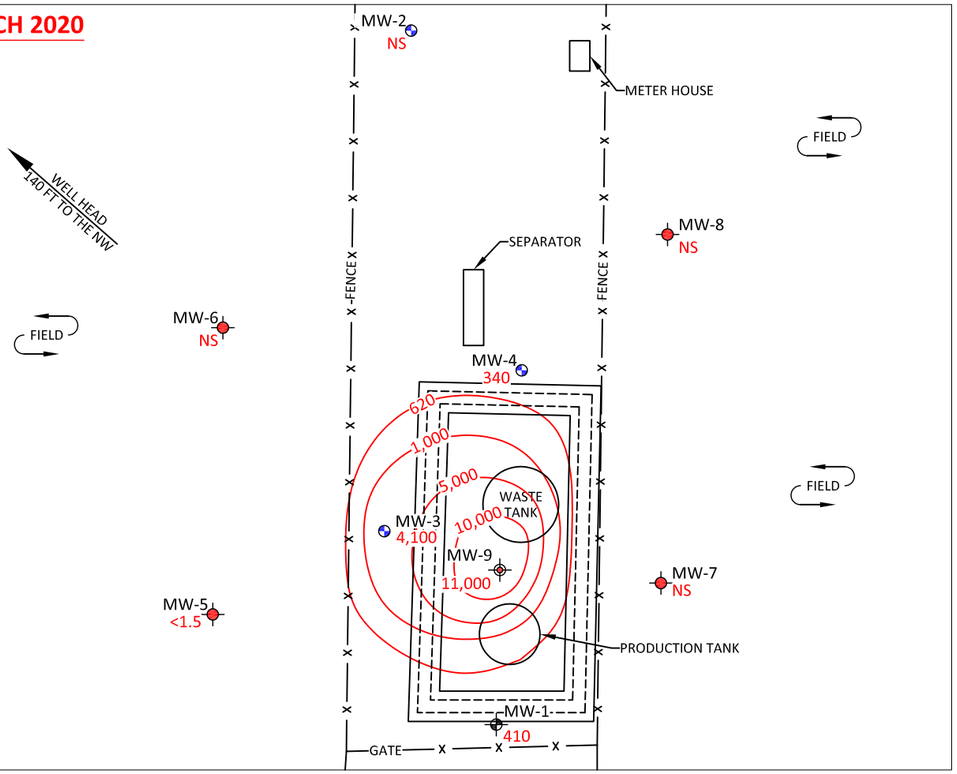
LEGEND

- EXISTING INVESTIGATION WELL
- MONITOR WELL INSTALLED IN APRIL AND MAY 2013
- MONITOR WELL INSTALLED IN AUGUST 2013
- MONITOR WELL INSTALLED IN JUNE 2014
- 21,00 — DISSOLVED TOLUENE CONCENTRATIONS IN µg/L
- —1,000— DISSOLVED TOLUENE CONCENTRATIONS CONTOURS IN µg/L
- NS — NOT SAMPLED

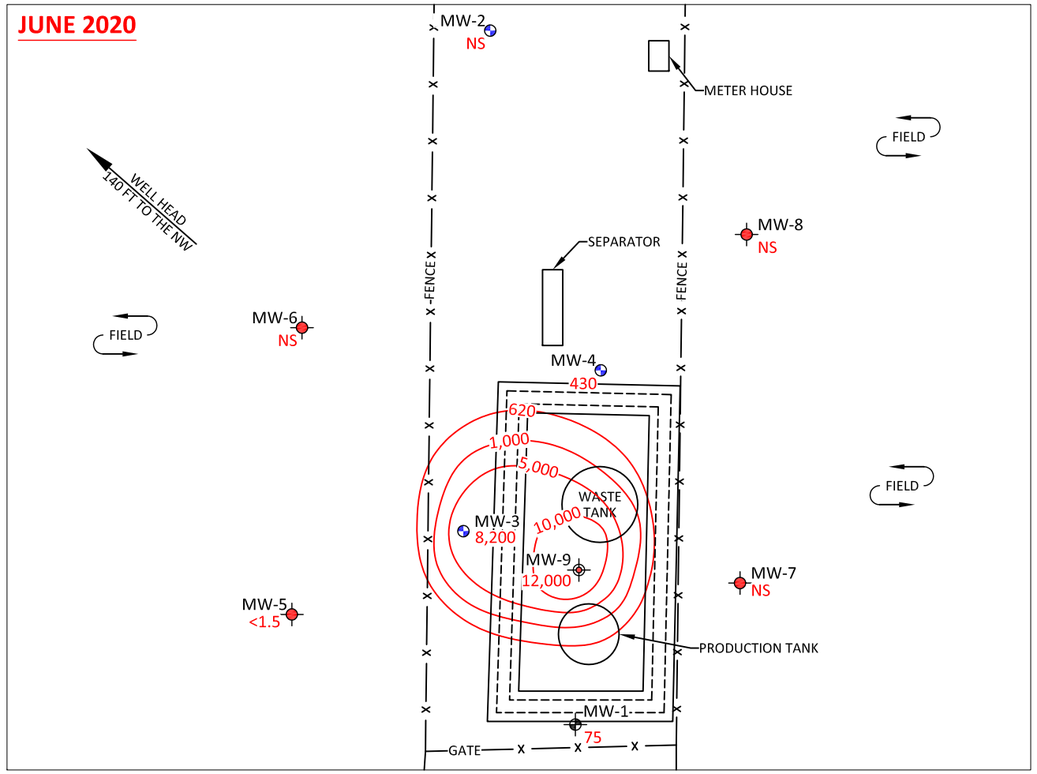
NOTE: ALL SAMPLES ANALYZED PER USEPA METHOD 8021B.



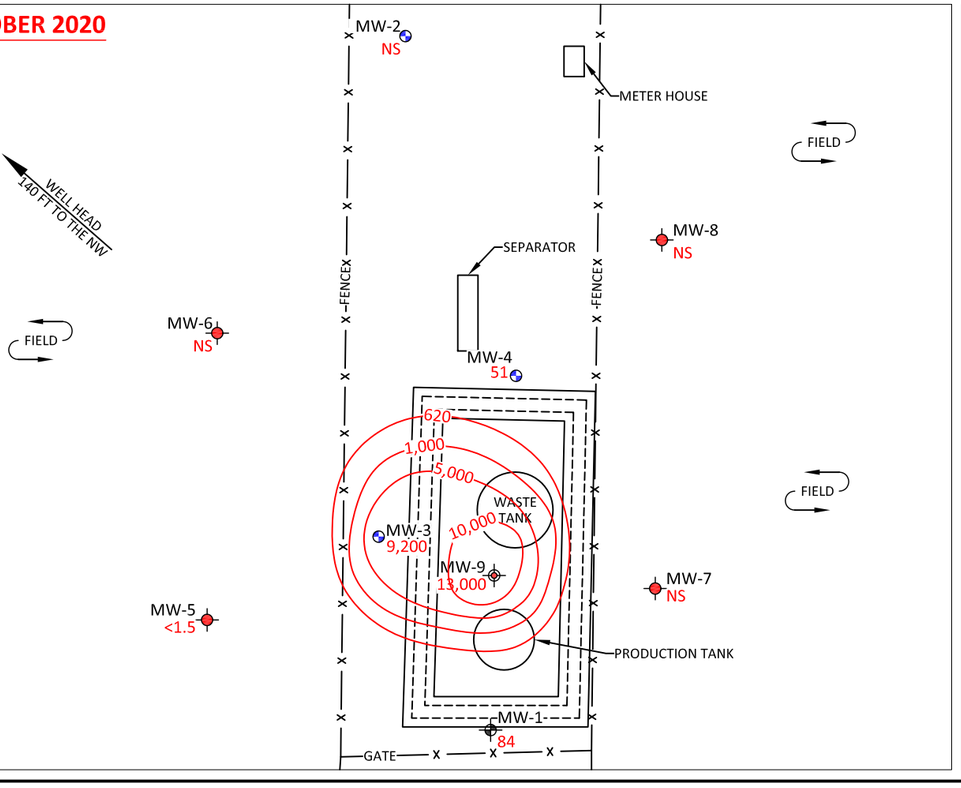
MARCH 2020



JUNE 2020



OCTOBER 2020



DECEMBER 2020

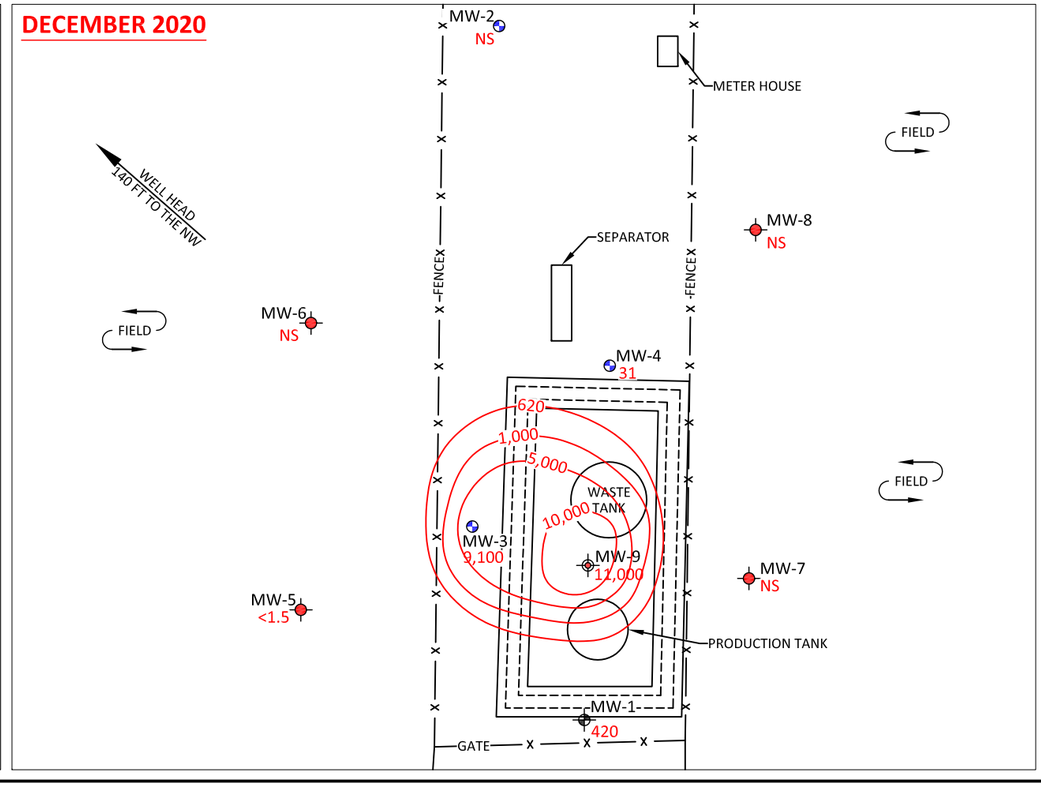


FIGURE 7

2020 DISSOLVED TOTAL XYLENES CONCENTRATION CONTOURS
LOGOS RESOURCES, LLC
JULANDER FEDERAL #1E
NE¼ SW¼, SECTION 31, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.67936, W108.03514

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	January 8, 2016
REVISIONS BY:	**DATE REVISED:**
C. Lameman	January 5, 2021
CHECKED BY:	**DATE CHECKED:**
D. Reese	January 5, 2021
APPROVED BY:	**DATE APPROVED:**
E. McNally	January 5, 2021

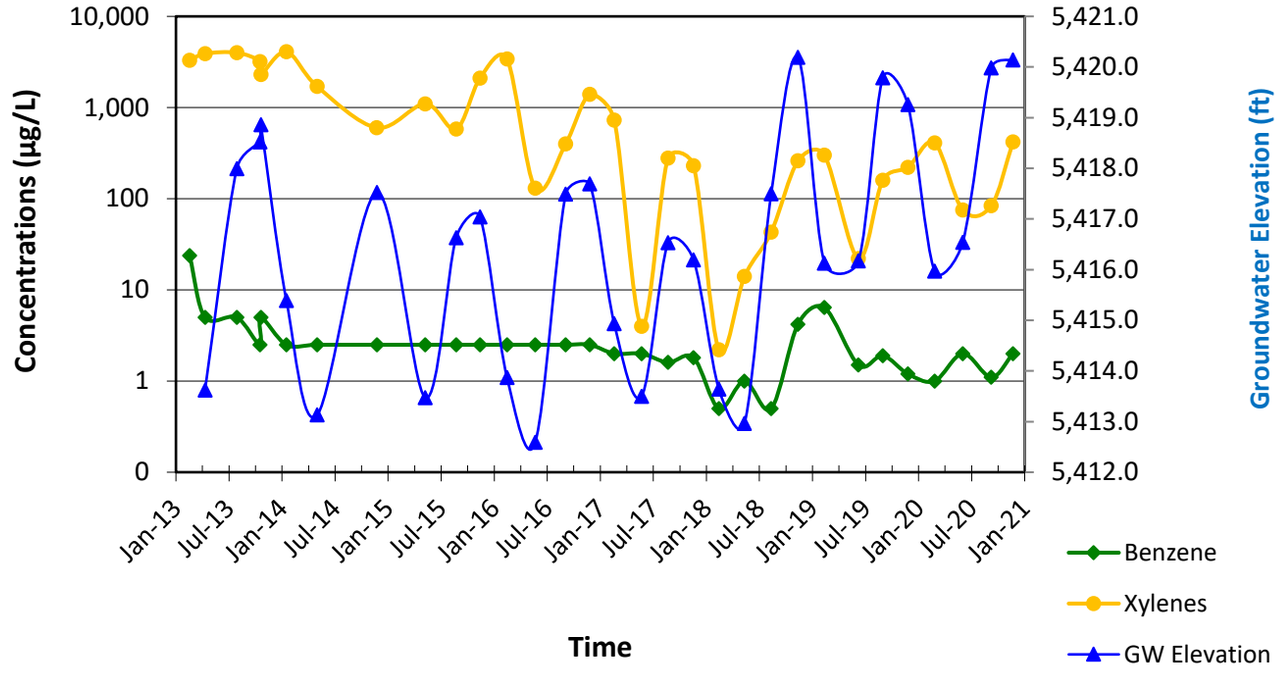
LEGEND

- EXISTING INVESTIGATION WELL
- MONITOR WELL INSTALLED IN APRIL AND MAY 2013
- MONITOR WELL INSTALLED IN AUGUST 2013
- MONITOR WELL INSTALLED IN JUNE 2014
- 3,200 — DISSOLVED TOTAL XYLENES CONCENTRATIONS IN µg/L
- —620— DISSOLVED TOTAL XYLENES CONCENTRATIONS CONTOURS IN µg/L
- NS — NOT SAMPLED

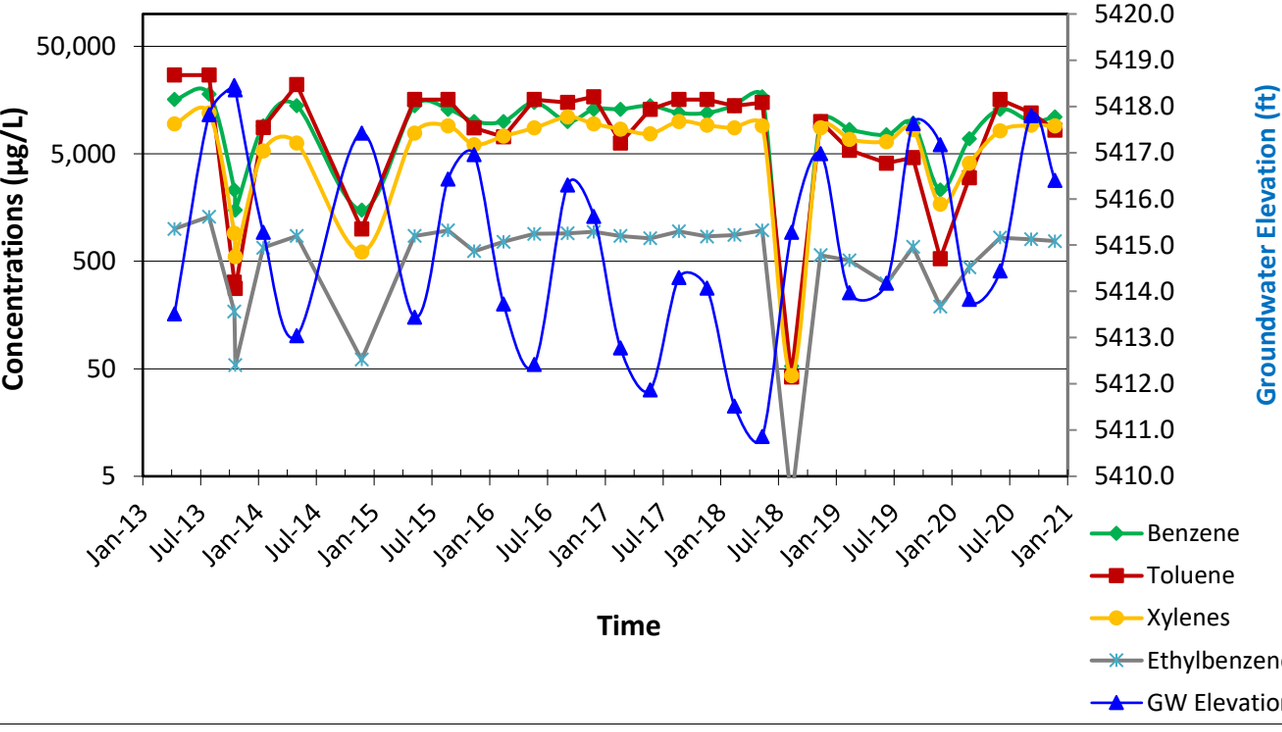
NOTE: ALL SAMPLES ANALYZED PER USEPA METHOD 8021B.

SCALE
30 20 0 30
10
(1 INCH = 30 FEET)

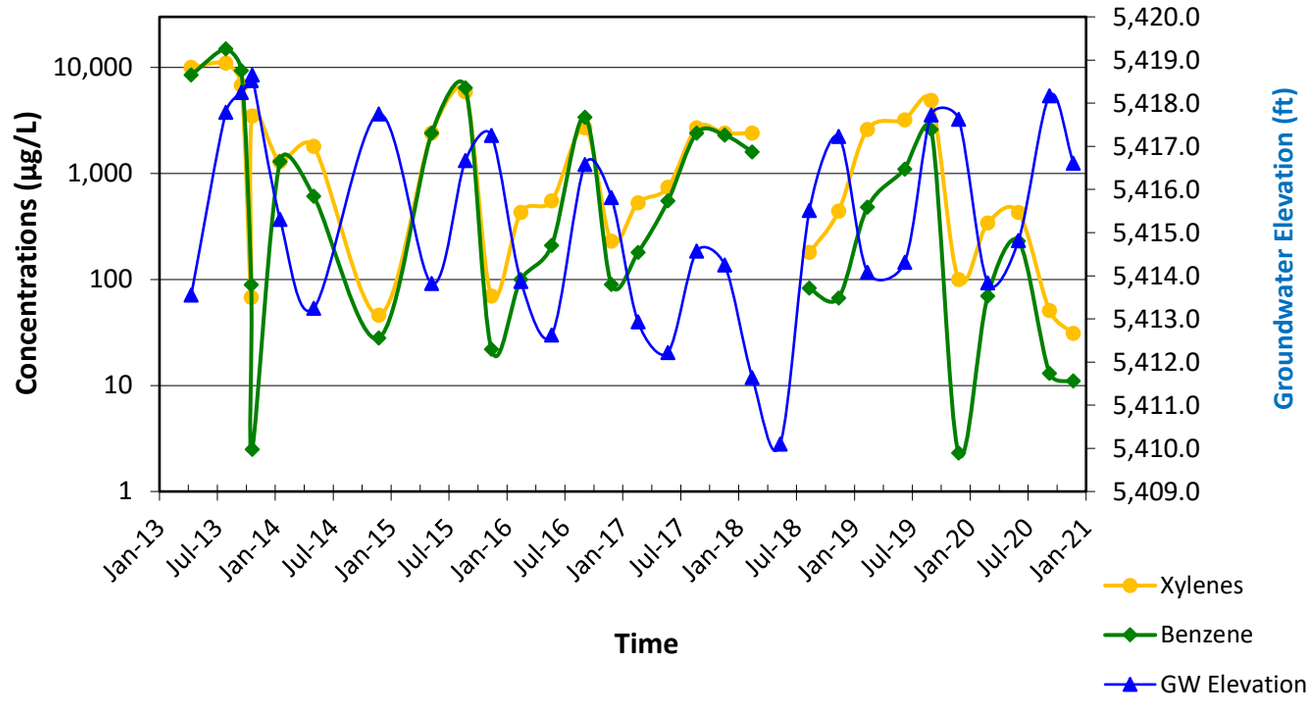
Graph 1: MW-1 Groundwater Elevations and Contaminant Concentrations over Time, Logos Julander Federal #1E



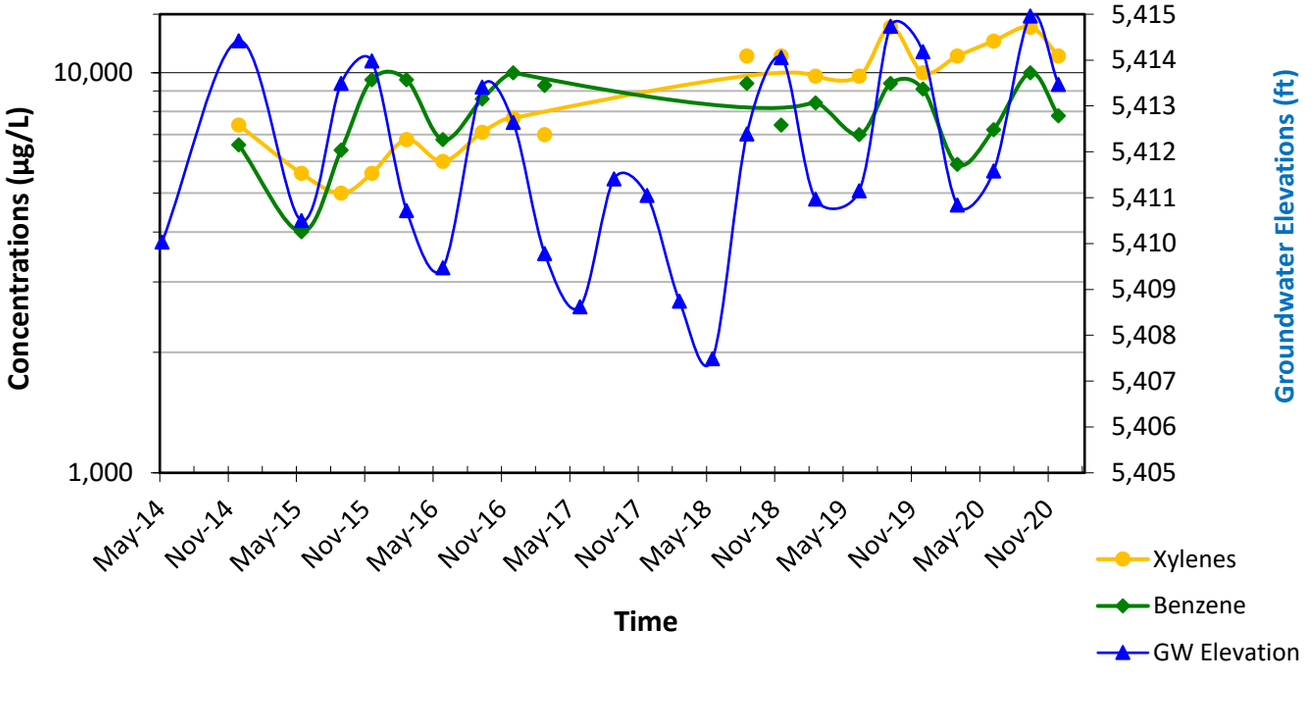
Graph 2: MW-3 Groundwater Elevations and Contaminant Concentrations over Time, Logos Julander Federal #1E



Graph 3: MW-4 Groundwater Elevations and Contaminant Concentrations over Time, Logos Julander Federal #1E



Graph 4: MW-9 Groundwater Elevations and Contaminant Concentrations over Time, Logos Julander Federal #1E



DEPTH TO GROUNDWATER MEASUREMENT FORM

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Groundwater Sampling
Site: Logos Resources
Location: Julander Federal #1E
Tech: GB/BD

Project No.: AES 160806
Date: 3.20.20
Time: 9:15
Form:

Well ID	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-1	Ø	41.52 30.22	Ø	
MW-2	~~unable to~~	locate		(Gauge only)
MW-3	Ø	40.14	Ø	
MW-4	Ø	39.75	Ø	
MW-5	Ø	39.86	Ø	
MW-6	- 0 -	38.49	- 0 -	(Gauge only)
MW-7	- 0 -	41.13	- 0 -	(Gauge only)
MW-8	- 0 -	38.51	- 0 -	(Gauge only)
MW-9	- 0 -	43.66	- 0 -	

Wells measured with KECK water level or KECK interface tape, decontaminated between each well measurement.

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-1

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/BD
Purge / No Purge: Purge
Well Diameter (in): 2

Project No.: AES 160806
Date: 3.20.20
Arrival Time: 10:14
Air Temp: 39°
T.O.C. Elev. (ft): 5455.49
Total Well Depth (ft): 47.72

Initial D.T.W. (ft): 41.52 Time: 10:16 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 41.52 Time: 10:17 *(taken prior to purging well)*
Final D.T.W. (ft): 45.62 Time: 10:34 *(taken after sample collection)*
If NAPL Present: D.T.P.: Ø D.T.W.: 0 Thickness: 0 Time: Ø

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 3.19.20

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
10:20	13.9	858	.74	7.05	-137.9	Initial	Clear/smelly
10:24	14.7	887	1.09	7.02	148.9	Gal 1	Clear/smelly
	Low Yield and					Gal 2	
	Recharge					Gal 3	
10:29	Samples Collected						

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: On site Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Purge Vol calculated @ 3 gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-3

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/BD
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 40.14 **Time:** 10:32 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 40.14 **Time:** 10:33 *(taken prior to purging well)*
Final D.T.W. (ft): 41.71 **Time:** 11:09 *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 3.20.20
Arrival Time: 10:31
Air Temp: 39°
T.O.C. Elev. (ft): 5453.98
Total Well Depth (ft): 46.52

Water Quality Parameters - Recorded During Well Purging

YSI #___ Calibration Date:

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
10:38	15°	1078	.79	6.88	84.2	Inital	Gray/slight odor/White microbes
10:43	14.9°	1074	1.13	6.90	77.7	Gal. 1	Black/slight odor/white microbes
10:51	14.5	1066	1.37	6.92	76.6	Gal. 2	Slight/odor/white microbes
11:00	14.8	1067	1.50	6.97	70.7	Gal. 3	
11:05		Samples collected					

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: On ground NC Access to storm drains
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Purge volume Calculated @ 3 gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-4

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/BD
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 39.75 Time: 11:15 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 39.75 Time: 11:14 *(taken prior to purging well)*
Final D.T.W. (ft): 43.24 Time: 11:28 *(taken after sample collection)*
If NAPL Present: D.T.P.: 0 D.T.W.: 0 Thickness: 0 Time: 0

Project No.: AES 160806
Date: 3.20.20
Arrival Time: 11:13
Air Temp: 40°
T.O.C. Elev. (ft): 5453.72
Total Well Depth (ft): 47.45

Water Quality Parameters - Recorded During Well Purging

YSI # ___ Calibration Date:

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
	Sheen	No	Water	Quality	readings		Taken
11:25	Samples		Collected				

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: On ground No access to storm drain
Collected Samples Stored on Ice in Cooler: yes
Chain of Custody Record Complete: yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Purge Volume Calculated @ 3.75 gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-5

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/BD
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 39.86 Time: 9:30 (taken at initial gauging of all wells)
Confirm D.T.W. (ft): 39.86 Time: 9:31 (taken prior to purging well)
Final D.T.W. (ft): 43.08 Time: 10:16 (taken after sample collection)
If NAPL Present: D.T.P.: 0 D.T.W.: 0 Thickness: 0 Time: 0

Project No.: AES 160806
Date: 3.20.20
Arrival Time: 9:29
Air Temp: 38°F
T.O.C. Elev. (ft): 5453.77
Total Well Depth (ft): 45.95

Water Quality Parameters - Recorded During Well Purging

YSI # ___ Calibration Date:

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
9:44	14.3	880	.42	6.82	170.6	Initial	Clear/No odor
9:50	13.9	861	.93	7.00	178.9	1 gal	Clear/No odor
9:55	13.8	847	99	7.02	181.7	2 gal	Cloudy/No odor
10:00	13.7	852	1.34	7.01	188.4	3 gal	Cloudy/No odor
10:07		Samples Collected					

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: on ground No access to storm drain
Collected Samples Stored on Ice in Cooler: YES
Chain of Custody Record Complete: YES
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Purge Vol calc @ 2.98 Gal

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-9

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/BD
Purge / No Purge: Purge
Well Diameter (in): 2

Project No.: AES 160806
Date: 3.20.20
Arrival Time: 11:31
Air Temp: 40°
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): 52.63

Initial D.T.W. (ft): 43.64 Time: 11:33 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 43.64 Time: 11:34 *(taken prior to purging well)*
Final D.T.W. (ft): 50.01 Time: 11:49 *(taken after sample collection)*
If NAPL Present: D.T.P.: ✓ D.T.W.: ✓ Thickness: ✓ Time: ✓

Water Quality Parameters - Recorded During Well Purging

YSI #___ Calibration Date:

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
	Sheen/No Water quality readings taken						
11:46		Samples Taken					

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: on ground No access to storm drain
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Purge Volume Calculated at 4.39 gallons

DEPTH TO GROUNDWATER MEASUREMENT FORM

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Groundwater Sampling
Site: Logos Resources
Location: Julander Federal #1E
Tech: Greg Bronme / Cowan Lamerman

Project No.: AES 160806
Date: 6-25-20
Time: 832 - 1035
Form:

Well ID	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-1	—	40.95	—	
MW-2	—	37.64	—	(Gauge only)
MW-3	—	39.54	—	
MW-4	—	38.90	—	
MW-5	—	39.45	—	
MW-6	—	37.85	—	(Gauge only)
MW-7	—	40.34	—	(Gauge only)
MW-8	—	38.32	—	(Gauge only)
MW-9	42.92	42.92	<0.01	1st Bailer had sheen.

Wells measured with KECK water level or KECK interface tape, decontaminated between each well measurement.

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-1

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 40.95 **Time:** 9:15 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 40.95 **Time:** 9:17 *(taken prior to purging well)*
Final D.T.W. (ft): 48.68 **Time:** 9:28 *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 6-25-20
Arrival Time: 9:14
Air Temp: 82°F Sunny, Breezy
T.O.C. Elev. (ft): 5455.49
Total Well Depth (ft): 47.72

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 6-25-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
~~9:19~~ 9:19	15.9	1.09	0.50	6.72	-17.8	Initial (0.25)	Clear / Hydrocarbon odor
9:21	15.8	1.10	1.32	6.73	-65.9	1.0	Sl. Gray / Hydrocarbon odor Blk. flakes
9:23	15.6	1.10	1.85	6.79	-71.7	2.0	Sl. Gray / Hydrocarbon odor Blk flakes
9:25	15.9	1.10	1.99	6.94	-61.6	3.0	Lots Sl. Gray / Hydrocarbon odor Blk flakes
9:27	—	—	—	—	—	—	Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: On site Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume = 3.25 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-3

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 39.54 **Time:** 9:49 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 39.54 **Time:** 9:51 *(taken prior to purging well)*
Final D.T.W. (ft): 41.35 **Time:** 10:03 *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 6-25-20
Arrival Time: 9:48
Air Temp: 80°F P.Cloudy, Breezy
T.O.C. Elev. (ft): 5453.98
Total Well Depth (ft): 46.52

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 6-25-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
9:54	16.5	1.28	1.12	6.77	-83.1	Initial (0.25)	Sl. Gray / Hydrocarbon Odor
9:56	15.9	1.33	0.98	6.66	-78.3	1.0	Sl. Tan Sed / Hydrocarbon odor White Bugs
9:58	15.8	1.32	1.02	6.63	-73.6	2.0	Sl. Tan Sed / Hydrocarbon Odor White Bugs
10:00	15.7	1.28	0.79	6.66	-76.2	3.0	Sl. Tan Sed / Hydrocarbon Odor White Bugs
10:02	—	—	—	—	—	3.5	Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: In Waste Tank Onsite
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume = 3.5 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-4

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CJ/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 38.90 **Time:** 9:32 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 38.90 **Time:** 9:34 *(taken prior to purging well)*
Final D.T.W. (ft): 44.02 **Time:** 9:47 *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 6-25-20
Arrival Time: 9:31
Air Temp: 80°F P.Cloudy & Breezy
T.O.C. Elev. (ft): 5453.72
Total Well Depth (ft): 47.45

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 6-25-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
	NO WATER QUALITY READINGS						
	DUE TO SHEEN						
9:46	—	—	—	—	—	—	Samples Collected Below "Sheen" surface

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: In Waste Tank Onsite
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 4.25 Gallons
Bail off sheen.

#2 57.64

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-5

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 39.45 **Time:** 8:56 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 39.45 **Time:** 8:58 *(taken prior to purging well)*
Final D.T.W. (ft): 43.73 **Time:** 9:11 *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 6-25-20
Arrival Time: 8:55
Air Temp: 76° Sunny, Breezy
T.O.C. Elev. (ft): 5453.77
Total Well Depth (ft): 45.95

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 6-25-20 GB

Time	Temp (deg C)	Conductivity (µS) (~~mS~~)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
9:02	16.7	1.11	2.05	6.65	231.6	Initial	Clear/No Odor
9:04	15.6	1.10	2.30	6.65	230.5	1.0	Clear/No Odor
9:06	15.2	1.10	1.35	6.68	226.9	2.0	Clear/No Odor/Roots
9:08	15.0	1.10	1.28	6.67	227.3	3.0	
9:10	—	—	—	—	—	—	Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: In waste tank onsite
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 3 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-9

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): — **Time:** —
Confirm D.T.W. (ft): — **Time:** —
Final D.T.W. (ft): — **Time:** —
If NAPL Present: **D.T.P.:** 42.92 **D.T.W.:** 42.92 **Thickness:** <0.01 **Time:** 10:06

Project No.: AES 160806
Date: 6-25-20
Arrival Time: 10:05
Air Temp: 80°F P.Cloudy, Breezy
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): 52.63
(taken at initial gauging of all wells)
(taken prior to purging well)
(taken after sample collection)

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 6-25-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
	NO WATER QUALITY READINGS						
	DUE TO SHEEN						
10:17	—					—	Samples Collected Below "Sheen" Surface

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: ~~On W~~ In Waste Tank Onsite
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈NA
Initial Bailer had sheen. Additional Bailers pulled in more "Sheen". Attempts to Bail off sheen.
Final D.T.P = 48.88 D.T.W. = 48.88 Thickness = <0.01 "Sheen" Time = 10:19

DEPTH TO GROUNDWATER MEASUREMENT FORM

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Groundwater Sampling
Site: Logos Resources
Location: Julander Federal #1E
Tech: CL + GB

Project No.: AES 160806
Date: 10-1-20
Time: 9:40 - 12:15
Form:

Well ID	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-1	-	37.51	—	
MW-2	—	39.98	—	*(Gauge only)*
MW-3	—	36.18	—	
MW-4	—	35.55	—	
MW-5	—	36.16	—	
MW-6	—	34.87	—	*(Gauge only)*
MW-7	—	36.82	—	*(Gauge only)*
MW-8	—	34.75	—	*(Gauge only)*
MW-9	—	39.54	—	

Wells measured with KECK water level or KECK interface tape, decontaminated between each well measurement.

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-1

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 37.51 **Time:** 10:28 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 37.51 **Time:** 10:30 *(taken prior to purging well)*
Final D.T.W. (ft): 43.03 **Time:** 10:56 *(taken after sample collection)*
If NAPL Present: D.T.P.: – D.T.W.: – Thickness: – Time: –

Project No.: AES 160806
Date: 10-1-20
Arrival Time: 10:27
Air Temp: 63°F Sunny
T.O.C. Elev. (ft): 5455.49
Total Well Depth (ft): 47.72

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 10-1-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
10:34	14.9	820	0.65	6.82	-8.8	Initial	Light Gray / Clear / Strong Odor / White Bugs
10:40	15.1	839	0.81	6.78	-24.2	1.0	Light Gray / Cloudy / Strong Odor / White Bugs / Blk Roots
10:43	15.1	859	0.82	6.73	-34.6	2.0	Light Gray / Cloudy / Strong Odor / White Bugs / Blk Roots
10:47	15.1	879	1.03	6.77	-50.7	3.0	Blk flakes / Cloudy / V. Strong Odor / Blk Roots
10:50	15.1	847	1.50	6.86	-57.4	4.0	Blk flakes / Cloudy / Strong Odor
10:53	15.2	824	1.07	6.93	-55.5	5.0	Blk flakes / Cloudy / Odor
10:54							Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: On site Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 5.0 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-3

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 36.18 **Time:** 11:23 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 36.18 **Time:** 11:25 *(taken prior to purging well)*
Final D.T.W. (ft): 37.56 **Time:** *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 10-1-20
Arrival Time: 11:21
Air Temp: 65°F Sunny
T.O.C. Elev. (ft): 5453.98
Total Well Depth (ft): 46.52

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 10-1-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
11:28	16.6	1620	0.79	6.96	-71.3	Initial	Clear / Blk Algae / strong Odor
11:31	15.8	1050	0.62	6.78	-76.7	1.0	Gray Sed / V. Strong Odor / White Bugs
11:33	15.6	1057	0.85	6.74	-76.3	2.0	Gray Sed / V. Strong Odor
11:36	15.4	1078	0.72	6.70	-74.3	3.0	Gray Sed / V. Strong Odor
11:39	15.4	1091	0.78	6.67	-72.1	4.0	Gray Sed / V. Strong Odor
11:43	15.5	982	0.52	6.70	-72.0	5.0	Tan Sed / V. Strong Odor
11:44	—	—	—	—	—	—	Sample Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: Onsite Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 5.0 Gallons.

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-4

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 35.55 **Time:** 11:02 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 35.55 **Time:** 11:04 *(taken prior to purging well)*
Final D.T.W. (ft): 35.81 **Time:** 11:20 *(taken after sample collection)*
If NAPL Present: D.T.P.: — **D.T.W.:** — **Thickness:** — **Time:** —

Project No.: AES 160806
Date: 10-1-20
Arrival Time: 10:55
Air Temp: 63°F Sunny
T.O.C. Elev. (ft): 5453.72
Total Well Depth (ft): 47.45

Water Quality Parameters - Recorded During Well Purging

YSI # 1 **Calibration Date:** 10-1-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
	NO WATER QUALITY						
	READINGS DUE TO SHEEN						
11:18	—	—	—	—	—	—	Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: Onsite Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 5.8 Gallons
Attempt to Bail off Sheen. Sample Collected Below Sheen Surfaces

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-5

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/CB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 36.16 **Time:** 10:00 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 36.16 **Time:** 10:02 *(taken prior to purging well)*
Final D.T.W. (ft): 40.31 **Time:** 10:23 *(taken after sample collection)*
If NAPL Present: D.T.P.: - D.T.W.: - Thickness: - Time: -

Project No.: AES 160806
Date: 10-1-20
Arrival Time: 9:59
Air Temp: 49°F Sunny
T.O.C. Elev. (ft): 5453.77
Total Well Depth (ft): 45.95

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 10-1-20 CB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
10:09	15.1	867	3.37	6.86	202.3	Initial	Clear / No Odor
10:11	14.6	874	3.83	6.74	199.9	1.0	white Cloudy / No Odor
10:14	14.5	872	3.81	6.67	197.9	2.0	Tan Sed / No Odor
10:17	14.5	879	3.80	6.70	196.5	3.0	Tan Sed / No Odor
10:19	14.5	889	2.58	6.70	195.4	4.0	Tan Sed / No Odor
10:21							Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: ~~on~~ Onsite Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 4.75 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-9

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: CL/GB
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 39.54 **Time:** 11:49 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 39:54 **Time:** 11:51 *(taken prior to purging well)*
Final D.T.W. (ft): 44.45 **Time:** 12:04 *(taken after sample collection)*
If NAPL Present: D.T.P.:— D.T.W.:~ Thickness:— Time:—

Project No.: AES 160806
Date: 10-1-20
Arrival Time: 11:48
Air Temp: 68°F Sunny
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): 52.63

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 10-1-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
		NO WATER QUALITY					
		READINGS DUE TO SHEEN					
12:03	—	—	—	—	—	—	Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method 8021 (BTEX) - Three 40 mL (HgCl2) VOA

Disposal of Purged Water: Onsite Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈6.25 Gallons
Attempt to Boil Off Sheen. Samples Collected below sheen surface.

DEPTH TO GROUNDWATER MEASUREMENT FORM

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Groundwater Sampling
Site: Logos Resources
Location: Julander Federal #1E
Tech: GB/CL

Project No.: AES 160806
Date: 12-15-20
Time: 9:11 - 11:54
Form:

Well ID	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-1	—	37.95	—	
MW-2	—	35.12	—	(Gauge only)
MW-3	—	37.58	—	
MW-4	—	37.11	—	
MW-5	—	38.95	—	
MW-6	—	35.88	—	(Gauge only)
MW-7	—	38.39	—	(Gauge only)
MW-8	—	36.50	—	(Gauge only)
MW-9				

Wells measured with KECK water level or KECK interface tape, decontaminated between each well measurement.

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-1

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/CL
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 38.95 **Time:** 10:20 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 38.95 **Time:** 10:22 *(taken prior to purging well)*
Final D.T.W. (ft): 46.01 **Time:** 10:35 *(taken after sample collection)*
If NAPL Present: D.T.P.: – D.T.W.: – Thickness: – Time: –

Project No.: AES 160806
Date: 12-15-20
Arrival Time: 10:18
Air Temp:
T.O.C. Elev. (ft): 5455.49
Total Well Depth (ft): 47.72

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 12-15-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
10:24	13.1	738	1.43	6.55	-29.6	Initial 0.25	Clear Some O&G flakes / Hydrocarbon odor
10:26	14.1	779	1.70	6.63	-69.7	1.0	Purge Sl. Turbid / Hydrocarbons odor
10:28	14.3	797	1.48	6.60	-84.7	2.0	S.A.A.
10:31	14.1	777	1.73	6.60	-95.7	3.0	S.A.A.
10:33	—						Low Yield
							Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method ~~8021 (BTEX)~~ 8260 - Three 40 mL (HgCl2) VOA
8260 Full List

Disposal of Purged Water: On site Waste Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 4.25 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-3

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/CL
Purge / No Purge: Purge
Well Diameter (in): 2

Project No.: AES 160806
Date: 12-15-20
Arrival Time: 11:10
Air Temp: 28° F Sunny
T.O.C. Elev. (ft): 5453.98
Total Well Depth (ft): 46.52

Initial D.T.W. (ft): 37.58 **Time:** 11:11 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 37.58 **Time:** 11:13 *(taken prior to purging well)*
Final D.T.W. (ft): 38.73 **Time:** 11:26 *(taken after sample collection)*
If NAPL Present: **D.T.P.:** — **D.T.W.:** — **Thickness:** — **Time:** —

Water Quality Parameters - Recorded During Well Purging

YSI # 1 **Calibration Date:** 12-15-20

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
11:15	13.6	1042	2.24	6.30	-91.0	Initial 0.25	Tan Sed Sl. Turbid / White Bugs Hydrocarbon Odor
11:17	14.6	1079	1.35	6.34	-95.2	1.0	Tan Sed Sl. Turbid / Hydrocarbon Odor
11:20	14.8	1089	1.14	6.37	-92.7	2.0	Tan Sed Turbid / Hydrocarbon Odor
11:22	15.0	1100	1.19	6.37	-92.8	3.0	S.A.A.
11:24	15.0	1105	1.15	6.39	-93.2	4.0	S.A.A.
11:25	—	—	—	—	—	—	Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method ~~8021 (BTEX)~~ 8260 - Three 40 mL (HgCl2) VOA
8260 Full List

Disposal of Purged Water: onsite Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 4.25 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-4

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/CA
Purge / No Purge: Purge
Well Diameter (in): 2

Project No.: AES 160806
Date: 12-15-20
Arrival Time: 10:54
Air Temp: 26°F Sunny Breezy
T.O.C. Elev. (ft): 5453.72
Total Well Depth (ft): 47.45

Initial D.T.W. (ft): 37.11 **Time:** 10:54 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 37.11 **Time:** 10:56 *(taken prior to purging well)*
Final D.T.W. (ft): 38.82 **Time:** 11:08 *(taken after sample collection)*
If NAPL Present: **D.T.P.:** — **D.T.W.:** — **Thickness:** — **Time:** —

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 12-15-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
—	No WATER QUALITY READINGS DUE TO SHEEN						—
11:07	—						Samples Collected Below Sheen Surface

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method ~~8021 (BTEX)~~ 8260 - Three 40 mL (HgCl2) VOA
8260 Full List

Disposal of Purged Water: Onsite Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 5 Gallons
Attempt to Bail Sheen off for 10 mins.

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-5

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/cc
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 37.35 **Time:** 9:42 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 37.35 **Time:** 9:44 *(taken prior to purging well)*
Final D.T.W. (ft): 44.90 **Time:** 9:58 *(taken after sample collection)*
If NAPL Present: D.T.P.: — D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 12-15-20
Arrival Time: 9:40
Air Temp: 26°F Sunny Breezy
T.O.C. Elev. (ft): 5453.77
Total Well Depth (ft): 45.95

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 12-15-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
9:47	13.4	909	5.34	7.76	211.1	Initial	clear / No odor
9:50	13.9	920	4.54	7.38	206.3	1.0	Tan Sed Slt Turbid / No odor
9:52	14.1	936	4.07	7.20	201.9	2.0	S.A.A.
9:54	14.0	938	3.82	7.07	198.7	3.0	S.A.A.
9:56							Low Yield
							Samples Collected

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method ~~8021 (BTEX)~~ Three 40 mL (HgCl2) VOA
8260 Full List

Disposal of Purged Water: ~~On G~~ Onsite Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈ 4 Gallons

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-9

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Groundwater Sampling
Location: Julander Federal #1E
Project: Logos Resources, LLC
Sampling Technician: GB/CL
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 41.03 **Time:** 11:30 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 41.03 **Time:** 11:32 *(taken prior to purging well)*
Final D.T.W. (ft): 49.26 **Time:** 11:45 *(taken after sample collection)*
If NAPL Present: D.T.P.: 4' D.T.W.: — Thickness: — Time: —

Project No.: AES 160806
Date: 12-15-20
Arrival Time: 11:29
Air Temp: 29°F Sunny Breezy
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): 52.63

Water Quality Parameters - Recorded During Well Purging

YSI # 1 Calibration Date: 12-05-20 GB

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
—	NO WATER QUALITY	READINGS DUE TO	SHEEN			—	
11:44	—	—	—	—	—	—	Samples Collected
							Below Sheen Surface

Analytical Parameters (include analysis method and number and type of sample containers)

USEPA Method ~~8021 (BTEX)~~ 8260 Three 40 mL (HgCl2) VOA
8260 Full List

Disposal of Purged Water: Onsite Tank
Collected Samples Stored on Ice in Cooler: Yes
Chain of Custody Record Complete: Yes
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: Calculated Purge Volume ≈
Attempt to Bail off Sheen for 10 mins

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 02, 2020

Elizabeth McNally

Animas Environmental Services
604 Pinon Street
Farmington, NM 87401
TEL:
FAX

RE: Logos Julander Federal 1E OrderNo.: 2003992

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/21/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **2003992**
Date Reported: **4/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Lab Order:** 2003992
Project: Logos Julander Federal 1E

Lab ID: 2003992-001 **Collection Date:** 3/20/2020 10:29:00 AM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/28/2020 10:50:00 PM	A67651
Toluene	1.6	1.0		µg/L	1	3/28/2020 10:50:00 PM	A67651
Ethylbenzene	110	10		µg/L	10	3/29/2020 2:01:00 PM	SL6766
Xylenes, Total	410	15		µg/L	10	3/29/2020 2:01:00 PM	SL6766
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%Rec	1	3/28/2020 10:50:00 PM	A67651
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/28/2020 10:50:00 PM	A67651
Surr: Dibromofluoromethane	97.9	70-130		%Rec	1	3/28/2020 10:50:00 PM	A67651
Surr: Toluene-d8	100	70-130		%Rec	1	3/28/2020 10:50:00 PM	A67651

Lab ID: 2003992-002 **Collection Date:** 3/20/2020 11:05:00 AM
Client Sample ID: MW-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	6900	200		µg/L	200	3/28/2020 11:14:00 PM	A67651
Toluene	3000	200		µg/L	200	3/28/2020 11:14:00 PM	A67651
Ethylbenzene	440	200		µg/L	200	3/28/2020 11:14:00 PM	A67651
Xylenes, Total	4100	300		µg/L	200	3/28/2020 11:14:00 PM	A67651
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	200	3/28/2020 11:14:00 PM	A67651
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	200	3/28/2020 11:14:00 PM	A67651
Surr: Dibromofluoromethane	98.5	70-130		%Rec	200	3/28/2020 11:14:00 PM	A67651
Surr: Toluene-d8	98.9	70-130		%Rec	200	3/28/2020 11:14:00 PM	A67651

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

Qualifiers:

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

Analytical Report
Lab Order: **2003992**
Date Reported: **4/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Lab Order:** 2003992
Project: Logos Julander Federal 1E

Lab ID: 2003992-003 **Collection Date:** 3/20/2020 11:25:00 AM
Client Sample ID: MW-4 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	70	1.0		µg/L	1	3/28/2020 11:38:00 PM	A67651
Toluene	290	10		µg/L	10	3/29/2020 2:25:00 PM	SL6766
Ethylbenzene	54	1.0		µg/L	1	3/28/2020 11:38:00 PM	A67651
Xylenes, Total	340	15		µg/L	10	3/29/2020 2:25:00 PM	SL6766
Surr: 1,2-Dichloroethane-d4	99.1	70-130		%Rec	1	3/28/2020 11:38:00 PM	A67651
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	3/28/2020 11:38:00 PM	A67651
Surr: Dibromofluoromethane	99.2	70-130		%Rec	1	3/28/2020 11:38:00 PM	A67651
Surr: Toluene-d8	104	70-130		%Rec	1	3/28/2020 11:38:00 PM	A67651

Lab ID: 2003992-004 **Collection Date:** 3/20/2020 10:07:00 AM
Client Sample ID: MW-5 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/29/2020 5:37:00 PM	SL6766
Toluene	ND	1.0		µg/L	1	3/29/2020 5:37:00 PM	SL6766
Ethylbenzene	ND	1.0		µg/L	1	3/29/2020 5:37:00 PM	SL6766
Xylenes, Total	ND	1.5		µg/L	1	3/29/2020 5:37:00 PM	SL6766
Surr: 1,2-Dichloroethane-d4	134	70-130	S	%Rec	1	3/29/2020 5:37:00 PM	SL6766
Surr: 4-Bromofluorobenzene	88.1	70-130		%Rec	1	3/29/2020 5:37:00 PM	SL6766
Surr: Dibromofluoromethane	121	70-130		%Rec	1	3/29/2020 5:37:00 PM	SL6766
Surr: Toluene-d8	98.7	70-130		%Rec	1	3/29/2020 5:37:00 PM	SL6766

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

Qualifiers:

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

Analytical Report
Lab Order: **2003992**
Date Reported: **4/2/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Lab Order:** 2003992
Project: Logos Julander Federal 1E

Lab ID: 2003992-005 **Collection Date:** 3/20/2020 11:46:00 AM
Client Sample ID: MW-9 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	5900	200		µg/L	200	3/29/2020 6:01:00 PM	SL6766
Toluene	19000	500		µg/L	500	3/30/2020 11:47:00 AM	SL6768
Ethylbenzene	1100	200		µg/L	200	3/29/2020 6:01:00 PM	SL6766
Xylenes, Total	11000	300		µg/L	200	3/29/2020 6:01:00 PM	SL6766
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	200	3/29/2020 6:01:00 PM	SL6766
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	200	3/29/2020 6:01:00 PM	SL6766
Surr: Dibromofluoromethane	97.6	70-130		%Rec	200	3/29/2020 6:01:00 PM	SL6766
Surr: Toluene-d8	114	70-130		%Rec	200	3/29/2020 6:01:00 PM	SL6766

Lab ID: 2003992-006 **Collection Date:**
Client Sample ID: Trip Blank **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/29/2020 6:25:00 PM	SL6766
Toluene	ND	1.0		µg/L	1	3/29/2020 6:25:00 PM	SL6766
Ethylbenzene	ND	1.0		µg/L	1	3/29/2020 6:25:00 PM	SL6766
Xylenes, Total	ND	1.5		µg/L	1	3/29/2020 6:25:00 PM	SL6766
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	3/29/2020 6:25:00 PM	SL6766
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	3/29/2020 6:25:00 PM	SL6766
Surr: Dibromofluoromethane	91.0	70-130		%Rec	1	3/29/2020 6:25:00 PM	SL6766
Surr: Toluene-d8	92.0	70-130		%Rec	1	3/29/2020 6:25:00 PM	SL6766

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2003992**
02-Apr-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **A67651**	RunNo: **67651**
Prep Date:	Analysis Date: **3/28/2020**	SeqNo: **2335791** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.2	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A67651**	RunNo: **67651**
Prep Date:	Analysis Date: **3/28/2020**	SeqNo: **2335792** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		121	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL67662**	RunNo: **67662**
Prep Date:	Analysis Date: **3/29/2020**	SeqNo: **2336611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL67662**	RunNo: **67662**
Prep Date:	Analysis Date: **3/29/2020**	SeqNo: **2336612** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2003992**
02-Apr-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL67662**	RunNo: **67662**
Prep Date:	Analysis Date: **3/29/2020**	SeqNo: **2336612** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.8	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL67683**	RunNo: **67683**
Prep Date:	Analysis Date: **3/30/2020**	SeqNo: **2337308** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL67683**	RunNo: **67683**
Prep Date:	Analysis Date: **3/30/2020**	SeqNo: **2339328** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 2003992 RcptNo: 1

Received By: Yazmine Garduno 3/21/2020 8:06:00 AM

Completed By: Isaiah Ortiz 3/23/2020 9:16:38 AM

Reviewed By: IO 3/23/20

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: JR 3/23/20

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Mailing Address: P.O. Box 8
Farmington, NM 87499-0008

Phone #: 505-564-2281

email or Fax#: emcnally@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard Rush_____

Project Name:
Logos Julander Federal #1E

Project #:

Project Manager:
Elizabeth McNally

Sampler: GB/BD
On Ice: Y Yes ☐ No Y63 L1123
Sample Temperature: 2.8-0.2+0.2=6

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2003992	BTEX (8021)	Air Bubbles (Y or N)
3/20/20	10:29	H_2O	MW-1	3 - 40 ml VOA	HgCl2	-001	X	
3/20/20	11:05	H_2O	MW-3	3 - 40 ml VOA	HgCl2	-002	X	
3/20/20	11:25	H_2O	MW-4	3 - 40 ml VOA	HgCl2	-003	X	
3/20/20	10:07	H_2O	MW-5	4 - 40 ml VOA	HgCl2	-004	X	
3/20/20	11:46	H_2O	MW-9	5 - 40 ml VOA	HgCl2	-005	X	
		H2O	Trip Blank	2 - 40 mL VOA	ok a ~~HgCl2~~ ~~HCl~~	-006	X	

Date	Time	Relinquished by:	Received by:	Date	Time
3/20/20	1652	BDunn	Christine Walters	3/20/20	1652
3/20/20	1814	Christine Walters	Courier	3/21/20	0804

Custody seal attached 3/21/20

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 06, 2020

Elizabeth McNally

Animas Environmental Services
604 Pinon Street
Farmington, NM 87401
TEL:
FAX:

RE: Logos Julander Federal 1E OrderNo.: 2006D81

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/26/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2006D81**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-1
Project: Logos Julander Federal 1E
Collection Date: 6/25/2020 9:27:00 AM
Lab ID: 2006D81-001 **Matrix:** AQUEOUS **Received Date:** 6/26/2020 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	2.0		µg/L	2	6/28/2020 7:38:15 PM	A69970
Toluene	ND	2.0		µg/L	2	6/28/2020 7:38:15 PM	A69970
Ethylbenzene	47	2.0		µg/L	2	6/28/2020 7:38:15 PM	A69970
Xylenes, Total	75	3.0		µg/L	2	6/28/2020 7:38:15 PM	A69970
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	2	6/28/2020 7:38:15 PM	A69970
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	2	6/28/2020 7:38:15 PM	A69970
Surr: Dibromofluoromethane	94.4	70-130		%Rec	2	6/28/2020 7:38:15 PM	A69970
Surr: Toluene-d8	102	70-130		%Rec	2	6/28/2020 7:38:15 PM	A69970

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

Qualifiers:

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

Analytical Report
Lab Order **2006D81**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-3
Project: Logos Julander Federal 1E
Collection Date: 6/25/2020 10:02:00 AM
Lab ID: 2006D81-002 **Matrix:** AQUEOUS **Received Date:** 6/26/2020 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**	
Benzene	13000	1000		µg/L	1E+	7/2/2020 5:11:36 PM	SL70086
Toluene	16000	1000		µg/L	1E+	7/2/2020 5:11:36 PM	SL70086
Ethylbenzene	830	100		µg/L	100	6/28/2020 8:08:19 PM	A69970
Xylenes, Total	8200	150		µg/L	100	6/28/2020 8:08:19 PM	A69970
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	100	6/28/2020 8:08:19 PM	A69970
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	100	6/28/2020 8:08:19 PM	A69970
Surr: Dibromofluoromethane	99.6	70-130		%Rec	100	6/28/2020 8:08:19 PM	A69970
Surr: Toluene-d8	105	70-130		%Rec	100	6/28/2020 8:08:19 PM	A69970

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

Qualifiers:

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

Analytical Report
Lab Order **2006D81**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-4
Project: Logos Julander Federal 1E
Collection Date: 6/25/2020 9:46:00 AM
Lab ID: 2006D81-003 **Matrix:** AQUEOUS **Received Date:** 6/26/2020 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	230	5.0		µg/L	5	6/28/2020 8:38:16 PM	A69970
Toluene	180	5.0		µg/L	5	6/28/2020 8:38:16 PM	A69970
Ethylbenzene	50	5.0		µg/L	5	6/28/2020 8:38:16 PM	A69970
Xylenes, Total	430	7.5		µg/L	5	6/28/2020 8:38:16 PM	A69970
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%Rec	5	6/28/2020 8:38:16 PM	A69970
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	5	6/28/2020 8:38:16 PM	A69970
Surr: Dibromofluoromethane	87.9	70-130		%Rec	5	6/28/2020 8:38:16 PM	A69970
Surr: Toluene-d8	105	70-130		%Rec	5	6/28/2020 8:38:16 PM	A69970

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

Qualifiers:

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

Analytical Report
Lab Order **2006D81**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-5
Project: Logos Julander Federal 1E
Collection Date: 6/25/2020 9:10:00 AM
Lab ID: 2006D81-004 **Matrix:** AQUEOUS **Received Date:** 6/26/2020 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	6/28/2020 9:08:08 PM	A69970
Toluene	ND	1.0		µg/L	1	6/28/2020 9:08:08 PM	A69970
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 9:08:08 PM	A69970
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 9:08:08 PM	A69970
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	6/28/2020 9:08:08 PM	A69970
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	6/28/2020 9:08:08 PM	A69970
Surr: Dibromofluoromethane	101	70-130		%Rec	1	6/28/2020 9:08:08 PM	A69970
Surr: Toluene-d8	100	70-130		%Rec	1	6/28/2020 9:08:08 PM	A69970

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

Qualifiers:

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

Analytical Report
Lab Order **2006D81**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9
Project: Logos Julander Federal 1E
Collection Date: 6/25/2020 10:17:00 AM
Lab ID: 2006D81-005 **Matrix:** AQUEOUS **Received Date:** 6/26/2020 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	7200	500		µg/L	500	6/28/2020 9:37:55 PM	A69970
Toluene	23000	500		µg/L	500	6/28/2020 9:37:55 PM	A69970
Ethylbenzene	1200	500		µg/L	500	6/28/2020 9:37:55 PM	A69970
Xylenes, Total	12000	750		µg/L	500	6/28/2020 9:37:55 PM	A69970
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	500	6/28/2020 9:37:55 PM	A69970
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	500	6/28/2020 9:37:55 PM	A69970
Surr: Dibromofluoromethane	97.0	70-130		%Rec	500	6/28/2020 9:37:55 PM	A69970
Surr: Toluene-d8	101	70-130		%Rec	500	6/28/2020 9:37:55 PM	A69970

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

Qualifiers:

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

Analytical Report
Lab Order **2006D81**
Date Reported: **7/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: Logos Julander Federal 1E **Collection Date:**
Lab ID: 2006D81-006 **Matrix:** TRIP BLANK **Received Date:** 6/26/2020 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	6/28/2020 10:07:37 PM	A69970
Toluene	ND	1.0		µg/L	1	6/28/2020 10:07:37 PM	A69970
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 10:07:37 PM	A69970
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 10:07:37 PM	A69970
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/28/2020 10:07:37 PM	A69970
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	6/28/2020 10:07:37 PM	A69970
Surr: Dibromofluoromethane	105	70-130		%Rec	1	6/28/2020 10:07:37 PM	A69970
Surr: Toluene-d8	98.7	70-130		%Rec	1	6/28/2020 10:07:37 PM	A69970

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006D81**
06-Jul-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**							
Client ID: **PBW**	Batch ID: **A69970**	RunNo: **69970**							
Prep Date:	Analysis Date: **6/28/2020**	SeqNo: **2430532**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**							
Client ID: **LCSW**	Batch ID: **A69970**	RunNo: **69970**							
Prep Date:	Analysis Date: **6/28/2020**	SeqNo: **2430533**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.0	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**							
Client ID: **PBW**	Batch ID: **R69998**	RunNo: **69998**							
Prep Date:	Analysis Date: **6/29/2020**	SeqNo: **2431851**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.5	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**							
Client ID: **LCSW**	Batch ID: **R69998**	RunNo: **69998**							
Prep Date:	Analysis Date: **6/29/2020**	SeqNo: **2431852**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.7	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006D81**
06-Jul-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL70086**	RunNo: **70086**
Prep Date:	Analysis Date: **7/2/2020**	SeqNo: **2435180** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.4	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **100ng sl lcs4**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **SL70086**	RunNo: **70086**
Prep Date:	Analysis Date: **7/2/2020**	SeqNo: **2435181** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	80	120			
Toluene	22	1.0	20.00	0	109	80	120			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.3	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.7	70	130			
Surr: Dibromofluoromethane	10		10.00		99.7	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Animas Environmental Services** Work Order Number: **2006D81** RcptNo: **1**

Received By: **Scott Anderson** **6/26/2020 8:10:00 AM**

Completed By: **Emily Mocho** **6/26/2020 8:52:40 AM**

Reviewed By: JR 6/26/20

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: SPA 6.26.25

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Not Present			
2	3.1	Good	Not Present			

Chain-of-Custody Record

Client: Animas Environmenal Services, LLC

Mailing Address: P.O. Box 8
Farmington, NM 87499-0008

Phone #: 505-564-2281

email or Fax#: emcnally@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:
X Standard Rush_____

Project Name:
Logos Julander Federal #1E

Project #:

Project Manager:
Elizabeth McNally

Sampler: GB/CL

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.9 -0 = 2.9
3.1 -0 = 3.1

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2006D81	BTEX (8021)	Air Bubbles (Y or N)
6-25-20	9:27	H_2O	MW-1	3 - 40 ml VOA	HgCl2	-001	X	
	10:02	H_2O	MW-3	3 - 40 ml VOA	HgCl2	-002	X	
	9:46	H_2O	MW-4	3 - 40 ml VOA	HgCl2	-003	X	
	9:10 9:12	H_2O	MW-5	3/4 - 40 ml VOA	HgCl2	-004	X	
	10:17	H_2O	MW-9	3/6 - 40 ml VOA	HgCl2	-005	X	
		H2O	Trip Blank	2 - 40 mL VOA	HCl	-006	X	

Analysis Request

Date	Time	Relinquished by:	Received by:	Date	Time
6/25/2020	1628			6/25/2020	1628
6/25/2020	1840		SPA Courier	6.26.20	8:10

MW-4 and MW-9 had NAPL Sheen.

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 08, 2020

Elizabeth McNally

Animas Environmental Services
624 E. Comanche
Farmington, NM 87401
TEL:
FAX:

RE: Logos Julander Federal 1E OrderNo.: 2010115

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/2/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2010115**
Date Reported: **10/8/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-1
Project: Logos Julander Federal 1E
Collection Date: 10/1/2020 10:54:00 AM
Lab ID: 2010115-001 **Matrix:** AQUEOUS **Received Date:** 10/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	1.1	1.0		µg/L	2	10/6/2020 7:48:11 PM	R72449
Toluene	ND	2.0		µg/L	2	10/6/2020 7:48:11 PM	R72449
Ethylbenzene	110	2.0		µg/L	2	10/6/2020 7:48:11 PM	R72449
Xylenes, Total	84	3.0		µg/L	2	10/6/2020 7:48:11 PM	R72449
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%Rec	2	10/6/2020 7:48:11 PM	R72449
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	2	10/6/2020 7:48:11 PM	R72449
Surr: Dibromofluoromethane	106	70-130		%Rec	2	10/6/2020 7:48:11 PM	R72449
Surr: Toluene-d8	98.6	70-130		%Rec	2	10/6/2020 7:48:11 PM	R72449

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

Qualifiers:

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

Analytical Report
Lab Order **2010115**
Date Reported: **10/8/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-3
Project: Logos Julander Federal 1E
Collection Date: 10/1/2020 11:44:00 AM
Lab ID: 2010115-002 **Matrix:** AQUEOUS **Received Date:** 10/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	10000	500		µg/L	500	10/6/2020 8:16:47 PM	R72449
Toluene	12000	500		µg/L	500	10/6/2020 8:16:47 PM	R72449
Ethylbenzene	800	50		µg/L	50	10/6/2020 8:45:22 PM	R72449
Xylenes, Total	9200	75		µg/L	50	10/6/2020 8:45:22 PM	R72449
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	50	10/6/2020 8:45:22 PM	R72449
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	50	10/6/2020 8:45:22 PM	R72449
Surr: Dibromofluoromethane	109	70-130		%Rec	50	10/6/2020 8:45:22 PM	R72449
Surr: Toluene-d8	97.3	70-130		%Rec	50	10/6/2020 8:45:22 PM	R72449

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

Qualifiers:

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

Analytical Report
Lab Order **2010115**
Date Reported: **10/8/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-4
Project: Logos Julander Federal 1E
Collection Date: 10/1/2020 11:18:00 AM
Lab ID: 2010115-003 **Matrix:** AQUEOUS **Received Date:** 10/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	13	5.0		µg/L	5	10/6/2020 9:13:53 PM	R72449
Toluene	7.6	5.0		µg/L	5	10/6/2020 9:13:53 PM	R72449
Ethylbenzene	7.4	5.0		µg/L	5	10/6/2020 9:13:53 PM	R72449
Xylenes, Total	51	7.5		µg/L	5	10/6/2020 9:13:53 PM	R72449
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	5	10/6/2020 9:13:53 PM	R72449
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	5	10/6/2020 9:13:53 PM	R72449
Surr: Dibromofluoromethane	107	70-130		%Rec	5	10/6/2020 9:13:53 PM	R72449
Surr: Toluene-d8	102	70-130		%Rec	5	10/6/2020 9:13:53 PM	R72449

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

Qualifiers:

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

Analytical Report
Lab Order **2010115**
Date Reported: **10/8/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-5
Project: Logos Julander Federal 1E
Collection Date: 10/1/2020 10:21:00 AM
Lab ID: 2010115-004 **Matrix:** AQUEOUS **Received Date:** 10/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	10/6/2020 9:42:17 PM	R72449
Toluene	ND	1.0		µg/L	1	10/6/2020 9:42:17 PM	R72449
Ethylbenzene	ND	1.0		µg/L	1	10/6/2020 9:42:17 PM	R72449
Xylenes, Total	ND	1.5		µg/L	1	10/6/2020 9:42:17 PM	R72449
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%Rec	1	10/6/2020 9:42:17 PM	R72449
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/6/2020 9:42:17 PM	R72449
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/6/2020 9:42:17 PM	R72449
Surr: Toluene-d8	98.9	70-130		%Rec	1	10/6/2020 9:42:17 PM	R72449

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

Qualifiers:

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

Analytical Report
Lab Order **2010115**
Date Reported: **10/8/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9
Project: Logos Julander Federal 1E
Collection Date: 10/1/2020 12:03:00 PM
Lab ID: 2010115-005 **Matrix:** AQUEOUS **Received Date:** 10/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	10000	500		µg/L	500	10/6/2020 10:10:49 PM	R72449
Toluene	29000	500		µg/L	500	10/6/2020 10:10:49 PM	R72449
Ethylbenzene	1200	500		µg/L	500	10/6/2020 10:10:49 PM	R72449
Xylenes, Total	13000	750		µg/L	500	10/6/2020 10:10:49 PM	R72449
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%Rec	500	10/6/2020 10:10:49 PM	R72449
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	500	10/6/2020 10:10:49 PM	R72449
Surr: Dibromofluoromethane	108	70-130		%Rec	500	10/6/2020 10:10:49 PM	R72449
Surr: Toluene-d8	101	70-130		%Rec	500	10/6/2020 10:10:49 PM	R72449

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

Qualifiers:

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

Analytical Report
Lab Order **2010115**
Date Reported: **10/8/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: Logos Julander Federal 1E **Collection Date:**
Lab ID: 2010115-006 **Matrix:** TRIP BLANK **Received Date:** 10/2/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	10/6/2020 10:39:13 PM	R72449
Toluene	ND	1.0		µg/L	1	10/6/2020 10:39:13 PM	R72449
Ethylbenzene	ND	1.0		µg/L	1	10/6/2020 10:39:13 PM	R72449
Xylenes, Total	ND	1.5		µg/L	1	10/6/2020 10:39:13 PM	R72449
Surr: 1,2-Dichloroethane-d4	96.1	70-130		%Rec	1	10/6/2020 10:39:13 PM	R72449
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/6/2020 10:39:13 PM	R72449
Surr: Dibromofluoromethane	110	70-130		%Rec	1	10/6/2020 10:39:13 PM	R72449
Surr: Toluene-d8	103	70-130		%Rec	1	10/6/2020 10:39:13 PM	R72449

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2010115**
08-Oct-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R72449**	RunNo: **72449**
Prep Date:	Analysis Date: **10/6/2020**	SeqNo: **2542664** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.8	70	130			
Toluene	20	1.0	20.00	0	99.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		99.9	70	130			

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R72449**	RunNo: **72449**
Prep Date:	Analysis Date: **10/6/2020**	SeqNo: **2542665** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Animas Environmental Se** Work Order Number: **2010115** RcptNo: 1

Received By: **Cheyenne Cason** **10/2/2020 8:00:00 AM**

Completed By: **Isaiah Ortiz** **10/2/2020 9:15:49 AM** I-OX

Reviewed By: ENM 10/2/20

Chain of Custody

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

Log In

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

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

Adjusted?

Checked by:

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			
2	4.2	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmenal Services, LLC

Mailing Address: P.O. Box 8
Farmington, NM 87499-0008

Phone #: 505-564-2281

email or Fax#: emcnally@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:
X Standard Rush_____

Project Name:
Logos Julander Federal #1E

Project #:

Project Manager:
Elizabeth McNally

Sampler: GB/CL
On Ice: ☑ Yes ☐ No
Sample Temperature: See PW

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2010115	BTEX (8021)													Air Bubbles (Y or N)
10-1-20	10:54	H_2O	MW-1	3 - 40 ml VOA	HgCl2	001	X													
10-1-20	11:44	H_2O	MW-3	3 - 40 ml VOA	HgCl2	002	X													
10-1-20	11:18	H_2O	MW-4	3 - 40 ml VOA	HgCl2	003	X													
10-1-20	10:21	H_2O	MW-5	4 - 40 ml VOA	HgCl2	004	X													
10-1-20	12:03	H_2O	MW-9	5 - 40 ml VOA	HgCl2	005	X													
		H2O	Trip Blank	2 - 40 mL VOA	HCl	006	X													

Date	Time	Relinquished by:	Received by:	Date	Time
10/1/2020	1733			10/1/2020	1733
10/1/2020	1843			10/2/20	0800

4.4 - 0.1 = 4.3
4.3 - 0.1 = 4.2

Call with any questions.

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 30, 2020

Elizabeth McNally

Animas Environmental Services
624 E. Comanche
Farmington, NM 87401
TEL:
FAX

RE: Logos Julander Federal 1E OrderNo.: 2012771

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/16/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** MW-1
Project: Logos Julander Federal 1E **Collection Date:** 12/15/2020 10:33:00 AM
Lab ID: 2012771-001 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Toluene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Ethylbenzene	140	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2,4-Trimethylbenzene	120	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,3,5-Trimethylbenzene	55	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Naphthalene	25	4.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1-Methylnaphthalene	ND	8.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
2-Methylnaphthalene	9.7	8.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Acetone	ND	20		µg/L	2	12/22/2020 2:36:30 PM	A74207
Bromobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Bromodichloromethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Bromoform	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Bromomethane	ND	6.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
2-Butanone	ND	20		µg/L	2	12/22/2020 2:36:30 PM	A74207
Carbon disulfide	ND	20		µg/L	2	12/22/2020 2:36:30 PM	A74207
Carbon Tetrachloride	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Chlorobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Chloroethane	ND	4.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Chloroform	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Chloromethane	ND	6.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
2-Chlorotoluene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
4-Chlorotoluene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
cis-1,2-DCE	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Dibromochloromethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Dibromomethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2-Dichlorobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,3-Dichlorobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,4-Dichlorobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Dichlorodifluoromethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,1-Dichloroethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,1-Dichloroethene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2-Dichloropropane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,3-Dichloropropane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
2,2-Dichloropropane	ND	4.0		µg/L	2	12/22/2020 2:36:30 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** MW-1
Project: Logos Julander Federal 1E **Collection Date:** 12/15/2020 10:33:00 AM
Lab ID: 2012771-001 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Hexachlorobutadiene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
2-Hexanone	ND	20		µg/L	2	12/22/2020 2:36:30 PM	A74207
Isopropylbenzene	19	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
4-Isopropyltoluene	3.6	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
4-Methyl-2-pentanone	ND	20		µg/L	2	12/22/2020 2:36:30 PM	A74207
Methylene Chloride	ND	6.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
n-Butylbenzene	ND	6.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
n-Propylbenzene	16	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
sec-Butylbenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Styrene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
tert-Butylbenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
trans-1,2-DCE	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,1,1-Trichloroethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,1,2-Trichloroethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Trichloroethene (TCE)	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Trichlorofluoromethane	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
1,2,3-Trichloropropane	ND	4.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Vinyl chloride	ND	2.0		µg/L	2	12/22/2020 2:36:30 PM	A74207
Xylenes, Total	420	30		µg/L	20	12/23/2020 8:59:19 PM	A74228
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	2	12/22/2020 2:36:30 PM	A74207
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	2	12/22/2020 2:36:30 PM	A74207
Surr: Dibromofluoromethane	102	70-130		%Rec	2	12/22/2020 2:36:30 PM	A74207
Surr: Toluene-d8	94.6	70-130		%Rec	2	12/22/2020 2:36:30 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-3
Project: Logos Julander Federal 1E
Collection Date: 12/15/2020 11:25:00 AM
Lab ID: 2012771-002 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	11000	500		µg/L	500	12/22/2020 4:02:14 PM	A74207
Toluene	8300	500		µg/L	500	12/22/2020 4:02:14 PM	A74207
Ethylbenzene	770	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2,4-Trimethylbenzene	530	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,3,5-Trimethylbenzene	210	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2-Dibromoethane (EDB)	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Naphthalene	92	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
1-Methylnaphthalene	ND	100		µg/L	50	12/22/2020 4:30:56 PM	A74207
2-Methylnaphthalene	ND	100		µg/L	50	12/22/2020 4:30:56 PM	A74207
Acetone	ND	250		µg/L	50	12/22/2020 4:30:56 PM	A74207
Bromobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Bromodichloromethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Bromoform	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Bromomethane	ND	75		µg/L	50	12/22/2020 4:30:56 PM	A74207
2-Butanone	ND	250		µg/L	50	12/22/2020 4:30:56 PM	A74207
Carbon disulfide	ND	250		µg/L	50	12/22/2020 4:30:56 PM	A74207
Carbon Tetrachloride	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Chlorobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Chloroethane	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
Chloroform	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Chloromethane	ND	75		µg/L	50	12/22/2020 4:30:56 PM	A74207
2-Chlorotoluene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
4-Chlorotoluene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
cis-1,2-DCE	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
cis-1,3-Dichloropropene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2-Dibromo-3-chloropropane	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
Dibromochloromethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Dibromomethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2-Dichlorobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,3-Dichlorobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,4-Dichlorobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Dichlorodifluoromethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,1-Dichloroethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,1-Dichloroethene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2-Dichloropropane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,3-Dichloropropane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
2,2-Dichloropropane	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-3
Project: Logos Julander Federal 1E
Collection Date: 12/15/2020 11:25:00 AM
Lab ID: 2012771-002 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Hexachlorobutadiene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
2-Hexanone	ND	250		µg/L	50	12/22/2020 4:30:56 PM	A74207
Isopropylbenzene	28	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
4-Isopropyltoluene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
4-Methyl-2-pentanone	ND	250		µg/L	50	12/22/2020 4:30:56 PM	A74207
Methylene Chloride	ND	75		µg/L	50	12/22/2020 4:30:56 PM	A74207
n-Butylbenzene	ND	75		µg/L	50	12/22/2020 4:30:56 PM	A74207
n-Propylbenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
sec-Butylbenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Styrene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
tert-Butylbenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,1,1,2-Tetrachloroethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,1,2,2-Tetrachloroethane	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
Tetrachloroethene (PCE)	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
trans-1,2-DCE	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
trans-1,3-Dichloropropene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2,3-Trichlorobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2,4-Trichlorobenzene	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,1,1-Trichloroethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,1,2-Trichloroethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Trichloroethene (TCE)	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
Trichlorofluoromethane	ND	25		µg/L	50	12/22/2020 4:30:56 PM	A74207
1,2,3-Trichloropropane	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
Vinyl chloride	ND	50		µg/L	50	12/22/2020 4:30:56 PM	A74207
Xylenes, Total	9100	38		µg/L	50	12/22/2020 4:30:56 PM	A74207
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	50	12/22/2020 4:30:56 PM	A74207
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	50	12/22/2020 4:30:56 PM	A74207
Surr: Dibromofluoromethane	107	70-130		%Rec	50	12/22/2020 4:30:56 PM	A74207
Surr: Toluene-d8	96.3	70-130		%Rec	50	12/22/2020 4:30:56 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** MW-4
Project: Logos Julander Federal 1E **Collection Date:** 12/15/2020 11:07:00 AM
Lab ID: 2012771-003 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	11	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Toluene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Ethylbenzene	6.9	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2,4-Trimethylbenzene	7.3	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,3,5-Trimethylbenzene	3.3	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Naphthalene	ND	2.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1-Methylnaphthalene	ND	4.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
2-Methylnaphthalene	ND	4.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Acetone	ND	10		µg/L	1	12/22/2020 4:59:33 PM	A74207
Bromobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Bromodichloromethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Bromoform	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Bromomethane	ND	3.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
2-Butanone	ND	10		µg/L	1	12/22/2020 4:59:33 PM	A74207
Carbon disulfide	ND	10		µg/L	1	12/22/2020 4:59:33 PM	A74207
Carbon Tetrachloride	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Chlorobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Chloroethane	ND	2.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Chloroform	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Chloromethane	ND	3.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
2-Chlorotoluene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
4-Chlorotoluene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
cis-1,2-DCE	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Dibromochloromethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Dibromomethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,1-Dichloroethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,1-Dichloroethene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2-Dichloropropane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,3-Dichloropropane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
2,2-Dichloropropane	ND	2.0		µg/L	1	12/22/2020 4:59:33 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-4
Project: Logos Julander Federal 1E
Collection Date: 12/15/2020 11:07:00 AM
Lab ID: 2012771-003 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Hexachlorobutadiene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
2-Hexanone	ND	10		µg/L	1	12/22/2020 4:59:33 PM	A74207
Isopropylbenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
4-Isopropyltoluene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
4-Methyl-2-pentanone	ND	10		µg/L	1	12/22/2020 4:59:33 PM	A74207
Methylene Chloride	ND	3.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
n-Butylbenzene	ND	3.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
n-Propylbenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
sec-Butylbenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Styrene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
tert-Butylbenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
trans-1,2-DCE	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Trichlorofluoromethane	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Vinyl chloride	ND	1.0		µg/L	1	12/22/2020 4:59:33 PM	A74207
Xylenes, Total	31	1.5		µg/L	1	12/22/2020 4:59:33 PM	A74207
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/22/2020 4:59:33 PM	A74207
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	12/22/2020 4:59:33 PM	A74207
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/22/2020 4:59:33 PM	A74207
Surr: Toluene-d8	99.3	70-130		%Rec	1	12/22/2020 4:59:33 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-5
Project: Logos Julander Federal 1E
Collection Date: 12/15/2020 9:56:00 AM
Lab ID: 2012771-004 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	1.7	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Toluene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Ethylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Naphthalene	ND	2.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1-Methylnaphthalene	ND	4.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
2-Methylnaphthalene	ND	4.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Acetone	ND	10		µg/L	1	12/22/2020 5:28:07 PM	A74207
Bromobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Bromodichloromethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Bromoform	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Bromomethane	ND	3.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
2-Butanone	ND	10		µg/L	1	12/22/2020 5:28:07 PM	A74207
Carbon disulfide	ND	10		µg/L	1	12/22/2020 5:28:07 PM	A74207
Carbon Tetrachloride	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Chlorobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Chloroethane	ND	2.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Chloroform	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Chloromethane	ND	3.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
2-Chlorotoluene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
4-Chlorotoluene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
cis-1,2-DCE	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Dibromochloromethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Dibromomethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,1-Dichloroethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,1-Dichloroethene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2-Dichloropropane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,3-Dichloropropane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
2,2-Dichloropropane	ND	2.0		µg/L	1	12/22/2020 5:28:07 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-5
Project: Logos Julander Federal 1E
Collection Date: 12/15/2020 9:56:00 AM
Lab ID: 2012771-004 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Hexachlorobutadiene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
2-Hexanone	ND	10		µg/L	1	12/22/2020 5:28:07 PM	A74207
Isopropylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
4-Isopropyltoluene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
4-Methyl-2-pentanone	ND	10		µg/L	1	12/22/2020 5:28:07 PM	A74207
Methylene Chloride	ND	3.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
n-Butylbenzene	ND	3.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
n-Propylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
sec-Butylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Styrene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
tert-Butylbenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
trans-1,2-DCE	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Trichlorofluoromethane	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Vinyl chloride	ND	1.0		µg/L	1	12/22/2020 5:28:07 PM	A74207
Xylenes, Total	ND	1.5		µg/L	1	12/22/2020 5:28:07 PM	A74207
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/22/2020 5:28:07 PM	A74207
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	12/22/2020 5:28:07 PM	A74207
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/22/2020 5:28:07 PM	A74207
Surr: Toluene-d8	98.2	70-130		%Rec	1	12/22/2020 5:28:07 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9
Project: Logos Julander Federal 1E
Collection Date: 12/15/2020 11:44:00 AM
Lab ID: 2012771-005 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	7800	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Toluene	20000	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Ethylbenzene	1000	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Methyl tert-butyl ether (MTBE)	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2,4-Trimethylbenzene	550	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,3,5-Trimethylbenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2-Dichloroethane (EDC)	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2-Dibromoethane (EDB)	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Naphthalene	ND	1000		µg/L	500	12/22/2020 5:56:42 PM	A74207
1-Methylnaphthalene	ND	2000		µg/L	500	12/22/2020 5:56:42 PM	A74207
2-Methylnaphthalene	ND	2000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Acetone	ND	5000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Bromobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Bromodichloromethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Bromoform	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Bromomethane	ND	1500		µg/L	500	12/22/2020 5:56:42 PM	A74207
2-Butanone	ND	5000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Carbon disulfide	ND	5000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Carbon Tetrachloride	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Chlorobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Chloroethane	ND	1000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Chloroform	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Chloromethane	ND	1500		µg/L	500	12/22/2020 5:56:42 PM	A74207
2-Chlorotoluene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
4-Chlorotoluene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
cis-1,2-DCE	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
cis-1,3-Dichloropropene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2-Dibromo-3-chloropropane	ND	1000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Dibromochloromethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Dibromomethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2-Dichlorobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,3-Dichlorobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,4-Dichlorobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Dichlorodifluoromethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,1-Dichloroethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,1-Dichloroethene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2-Dichloropropane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,3-Dichloropropane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
2,2-Dichloropropane	ND	1000		µg/L	500	12/22/2020 5:56:42 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** MW-9
Project: Logos Julander Federal 1E **Collection Date:** 12/15/2020 11:44:00 AM
Lab ID: 2012771-005 **Matrix:** AQUEOUS **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Hexachlorobutadiene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
2-Hexanone	ND	5000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Isopropylbenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
4-Isopropyltoluene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
4-Methyl-2-pentanone	ND	5000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Methylene Chloride	ND	1500		µg/L	500	12/22/2020 5:56:42 PM	A74207
n-Butylbenzene	ND	1500		µg/L	500	12/22/2020 5:56:42 PM	A74207
n-Propylbenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
sec-Butylbenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Styrene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
tert-Butylbenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,1,1,2-Tetrachloroethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,1,2,2-Tetrachloroethane	ND	1000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Tetrachloroethene (PCE)	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
trans-1,2-DCE	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
trans-1,3-Dichloropropene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2,3-Trichlorobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2,4-Trichlorobenzene	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,1,1-Trichloroethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,1,2-Trichloroethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Trichloroethene (TCE)	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Trichlorofluoromethane	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
1,2,3-Trichloropropane	ND	1000		µg/L	500	12/22/2020 5:56:42 PM	A74207
Vinyl chloride	ND	500		µg/L	500	12/22/2020 5:56:42 PM	A74207
Xylenes, Total	11000	750		µg/L	500	12/22/2020 5:56:42 PM	A74207
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%Rec	500	12/22/2020 5:56:42 PM	A74207
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	500	12/22/2020 5:56:42 PM	A74207
Surr: Dibromofluoromethane	107	70-130		%Rec	500	12/22/2020 5:56:42 PM	A74207
Surr: Toluene-d8	96.2	70-130		%Rec	500	12/22/2020 5:56:42 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: Logos Julander Federal 1E **Collection Date:**
Lab ID: 2012771-006 **Matrix:** TRIP BLANK **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Toluene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Ethylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Naphthalene	ND	2.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1-Methylnaphthalene	ND	4.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
2-Methylnaphthalene	ND	4.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Acetone	ND	10		µg/L	1	12/22/2020 6:25:18 PM	A74207
Bromobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Bromodichloromethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Bromoform	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Bromomethane	ND	3.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
2-Butanone	ND	10		µg/L	1	12/22/2020 6:25:18 PM	A74207
Carbon disulfide	ND	10		µg/L	1	12/22/2020 6:25:18 PM	A74207
Carbon Tetrachloride	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Chlorobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Chloroethane	ND	2.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Chloroform	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Chloromethane	ND	3.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
2-Chlorotoluene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
4-Chlorotoluene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
cis-1,2-DCE	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Dibromochloromethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Dibromomethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,1-Dichloroethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,1-Dichloroethene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2-Dichloropropane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,3-Dichloropropane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
2,2-Dichloropropane	ND	2.0		µg/L	1	12/22/2020 6:25:18 PM	A74207

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

Qualifiers:

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

Analytical Report
Lab Order **2012771**
Date Reported: **12/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: Logos Julander Federal 1E **Collection Date:**
Lab ID: 2012771-006 **Matrix:** TRIP BLANK **Received Date:** 12/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Hexachlorobutadiene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
2-Hexanone	ND	10		µg/L	1	12/22/2020 6:25:18 PM	A74207
Isopropylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
4-Isopropyltoluene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
4-Methyl-2-pentanone	ND	10		µg/L	1	12/22/2020 6:25:18 PM	A74207
Methylene Chloride	ND	3.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
n-Butylbenzene	ND	3.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
n-Propylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
sec-Butylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Styrene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
tert-Butylbenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
trans-1,2-DCE	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Trichlorofluoromethane	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Vinyl chloride	ND	1.0		µg/L	1	12/22/2020 6:25:18 PM	A74207
Xylenes, Total	ND	1.5		µg/L	1	12/22/2020 6:25:18 PM	A74207
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/22/2020 6:25:18 PM	A74207
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	12/22/2020 6:25:18 PM	A74207
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/22/2020 6:25:18 PM	A74207
Surr: Toluene-d8	97.4	70-130		%Rec	1	12/22/2020 6:25:18 PM	A74207

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012771**
30-Dec-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **A74207**	RunNo: **74207**							
Prep Date:	Analysis Date: **12/22/2020**	SeqNo: **2619436**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.3	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **A74207**	RunNo: **74207**							
Prep Date:	Analysis Date: **12/22/2020**	SeqNo: **2619437**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012771**
30-Dec-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A74207**	RunNo: **74207**
Prep Date:	Analysis Date: **12/22/2020**	SeqNo: **2619437** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012771**
30-Dec-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A74207**	RunNo: **74207**
Prep Date:	Analysis Date: **12/22/2020**	SeqNo: **2619437** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID: **2012771-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-1**	Batch ID: **A74207**	RunNo: **74207**
Prep Date:	Analysis Date: **12/22/2020**	SeqNo: **2619442** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	43	2.0	40.00	1.050	106	70	130			
Toluene	44	2.0	40.00	0.8160	108	70	130			
Chlorobenzene	43	2.0	40.00	0	107	70	130			
1,1-Dichloroethene	40	2.0	40.00	0	101	70	130			
Trichloroethene (TCE)	38	2.0	40.00	0	95.0	70	130			
Surr: 1,2-Dichloroethane-d4	21		20.00		103	70	130			
Surr: 4-Bromofluorobenzene	20		20.00		102	70	130			
Surr: Dibromofluoromethane	19		20.00		96.6	70	130			
Surr: Toluene-d8	19		20.00		96.1	70	130			

Sample ID: **2012771-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-1**	Batch ID: **A74207**	RunNo: **74207**
Prep Date:	Analysis Date: **12/22/2020**	SeqNo: **2619443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	43	2.0	40.00	1.050	104	70	130	1.57	20	
Toluene	41	2.0	40.00	0.8160	101	70	130	6.21	20	
Chlorobenzene	42	2.0	40.00	0	105	70	130	2.17	20	
1,1-Dichloroethene	38	2.0	40.00	0	95.4	70	130	5.64	20	
Trichloroethene (TCE)	36	2.0	40.00	0	90.3	70	130	5.14	20	
Surr: 1,2-Dichloroethane-d4	21		20.00		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	20		20.00		102	70	130	0	0	
Surr: Dibromofluoromethane	20		20.00		100	70	130	0	0	
Surr: Toluene-d8	19		20.00		95.1	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012771**
30-Dec-20

Client: Animas Environmental Services
Project: Logos Julander Federal 1E

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **LCSW**	Batch ID: **A74228**	RunNo: **74228**						
Prep Date:	Analysis Date: **12/23/2020**	SeqNo: **2620156**	Units: **%Rec**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID: **VSB Fridge**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**	Batch ID: **A74228**	RunNo: **74228**						
Prep Date:	Analysis Date: **12/23/2020**	SeqNo: **2620157**	Units: **µg/L**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Animas Environmental Services** Work Order Number: **2012771** RcptNo: **1**

Received By: **Desiree Dominguez** **12/16/2020 8:00:00 AM** DD

Completed By: **Desiree Dominguez** **12/16/2020 9:07:29 AM** DD

Reviewed By: JR 12/16/20

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: SGL 12/16/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmenal Services, LLC

Mailing Address: P.O. Box 8
Farmington, NM 87499-0008

Phone #: 505-564-2281

email or Fax#: emcnally@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard Rush_____

Project Name:
Logos Julander Federal #1E

Project #:

Project Manager:
Elizabeth McNally/
Karen Lupton

Sampler: GB/CL
On Ice: ☒ Yes ☐ No
Sample Temperature: 0.6 - 0.0 = 0.6°C

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2012771	BTEX (8260) + 8260 Full List	Air Bubbles (Y or N)
12-15-20	10:33	H_2O	MW-1	3 - 40 ml VOA	HgCl2	-001	X	
	11:25	H_2O	MW-3	3 - 40 ml VOA	HgCl2	-002	X	
	11:07	H_2O	MW-4	3 - 40 ml VOA	HgCl2	-003	X	
	9:56	H_2O	MW-5	3 - 40 ml VOA	HgCl2	-004	X	
	11:44	H_2O	MW-9	3 - 40 ml VOA	HgCl2	-005	X	
		H2O	Trip Blank	2 - 40 mL VOA	HCl		X	

Date	Time	Relinquished by:	Received by:	Date	Time
12/15/2020	1712		Christine Walsh	12/15/2020	1712
12/15/2020	1806	Christine Walsh			
			Courier	12/16/20	8:00

Direct Bill to Logos. Call with Questions.
MW-4 and MW-9 had hydrocarbon sheen.

Seal Intact DAD 12/16/20

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

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

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

CONDITIONS

Action 18111

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 18111
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of Annual Report for 2020 Quarterly Groundwater Monitoring and Sampling: Content satisfactory 1. Continue gauging of all site wells and sampling of MW-1, MW-3, MW-4, and MW-9—for laboratory analysis of full list volatile organics per USEPA Method 8260 2. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022	12/28/2021