REVIEWED
By Mike Buchanan at 2:29 pm, Aug 03, 2023

animas environmental services

Review of Q1 through Q4 2022 Progress Report: **Content Satisfactory**
1. Perform an additional well cleaning treatment as prescribed within report on MPE wells with NAPL
2. Proceed to install oil absorbent socks within MPE wells to assist in mitigation of residual NAPL.
3. Continue recovery of residual NAPL via hydrophobic socks where NAPL thickness is sufficient for removal
4. Semi-annual gauging events for MW-2, MW-7, MW-9R
5. Conduct sampling for MW-9R (VOCs per 8260, TPH, and 8015, and manganese, dissolved iron. Sample MW-7 for TDS.
6. Submit progress report for 2023 by April 1, 2024.

March 29, 2023

Nelson Velez
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Q1 through Q4 2022 Progress Report
Benson-Montin-Greer
Highway 537 Llaves Pipeline 2008 Release
Rio Arriba County, New Mexico
AP-136 (Formerly 3RP-447)
Incident #NRMD0929936774

Dear Mr. Velez:

On behalf of Benson-Montin-Greer Drilling Corporation (BMG), Animas Environmental Services, LLC (AES) has prepared this 2022 Progress Report, which details Q1 through Q4 gauging and sampling activities at the BMG Llaves Pipeline 2008 Release location. Site activities were conducted in accordance with a Stage 1 and 2 Abatement Plan dated June 6, 2019, and Plan approval is currently pending.

1.0 Site Information

1.1 Site Location

The 2008 release originated on the Schmitz Ranch, on the south side of Highway 537 and flowed south and southwest through a small unnamed arroyo for a distance of approximately 920 linear feet (ft). This arroyo eventually drains to the Los Ojitos Arroyo, which ultimately drains to Largo Canyon. The release location is legally described as being located within the NW¼ NE¼ Section 18, T25N, R3W in Rio Arriba County, New Mexico. Latitude and longitude were recorded as being N36.40357 and W107.18422, respectively. A topographic site location map, based on an excerpt from the U.S. Geological Survey (USGS) 7.5-minute Schmitz Ranch, Rio Arriba County, New Mexico topographic quadrangle, is included as Figure 1, and a general site plan is presented as Figure 2.

624 E. Comanche Street, Farmington, NM 87401
P.O. Box 8, Farmington, NM 87499-008
505-564-2281 animasenvironmental.com

1.2 Release History

December 31, 2007 - A Western Refining truck driver discovered the Llaves pipeline leak and immediately contacted BMG. BMG personnel confirmed the release and shut down the Llaves pipeline pumps and block valve located about one mile upstream. BMG contracted with TNT Excavating to remove the oil that had pooled along the surface of the small arroyo. Approximately 40 barrels (bbls) of oil were recovered and placed in storage tanks at the BMG Hwy 537 Transfer Station. A total of 3,932 cubic yards of contaminated soils were excavated and transported to the TNT Landfarm facility for disposal.

January 9, 2008 - Llaves pipeline was repaired. BMG notified the National Response Center on January 23, 2008, and the release was given identification number 860429.

1.3 Abatement Plan 2019

In accordance with New Mexico Administrative Code (NMAC) 19.15.30.11, a Stage 1 and 2 Abatement Plan was requested from NMOCD in correspondence dated March 18, 2019, and subsequently submitted in June 2019.

The purpose of a Stage 1 Abatement Plan is to design and conduct a site investigation that adequately defines site conditions, and to provide the data necessary to select and design an effective abatement option. The plan proposed that previous site data and associated reports adequately defined site conditions, thereby meeting the requirements of a Stage 1 Abatement Plan.

The proposed activities of the Stage 2 Abatement Plan included replacement monitor well MW-9R installation and sampling (completed September 2019), installation of a solar-powered low vacuum non-aqueous phase liquid (NAPL) recovery system (completed October 2019), ongoing groundwater monitoring and sampling, and compliance soil sampling.

2.0 Quarterly Progress Summaries, Q1 through Q4 2022

2.1 Q1 - March 2022 Groundwater Gauging

Groundwater gauging of site wells and hand bailing of NAPL for well MW-9R was conducted by AES on March 8, 2022. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. Due to the presence of NAPL in MW-9R and low water recharge rate, water quality readings and samples were not collected. The Water Sample Collection Form is included in Appendix A.

Groundwater Elevations and Water Quality Measurements

On March 8, 2022, depth to groundwater at the site ranged from 33.81 ft below ground surface (bgs) at MPE-7 to 41.63 ft bgs at MW-7. NAPL was observed in six wells: MW-9R (0.01 ft), MPE-1 (sheen), MPE-2 (0.01 ft), MPE-3 (0.03 ft), MPE-5 (0.03 ft), and MPE-6 (0.01 ft). NAPL was not observed in wells MW-2, MW-7, MPE-4, and MPE-7.

Groundwater flow is historically to the southwest. Groundwater elevations are presented in Table 1, and groundwater elevation and contours are presented in Figure 3. NAPL contours are presented on Figure 4.

Groundwater Laboratory Analyses

On March 8, 2022, after bailing NAPL to a sheen, groundwater recharge in MW-9R was not sufficient to collect a sample.

2.2 Q2 - June 2022 Groundwater Gauging

Groundwater gauging of site wells and hand bailing of NAPL was conducted by AES on June 9, 2022. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. Due to the presence of NAPL in MW-9R and low water recharge rate, water quality readings and samples were not collected. The Water Sample Collection Form is included in Appendix A.

Groundwater Elevations and Water Quality Measurements

On June 9, 2022, depth to groundwater at the site ranged from 33.92 ft bgs at MPE-7 to 37.39 ft bgs at MPE-1. NAPL was observed in six wells: MW-9R (0.99 ft), MPE-1 (0.01 ft), MPE-3 (0.67 ft), MPE-5 (1.3 ft), and MPE-6 (0.13 ft). NAPL was not observed in wells MW-2, MW-7, MPE-2, MPE-4, and MPE-7.

Groundwater elevations are presented in Table 1, and groundwater elevation and contours are presented in Figure 6. NAPL contours are presented on Figure 7.

2.3 Q3 – September 2022 Groundwater Gauging and Sampling

Groundwater gauging of site wells, hand bailing of non-aqueous phase liquid (NAPL, and sampling of monitor well MW-9R was conducted by AES on September 28, 2022. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. The Water Sample Collection Form is included in Appendix A.

On September 28, 2022, hydrophobic socks were changed in MPE-1, MPE-2, MPE-3, and MPE-5. Additionally, a dilute solution of Simple Green detergent and hot water was injected into and then bailed out of MPE-1, MPE-5, and MW-9R to improve transmissivity of NAPL from the formation and sand pack into the wells.

Groundwater Elevations and Water Quality Measurements

On September 28, 2022, depth to groundwater at the site ranged from 33.88 ft bgs at MPE-7 to 33.78 ft bgs at MPE-1. NAPL was observed in six wells: MW-9R (0.04 ft), MPE-1 (0.01 ft), MPE-2 (0.01 ft), MPE-3 (0.31 ft), MPE-5 (1.3 ft), and MPE-6 (0.08 ft). MW-2 and MW-7 were found to be dry, and an obstruction was noted within MPE-4 (35.27 ft bgs). NAPL was not observed in wells MPE-4 and MPE-7.

Groundwater elevations are presented in Table 1, and groundwater elevation and contours are presented in Figure 8.

Groundwater Laboratory Analyses

After bailing NAPL to a sheen, a groundwater sample was collected from MW-9R and submitted to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico, for analysis of the following parameters listed in NMAC 20.6.2.3103(A, B, and C):

- Volatile Organic Compounds (VOCs) per USEPA Method 8260;
- Total Phenolics per SW-846 9067; and
- Dissolved Iron and Manganese per USEPA Method 200.7.

All samples were preserved in laboratory-supplied containers and stored in an insulated cooler containing ice. Samples were shipped by Hall courier in chilled and insulated coolers at less than 6°C to the analytical laboratory.

Groundwater Laboratory Analytical Results

Dissolved benzene, toluene, ethylbenzene, and total xylenes were not detected in MW-9R. However, total phenolics in MW-9R exceeded the WQCC standard of 0.005 micrograms per liter (µg/L) with a concentration of 0.016 µg/L. Dissolved iron and manganese concentrations were below their respective WQCC standards. Groundwater analytical results are tabulated in Tables 2 and 3 and are also presented on Figure 5. The laboratory analytical report is included in Appendix B.

2.4 Q4 – December 2022 Groundwater Gauging and Sampling

Groundwater gauging of site wells, hand bailing of NAPL, and sampling of monitor well MW-9R was conducted by AES on December 21, 2022. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. The Water Sample Collection Form is included in Appendix A.

Groundwater Elevations and Water Quality Measurements

On December 21, 2022, depth to groundwater at the site ranged from 33.64 ft bgs at MPE-7 to 41.50 ft bgs at MW-7. NAPL was observed in five wells: MW-9R (0.01 ft), MPE-1 (0.04 ft), MPE-3 (0.05 ft), MPE-5 (1.08 ft), and MPE-6 (0.02 ft). MW-2 was found to be dry, and an obstruction was noted within MPE-4. NAPL was not observed in wells MW-7, MPE-2, MPE-4, and MPE-7.

Groundwater elevations are presented in Table 1, and groundwater elevation and contours are presented in Figure 9. NAPL contours are presented on Figure 10.

Groundwater Laboratory Analyses

After bailing NAPL to a sheen, a groundwater sample was collected from MW-9R and submitted to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico, for analysis of the following parameters:

- VOCs per USEPA Method 8260; and,
- Total petroleum hydrocarbons (TPH) gasoline range organics (GRO) per USEPA Method 8015.

All samples were preserved in laboratory-supplied containers and stored in an insulated cooler containing ice. Samples were shipped by Hall courier in chilled and insulated coolers at less than 6°C to the analytical laboratory.

Groundwater Laboratory Analytical Results

Dissolved benzene, toluene, ethylbenzene, and total xylenes were not detected. TPH-GRO was detected at a concentration of 0.24 milligrams per liter (mg/L). Groundwater analytical results are tabulated in Tables 2 and 3 and are also presented on Figure 5. The laboratory analytical report is included in Appendix B.

2.5 NAPL Recovery

On March 8, June 9, September 28, and December 21, 2022, AES hand bailed NAPL from six monitor wells (MW-9R, MPE-1, MPE-2, MPE-3, MPE-5, and MPE-6). Hand bailing was performed by lowering a bailer into each well and retrieving it via a length of string. Bailed NAPL was decanted into the onsite storage barrel. NAPL volumes were approximated and recorded on the attached Depth to Groundwater Measurement forms.

NAPL Recovery Data - March 8, 2022

Well ID	*Initial Depth to NAPL (ft)*	*Initial Depth to Water (ft)*	*Initial NAPL thickness (ft)*	*Final Depth to NAPL (ft)*	*Final Depth to Water (ft)*	*Final NAPL Thickness (ft)*	*Volume of NAPL Removed (gallon)*
MW-9R	--	--	0.01	--	--	--	0.75
MPE-1	--	--	0.01	--	--	--	<0.25
MPE-2	--	--	0.01	--	--	--	<0.50
MPE-3	--	--	0.03	--	--	--	0.50
MPE-5	--	--	0.03	--	--	--	<0.75
MPE-6	--	--	0.01	--	--	--	<1.0

NAPL thicknesses are estimated and no depths recorded due to interface probe failure in field.

NAPL Recovery Data - June 9, 2022

Well ID	Initial Depth to NAPL (ft)	Initial Depth to Water (ft)	Initial NAPL thickness (ft)	Final Depth to NAPL (ft)	Final Depth to Water (ft)	Final NAPL Thickness (ft)	Volume of NAPL Removed (gallon)
MW-9R	36.15	37.14	0.99	40.31	40.32	0.01	1.0
MPE-1	37.29	37.39	0.10	42.51	42.52	0.01	1.0
MPE-3	35.67	36.34	0.67	36.69	36.79	0.10	1.0
MPE-5	38.00	39.03	1.03	39.01	40.11	1.10	1.5
MPE-6	36.15	37.14	0.99	40.31	40.32	0.01	1.0

NAPL Recovery Data – September 28, 2022

Well ID	Initial Depth to NAPL (ft)	Initial Depth to Water (ft)	Initial NAPL thickness (ft)	Final Depth to NAPL (ft)	Final Depth to Water (ft)	Final NAPL Thickness (ft)	Volume of NAPL Removed (gallon)
MW-9R	36.11	36.15	0.04	40.13	40.13	sheen	1.5
MPE-1	37.77	37.78	0.01	43.02	43.02	sheen	1.0
MPE-2	35.64	35.65	0.01	40.74	40.74	sheen	2.0
MPE-3	35.67	35.98	0.31	36.12	36.17	0.05	2.5
MPE-5	38.00	--	1.30	--	--	sheen	0.75
MPE-6	36.31	36.33	0.02	38.78	38.78	sheen	0.5

NAPL Recovery Data – December 21, 2022

Well ID	Initial Depth to NAPL (ft)	Initial Depth to Water (ft)	Initial NAPL thickness (ft)	Final Depth to NAPL (ft)	Final Depth to Water (ft)	Final NAPL Thickness (ft)	Volume of NAPL Removed (gallon)
MW-9R	--	35.89	0.01	--	40.31	--	1.25
MPE-1	38.68	38.72	0.04	--	--	--	--
MPE-3	35.76	35.81	0.05	--	--	--	--
MPE-5	38.00	39.08	1.08	--	--	--	0.25
MPE-6	36.31	36.33	0.02	--	--	--	0.01

Petroleum Hydrocarbon Mass Removal through Q4 2022
BMG Hwy 537 2008 Release

Time Period	Mass Petroleum Hydrocarbons Removed (lbs)
Through 2021	41,497
Q1 2022	24
Q2 2022	35
Q3 2022	52
Q4 2022	10
Cumulative Mass Removal (lbs)	***41,618***

Cumulative depth to groundwater and NAPL measurements are presented in Table 1 and in NAPL recovery forms, which are included as Appendix A.

3.0 Conclusions, Recommendations, and Scheduled Activities

3.1 Conclusions

In March, June, September, and December 2022, AES conducted well gauging, hand bailing of NAPL, and groundwater sampling of MW-9R (September and December 2022). Additionally, hydrophobic socks were changed out within select site wells, and a well cleaning treatment was performed in September 2022.

Groundwater elevations in the site monitor wells continue to decline slowly over time, with MW-2 (the downgradient well) remaining dry, and MW-7 continuing to decrease to a recorded depth of 41.50 ft bgs in December 2022.

Groundwater samples were collected from MW-9R in September and December 2022, and dissolved phase concentrations for volatile organics were either below laboratory detection limits or below their respective WQCC standards. TPH-GRO had a reported concentration of 0.24 mg/L in December 2022; however, there are no WQCC standards for TPH in groundwater. Total phenolics slightly exceeded the WQCC standard, with a concentration of 0.016 µg/L detected in the sample collected on October 6, 2022. Dissolved iron and manganese were below their respective WQCC standards.

NAPL recovery efforts included hand-bailing and installation of hydrophobic socks, as well as a well cleaning treatment in September 2022.

3.2 Recommendations

Based on site conditions, AES recommends continuing with the scheduled gauging, sampling, and recovery of residual NAPL. AES also recommends:

1. Performing another well cleaning treatment on the MPE wells with NAPL to increase NAPL transmissivity to the well and subsequent recovery of residual NAPL; and
2. Installation and routine changing of oil absorbent socks within MPE wells to mitigate residual NAPL.

3.3 Scheduled Site Activities

The following site activities are currently scheduled for the remainder of 2023:

- Continue recovery of residual NAPL via hydrophobic socks where NAPL thickness is sufficient for removal; quarterly hand-bailing and sock replacements as necessary.
- Semi-annual gauging events of the remaining monitor wells MW-2, MW-7, and MW-9R;
- In December 2023, conduct sampling of MW-9R for VOCs per USEPA 8260, TPH (GRO, DRO, MRO) per USEPA 8015, and dissolved iron and manganese. Sample MW-7 (upgradient well) for total dissolved solids (TDS).

If you have any questions regarding this report or site conditions, please do not hesitate to contact me or Elizabeth McNally at (505) 564-2281.

Respectfully Submitted,

Lany Cupps
Environmental Coordinator

Angela Ledgerwood
Senior Project Manager

Elizabeth McNally, P.E.

Tables

Table 1. Summary of Groundwater Measurement and Water Quality Data
Table 2. Summary of Groundwater Analytical Results – VOCs and TPH
Table 3. WQCC – Dissolved Iron and Manganese, and Phenols

Figures

1. Topographic Site Location Map
2. General Site Plan

3. Groundwater Elevation Contours, Residual NAPL Contours, and Groundwater Contaminant Concentrations, March 2022, June 2022, September 2022, December 2022

Appendices

A. Water Sample Collection Forms and NAPL Recovery Documentation – March, June, September, and December 2022
B. Laboratory Analytical Reports (Hall Nos. 2209H14, 2210431, 2212C90)

Cc: Zach Stradling (zstradling@bmgdrilling.com)
Benson-Montin-Greer Drilling Corp.
4900 College Blvd
Farmington, NM 87402

Craig Schmitz, Private Landowner (hard copy)
#70 County Road 405
Lindrith, NM 87029

Tables

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MW-1	14-Jan-14	7082.57			33.51		7049.06	NM	NM	NM	NM	NM
MW-1	07-Aug-17	7082.57		Plugged and Abandoned								
MW-2	14-Jan-14	7079.94			31.28		7048.66	NM	NM	NM	NM	NM
MW-2	04-Apr-14	7079.94			31.15		7048.79	NM	NM	NM	NM	NM
MW-2	10-Sep-14	7079.94			Dry		NA	NM - WELL DRY				
MW-2	03-Dec-14	7079.94			Dry		NA	NM - WELL DRY				
MW-2	27-Mar-15	7079.94			Dry		NA	NM - WELL DRY				
MW-2	08-Dec-15	7079.94			Dry		NA	NM - WELL DRY				
MW-2	17-Jun-16	7079.94			Dry		NA	NM - WELL DRY				
MW-2	20-Oct-16	7079.94			Dry		NA	NM - WELL DRY				
MW-2	27-Jan-17	7079.94			Dry		NA	NM - WELL DRY				
MW-2	14-Apr-17	7079.94			Dry		NA	NM - WELL DRY				
MW-2	25-Sep-19	7079.94			Dry		NA	NM - WELL DRY				
MW-2	25-Mar-20	7079.94			Dry		NA	NM - WELL DRY				
MW-2	23-Jun-20	7079.94			Dry		NA	NM - WELL DRY				
MW-2	23-Sep-20	7079.94			Dry		NA	NM - WELL DRY				
MW-2	23-Nov-20	7079.94			Dry		NA	NM - WELL DRY				
MW-2	17-Mar-21	7079.94			Dry		NA	NM - WELL DRY				
MW-2	17-Jun-21	7097.94			Dry		NA	NM - WELL DRY				
MW-2	29-Sep-21	7097.94			Dry		NA	NM - WELL DRY				
MW-2	30-Nov-21	7097.94			Dry		NA	NM - WELL DRY				
MW-2	08-Mar-22	7097.94			Dry		NA	NM - WELL DRY				
MW-2	09-Jun-22	7097.94			Dry		NA	NM - WELL DRY				
MW-2	28-Sep-22	7097.94			Dry		NA	NM - WELL DRY				

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MW-2	21-Dec-22	7097.94			Dry		NA	NM - WELL DRY				
MW-3	14-Jan-14	7081.10			31.77		7049.33	NM	NM	NM	NM	NM
MW-3	07-Aug-17	7081.10		Plugged and Abandoned								
MW-4	14-Jan-14	7084.79			34.85		7049.94	NM	NM	NM	NM	NM
MW-4	07-Aug-17	7084.79		Plugged and Abandoned								
MW-5	05-May-08	7087.98			Dry		NA	NM - WELL DRY				
MW-5	07-Aug-17	7088.98		Plugged and Abandoned								
MW-6	14-Jan-14	7088.43			38.14		7050.29	NM	NM	NM	NM	NM
MW-6	07-Aug-17	7088.43		Plugged and Abandoned								
MW-7	14-Jan-14	7090.15			39.85		7050.30	NM	NM	NM	NM	NM
MW-7	04-Apr-14	7090.15			39.89		7050.26	NM	NM	NM	NM	NM
MW-7	10-Sep-14	7090.15			40.07		7050.08	NM	NM	NM	NM	NM
MW-7	03-Dec-14	7090.15			40.24		7049.91	NM	NM	NM	NM	NM
MW-7	27-Mar-15	7090.15			39.94		7050.21	NM	NM	NM	NM	NM
MW-7	08-Dec-15	7090.15			40.27		7049.88	NM	NM	NM	NM	NM
MW-7	17-Jun-16	7090.15			40.30		7049.85	NM	NM	NM	NM	NM
MW-7	20-Oct-16	7090.15			40.51		7049.64	NM	NM	NM	NM	NM
MW-7	27-Jan-17	7090.15			40.49		7049.66	NM	NM	NM	NM	NM
MW-7	14-Apr-17	7090.15			40.23		7049.92	NM	NM	NM	NM	NM
MW-7	25-Sep-19	7090.15			40.85		7049.30	NM	NM	NM	NM	NM
MW-7	25-Mar-20	7090.15			40.61		7049.54	12.5	2.00	1.78	7.13	168.9

TABLE 1
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MW-7	23-Jun-20	7090.15			40.85		7049.30	19.4	1.96	4.38	7.53	167.6
MW-7	23-Sep-20	7090.15			41.14		7049.01	NM	NM	NM	NM	NM
MW-7	23-Nov-20	7090.15			41.16		7048.99	NM	NM	NM	NM	NM
MW-7	17-Mar-21	7090.15			41.23		7048.92	NM	NM	NM	NM	NM
MW-7	17-Jun-21	7090.15			41.36		7048.79	NM	NM	NM	NM	NM
MW-7	29-Sep-21	7090.15			44.54		7045.61	NM	NM	NM	NM	NM
MW-7	30-Nov-21	7090.15			41.67		7048.48	NM	NM	NM	NM	NM
MW-7	08-Mar-22	7090.15			41.63		7048.52	NM	NM	NM	NM	NM
MW-7	09-Jun-22	7090.15			Dry		NA	NM - WELL DRY				
MW-7	28-Sep-22	7090.15			Dry		NA	NM - WELL DRY				
MW-7	21-Dec-22	7090.15			41.50		7048.65	NM	NM	NM	NM	NM
MW-8	14-Jan-14	7085.20			35.87		7049.33	NM	NM	NM	NM	NM
MW-8	07-Aug-17	7085.20		Plugged and Abandoned								
MW-9	05-May-08	7083.64			31.81		7051.83	15.01	1.955	2.59	7.85	-37.9
MW-9	24-Sep-08	7083.64			32.26		7051.38	14.03	1.515	2.84	7.08	43.3
MW-9	05-Jan-09	7083.64					7083.64	NM - WELL DRY				
MW-9	07-Apr-09	7083.64			32.34		7051.30	12.85	1.876	1.11	6.89	7.0
MW-9	07-Jul-09	7083.64			32.41		7051.23	16.77	1.672	1.14	7.19	-9.7
MW-9	12-Oct-09	7083.64			32.63		7051.01	13.78	1.352	2.10	7.22	72.9
MW-9	12-Jan-10	7083.64		32.43	34.80	2.37	7050.68	NM - 2.37 feet NAPL				
MW-9	13-Oct-10	7083.64		32.63	35.29	2.66	7050.42	NM - 2.66 feet NAPL				
MW-9	20-Jan-11	7083.64		32.71	35.21	2.50	7050.38	NM - 2.50 feet NAPL				
MW-9	09-May-11	7083.64		32.43	34.96	2.53	7050.65	NM - 2.53 feet NAPL				
MW-9	15-Aug-11	7083.64		33.11	35.33	2.22	7050.04	NM - 2.22 feet NAPL				

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MW-9	07-Oct-11	7083.64		33.14	35.23	2.09	7050.04	NM - 2.09 feet NAPL				
MW-9	21-Nov-11	7083.64		33.25	35.37	2.12	7049.92	NM - 2.12 feet NAPL				
MW-9	21-Feb-12	7083.64		33.14	35.06	1.92	7050.07	NM - 1.92 feet NAPL				
MW-9	24-May-12	7083.64		33.15	35.19	2.04	7050.04	NM - 2.04 feet NAPL				
MW-9	18-Sep-12	7083.64		33.47	35.26	1.79	7049.77	NM - 1.79 feet NAPL				
MW-9	04-Dec-12	7083.64		33.68	35.64	1.96	7049.52	NM - 1.96 feet NAPL				
MW-9	26-Mar-13	7083.64		33.53	35.22	1.69	7049.73	NM - 1.69 feet NAPL				
MW-9	26-Jun-13	7083.64		33.70	35.27	1.57	7049.59	NM - 1.57 feet NAPL				
MW-9	25-Sep-13	7083.64		32.96	36.46	3.50	7049.90	NM - 3.50 feet NAPL				
MW-9	14-Jan-14	7083.64		33.95	34.31	0.36	7049.61	NM - 0.36 feet NAPL				
MW-9	04-Apr-14	7083.64		33.94	34.01	0.07	7049.68	NM - 0.07 feet NAPL				
MW-9	10-Sep-14	7083.64		34.15	34.27	0.12	7049.46	NM - 0.12 feet NAPL				
MW-9	03-Dec-14	7083.64		34.25	34.31	0.06	7049.38	NM - 0.06 feet NAPL				
MW-9	27-Mar-15	7083.64		33.96	34.03	0.07	7049.66	NM - 0.07 feet NAPL				
MW-9	08-Dec-15	7083.64		34.30	34.36	0.06	7049.33	NM - 0.01 feet NAPL				
MW-9	17-Jun-16	7083.64		34.50	34.51	0.01	7049.14	NM - 0.01 feet NAPL				
MW-9	20-Oct-16	7083.64		34.63	34.90	0.27	7048.95	NM - 0.27 feet NAPL				
MW-9	27-Jan-17	7083.64		34.62	35.12	0.50	7048.91	NM - 0.50 feet NAPL				
MW-9	14-Apr-17	7083.64		34.32	34.87	0.55	7049.20	NM - 0.55 feet NAPL				
MW-9	21-Jun-17	7083.64		34.25	35.81	1.56	7049.04	NM - 1.56 feet NAPL				
MW-9	09-Aug-17	7083.64		34.32	36.68	2.36	7048.80	NM - 2.36 feet NAPL				
MW-9	07-Dec-17	7083.64		34.29	36.68	2.39	7048.82	NM - 2.39 feet NAPL				
MW-9	09-Jan-18	7083.64		34.19	36.59	2.40	7048.92	NM - 2.40 feet NAPL				
MW-9	18-Feb-18	7083.64		34.27	36.65	2.38	7048.84	NM - 2.38 feet NAPL				
MW-9	05-Mar-18	7083.64		34.26	36.52	2.26	7048.88	NM - 2.26 feet NAPL				
MW-9	05-Apr-18	7083.64		34.34	36.27	1.93	7048.87	NM - 1.93 feet NAPL				
MW-9	18-May-18	7083.64		34.26	36.49	2.23	7048.88	NM - 2.23 feet NAPL				

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MW-9	12-Jun-18	7083.64		34.45	36.72	2.27	7048.69	NM - 2.27 feet NAPL				
MW-9	09-Jul-18	7083.64		34.55	36.88	2.33	7048.57	NM - 2.33 feet NAPL				
MW-9	13-Aug-18	7083.64		34.56	36.76	2.20	7048.59	NM - 2.20 feet NAPL				
MW-9	24-Sep-18	7083.64		34.68	36.87	2.19	7048.47	NM - 2.19 feet NAPL				
MW-9	26-Oct-18	7083.64		34.73	36.90	2.17	7048.43	NM - 2.17 feet NAPL				
MW-9	19-Nov-18	7083.64		34.74	37.00	2.26	7048.40	NM - 2.26 feet NAPL				
MW-9	14-Dec-18	7083.64		34.85	37.00	2.15	7048.31	NM - 2.15 feet NAPL				
MW-9R	25-Sep-19	TBS	40		35.32		NA	13.6	1.413	1.41	6.65	24.9
MW-9R	10-Mar-20	TBS	40	--	35.20	--	NA	Not Measured				
MW-9R	25-Mar-20	TBS	40	35.07	35.12	0.05	NA	NM - 0.05 feet NAPL				
MW-9R	23-Jun-20	TBS	40	35.30	35.37	0.07	NA	NM - 0.07 feet NAPL				
MW-9R	23-Sep-20	TBS	40	35.57	35.86	0.29	NA	NM - 0.29 feet NAPL				
MW-9R	23-Nov-20	TBS	40	35.55	35.70	0.15	NA	NM - 0.15 feet NAPL				
MW-9R	17-Mar-21	TBS	40	35.66	35.76	0.10	NA	NM - 0.10 feet NAPL				
MW-9R	17-Jun-21	TBS	40	35.77	35.89	0.12	NA	NM - 0.12 feet NAPL				
MW-9R	29-Sep-21	TBS	40	36.01	36.14	0.13	NA	NM - 0.13 feet NAPL				
MW-9R	30-Nov-21	TBS	40	36.05	36.28	0.23	NA	NM - 0.23 feet NAPL				
MW-9R	08-Mar-22	TBS	40	--	--	0.01	NA	NM - 0.01 feet NAPL				
MW-9R	09-Jun-22	TBS	40	36.15	37.14	0.99	NA	NM - 0.99 feet NAPL				
MW-9R	28-Sep-22	TBS	40	36.11	36.15	0.04	NA	NM - 0.04 feet NAPL				
MW-9R	21-Dec-22	TBS	40	35.88	35.89	0.01	NA	NM - 0.01 feet NAPL				
MPE-1	14-Jan-14	TBS	40	35.12	37.44	2.32	NA	NM	NM	NM	NM	NM
MPE-1	04-Apr-14	TBS	40	35.10	37.40	2.30	NA	NM	NM	NM	NM	NM
MPE-1	10-Sep-14	TBS	40	35.36	37.70	2.34	NA	NM	NM	NM	NM	NM

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BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-1	03-Dec-14	TBS	40	35.44	37.77	2.33	NA	NM	NM	NM	NM	NM
MPE-1	09-Oct-15	TBS	40	35.48	37.37	1.89	NA	NM	NM	NM	NM	NM
MPE-1	27-Mar-15	TBS	40	35.22	37.29	2.07	NA	NM	NM	NM	NM	NM
MPE-1	09-Oct-15	TBS	40	35.48	37.37	1.89	NA	NM	NM	NM	NM	NM
MPE-1	08-Dec-15	TBS	40	35.58	37.60	2.02	NA	NM	NM	NM	NM	NM
MPE-1	17-Jun-16	TBS	40	35.62	37.72	2.10	NA	NM	NM	NM	NM	NM
MPE-1	20-Oct-16	TBS	40	35.84	38.05	2.21	NA	NM	NM	NM	NM	NM
MPE-1	27-Jan-17	TBS	40	35.80	37.88	2.08	NA	NM	NM	NM	NM	NM
MPE-1	14-Apr-17	TBS	40	35.58	37.37	1.79	NA	NM	NM	NM	NM	NM
MPE-1	21-Jun-17	TBS	40	35.74	37.65	1.91	NA	NM	NM	NM	NM	NM
MPE-1	09-Aug-17	TBS	40	35.96	37.50	1.54	NA	NM	NM	NM	NM	NM
MPE-1	07-Dec-17	TBS	40	35.83	37.69	1.86	NA	NM	NM	NM	NM	NM
MPE-1	09-Jan-18	TBS	40	35.79	37.69	1.90	NA	NM	NM	NM	NM	NM
MPE-1	12-Feb-18	TBS	40	35.85	37.19	1.34	NA	NM	NM	NM	NM	NM
MPE-1	05-Mar-18	TBS	40	35.93	37.06	1.13	NA	NM	NM	NM	NM	NM
MPE-1	05-Apr-18	TBS	40	35.95	37.23	1.28	NA	NM	NM	NM	NM	NM
MPE-1	18-May-18	TBS	40	35.92	37.40	1.48	NA	NM	NM	NM	NM	NM
MPE-1	12-Jun-18	TBS	40	36.10	37.35	1.25	NA	NM	NM	NM	NM	NM
MPE-1	09-Jul-18	TBS	40	36.23	37.30	1.07	NA	NM	NM	NM	NM	NM
MPE-1	13-Aug-18	TBS	40	36.33	37.17	0.84	NA	NM	NM	NM	NM	NM
MPE-1	24-Sep-18	TBS	40	36.44	36.98	0.54	NA	NM	NM	NM	NM	NM
MPE-1	26-Oct-18	TBS	40	36.51	36.75	0.24	NA	NM	NM	NM	NM	NM
MPE-1	19-Nov-18	TBS	40	36.54	36.86	0.32	NA	NM	NM	NM	NM	NM
MPE-1	14-Dec-18	TBS	40	36.63	36.78	0.15	NA	NM	NM	NM	NM	NM
MPE-1	25-Sep-19	TBS	40	36.19	38.11	1.92	NA	NM	NM	NM	NM	NM
MPE-1	10-Mar-20	TBS	40	36.93	37.36	0.43	NA	NM	NM	NM	NM	NM

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BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-1	25-Mar-20	TBS	40	37.08	37.71	0.63	NA	NM	NM	NM	NM	NM
MPE-1	23-Jun-20	TBS	40	37.60	38.50	0.90	NA	NM	NM	NM	NM	NM
MPE-1	23-Sep-20	TBS	40	37.79	38.69	0.90	NA	NM	NM	NM	NM	NM
MPE-1	23-Nov-20	TBS	40	37.84	38.69	0.85	NA	NM	NM	NM	NM	NM
MPE-1	17-Mar-21	TBS	40	36.75	37.22	0.47	NA	NM	NM	NM	NM	NM
MPE-1	17-Jun-21	TBS	40	36.94	37.13	0.19	NA	NM	NM	NM	NM	NM
MPE-1	29-Sep-21	TBS	40	37.18	37.40	0.22	NA	NM	NM	NM	NM	NM
MPE-1	30-Nov-21	TBS	40	37.22	37.39	0.17	NA	NM	NM	NM	NM	NM
MPE-1	08-Mar-22	TBS	40	--	--	0.01	NA	NM	NM	NM	NM	NM
MPE-1	09-Jun-22	TBS	40	37.29	37.39	0.10	NA	NM	NM	NM	NM	NM
MPE-1	28-Sep-22	TBS	40	37.77	37.78	0.01	NA	NM	NM	NM	NM	NM
MPE-1	21-Dec-22	TBS	40	38.68	38.72	0.04	NA	NM	NM	NM	NM	NM
MPE-2	14-Jan-14	TBS	40	33.80	34.13	0.33	NA	NM	NM	NM	NM	NM
MPE-2	04-Apr-14	TBS	40	33.74	34.03	0.29	NA	NM	NM	NM	NM	NM
MPE-2	10-Sep-14	TBS	40	34.03	34.44	0.41	NA	NM	NM	NM	NM	NM
MPE-2	03-Dec-14	TBS	40	34.10	34.55	0.45	NA	NM	NM	NM	NM	NM
MPE-2	09-Oct-15	TBS	40	34.07	34.43	0.36	NA	NM	NM	NM	NM	NM
MPE-2	27-Mar-15	TBS	40	33.85	34.20	0.35	NA	NM	NM	NM	NM	NM
MPE-2	09-Oct-15	TBS	40	34.07	34.43	0.36	NA	NM	NM	NM	NM	NM
MPE-2	08-Dec-15	TBS	40	34.20	34.38	0.18	NA	NM	NM	NM	NM	NM
MPE-2	17-Jun-16	TBS	40	34.31	34.43	0.12	NA	NM	NM	NM	NM	NM
MPE-2	20-Oct-16	TBS	40	34.52	34.77	0.25	NA	NM	NM	NM	NM	NM
MPE-2	27-Jan-17	TBS	40	34.48	34.73	0.25	NA	NM	NM	NM	NM	NM
MPE-2	14-Apr-17	TBS	40	34.22	34.36	0.14	NA	NM	NM	NM	NM	NM
MPE-2	21-Jun-17	TBS	40	34.36	34.62	0.26	NA	NM	NM	NM	NM	NM

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BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-2	09-Aug-17	TBS	40	34.57	34.74	0.17	NA	NM	NM	NM	NM	NM
MPE-2	07-Dec-17	TBS	40	34.47	34.62	0.15	NA	NM	NM	NM	NM	NM
MPE-2	09-Jan-18	TBS	40	34.43	34.58	0.15	NA	NM	NM	NM	NM	NM
MPE-2	12-Feb-18	TBS	40	34.41	34.50	0.09	NA	NM	NM	NM	NM	NM
MPE-2	05-Mar-18	TBS	40	34.52	34.54	0.02	NA	NM	NM	NM	NM	NM
MPE-2	05-Apr-18	TBS	40	34.52	34.57	0.05	NA	NM	NM	NM	NM	NM
MPE-2	18-May-18	TBS	40	34.50	34.55	0.05	NA	NM	NM	NM	NM	NM
MPE-2	12-Jun-18	TBS	40	34.67	34.79	0.12	NA	NM	NM	NM	NM	NM
MPE-2	09-Jul-18	TBS	40	34.78	34.83	0.05	NA	NM	NM	NM	NM	NM
MPE-2	13-Aug-18	TBS	40	34.83	34.87	0.04	NA	NM	NM	NM	NM	NM
MPE-2	24-Sep-18	TBS	40	34.90	34.99	0.09	NA	NM	NM	NM	NM	NM
MPE-2	26-Oct-18	TBS	40	34.95	35.00	0.05	NA	NM	NM	NM	NM	NM
MPE-2	19-Nov-18	TBS	40	34.99	35.03	0.04	NA	NM	NM	NM	NM	NM
MPE-2	14-Dec-18	TBS	40	35.03	35.09	0.06	NA	NM	NM	NM	NM	NM
MPE-2	25-Sep-19	TBS	40	34.84	34.88	0.04	NA	NM	NM	NM	NM	NM
MPE-2	10-Mar-20	TBS	40	--	34.74	--	NA	NM	NM	NM	NM	NM
MPE-2	25-Mar-20	TBS	40	34.62	34.63	0.01	NA	NM	NM	NM	NM	NM
MPE-2	23-Jun-20	TBS	40	34.85	34.85	0.00	NA	NM	NM	NM	NM	NM
MPE-2	23-Sep-20	TBS	40	35.14	35.15	0.01	NA	NM	NM	NM	NM	NM
MPE-2	23-Nov-20	TBS	40	35.11	35.13	0.02	NA	NM	NM	NM	NM	NM
MPE-2	17-Mar-21	TBS	40	--	35.21	--	NA	NM	NM	NM	NM	NM
MPE-2	17-Jun-21	TBS	40	35.32	35.33	0.01	NA	NM	NM	NM	NM	NM
MPE-2	29-Sep-21	TBS	40	35.58	35.59	0.01	NA	NM	NM	NM	NM	NM
MPE-2	30-Nov-21	TBS	40	35.61	35.62	0.01	NA	NM	NM	NM	NM	NM
MPE-2	08-Mar-22	TBS	40	--	--	0.01	NA	NM	NM	NM	NM	NM
MPE-2	09-Jun-22	TBS	40	--	35.68	--	NA	NM	NM	NM	NM	NM

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Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-2	28-Sep-22	TBS	40	35.64	35.65	0.01	NA	NM	NM	NM	NM	NM
MPE-2	21-Dec-22	TBS	40	--	35.39	--	NA	NM	NM	NM	NM	NM
MPE-3	14-Jan-14	TBS	38	33.86	34.32	0.46	NA	NM	NM	NM	NM	NM
MPE-3	04-Apr-14	TBS	38	33.83	34.18	0.35	NA	NM	NM	NM	NM	NM
MPE-3	10-Sep-14	TBS	38	34.15	34.55	0.40	NA	NM	NM	NM	NM	NM
MPE-3	03-Dec-14	TBS	38	34.20	34.57	0.37	NA	NM	NM	NM	NM	NM
MPE-3	09-Oct-15	TBS	38	34.10	34.47	0.37	NA	NM	NM	NM	NM	NM
MPE-3	27-Mar-15	TBS	38	33.96	34.20	0.24	NA	NM	NM	NM	NM	NM
MPE-3	09-Oct-15	TBS	38	34.10	34.47	0.37	NA	NM	NM	NM	NM	NM
MPE-3	08-Dec-15	TBS	38	34.28	34.56	0.28	NA	NM	NM	NM	NM	NM
MPE-3	17-Jun-16	TBS	38	34.18	36.01	1.83	NA	NM	NM	NM	NM	NM
MPE-3	20-Oct-16	TBS	38	34.35	36.53	2.18	NA	NM	NM	NM	NM	NM
MPE-3	27-Jan-17	TBS	38	34.29	36.48	2.19	NA	NM	NM	NM	NM	NM
MPE-3	14-Apr-17	TBS	38	34.05	35.85	1.80	NA	NM	NM	NM	NM	NM
MPE-3	21-Jun-17	TBS	38	34.24	35.59	1.35	NA	NM	NM	NM	NM	NM
MPE-3	09-Aug-17	TBS	38	34.39	36.39	2.00	NA	NM	NM	NM	NM	NM
MPE-3	07-Dec-17	TBS	38	34.27	36.39	2.12	NA	NM	NM	NM	NM	NM
MPE-3	09-Jan-18	TBS	38	34.22	36.33	2.11	NA	NM	NM	NM	NM	NM
MPE-3	12-Feb-18	TBS	38	34.25	36.04	1.79	NA	NM	NM	NM	NM	NM
MPE-3	05-Mar-18	TBS	38	34.40	35.81	1.41	NA	NM	NM	NM	NM	NM
MPE-3	05-Apr-18	TBS	38	34.38	36.05	1.67	NA	NM	NM	NM	NM	NM
MPE-3	18-May-18	TBS	38	34.43	36.11	1.68	NA	NM	NM	NM	NM	NM
MPE-3	12-Jun-18	TBS	38	34.53	36.26	1.73	NA	NM	NM	NM	NM	NM
MPE-3	09-Jul-18	TBS	38	34.66	36.19	1.53	NA	NM	NM	NM	NM	NM
MPE-3	13-Aug-18	TBS	38	34.73	36.15	1.42	NA	NM	NM	NM	NM	NM

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MPE-3	24-Sep-18	TBS	38	34.85	35.95	1.10	NA	NM	NM	NM	NM	NM
MPE-3	26-Oct-18	TBS	38	34.90	35.95	1.05	NA	NM	NM	NM	NM	NM
MPE-3	19-Nov-18	TBS	38	34.84	36.43	1.59	NA	NM	NM	NM	NM	NM
MPE-3	14-Dec-18	TBS	38	34.90	36.48	1.58	NA	NM	NM	NM	NM	NM
MPE-3	25-Sep-19	TBS	38	34.66	36.57	1.91	NA	NM	NM	NM	NM	NM
MPE-3	10-Mar-20	TBS	38	34.55	36.39	1.84	NA	NM	NM	NM	NM	NM
MPE-3	25-Mar-20	TBS	38	34.45	36.24	1.79	NA	NM	NM	NM	NM	NM
MPE-3	23-Jun-20	TBS	38	34.87	36.05	1.18	NA	NM	NM	NM	NM	NM
MPE-3	23-Sep-20	TBS	38	35.13	36.66	1.53	NA	NM	NM	NM	NM	NM
MPE-3	23-Nov-20	TBS	38	35.19	35.58	0.39	NA	NM	NM	NM	NM	NM
MPE-3	17-Mar-21	TBS	38	35.18	36.05	0.87	NA	NM	NM	NM	NM	NM
MPE-3	17-Jun-21	TBS	38	35.32	36.07	0.75	NA	NM	NM	NM	NM	NM
MPE-3	29-Sep-21	TBS	38	35.51	36.61	1.10	NA	NM	NM	NM	NM	NM
MPE-3	30-Nov-21	TBS	38	35.54	36.71	1.17	NA	NM	NM	NM	NM	NM
MPE-3	08-Mar-22	TBS	38	--	--	0.03	NA	NM	NM	NM	NM	NM
MPE-3	09-Jun-22	TBS	38	35.67	36.34	0.67	NA	NM	NM	NM	NM	NM
MPE-3	28-Sep-22	TBS	38	35.67	35.98	0.31	NA	NM	NM	NM	NM	NM
MPE-3	21-Dec-22	TBS	38	35.76	35.81	0.05	NA	NM	NM	NM	NM	NM
MPE-4	14-Jan-14	TBS	38	34.62	37.00	2.38	NA	NM	NM	NM	NM	NM
MPE-4	04-Apr-14	TBS	38	34.59	36.91	2.32	NA	NM	NM	NM	NM	NM
MPE-4	10-Sep-14	TBS	38	34.89	37.22	2.33	NA	NM	NM	NM	NM	NM
MPE-4	03-Dec-14	TBS	38	34.95	37.30	2.35	NA	NM	NM	NM	NM	NM
MPE-4	09-Oct-15	TBS	38	34.90	36.86	1.96	NA	NM	NM	NM	NM	NM
MPE-4	27-Mar-15	TBS	38	34.73	36.82	2.09	NA	NM	NM	NM	NM	NM
MPE-4	09-Oct-15	TBS	38	34.90	36.86	1.96	NA	NM	NM	NM	NM	NM

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-4	08-Dec-15	TBS	38	35.09	37.17	2.08	NA	NM	NM	NM	NM	NM
MPE-4	17-Jun-16	TBS	38	35.13	37.51	2.38	NA	NM	NM	NM	NM	NM
MPE-4	20-Oct-16	TBS	38	35.38	37.83	2.45	NA	NM	NM	NM	NM	NM
MPE-4	27-Jan-17	TBS	38	35.31	37.83	2.52	NA	NM	NM	NM	NM	NM
MPE-4	14-Apr-17	TBS	38	35.06	37.16	2.10	NA	NM	NM	NM	NM	NM
MPE-4	21-Jun-17	TBS	38	35.21	37.53	2.32	NA	NM	NM	NM	NM	NM
MPE-4	09-Aug-17	TBS	38	35.42	37.65	2.23	NA	NM	NM	NM	NM	NM
MPE-4	07-Dec-17	TBS	38	35.53	37.53	2.00	NA	NM	NM	NM	NM	NM
MPE-4	09-Jan-18	TBS	38	35.26	37.52	2.26	NA	NM	NM	NM	NM	NM
MPE-4	12-Feb-18	TBS	38	35.31	37.15	1.84	NA	NM	NM	NM	NM	NM
MPE-4	05-Mar-18	TBS	38	35.44	37.04	1.60	NA	NM	NM	NM	NM	NM
MPE-4	05-Apr-18	TBS	38	35.47	37.03	1.56	NA	NM	NM	NM	NM	NM
MPE-4	18-May-18	TBS	38	35.42	37.10	1.68	NA	NM	NM	NM	NM	NM
MPE-4	12-Jun-18	TBS	38	35.73	36.58	0.85	NA	NM	NM	NM	NM	NM
MPE-4	09-Jul-18	TBS	38	35.93	36.14	0.21	NA	NM	NM	NM	NM	NM
MPE-4	13-Aug-18	TBS	38	35.99	36.04	0.05	NA	NM	NM	NM	NM	NM
MPE-4	24-Sep-18	TBS	38	36.05	36.16	0.11	NA	NM	NM	NM	NM	NM
MPE-4	26-Oct-18	TBS	38	36.11	36.17	0.06	NA	NM	NM	NM	NM	NM
MPE-4	19-Nov-18	TBS	38	36.15	36.19	0.04	NA	NM	NM	NM	NM	NM
MPE-4	14-Dec-18	TBS	38	36.21	36.26	0.05	NA	NM	NM	NM	NM	NM
MPE-4	25-Sep-19	TBS	38	35.70	37.86	2.16	NA	NM	NM	NM	NM	NM
MPE-4	25-Mar-20	TBS	38	--	--	--	NA	NM - Lower and Upper Portions of Well Not Aligned Due to Shift at Approximately 35.32 Ft				
MPE-4	23-Jun-20	TBS	38	--	--	--	NA					
MPE-4	23-Sep-20	TBS	38	--	--	--	NA	Well Damaged				
MPE-4	23-Nov-20	TBS	38	--	--	--	NA	Well Obstructed at 35.28 Ft				
MPE-4	17-Mar-21	TBS	38	--	--	--	NA	Well Obstructed at 35.28 Ft				

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BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-4	17-Jun-21	TBS	38	--	--	--	NA	Well Obstructed at 35.28 Ft				
MPE-4	29-Sep-21	TBS	38	--	--	--	NA	Well Obstructed at 35.25 Ft				
MPE-4	30-Nov-21	TBS	38	--	--	--	NA	Well Obstructed at 35.28 Ft				
MPE-4	08-Mar-22	TBS	38	--	--	--	NA	Well Obstructed at 35.25 Ft				
MPE-4	09-Jun-22	TBS	38	--	--	--	NA	Well Obstructed				
MPE-4	28-Sep-22	TBS	38	--	--	--	NA	Well Obstructed at 35.27 Ft				
MPE-4	21-Dec-22	TBS	38	--	--	--	NA	Well Obstructed				
MPE-5	14-Jan-14	TBS	40	36.15	38.50	2.35	NA	NM	NM	NM	NM	NM
MPE-5	04-Apr-14	TBS	40	36.15	38.32	2.17	NA	NM	NM	NM	NM	NM
MPE-5	10-Sep-14	TBS	40	36.38	38.86	2.48	NA	NM	NM	NM	NM	NM
MPE-5	03-Dec-14	TBS	40	36.49	38.91	2.42	NA	NM	NM	NM	NM	NM
MPE-5	09-Oct-15	TBS	40	36.45	38.57	2.12	NA	NM	NM	NM	NM	NM
MPE-5	27-Mar-15	TBS	40	36.27	38.28	2.01	NA	NM	NM	NM	NM	NM
MPE-5	09-Oct-15	TBS	40	36.45	38.57	2.12	NA	NM	NM	NM	NM	NM
MPE-5	08-Dec-15	TBS	40	36.58	38.92	2.34	NA	NM	NM	NM	NM	NM
MPE-5	17-Jun-16	TBS	40	36.66	38.90	2.24	NA	NM	NM	NM	NM	NM
MPE-5	20-Oct-16	TBS	40	36.88	39.31	2.43	NA	NM	NM	NM	NM	NM
MPE-5	27-Jan-17	TBS	40	36.84	39.20	2.36	NA	NM	NM	NM	NM	NM
MPE-5	14-Apr-17	TBS	40	36.61	38.55	1.94	NA	NM	NM	NM	NM	NM
MPE-5	21-Jun-17	TBS	40	36.75	38.82	2.07	NA	NM	NM	NM	NM	NM
MPE-5	09-Aug-17	TBS	40	36.91	39.22	2.31	NA	NM	NM	NM	NM	NM
MPE-5	26-Sep-17	TBS	40	37.09	38.65	1.56	NA	NM	NM	NM	NM	NM
MPE-5	07-Dec-17	TBS	40	36.85	38.97	2.12	NA	NM	NM	NM	NM	NM
MPE-5	09-Jan-18	TBS	40	36.79	38.88	2.09	NA	NM	NM	NM	NM	NM
MPE-5	12-Feb-18	TBS	40	36.86	38.49	1.63	NA	NM	NM	NM	NM	NM

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BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-5	05-Mar-18	TBS	40	36.96	38.46	1.50	NA	NM	NM	NM	NM	NM
MPE-5	05-Apr-18	TBS	40	37.01	38.38	1.37	NA	NM	NM	NM	NM	NM
MPE-5	18-May-18	TBS	40	37.03	38.07	1.04	NA	NM	NM	NM	NM	NM
MPE-5	12-Jun-18	TBS	40	37.21	38.18	0.97	NA	NM	NM	NM	NM	NM
MPE-5	09-Jul-18	TBS	40	37.33	38.13	0.80	NA	NM	NM	NM	NM	NM
MPE-5	13-Aug-18	TBS	40	37.36	38.25	0.89	NA	NM	NM	NM	NM	NM
MPE-5	24-Sep-18	TBS	40	37.42	38.37	0.95	NA	NM	NM	NM	NM	NM
MPE-5	26-Oct-18	TBS	40	37.50	38.26	0.76	NA	NM	NM	NM	NM	NM
MPE-5	19-Nov-18	TBS	40	37.52	38.41	0.89	NA	NM	NM	NM	NM	NM
MPE-5	14-Dec-18	TBS	40	37.61	38.21	0.60	NA	NM	NM	NM	NM	NM
MPE-5	25-Sep-19	TBS	40	37.43	37.97	0.54	NA	NM	NM	NM	NM	NM
MPE-5	10-Mar-20	TBS	40	37.22	37.92	0.70	NA	NM	NM	NM	NM	NM
MPE-5	25-Mar-20	TBS	40	37.21	37.83	0.62	NA	NM	NM	NM	NM	NM
MPE-5	23-Jun-20	TBS	40	37.42	38.10	0.68	NA	NM	NM	NM	NM	NM
MPE-5	23-Sep-20	TBS	40	37.72	38.35	0.63	NA	NM	NM	NM	NM	NM
MPE-5	23-Nov-20	TBS	40	37.70	38.29	0.59	NA	NM	NM	NM	NM	NM
MPE-5	17-Mar-21	TBS	40	37.80	38.41	0.61	NA	NM	NM	NM	NM	NM
MPE-5	17-Jun-21	TBS	40	37.95	38.28	0.33	NA	NM	NM	NM	NM	NM
MPE-5	29-Sep-21	TBS	40	37.93	--	--	NA	Well Obstructed at 39.3 Ft				
MPE-5	30-Nov-21	TBS	40	39.30	--	0.20	NA	NM	NM	NM	NM	NM
MPE-5	08-Mar-22	TBS	40	--	--	0.03	NA	NM	NM	NM	NM	NM
MPE-5	09-Jun-22	TBS	40	38.00	--	1.30	NA	NM	NM	NM	NM	NM
MPE-5	28-Sep-22	TBS	40	38.00	--	1.30	NA	NM	NM	NM	NM	NM
MPE-5	21-Dec-22	TBS	40	38.00	39.08	1.08	NA	NM	NM	NM	NM	NM
MPE-6	14-Jan-14	TBS	36	33.88	36.14	2.26	NA	NM	NM	NM	NM	NM

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SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-6	04-Apr-14	TBS	36	33.82	36.10	2.28	NA	NM	NM	NM	NM	NM
MPE-6	10-Sep-14	TBS	36	34.12	36.42	2.30	NA	NM	NM	NM	NM	NM
MPE-6	03-Dec-14	TBS	36	34.20	36.50	2.30	NA	NM	NM	NM	NM	NM
MPE-6	09-Oct-15	TBS	36	34.16	36.21	2.05	NA	NM	NM	NM	NM	NM
MPE-6	27-Mar-15	TBS	36	33.97	35.95	1.98	NA	NM	NM	NM	NM	NM
MPE-6	09-Oct-15	TBS	36	34.16	36.21	2.05	NA	NM	NM	NM	NM	NM
MPE-6	08-Dec-15	TBS	36	34.63	36.68	2.05	NA	NM	NM	NM	NM	NM
MPE-6	17-Jun-16	TBS	36	34.36	36.65	2.29	NA	NM	NM	NM	NM	NM
MPE-6	20-Oct-16	TBS	36	34.62	36.80	2.18	NA	NM	NM	NM	NM	NM
MPE-6	27-Jan-17	TBS	36	34.55	36.76	2.21	NA	NM	NM	NM	NM	NM
MPE-6	14-Apr-17	TBS	36	34.30	36.20	1.90	NA	NM	NM	NM	NM	NM
MPE-6	21-Jun-17	TBS	36	34.45	36.60	2.15	NA	NM	NM	NM	NM	NM
MPE-6	09-Aug-17	TBS	36	34.71	36.44	1.73	NA	NM	NM	NM	NM	NM
MPE-6	07-Dec-17	TBS	36	34.60	36.56	1.96	NA	NM	NM	NM	NM	NM
MPE-6	09-Jan-18	TBS	36	34.51	36.54	2.03	NA	NM	NM	NM	NM	NM
MPE-6	12-Feb-18	TBS	36	34.58	36.08	1.50	NA	NM	NM	NM	NM	NM
MPE-6	05-Mar-18	TBS	36	34.73	35.81	1.08	NA	NM	NM	NM	NM	NM
MPE-6	05-Apr-18	TBS	36	34.73	36.02	1.29	NA	NM	NM	NM	NM	NM
MPE-6	18-May-18	TBS	36	34.68	36.13	1.45	NA	NM	NM	NM	NM	NM
MPE-6	12-Jun-18	TBS	36	34.95	35.76	0.81	NA	NM	NM	NM	NM	NM
MPE-6	09-Jul-18	TBS	36	35.10	35.60	0.50	NA	NM	NM	NM	NM	NM
MPE-6	13-Aug-18	TBS	36	35.17	35.50	0.33	NA	NM	NM	NM	NM	NM
MPE-6	24-Sep-18	TBS	36	35.27	35.48	0.21	NA	NM	NM	NM	NM	NM
MPE-6	26-Oct-18	TBS	36	35.30	35.56	0.26	NA	NM	NM	NM	NM	NM
MPE-6	19-Nov-18	TBS	36	35.06	35.34	0.28	NA	NM	NM	NM	NM	NM
MPE-6	14-Dec-18	TBS	36	35.40	35.60	0.20	NA	NM	NM	NM	NM	NM

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SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-6	25-Sep-19	TBS	36	35.13	35.93	0.80	NA	NM	NM	NM	NM	NM
MPE-6	10-Mar-20	TBS	36	35.81	35.86	0.05	NA	NM	NM	NM	NM	NM
MPE-6	25-Mar-20	TBS	36	35.01	35.17	0.16	NA	NM	NM	NM	NM	NM
MPE-6	23-Jun-20	TBS	36	35.12	36.07	0.95	NA	NM	NM	NM	NM	NM
MPE-6	23-Sep-20	TBS	36	35.39	36.34	0.95	NA	NM	NM	NM	NM	NM
MPE-6	23-Nov-20	TBS	36	35.37	36.27	0.60	NA	NM	NM	NM	NM	NM
MPE-6	17-Mar-21	TBS	36	35.48	36.19	0.71	NA	NM	NM	NM	NM	NM
MPE-6	17-Jun-21	TBS	36	35.68	36.00	0.32	NA	NM	NM	NM	NM	NM
MPE-6	29-Sep-21	TBS	36	36.00	36.25	0.25	NA	NM	NM	NM	NM	NM
MPE-6	30-Nov-21	TBS	36	35.94	36.28	0.34	NA	NM	NM	NM	NM	NM
MPE-6	08-Mar-22	TBS	36	--	--	0.01	NA	NM	NM	NM	NM	NM
MPE-6	09-Jun-22	TBS	36	36.03	36.16	0.13	NA	NM	NM	NM	NM	NM
MPE-6	28-Sep-22	TBS	36	36.13	36.21	0.08	NA	NM	NM	NM	NM	NM
MPE-6	21-Dec-22	TBS	36	36.31	36.33	0.02	NA	NM	NM	NM	NM	NM
MPE-7	14-Jan-14	TBS	36		NM		NA	NM	NM	NM	NM	NM
MPE-7	04-Apr-14	TBS	36	32.00	32.01	0.01	NA	NM	NM	NM	NM	NM
MPE-7	10-Sep-14	TBS	36		32.34		NA	NM	NM	NM	NM	NM
MPE-7	03-Dec-14	TBS	36		32.41		NA	NM	NM	NM	NM	NM
MPE-7	09-Oct-15	TBS	36		32.29		NA	NM	NM	NM	NM	NM
MPE-7	27-Mar-15	TBS	36		32.14		NA	NM	NM	NM	NM	NM
MPE-7	09-Oct-15	TBS	36		32.29		NA	NM	NM	NM	NM	NM
MPE-7	08-Dec-15	TBS	36		32.47		NA	NM	NM	NM	NM	NM
MPE-7	17-Jun-16	TBS	36		32.56		NA	NM	NM	NM	NM	NM
MPE-7	20-Oct-16	TBS	36		32.79		NA	NM	NM	NM	NM	NM

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BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Surveyed TOC (ft)	Total Well Depth (ft)	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MPE-7	27-Jan-17	TBS	36		32.76		NA	NM	NM	NM	NM	NM
MPE-7	25-Sep-19	TBS	36		33.12		NA	NM	NM	NM	NM	NM
MPE-7	25-Mar-20	TBS	36		32.85		NA	NM	NM	NM	NM	NM
MPE-7	23-Jun-20	TBS	36		33.12		NA	NM	NM	NM	NM	NM
MPE-7	23-Sep-20	TBS	36		33.43		NA	NM	NM	NM	NM	NM
MPE-7	23-Nov-20	TBS	36		33.34		NA	NM	NM	NM	NM	NM
MPE-7	17-Mar-21	TBS	36		33.50		NA	NM	NM	NM	NM	NM
MPE-7	17-Jun-21	TBS	36		33.57		NA	NM	NM	NM	NM	NM
MPE-7	29-Sep-21	TBS	36		33.80		NA	NM	NM	NM	NM	NM
MPE-7	30-Nov-21	TBS	36		33.86		NA	NM	NM	NM	NM	NM
MPE-7	08-Mar-22	TBS	36		33.81		NA	NM	NM	NM	NM	NM
MPE-7	09-Jun-22	TBS	36		33.92		NA	NM	NM	NM	NM	NM
MPE-7	28-Sep-22	TBS	36		33.88		NA	NM	NM	NM	NM	NM
MPE-7	21-Dec-22	TBS	36		33.64		NA	NM	NM	NM	NM	NM

NOTE: **Table includes only data from 2014 through present; comprehensive table available upon request.

NA - NOT AVAILABLE
NM - NOT MEASURED
NS - NOT SAMPLED
TBS - TO BE SURVEYED

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS -
VOLATILE ORGANICS AND PETROLEUM HYDROCARBONS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-MRO
		(µg/L)	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*
Analytical Method		**8021/8260**	**8021/826**	**8021/8260**	**8021/8260**	**8015D**	**8015M/D**	**8015M/D**
New Mexico WQCC		***5***	***1000***	***700***	***620***	***NE***	***NE***	***NE***
MW-1	05-May-08	<1.0	<1.0	<1.0	<2.0	0.092	<1.0	<5.0
MW-1	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	07-Aug-17	Plugged and Abandoned						
MW-2	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	13-Oct-10	NS - Well Filled with Roots						
MW-2	20-Jan-11	NS - Well Filled with Roots						
MW-2	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	07-Jul-09	NS - Well filled with sediment						
MW-3	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	07-Aug-17	Plugged and Abandoned						
MW-4	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS -
VOLATILE ORGANICS AND PETROLEUM HYDROCARBONS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-MRO
		(µg/L)	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*
Analytical Method		**8021/8260**	**8021/826**	**8021/8260**	**8021/8260**	**8015D**	**8015M/D**	**8015M/D**
New Mexico WQCC		***5***	***1000***	***700***	***620***	***NE***	***NE***	***NE***
MW-4	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	09-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	07-Aug-17	Plugged and Abandoned						
MW-5	05-May-08	NS - Well Dry						
MW-5	07-Aug-17	Plugged and Abandoned						
MW-6	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	09-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	07-Aug-17	Plugged and Abandoned						
MW-7	05-May-08	2.8	<1.0	<1.0	<2.0	0.40	<1.0	<5.0
MW-7	24-Sep-08	<1.0	<1.0	<1.0	<2.0	0.069	<1.0	<5.0
MW-7	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	09-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS -
VOLATILE ORGANICS AND PETROLEUM HYDROCARBONS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-MRO
		(µg/L)	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*
Analytical Method		**8021/8260**	**8021/826**	**8021/8260**	**8021/8260**	**8015D**	**8015M/D**	**8015M/D**
New Mexico WQCC		***5***	***1000***	***700***	***620***	***NE***	***NE***	***NE***
MW-8	05-May-08	**26**	10	<1.0	<2.0	1.10	<1.0	<5.0
MW-8	24-Sep-08	**65**	26	<1.0	<2.0	0.90	<1.0	<5.0
MW-8	05-Jan-09	**45**	25	<1.0	2.2	1.0	<1.0	<5.0
MW-8	07-Apr-09	**25**	20	<1.0	2.9	0.89	<1.0	<5.0
MW-8	07-Jul-09	**7.5**	4.5	<1.0	<2.0	0.21	<1.0	<5.0
MW-8	12-Oct-09	**15**	11	<1.0	<2.0	0.52	<1.0	<5.0
MW-8	12-Jan-10	<1.0	<1.0	<1.0	<2.0	0.088	<1.0	<5.0
MW-8	13-Oct-10	**12**	<1.0	1.7	16	0.25	<1.0	<5.0
MW-8	20-Jan-11	**35**	<1.0	6.5	6.3	0.16	<1.0	<5.0
MW-8	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	15-Aug-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0
MW-8	21-Nov-11	<2.0	<2.0	<2.0	<4.0	<0.10	2.2	<5.0
MW-8	21-Feb-12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0
MW-8	24-May-12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0
MW-8	21-Sep-12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	04-Dec-12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	26-Mar-13	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	26-Jun-13	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	07-Aug-17	Plugged and Abandoned						
MW-9	05-May-08	**6.2**	7.5	<1.0	2.3	0.90	<1.0	<5.0
MW-9	24-Sep-08	**17**	12	<1.0	<2.0	0.32	<1.0	<5.0
MW-9	05-Jan-09	NS - Well Dry						
MW-9	07-Apr-09	**12**	6.2	<1.0	<2.0	0.32	<1.0	<5.0
MW-9	07-Jul-09	**7.0**	5.3	<1.0	<2.0	0.28	<1.0	<5.0
MW-9	12-Oct-09	**26**	2.0	<1.0	<2.0	0.31	<1.0	<5.0
MW-9	12-Jan-10	NAPL Present through Current Date						
MW-9R	25-Sep-19	<1.0	<1.0	56	80	0.87	<1.0	<5.0
MW-9R	25-Mar-20	<2.0	<2.0	50	44	0.66	1.2	<5.0
MW-9R	23-Jun-20	<1.0	<1.0	11	23	0.86	46	20
MW-9R	23-Sep-20	<5.0	<5.0	38	100	3.8	550	270
MW-9R	23-Nov-20	<5.0	<5.0	12	29	1.0	250	120
MW-9R	17-Mar-21	<1.0	<1.0	<1.0	6.7	2.9	220	98
MW-9R	29-Sep-21	NS - Insufficient Water						

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS -
VOLATILE ORGANICS AND PETROLEUM HYDROCARBONS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

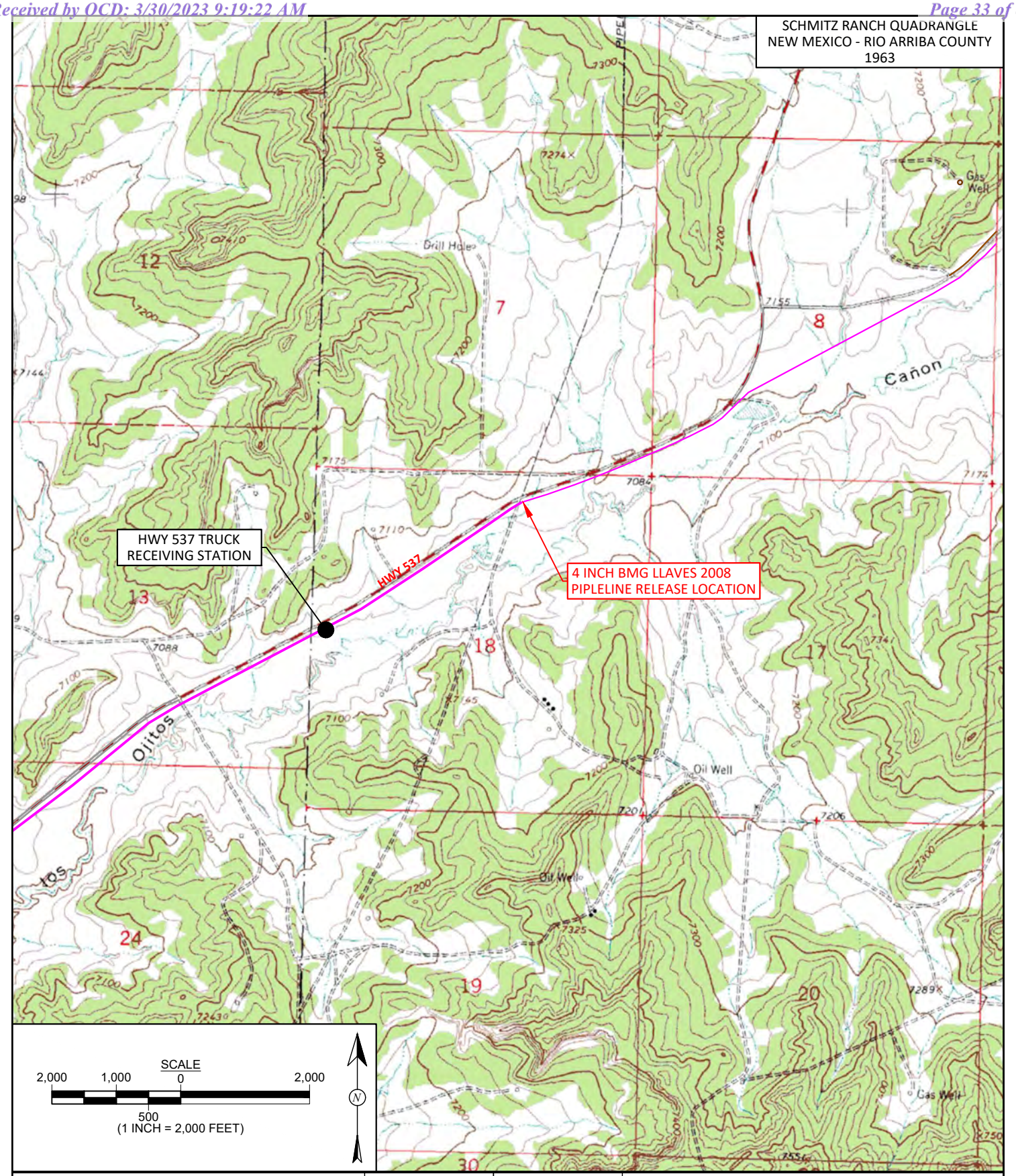
Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-MRO
		(µg/L)	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*
Analytical Method		**8021/8260**	**8021/826**	**8021/8260**	**8021/8260**	**8015D**	**8015M/D**	**8015M/D**
New Mexico WQCC		***5***	***1000***	***700***	***620***	***NE***	***NE***	***NE***
MW-9R	30-Nov-21	NS - Insufficient Water						
MW-9R	08-Mar-22	NS - Insufficient Water						
MW-9R	09-Jun-22	NS - Insufficient Water						
MW-9R	28-Sep-22	<2.0	<2.0	<2.0	<3.0	NA	NA	NA
MW-9R	21-Dec-22	<2.0	<2.0	<2.0	<3.0	0.24	NA	NA

NOTE: NS = Not Sampled
NA = Not Analyzed
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
MRO = Motor Oil Range Organics

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - WQCC GROUNDWATER STANDARDS
(NMAC 20.6.2.3103)
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Analyte	Analytical Method	NM WQCC Standard				
		Well ID	MW-7	MW-9R	MW-9R	MW-9R
		Sample Date	23-Jun-20	25-Sep-19	25-Mar-20	6-Oct-22
Antimony	200.8	0.006	NA	<0.0010	NA	NA
Arsenic		0.01	NA	0.0016	NA	NA
Copper		1.0	NA	0.0057	NA	NA
Lead		0.015	NA	0.0015	NA	NA
Selenium		0.05	NA	0.0011	NA	NA
Thallium		0.002	NA	<0.00050	NA	NA
Uranium		0.03	NA	0.0061	NA	NA
Fluoride	300.0	1.6	NA	<0.50	NA	NA
Chloride		250	NA	110	NA	NA
Nitrite-N		1.0	NA	<0.50	NA	NA
Nitrate-N		10.0	NA	<0.50	NA	NA
Sulfate		600	NA	76	NA	NA
Total Dissolved Solids	2540C	1,000	NA	**1,040**	NA	NA
Aluminum	200.7/6010 B	5.0	NA	3.7	NA	NA
Barium		2.0	NA	0.31	NA	NA
Beryllium		0.004	NA	<0.0020	NA	NA
Boron		0.75	NA	0.078	NA	NA
Cadmium		0.005	NA	<0.0020	NA	NA
Chromium		0.05	NA	<0.0060	NA	NA
Cobalt		0.05	NA	<0.0060	NA	NA
Iron		1.0	0.11	**4.2 (T)**	**1.9**	0.0096
Manganese		0.2	0.18	**3.3 (T)**	**2.5**	0.0041
Molybdenum		1.0	NA	<0.0080	NA	NA
Nickel		0.2	NA	<0.010	NA	NA
Silver		0.05	NA	<0.0050	NA	NA
Zinc		10.0	NA	0.017	NA	NA
Mercury	245.1	0.002	NA	<0.00020	NA	NA
Phenols	SW-846 9067	0.005	NA	0.0042	NA	**0.016**
Cyanide	4500CN	0.2	NA	<0.00500	NA	NA
pH	4500-H+B	6 to 9	NA	7.44	NA	NA
Radium 226/228	903.1 904.0	5.0	NA	3.11	NA	NA

Figures



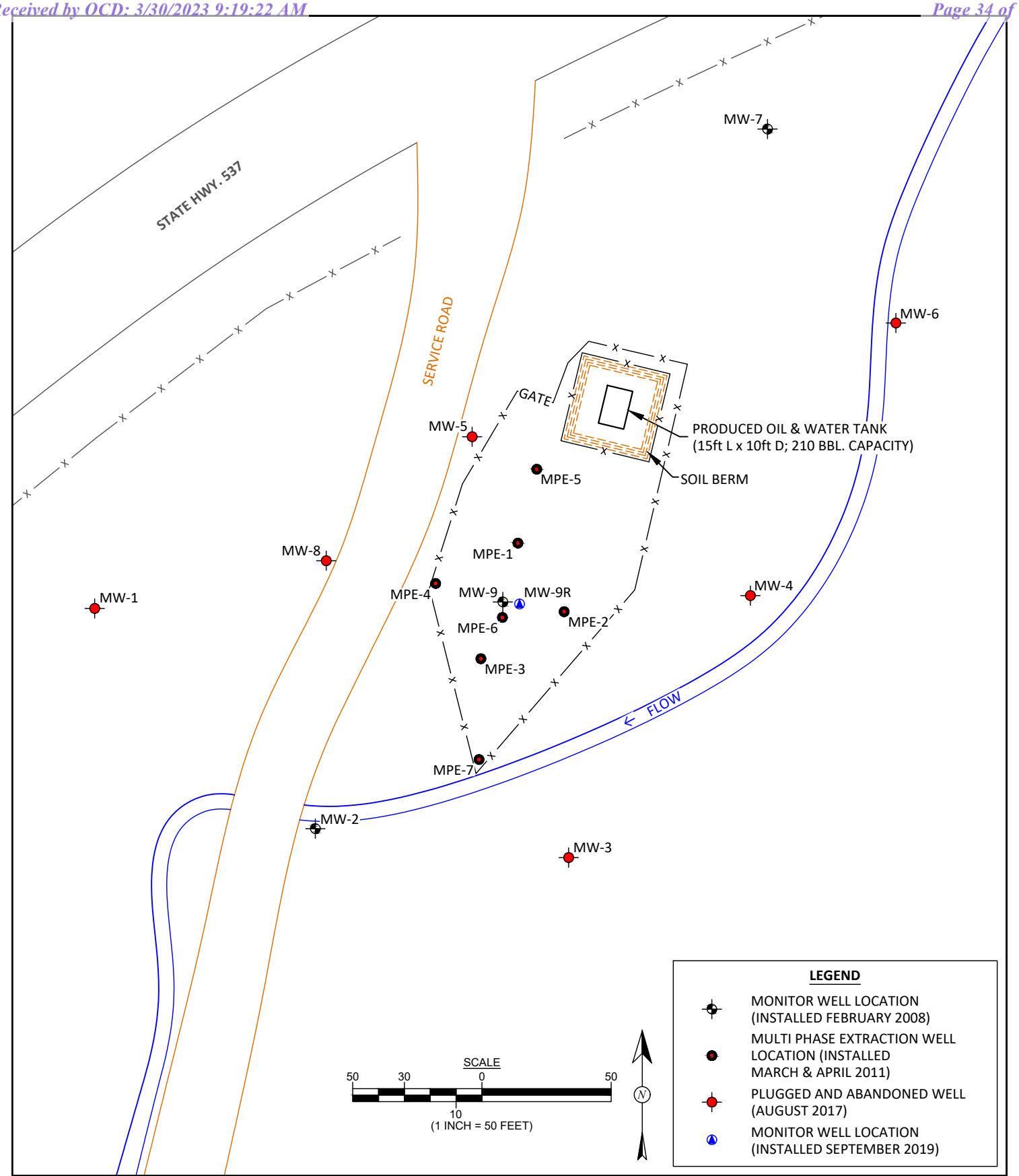
DRAWN BY: C. Lameman	**DATE DRAWN:** March 3, 2017
REVISIONS BY: C. Lameman	**DATE REVISED:** February 8, 2023
CHECKED BY: L. Cupps	**DATE CHECKED:** February 8, 2023
APPROVED BY: E. McNally	**DATE APPROVED:** February 8, 2023

animas environmental services
Farmington, NM
animasenvironmental.com

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP

BMG HIGHWAY 537
LLAVES 2008 PIPELINE OIL RELEASE
NW¼ NE¼, SECTION 18, T25N, R3W
RIO ARRIBA COUNTY, NEW MEXICO
N36.40357, W107.18422



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Farmington, NM
animasenvironmental.com

DRAWN BY: C. Lameman	**DATE DRAWN:** March 3, 2017
REVISIONS BY: C. Lameman	**DATE REVISED:** February 8, 2023
CHECKED BY: L. Cupps	**DATE CHECKED:** February 8, 2023
APPROVED BY: E. McNally	**DATE APPROVED:** February 8, 2023

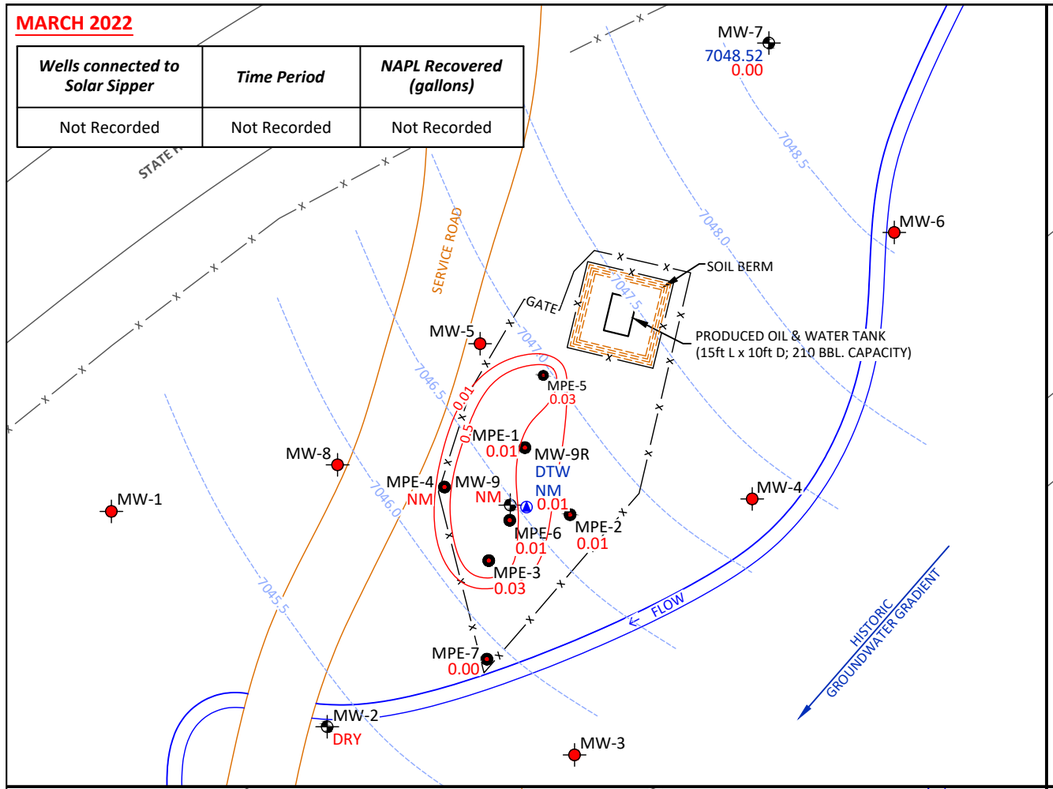
FIGURE 2

GENERAL SITE MAP

BMG HIGHWAY 537
LLAVES 2008 PIPELINE OIL RELEASE
NW¼ NE¼, SECTION 18, T25N, R3W
RIO ARRIBA COUNTY, NEW MEXICO
N36.40357, W107.18422

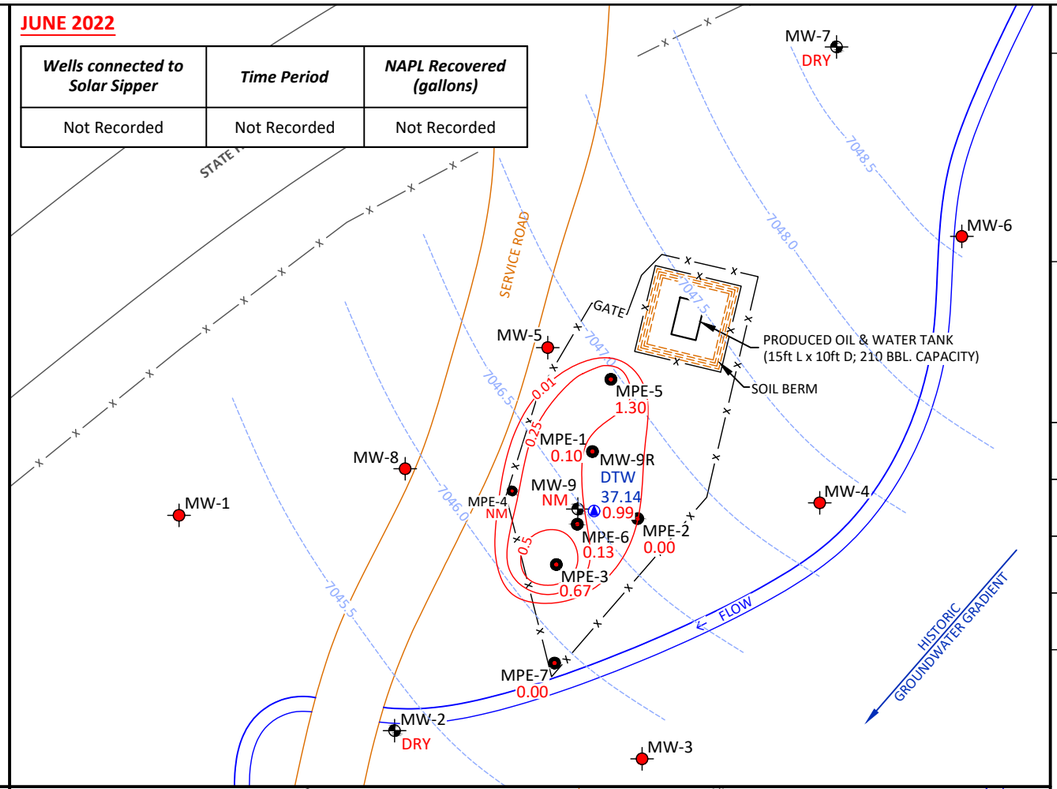
MARCH 2022

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
Not Recorded	Not Recorded	Not Recorded



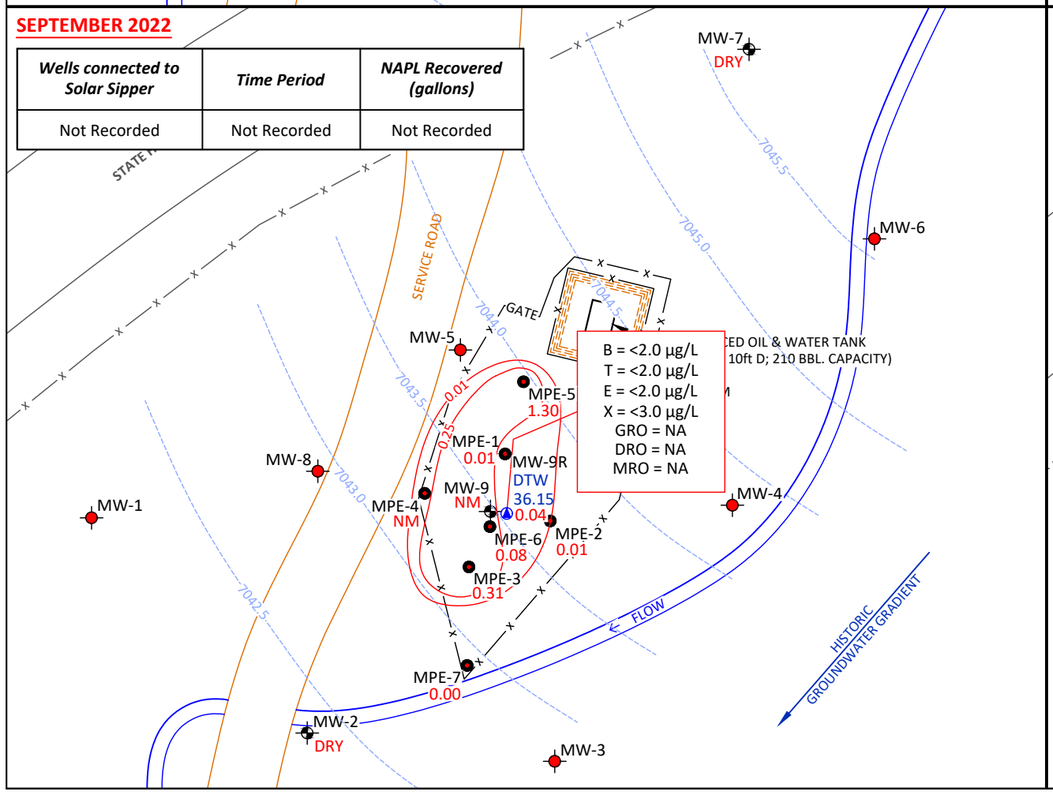
JUNE 2022

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
Not Recorded	Not Recorded	Not Recorded



SEPTEMBER 2022

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
Not Recorded	Not Recorded	Not Recorded



DECEMBER 2022

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
Not Recorded	Not Recorded	Not Recorded

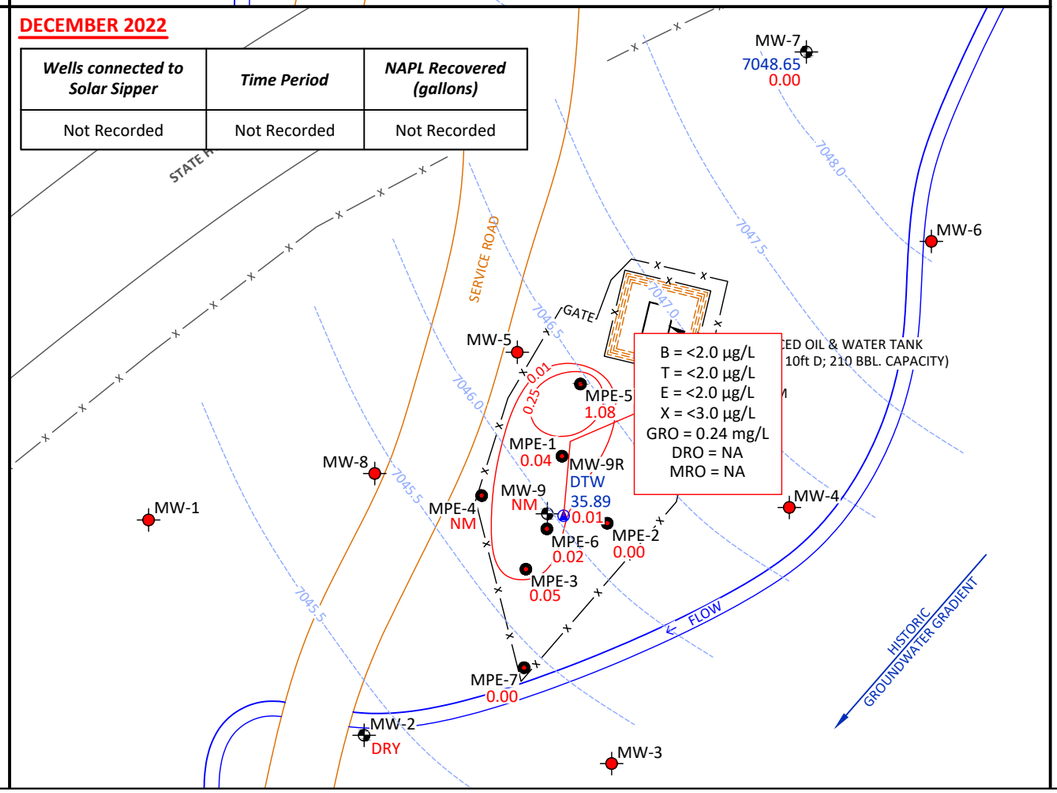


FIGURE 3

2022 GROUNDWATER ELEVATION CONTOURS, RESIDUAL NAPL CONTOURS, AND CONTAMINANT CONCENTRATIONS

BMG HIGHWAY 537
LLAVES 2008 PIPELINE OIL RELEASE
NW¼ NE¼, SECTION 18, T25N, R3W
RIO ARRIBA COUNTY, NEW MEXICO
N36.40357, W107.18422

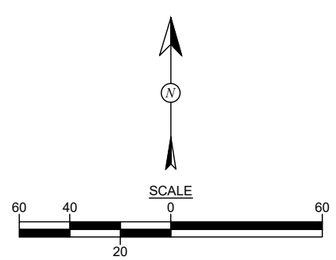
animas environmental services
Farmington, NM
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	June 16, 2022
REVISIONS BY:	**DATE REVISED:**
C. Lameman	February 8, 2023
CHECKED BY:	**DATE CHECKED:**
L. Cupps	February 8, 2023
APPROVED BY:	**DATE APPROVED:**
E. McNally	February 8, 2023

LEGEND

- MONITOR WELL LOCATION (INSTALLED FEBRUARY 2008)
- MULTI PHASE EXTRACTION WELL LOCATION (INSTALLED MARCH & APRIL 2011)
- PLUGGED AND ABANDONED WELL (AUGUST 2017)
- MONITOR WELL LOCATION (INSTALLED SEPTEMBER 2019)
- 7048.92 — GROUNDWATER ELEVATION IN FEET (AMSL)
- 7048.5 — INFERRED GROUNDWATER ELEVATION CONTOUR IN FEET (AMSL)
- 0.87 — NAPL THICKNESS IN FEET
- 0.5 — NAPL THICKNESS CONTOURS IN FEET
- B — BENZENE
- T — TOLUENE
- E — ETHYLBENZENE
- X — XYLENES, TOTAL
- GRO — GASOLINE RANGE ORGANICS
- DRO — DIESEL RANGE ORGANICS
- MRO — MOTOR OIL RANGE ORGANICS

NOTE: GROUNDWATER MEASUREMENTS AND SAMPLES WERE COLLECTED ON MARCH 8, JUNE 9, SEPTEMBER 28, AND DECEMBER 21, 2022. ALL SAMPLED WERE ANALYZED PER EPA METHOD 8021B OR 8260B AND 8015.



Appendix

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 Monitoring
Site: BMG
Location: Hwy 537 2008 Release
Tech: JO

Project No.:
Date: 03-08-2022
Time: 13:49
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2			DRY		Bottom @ 31.5'
MW-7	14:32		41.63		
MW-9R					
MPE-1					2" Well
MPE-2					2" Well
MPE-3					2" Well
MPE-4	14:42		~~~		2" Well 35.25 obstruction
MPE-5					2" Well
MPE-6					2" Well
MPE-7	14:53		33.81		2" Well (MUD) - No water
Waste NAPL Drum	15:00	N/A	Empty Drum	N/A	Depth to Bottom of Drum = 2.75 Diameter = 1.9 ft

Source of the NAPL:

Time period NAPL has been collected from here:

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

NAPL Recovery Form

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
animasenvironmental.com (505) 564-2281

Site:	BMG	Project No.:	
Location:	HWY 537 2008 Release	Date:	03-08-2022
Project:	NAPL Recovery	Arrival Time:	13:49
Sampling Technician:	JS	Air Temp:	30° Sunny

Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MW-9R	15:47 / 17:00			.01				~ .75	Low Recharge @ 17:00 Less than .01 gal
MPE-3	16:04			.03				~ .5	est
MPE-6	16:10			.01				< 1.0	est
MPE-2	16:24			.01				< .5	est
MPE-1	16:29			< .01				< .25	est
MPE-5	16:44			.03				< .75	est

Purged NAPL and Water Storage, Transport, and Disposal Information:

Amounts are estimated due to interface probe failure. Approx time 15:15

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-2

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JD
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): — Time: 14:11 (taken at initial gauging of all wells)
Confirm D.T.W. (ft): — Time: 14:12 (taken prior to purging well)
Final D.T.W. (ft): — Time: 14:12 (taken after sample collection)
If NAPL Present: D.T.P.:_____ D.T.W.:_____ Thickness:_____ Time:_____

Project No.: AES 080101
Date: 03-08-2023
Arrival Time: 14:10
Air Temp: 30° Sunny
T.O.C. Elev. (ft): 7079.94
Total Well Depth (ft): 30.98

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
		DRY WELL					

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

See Abatement plan or Chain of Custody for Analytical Analysis and Containers

Disposal of Purged Water: N/A
Collected Samples Stored on Ice in Cooler: N/A
Chain of Custody Record Complete: N/A
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: well is dry

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-7

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician:
Purge / No Purge:
Well Diameter (in): 0.75

Project No.: AES 080101
Date: 03-08-2022
Arrival Time: 14:32
Air Temp: 30° Sunny
T.O.C. Elev. (ft): 7090.15
Total Well Depth (ft): 43.54

Initial D.T.W. (ft): 41.63 **Time:** 14:33 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 41.63 **Time:** 14:34 *(taken prior to purging well)*
Final D.T.W. (ft): 41.63 **Time:** 14:34 *(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
		DRY			WELL		

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

See Abatement plan or Chain of Custody for Analytical Analysis and Containers

Disposal of Purged Water: N/A
Collected Samples Stored on Ice in Cooler: N/A
Chain of Custody Record Complete: N/A
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: 1" well diameter, no readings taken

WATER SAMPLE COLLECTION FORM

Monitor Well No: **MW-9R**

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JO
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): — Time: 15:48 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): — Time: | *(taken prior to purging well)*
Final D.T.W. (ft): — Time: V *(taken after sample collection)*
If NAPL Present: D.T.P.:_____ D.T.W.:_____ Thickness:_____ Time:_____

Project No.: AES 080101
Date: 03-08-2022
Arrival Time: 15:47
Air Temp: 30° Sunny
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): approx. 38

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

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

VOCs per USEPA Method 8260 (5-40mL VOAs with HgCl2 preserve)
TPH-GRO/DRO/MRO per USEPA Method 8015 (1-250mL Amber Glass nonpreserved)

Disposal of Purged Water: In onsite collection barrel
Collected Samples Stored on Ice in Cooler: N/A - well had very low recharge <.25 gal
Chain of Custody Record Complete: N/A
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: Approx amount of NAPL removed is about .01 gal
@15:47 - @17:00 went to check recharge for sample collection and recharge amount was <.25 gallons.

NAPL Recovery Form

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
animasenvironmental.com (505) 564-2281

Site:	BMG	Project No.:	
Location:	HWY 537 2008 Release	Date:	9-28-22
Project:	NAPL Recovery	Arrival Time:	10:20
Sampling Technician:	Jason Ogden	Air Temp:	70° – Sunny

Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MW-9R		36.11	36.15	.04					
MPE-1		37.77	37.78	.04					
MPE-2		35.64	35.65	.01					
MPE-3		35.67	35.98	.31					
MPE-5		38.00	∅	1.3					
MPE-6		36.13	36.21	.08					

Purged NAPL and Water Storage, Transport, and Disposal Information:

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 Monitoring
Site: BMG
Location: Hwy 537 2008 Release
Tech:

Project No.:
Date: 9-28-22
Time: 10:20
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	10:36	—	DRY	—	
MW-7	10:31	—	DRY	—	
MW-9R	11:20	36.11	36.15	.04	
MPE-1	12:41	37.77	37.78	.01	2" Well
MPE-2	10:52	35.64	35.65	.01	2" Well
MPE-3	10:55	35.67	35.98	.31	2" Well
MPE-4	15:40	—	—	—	2" Well Blockage in MW @ 35.87
MPE-5	14:15	38.00	Ø	~1.3	2" Well TDB - 39.5
MPE-6	11:17	36.13	36.21	.08	2" Well
MPE-7	10:48	—	33.88	—	2" Well
Waste NAPL Drum	15:42	N/A	N/A	N/A	Depth to Bottom of Drum = 2.75 Diameter = 1.9 ft

Source of the NAPL:

Time period NAPL has been collected from here:

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

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-2

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JO
Purge / (No Purge): No Purge
Well Diameter (in): 0.75

Project No.: AES 080101
Date: 9-28-22
Arrival Time: 10:36
Air Temp: 70° Sunny
T.O.C. Elev. (ft): 7079.94
Total Well Depth (ft): 30.98

Initial D.T.W. (ft): DRY **Time:** 10:36 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): DRY **Time:** 10:37 *(taken prior to purging well)*
Final D.T.W. (ft): — **Time:** — *(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

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

See Abatement plan or Chain of Custody for Analytical Analysis and Containers

Disposal of Purged Water: N/A
Collected Samples Stored on Ice in Cooler: N/A
Chain of Custody Record Complete: N/A
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:

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = _____ - _____ =

Well Volume = (h)(cf) = ( )(0.1632) =

Total Purge Volume = 3(Well Volume) = _____

Groundwater Sampling Form 050718 Yammer.xlsx

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-7

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JO
Purge / ~~No Purge~~: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): DRY **Time:** 10:31 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): DRY **Time:** 10:31 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 080101
Date: 9-28-22
Arrival Time: 10:31
Air Temp: 70° Sunny
T.O.C. Elev. (ft): 7090.15
Total Well Depth (ft): 43.54

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

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

See Abatement plan or Chain of Custody for Analytical Analysis and Containers

Disposal of Purged Water: N/A
Collected Samples Stored on Ice in Cooler: N/A
Chain of Custody Record Complete: N/A
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:

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = _____ - _____ =

Well Volume = (h)(cf) = ( )(0.1632) =

Total Purge Volume = 3(Well Volume) = _____

Groundwater Sampling Form 050718 Yammer.xlsx

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-9R

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JD
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 36.15 **Time:** 11:20 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 36.15 **Time:** 11:21 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** 36.11 **D.T.W.:** 36.15 **Thickness:** .04 **Time:** 11:20

Project No.: AES 080101
Date: 9-28-22
Arrival Time: 11:20
Air Temp: 70° Sunny
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): approx. 38

Water Quality Parameters - Recorded During Well Purging

YSI # 2 Calibration Date:

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
14:08						Samples Collected from under NAPL	

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

VOCs per USEPA Method 8260 (5-40mL VOAs with HgCl2 preserve)
TPH-GRO/DRO/MRO per USEPA Method 8015 (1-250mL Amber Glass nonpreserved)

Disposal of Purged Water: Onsite Storage Vessel
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: Estimated 1.0 gallon purge.

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = _____ - _____ = 1.85

Well Volume = (h)(cf) = (1.85)(0.1632) = .30

Total Purge Volume = 3(Well Volume) = .90 ≈ 1 gallon purge

Groundwater Sampling Form 050718 Yammer.xlsx

NAPL Recovery Form

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
animasenvironmental.com (505) 564-2281

Site:	BMG	Project No.:	
Location:	HWY 537 2008 Release	Date:	9-28-22
Project:	NAPL Recovery	Arrival Time:	10:20
Sampling Technician:	Jason Ogden	Air Temp:	70° – Sunny

Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MW-9R		36.11	36.15	.04					
Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MPE-1		37.77	37.78	.04					
Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MPE-2		35.64	35.65	.01					
Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MPE-3		35.67	35.98	.31					
Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MPE-5		38.00	∅	1.3					
Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MPE-6		36.13	36.21	.08					

Purged NAPL and Water Storage, Transport, and Disposal Information:

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 Monitoring
Site: BMG
Location: Hwy 537 2008 Release
Tech:

Project No.:
Date: 9-28-22
Time: 10:20
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	10:36	—	DRY	—	
MW-7	10:31	—	DRY	—	
MW-9R	11:20	36.11	36.15	.04	
MPE-1	12:41	37.77	37.78	.01	2" Well
MPE-2	10:52	35.64	35.65	.01	2" Well
MPE-3	10:55	35.67	35.98	.31	2" Well
MPE-4	15:40	—	—	—	2" Well Blockage in MW @ 35.87
MPE-5	14:15	38.00	Ø	~1.3	2" Well TDB - 39.5
MPE-6	11:17	36.13	36.21	.08	2" Well
MPE-7	10:48	—	33.88	—	2" Well
Waste NAPL Drum	15:42	N/A	N/A	N/A	Depth to Bottom of Drum = 2.75 Diameter = 1.9 ft

Source of the NAPL:

Time period NAPL has been collected from here:

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

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-2

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JO
Purge / (No Purge): No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): DRY **Time:** 10:36 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): DRY **Time:** 10:37 *(taken prior to purging well)*
Final D.T.W. (ft): — **Time:** — *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 080101
Date: 9-28-22
Arrival Time: 10:36
Air Temp: 70° Sunny
T.O.C. Elev. (ft): 7079.94
Total Well Depth (ft): 30.98

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

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

See Abatement plan or Chain of Custody for Analytical Analysis and Containers

Disposal of Purged Water: N/A
Collected Samples Stored on Ice in Cooler: N/A
Chain of Custody Record Complete: N/A
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:

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = _____ - _____ =

Well Volume = (h)(cf) = ( )(0.1632) =

Total Purge Volume = 3(Well Volume) = _____

Groundwater Sampling Form 050718 Yammer.xlsx

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-7

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JO
Purge / No Purge: No Purge
Well Diameter (in): 0.75

Project No.: AES 080101
Date: 9-28-22
Arrival Time: 10:31
Air Temp: 70° Sunny
T.O.C. Elev. (ft): 7090.15
Total Well Depth (ft): 43.54

Initial D.T.W. (ft): DRY **Time:** 10:31 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): DRY **Time:** 10:31 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(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

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

See Abatement plan or Chain of Custody for Analytical Analysis and Containers

Disposal of Purged Water: N/A
Collected Samples Stored on Ice in Cooler: N/A
Chain of Custody Record Complete: N/A
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:

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = _____ - _____ =

Well Volume = (h)(cf) = ( )(0.1632) =

Total Purge Volume = 3(Well Volume) = _____

Groundwater Sampling Form 050718 Yammer.xlsx

WATER SAMPLE COLLECTION FORM

Monitor Well No: MW-9R

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JD
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 36.15 **Time:** 11:20 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 36.15 **Time:** 11:21 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** 36.11 **D.T.W.:** 36.15 **Thickness:** .04 **Time:** 11:20

Project No.: AES 080101
Date: 9-28-22
Arrival Time: 11:20
Air Temp: 70° Sunny
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): approx. 38

Water Quality Parameters - Recorded During Well Purging

YSI # 2 Calibration Date:

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
14:08						Samples Collected from under NAPL	

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

VOCs per USEPA Method 8260 (5-40mL VOAs with HgCl2 preserve)
TPH-GRO/DRO/MRO per USEPA Method 8015 (1-250mL Amber Glass nonpreserved)

Disposal of Purged Water: Onsite Storage Vessel
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: Estimated 1.0 gallon purge.

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = _____ - _____ = 1.85

Well Volume = (h)(cf) = (1.85)(0.1632) = .30

Total Purge Volume = 3(Well Volume) = .90 ≈ 1 gallon purge

Groundwater Sampling Form 050718 Yammer.xlsx

NAPL Recovery Form

Animas Environmental Services
624 E. Comanche St., Farmington NM 87401
animasenvironmental.com (505) 564-2281

Site:	BMG	Project No.:	
Location:	HWY 537 2008 Release	Date:	12-21-22
Project:	NAPL Recovery	Arrival Time:	12:41
Sampling Technician:	JO	Air Temp:	30° Sunny

Well ID	Start Time/ End Time	Initial Depth to NAPL (ft.)	Initial Depth to Water (ft.)	Initial NAPL Thickness (ft.)	Final Depth to NAPL (ft.)	Final Depth to Water (ft.)	Final NAPL Thickness (ft.)	Purged Volume (gal.)	Method / Notes / Observations
MPE-5	13:05	38.00	39.08	1.08					.25 gallons removed. Napl - sock added
Well ID	**Start Time/ End Time**	**Initial Depth to NAPL (ft.)**	**Initial Depth to Water (ft.)**	**Initial NAPL Thickness (ft.)**	**Final Depth to NAPL (ft.)**	**Final Depth to Water (ft.)**	**Final NAPL Thickness (ft.)**	**Purged Volume (gal.)**	**Method / Notes / Observations**
MPE-6	13:23	36.31	36.33	0.02					sock added < 0.01 Napl removed
Well ID	**Start Time/ End Time**	**Initial Depth to NAPL (ft.)**	**Initial Depth to Water (ft.)**	**Initial NAPL Thickness (ft.)**	**Final Depth to NAPL (ft.)**	**Final Depth to Water (ft.)**	**Final NAPL Thickness (ft.)**	**Purged Volume (gal.)**	**Method / Notes / Observations**
MPE-1	13:25	38.68	38.72	0.04					sock added Emulsified H^2O & Napl after Bailing
Well ID	**Start Time/ End Time**	**Initial Depth to NAPL (ft.)**	**Initial Depth to Water (ft.)**	**Initial NAPL Thickness (ft.)**	**Final Depth to NAPL (ft.)**	**Final Depth to Water (ft.)**	**Final NAPL Thickness (ft.)**	**Purged Volume (gal.)**	**Method / Notes / Observations**
MPE-3	13:33	35.76	35.81	0.05					Emulsified H^2O-Napl after Bailing sock added
Well ID	**Start Time/ End Time**	**Initial Depth to NAPL (ft.)**	**Initial Depth to Water (ft.)**	**Initial NAPL Thickness (ft.)**	**Final Depth to NAPL (ft.)**	**Final Depth to Water (ft.)**	**Final NAPL Thickness (ft.)**	**Purged Volume (gal.)**	**Method / Notes / Observations**
MW-9R	13:17	0 ?	35.89	< 0.01					Emulsified H^2O & Napl ? Dark color with odor sock added
Well ID	**Start Time/ End Time**	**Initial Depth to NAPL (ft.)**	**Initial Depth to Water (ft.)**	**Initial NAPL Thickness (ft.)**	**Final Depth to NAPL (ft.)**	**Final Depth to Water (ft.)**	**Final NAPL Thickness (ft.)**	**Purged Volume (gal.)**	**Method / Notes / Observations**

Purged NAPL and Water Storage, Transport, and Disposal Information:

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 Monitoring
Site: BMG
Location: Hwy 537 2008 Release
Tech: JD

Project No.:
Date: 12-21-22
Time: 12:41
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	12:50		DRY		
MW-7	12:48		41.50		Condensate?
MW-9R		0 ?	35.89	.01	Emulsified product/H2O
MPE-1	13:25	38.68	38.72	.04	2" Well
MPE-2		0	35.39		2" Well HC odor - No sheen/staining
MPE-3	13:33	35.76	35.81	.05	2" Well
MPE-4	13:34	Blockage in MW			2" Well
MPE-5	13:05	38.00	39.08	1.08	2" Well
MPE-6	13:23	36.31	36.33	.02	2" Well
MPE-7	13:07		33.64		2" Well
Waste NAPL Drum					Depth to Bottom of Drum = Diameter = 1.9 ft

Source of the NAPL:

Time period NAPL has been collected from here:

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

WATER SAMPLE COLLECTION FORM

Monitor Well No: **MW-9R**

Animas Environmental Services
624 E Comanche St., Farmington NM
Tel. (505) 564-2281 animasenvironmental.com

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: JO
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 35.89 Time: 13:18 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 35.89 Time: 13:19 *(taken prior to purging well)*
Final D.T.W. (ft): 40.31 Time: 14:43 *(taken after sample collection)*
If NAPL Present: D.T.P.:_____ D.T.W.:_____ Thickness:_____ Time:_____

Project No.: AES 080101
Date: 12-21-22
Arrival Time: 13:17
Air Temp: 35° Sunny
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): ~~approx. 38~~ 40.00'

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
13:20	—	NAPL - NO WATER QUALITY READINGS					—
14:31				—		Samples Collected	—

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

VOCs per USEPA Method 8260 (5-40mL VOAs with HgCl2 preserve)
TPH-GRO/DRO/MRO per USEPA Method 8015 (1-250mL Amber Glass nonpreserved)

Disposal of Purged Water: Onsite Storage 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 - 1.0 gallon 1.25 actual

If it is necessary to calculate the volume of the monitoring well to determine what volume of groundwater will need to be purged from the well prior to collecting the samples, use the following equation:

Well Volume = (h)(cf)

where:

h = height of water column (feet)
cf = gallons/foot based on well diameter shown below

The gallons/foot for common size monitoring wells are as follows:

Well Diameter (inches)	1"	2"	3"	4"	6"
Volume (gallons/foot)	0.0408	0.1632	0.3672	0.6528	1.4688

The well volume is typically tripled to determine the volume to be purged.

Show purge volume calculation below:

h = Total Well Depth - Depth To Water = 38.00 - 35.89 = 2.11

Well Volume = (h)(cf) = (2.11)(0.1632) = .344

Total Purge Volume = 3(Well Volume) = 1.03 calculated Purge

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

October 12, 2022

Elizabeth McNally

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

RE: BMG Hwy 537 2008 Release OrderNo.: 2209H14

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/30/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2209H14**
Date Reported: **10/12/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9R
Project: BMG Hwy 537 2008 Release
Collection Date: 9/28/2022 2:08:00 PM
Lab ID: 2209H14-001 **Matrix:** AQUEOUS **Received Date:** 9/30/2022 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Toluene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Ethylbenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Methyl tert-butyl ether (MTBE)	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2,4-Trimethylbenzene	3.2	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,3,5-Trimethylbenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2-Dichloroethane (EDC)	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2-Dibromoethane (EDB)	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Naphthalene	ND	4.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1-Methylnaphthalene	15	8.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
2-Methylnaphthalene	ND	8.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Acetone	ND	20	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Bromobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Bromodichloromethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Bromoform	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Bromomethane	ND	6.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
2-Butanone	ND	20	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Carbon disulfide	ND	20	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Carbon Tetrachloride	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Chlorobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Chloroethane	ND	4.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Chloroform	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Chloromethane	ND	6.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
2-Chlorotoluene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
4-Chlorotoluene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
cis-1,2-DCE	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
cis-1,3-Dichloropropene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2-Dibromo-3-chloropropane	ND	4.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Dibromochloromethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Dibromomethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2-Dichlorobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,3-Dichlorobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,4-Dichlorobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Dichlorodifluoromethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,1-Dichloroethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,1-Dichloroethene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2-Dichloropropane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,3-Dichloropropane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
2,2-Dichloropropane	ND	4.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649

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

Qualifiers:

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

Analytical Report
Lab Order **2209H14**
Date Reported: **10/12/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9R
Project: BMG Hwy 537 2008 Release
Collection Date: 9/28/2022 2:08:00 PM
Lab ID: 2209H14-001 **Matrix:** AQUEOUS **Received Date:** 9/30/2022 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Hexachlorobutadiene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
2-Hexanone	ND	20	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Isopropylbenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
4-Isopropyltoluene	3.6	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
4-Methyl-2-pentanone	ND	20	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Methylene Chloride	ND	6.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
n-Butylbenzene	ND	6.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
n-Propylbenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
sec-Butylbenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Styrene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
tert-Butylbenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,1,1,2-Tetrachloroethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,1,2,2-Tetrachloroethane	ND	4.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Tetrachloroethene (PCE)	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
trans-1,2-DCE	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
trans-1,3-Dichloropropene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2,3-Trichlorobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2,4-Trichlorobenzene	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,1,1-Trichloroethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,1,2-Trichloroethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Trichloroethene (TCE)	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Trichlorofluoromethane	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
1,2,3-Trichloropropane	ND	4.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Vinyl chloride	ND	2.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Xylenes, Total	ND	3.0	D	µg/L	2	10/11/2022 1:38:00 AM	B91649
Surr: 1,2-Dichloroethane-d4	96.9	70-130	D	%Rec	2	10/11/2022 1:38:00 AM	B91649
Surr: 4-Bromofluorobenzene	96.9	70-130	D	%Rec	2	10/11/2022 1:38:00 AM	B91649
Surr: Dibromofluoromethane	98.0	70-130	D	%Rec	2	10/11/2022 1:38:00 AM	B91649
Surr: Toluene-d8	89.9	70-130	D	%Rec	2	10/11/2022 1:38:00 AM	B91649

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209H14**

12-Oct-22

Client: Animas Environmental Services

Project: BMG Hwy 537 2008 Release

Sample ID: **100ng lcs 2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B91649**	RunNo: **91649**
Prep Date:	Analysis Date: **10/10/2022**	SeqNo: **3285544** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.0	70	130			
Toluene	20	1.0	20.00	0	99.7	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	86.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.6		10.00		96.0	70	130			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B91649**	RunNo: **91649**
Prep Date:	Analysis Date: **10/11/2022**	SeqNo: **3285972** 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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209H14**

12-Oct-22

Client: Animas Environmental Services

Project: BMG Hwy 537 2008 Release

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B91649**	RunNo: **91649**
Prep Date:	Analysis Date: **10/11/2022**	SeqNo: **3285972** 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 interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209H14**

12-Oct-22

Client: Animas Environmental Services

Project: BMG Hwy 537 2008 Release

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B91649**	RunNo: **91649**
Prep Date:	Analysis Date: **10/11/2022**	SeqNo: **3285972** 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	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Animas Environmental Services | Work Order Number: 2209H14 | RcptNo: 1

Received By: Juan Rojas 9/30/2022 6:55:00 AM

Completed By: Sean Livingston 9/30/2022 9:13:26 AM

Reviewed By: 9-30-22

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: KPC 9.30.22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good				

Chain-of-Custody Record

Client:	Animas Environmental Services
Mailing Address:	PO Box 8
	Farmington, NM 87499-0008
Phone #:	505-564-2281
Email or Fax#:	aledgerwood@animasenvironmental.com
QA/QC Package:	
X Standard	☐ Level 4 (Full Validation)
Accreditation:	
☐ NELAP	☐ Other_____
☐ EDD (Type)	_____

Turn-Around Time:	
X Standard	☐ Rush_____
Project Name:	BMG Hwy 537 2008 Release
Project #:	
Project Manager:	Angela Ledgerwood Elizabeth McNally
Sampler:	J. Oyebi
On Ice:	☑ Yes ☐ No
Sample Temperature:	0.5+0.2=0.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 2209H14	VOCs (8260)	~~Phenols~~	~~Diss Mn and Fe~~						Air Bubbles (Y or N)
9-28-22	14:08	H_2O	MW-9R	5- 40 mL VOA	5 - HgCl2	001	X	~~X~~	~~X~~						
		~~H2O~~	~~Trip Blanks~~	~~2-40mL VOA~~	~~2- HgCl2~~	002	X								
			Trip Blanks												
			Not recived	KPG 9-30-22											

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/29/22	1342			9/29/22	1342
9/29/22	1740			9/30/22	6:55

Remarks: Please bill direct to Benson-Montin-Greer
bmg@bmgdrilling.com

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: www.hallenvironmental.com

October 24, 2022

Beth McNally

Animas Environmental Services
624 E. Comanche
Farmington, NM 87401
TEL: (505) 564-2281
FAX: (505) 324-2022

RE: BMG Hwy 537 2008 Release OrderNo.: 2210431

Dear Beth McNally:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/8/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2210431**
Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9R
Project: BMG Hwy 537 2008 Release
Collection Date: 10/6/2022 4:15:00 PM
Lab ID: 2210431-001 **Matrix:** AQUEOUS **Received Date:** 10/8/2022 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Iron	9.6	0.20	*	mg/L	10	10/17/2022 2:53:58 PM	A91889
Manganese	4.1	0.010	*	mg/L	5	10/11/2022 2:20:59 PM	A91716
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**	
Phenolics	16	5.0		µg/L	1	10/17/2022 8:21:00 AM	70849

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210431**

24-Oct-22

Client: Animas Environmental Services

Project: BMG Hwy 537 2008 Release

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A91716**	RunNo: **91716**
Prep Date:	Analysis Date: **10/11/2022**	SeqNo: **3287535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A91716**	RunNo: **91716**
Prep Date:	Analysis Date: **10/11/2022**	SeqNo: **3287536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.0023	0.0020	0.002000	0	114	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A91716**	RunNo: **91716**
Prep Date:	Analysis Date: **10/11/2022**	SeqNo: **3287537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.53	0.0020	0.5000	0	106	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A91889**	RunNo: **91889**
Prep Date:	Analysis Date: **10/17/2022**	SeqNo: **3295487** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A91889**	RunNo: **91889**
Prep Date:	Analysis Date: **10/17/2022**	SeqNo: **3295488** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.022	0.020	0.02000	0	109	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A91889**	RunNo: **91889**
Prep Date:	Analysis Date: **10/17/2022**	SeqNo: **3295489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210431**

24-Oct-22

Client: Animas Environmental Services

Project: BMG Hwy 537 2008 Release

Sample ID: **MB-70849**	SampType: **MBLK**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **PBW**	Batch ID: **70849**	RunNo: **91840**
Prep Date: **10/17/2022**	Analysis Date: **10/17/2022**	SeqNo: **3293387** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	ND	2.5								

Sample ID: **LCS-70849**	SampType: **LCS**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **LCSW**	Batch ID: **70849**	RunNo: **91840**
Prep Date: **10/17/2022**	Analysis Date: **10/17/2022**	SeqNo: **3293388** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	16	2.5	20.00	0	78.7	58.1	107			

Sample ID: **LCSD-70849**	SampType: **LCSD**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **LCSS02**	Batch ID: **70849**	RunNo: **91840**
Prep Date: **10/17/2022**	Analysis Date: **10/17/2022**	SeqNo: **3293389** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	15	2.5	20.00	0	76.7	58.1	107	2.55	20	

Qualifiers:

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

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 Services** Work Order Number: **2210431** RcptNo: 1

Received By: **Cheyenne Cason** **10/8/2022 8:30:00 AM** Cheyenne

Completed By: **Cheyenne Cason** **10/8/2022 9:33:04 AM** Cheyenne

Reviewed By: IO ~~10/8/22~~ 10/10/22 IO

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 (<2 or >12 unless noted)
Adjusted? N/O
Checked by: JN 10/10/22

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Yes			

Chain-of-Custody Record

Client:	Animas Environmental Services
Mailing Address:	PO Box 8 Farmington, NM 87499-0008
Phone #:	720-537-6650
Email or Fax#:	aledgerwood@animasenvironmental.com
QA/QC Package:	X Standard ☐ Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other _____
☐ EDD (Type) _____	

Turn-Around Time:	X Standard ☐ Rush
Project Name:	BMG Hwy 537 2008 Release
Project #:	
Project Manager:	Beth McNally Angela Ledgerwood
Sampler:	Jason Oyebi
On Ice:	☑ Yes ☐ No
Sample Temperature:	3.9 - 0 = 3.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 2210431	VOCs (8260)	Phenols	Diss Mn and Fe						Air Bubbles (Y or N)
10-06-22	1615	H_2O	MW-9R	1 x 125-mL poly 1 x 1-L amber glass	HNO_3 H_2SO_4	001		X	X						

Date: 10-07-22	Time: 1533	Relinquished by:	Received by:	Date	Time
				10/7/22	1533
Date: 10/7/22	Time: 1810	Relinquished by:	Received by:	Date	Time
			Cam cam	10/8/22	0830

Remarks: Please bill direct to Benson-Montin-Greer
bmg@bmgdrilling.com

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: www.hallenvironmental.com

January 04, 2023

Angela Ledgerwood
Animas Environmental Services
624 E. Comanche
Farmington, NM 87401
TEL: (505) 564-2281
FAX:

RE: BMG Hwy 537 2008 Release OrderNo.: 2212C90

Dear Angela Ledgerwood:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/22/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212C90**
Date Reported: **1/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** MW-9R
Project: BMG Hwy 537 2008 Release **Collection Date:** 12/21/2022 2:31:00 PM
Lab ID: 2212C90-001 **Matrix:** AQUEOUS **Received Date:** 12/22/2022 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	0.24	0.10		mg/L	2	12/28/2022 5:54:00 PM	R93606
Surr: BFB	152	70-130	S	%Rec	2	12/28/2022 5:54:00 PM	R93606
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Toluene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Ethylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Naphthalene	ND	4.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1-Methylnaphthalene	ND	8.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
2-Methylnaphthalene	ND	8.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Acetone	ND	20		µg/L	2	12/30/2022 11:32:33 PM	R93663
Bromobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Bromodichloromethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Bromoform	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Bromomethane	ND	6.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
2-Butanone	ND	20		µg/L	2	12/30/2022 11:32:33 PM	R93663
Carbon disulfide	ND	20		µg/L	2	12/30/2022 11:32:33 PM	R93663
Carbon Tetrachloride	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Chlorobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Chloroethane	ND	4.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Chloroform	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Chloromethane	ND	6.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
2-Chlorotoluene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
4-Chlorotoluene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
cis-1,2-DCE	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Dibromochloromethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Dibromomethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2-Dichlorobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,3-Dichlorobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,4-Dichlorobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Dichlorodifluoromethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1-Dichloroethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1-Dichloroethene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663

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

Qualifiers:

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

Analytical Report
Lab Order **2212C90**
Date Reported: **1/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9R
Project: BMG Hwy 537 2008 Release
Collection Date: 12/21/2022 2:31:00 PM
Lab ID: 2212C90-001 **Matrix:** AQUEOUS **Received Date:** 12/22/2022 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dichloropropane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,3-Dichloropropane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
2,2-Dichloropropane	ND	4.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1-Dichloropropene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Hexachlorobutadiene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
2-Hexanone	ND	20		µg/L	2	12/30/2022 11:32:33 PM	R93663
Isopropylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
4-Isopropyltoluene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
4-Methyl-2-pentanone	ND	20		µg/L	2	12/30/2022 11:32:33 PM	R93663
Methylene Chloride	ND	6.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
n-Butylbenzene	ND	6.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
n-Propylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
sec-Butylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Styrene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
tert-Butylbenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
trans-1,2-DCE	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1,1-Trichloroethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,1,2-Trichloroethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Trichloroethene (TCE)	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Trichlorofluoromethane	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
1,2,3-Trichloropropane	ND	4.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Vinyl chloride	ND	2.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Xylenes, Total	ND	3.0		µg/L	2	12/30/2022 11:32:33 PM	R93663
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	2	12/30/2022 11:32:33 PM	R93663
Surr: 4-Bromofluorobenzene	148	70-130	S	%Rec	2	12/30/2022 11:32:33 PM	R93663
Surr: Dibromofluoromethane	92.1	70-130		%Rec	2	12/30/2022 11:32:33 PM	R93663
Surr: Toluene-d8	83.2	70-130		%Rec	2	12/30/2022 11:32:33 PM	R93663

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

Qualifiers:

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

Analytical Report
Lab Order **2212C90**
Date Reported: **1/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: BMG Hwy 537 2008 Release **Collection Date:**
Lab ID: 2212C90-002 **Matrix:** TRIP BLANK **Received Date:** 12/22/2022 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/28/2022 6:14:00 PM	R93606
Surr: BFB	107	70-130		%Rec	1	12/28/2022 6:14:00 PM	R93606
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Toluene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Ethylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Naphthalene	ND	2.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1-Methylnaphthalene	ND	4.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
2-Methylnaphthalene	ND	4.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Acetone	ND	10		µg/L	1	12/30/2022 11:59:36 PM	R93663
Bromobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Bromodichloromethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Bromoform	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Bromomethane	ND	3.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
2-Butanone	ND	10		µg/L	1	12/30/2022 11:59:36 PM	R93663
Carbon disulfide	ND	10		µg/L	1	12/30/2022 11:59:36 PM	R93663
Carbon Tetrachloride	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Chlorobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Chloroethane	ND	2.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Chloroform	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Chloromethane	ND	3.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
2-Chlorotoluene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
4-Chlorotoluene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
cis-1,2-DCE	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Dibromochloromethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Dibromomethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1-Dichloroethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1-Dichloroethene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663

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

Qualifiers:

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B	Analyte detected in the associated Method Blank
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H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2212C90**
Date Reported: **1/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: BMG Hwy 537 2008 Release **Collection Date:**
Lab ID: 2212C90-002 **Matrix:** TRIP BLANK **Received Date:** 12/22/2022 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dichloropropane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,3-Dichloropropane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
2,2-Dichloropropane	ND	2.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1-Dichloropropene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Hexachlorobutadiene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
2-Hexanone	ND	10		µg/L	1	12/30/2022 11:59:36 PM	R93663
Isopropylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
4-Isopropyltoluene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
4-Methyl-2-pentanone	ND	10		µg/L	1	12/30/2022 11:59:36 PM	R93663
Methylene Chloride	ND	3.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
n-Butylbenzene	ND	3.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
n-Propylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
sec-Butylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Styrene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
tert-Butylbenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
trans-1,2-DCE	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Trichlorofluoromethane	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Vinyl chloride	ND	1.0		µg/L	1	12/30/2022 11:59:36 PM	R93663
Xylenes, Total	ND	1.5		µg/L	1	12/30/2022 11:59:36 PM	R93663
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	12/30/2022 11:59:36 PM	R93663
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	12/30/2022 11:59:36 PM	R93663
Surr: Dibromofluoromethane	94.2	70-130		%Rec	1	12/30/2022 11:59:36 PM	R93663
Surr: Toluene-d8	94.0	70-130		%Rec	1	12/30/2022 11:59:36 PM	R93663

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212C90**

04-Jan-23

Client: Animas Environmental Services

Project: BMG Hwy 537 2008 Release

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R93606**	RunNo: **93606**
Prep Date:	Analysis Date: **12/28/2022**	SeqNo: **3377664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	80	120			
Surr: BFB	47		20.00		236	70	130			S

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R93606**	RunNo: **93606**
Prep Date:	Analysis Date: **12/28/2022**	SeqNo: **3377665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	21		20.00		106	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2212C90**
04-Jan-23

Client: Animas Environmental Services
Project: BMG Hwy 537 2008 Release

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R93663**	RunNo: **93663**
Prep Date:	Analysis Date: **12/30/2022**	SeqNo: **3380281** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.0	70	130			
Toluene	19	1.0	20.00	0	93.4	70	130			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.0	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.4	70	130			
Surr: Toluene-d8	9.0		10.00		90.0	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R93663**	RunNo: **93663**
Prep Date:	Analysis Date: **12/30/2022**	SeqNo: **3380294** 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:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2212C90**
04-Jan-23

Client: Animas Environmental Services
Project: BMG Hwy 537 2008 Release

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R93663**	RunNo: **93663**
Prep Date:	Analysis Date: **12/30/2022**	SeqNo: **3380294** 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2212C90**
04-Jan-23

Client: Animas Environmental Services
Project: BMG Hwy 537 2008 Release

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R93663**	RunNo: **93663**
Prep Date:	Analysis Date: **12/30/2022**	SeqNo: **3380294** 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	9.9		10.00		98.6	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.1		10.00		91.2	70	130			

Qualifiers:

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

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 Services | Work Order Number: 2212C90 | RcptNo: 1

Received By: Tracy Casarrubias 12/22/2022 6:45:00 AM

Completed By: Tracy Casarrubias 12/22/2022 8:18:03 AM

Reviewed By: KPU 12.22.22

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: SCR 12/22/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes			

Chain-of-Custody Record

Client:	Animas Environmental Services
Mailing Address:	PO Box 8 Farmington, NM 87499-0008
Phone #:	505-564-2281
Email or Fax#:	aledgerwood@animasenvironmental.com
QA/QC Package:	
X Standard	☐ Level 4 (Full Validation)
Accreditation:	
☐ NELAP	☐ Other
☐ EDD (Type)	

Turn-Around Time:	
X Standard	☐ Rush
Project Name:	BMG Hwy 537 2008 Release
Project #:	
Project Manager:	Angela Ledgerwood Elizabeth McNally
Sampler:	J. Oyebi
On Ice:	☒ Yes ☐ No
Sample Temperature:	0.4 - 0 = 0.4°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
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. 2212C90	VOCs (8260)	TPH -GRO/DRO/MRO (8015)	TDS						Air Bubbles (Y or N)
12-21-22	14:31	H_2O	MW-9R	5- 40 mL VOA	5 - HgCl2	001	X	X							
		H2O	Trip Blanks	2-40mL VOA	2- HgCl2	002	X	X							

Date: 12/21/22	Time: 1700	Relinquished by:	Received by:	Date 12/21/22	Time 1700
Date: 12/21/22	Time: 1820	Relinquished by:	Received by: courier	Date 12/22/22	Time 6:45

Remarks: Please bill direct to Benson-Montin-Greer
bmg@bmgdrilling.com

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.

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 202234

CONDITIONS

Operator:	OGRID:
BENSON-MONTIN-GREER DRILLING CORP 4900 College Blvd. Farmington, NM 87402	2096
	Action Number: 202234
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of Q1 through Q4 2022 Progress Report: Content Satisfactory 1. Perform an additional well cleaning treatment as prescribed within report on MPE wells with NAPL 2. Proceed to install oil absorbent socks within MPE wells to assist in mitigation of residual NAPL. 3. Continue recovery of residual NAPL via hydrophobic socks where NAPL thickness is sufficient for removal 4. Semi-annual gauging events for MW-2, MW-7, MW-9R 5. Conduct sampling for MW-9R (VOCs per 8260, TPH, and 8015, and manganese, dissolved iron. Sample MW-7 for TDS. 6. Submit progress report for 2023 by April 1, 2024.	8/3/2023