animas environmental services

March 8, 2022

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

Review of the Q1 through Q4 2021 Progress Report for Highway 537 Llaves Pipeline Release:
Content Satisfactory
1. Conduct activities to redevelop MPE wells to increase NAPL transmissivity and increase productivity.
2. Continue NAPL recovery by solar stripper and quarterly hand bailing.
3. Conduct semi-annual gauging events of the remaining monitor wells, MW-2, MW-7 and MW-9R for VOCs per 8260 and TPH. Sample MW-7 for TDS.
4. Submit next progress report on or before April 1, 2024.

Re: Q1 through Q4 2021 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 2021 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.

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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 NAPL recovery system (completed October 2019), ongoing groundwater monitoring and sampling, and compliance soil sampling.

2.0 Quarterly Progress Summaries, Q1 through Q4 2021

2.1 Q1 - March 2021 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 March 17, 2021. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. Due to the presence of NAPL in MW-9R, water quality readings were not collected. The Water Sample Collection Form is included in Appendix A.

Groundwater Elevations and Water Quality Measurements

On March 17, 2021, depth to groundwater at the site ranged from 33.50 ft bgs at MPE-7 to 41.23 ft bgs at MW-7. NAPL was observed in five wells: MW-9R (0.10 ft), MPE-1 (0.47 ft), MPE-3 (0.87 ft), MPE-5 (0.61 ft), and MPE-6 (0.71 ft). NAPL was not observed in wells MW-2, MW-7, MPE-2, 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

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; and
- TPH (GRO/DRO/MRO) 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 and ethylbenzene were not detected. Total xylenes (6.7 µg/L) were detected but at a concentration well below the WQCC standard of 620 µg/L. TPH as gasoline range organics (GRO) (2.9 mg/L), diesel range organics (DRO) (220 mg/L), and motor oil range organics (MRO) (98 mg/L) were reported. 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.

2.2 Q2 - June 2021 Groundwater Gauging

Groundwater gauging of site wells and hand bailing of NAPL was conducted by AES on June 17, 2021. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. The Water Sample Collection Form is included in Appendix A.

The solar sipper NAPL recover units were re-installed in early Q2 at MPE-3 and MPE-6 once freezing temperatures were over for the season.

Groundwater Elevations and Water Quality Measurements

On June 17, 2021, depth to groundwater at the site ranged from 33.57 ft bgs at MPE-7 to 41.36 ft bgs at MW-7. NAPL was observed in six wells: MW-9R (0.12 ft), MPE-1 (0.19 ft),

MPE-2 (0.01 ft), MPE-3 (0.75 ft), MPE-5 (0.33 ft), and MPE-6 (0.32 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 6. NAPL contours are presented on Figure 7.

2.3 Q3 – September 2021 Groundwater Gauging

Groundwater gauging of site wells was conducted by AES on September 29, 2021. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. The Water Sample Collection Form is included in Appendix A.

The solar sipper units installed at MPE-3 and MPE-6 recovered NAPL, and thicknesses remained minimal. On September 29, 2021, the solar sipper units were removed and reinstalled in MPE-1 and MPE-3.

Groundwater Elevations and Water Quality Measurements

On September 29, 2021, depth to groundwater at the site ranged from 33.80 ft bgs at MPE-7 to 44.54 ft bgs at MW-7. NAPL was observed in six wells: MW-9R (0.13 ft), MPE-1 (0.22 ft), MPE-2 (0.01 ft), MPE-3 (1.10 ft), and MPE-6 (0.25 ft). MW-2 was found to be dry, and obstructions were noted within MPE-4 (35.25 ft bgs) and MPE-5 (39.3 ft bgs). NAPL was not observed in wells 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 8.

Groundwater Laboratory Analyses

On September 29, 2021, after bailing NAPL to a sheen, groundwater recharge in MW-9R was too low to collect a sample.

2.4 Q4 – November 2021 Groundwater Gauging

Groundwater gauging of site wells and hand bailing of NAPL was conducted by AES on November 30, 2021. All groundwater measurement and purge volumes were recorded onto a Water Sample Collection Form. The Water Sample Collection Form is included in Appendix A.

Prior to the onset of freezing temperatures, BMG personnel removed the solar sipper units from the site.

Groundwater Elevations and Water Quality Measurements

On November 30, 2021, depth to groundwater at the site ranged from 33.86 ft bgs at MPE-7 to 41.67 ft bgs at MW-7. NAPL was observed in six wells: MW-9R (0.23 ft), MPE-1

(0.17 ft), MPE-2 (0.01 ft), MPE-3 (1.17 ft), MPE-5 (0.20 ft), and MPE-6 (0.34 ft). MW-2 was found to be dry, and obstructions were noted within MPE-4 (35.28 ft bgs) and MPE-5 (39.3 ft bgs). NAPL was not observed in wells 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 9. NAPL contours are presented on Figure 10.

Groundwater Laboratory Analyses

On November 30, 2021, after bailing NAPL to a sheen, groundwater recharge in MW-9R was too slow to collect a sample.

2.5 NAPL Recovery

On March 17, June 17, and November 30, 2021, AES hand bailed NAPL from five monitor wells (MW-9R, MPE-1, 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 17, 2021

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	35.66	35.76	0.10	35.68	35.72	0.04	0.1
MPE-1	36.75	37.22	0.47	38.86	39.00	0.14	0.1
MPE-3	35.18	36.05	0.87	35.37	35.50	0.13	1.0
MPE-5	37.80	38.41	0.61	37.88	38.05	0.17	0.15
MPE-6	35.48	36.19	0.71	35.75	35.99	0.24	0.25

NAPL Recovery Data - June 17, 2021

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	35.77	35.89	0.12	36.45	36.42	0.03	0.2
MPE-1	36.94	37.13	0.19	38.22	38.20	0.02	0.2
MPE-3	35.32	36.07	0.75	36.75	36.85	0.10	0.5
MPE-5	37.95	38.28	0.33	39.05	39.13	0.08	0.3
MPE-6	35.68	36.00	0.32	36.49	36.56	0.07	0.4

NAPL Recovery Data – November 30, 2021

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	36.05	36.28	0.23	40.21	40.22	0.01	0.2
MPE-1	37.22	37.39	0.17	41.20	41.21	0.01	0.2
MPE-3	35.54	36.71	1.17	36.42	36.58	0.04	0.3
MPE-5	37.93	39.30	1.37	38.26	38.62	0.36	0.5
MPE-6	35.94	36.28	0.34	39.00	39.01	0.01	0.2

Petroleum Hydrocarbon Mass Removal through Q4 2021
BMG Hwy 537 2008 Release

Time Period	Mass Petroleum Hydrocarbons Removed (lbs)
Through 2020	41,468
Q1 2021	10
Q2 2021	10
Q4 2021	9
Cumulative Mass Removal (lbs)	***41,497***

Note that hand bailing of NAPL was not conducted during Q3 because of minimal NAPL thicknesses recorded for the MPE wells. 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 November 2021, AES conducted well gauging, hand bailing of NAPL, and groundwater sampling of MW-9R (March 2021). Additionally, the solar sipper units were in place and recovering residual NAPL from April through October 2021.

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 41.67 ft bgs in November 2021.

A groundwater sample was able to be collected from MW-9R in March, and dissolved phase concentrations for volatile organics were either below laboratory detection limits

or below their respective WQCC standards. TPH had reported concentrations of 2.9 mg/L GRO, 220 mg/L DRO, and 98 mg/L MRO; there are no WQCC standards for TPH in groundwater. Groundwater recharge during the September 2021 was too low to collect a groundwater sample without significant volatilization of the sample.

NAPL recovery efforts included hand-bailing and operation of the solar sipper units.

3.2 Recommendations

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

1. Re-developing the MPE wells to increase NAPL transmissivity to the well and increase productivity; and
2. Evaluating the feasibility of conducting mobile Enhanced Fluid Recovery (EFR) events at MPE wells to remove contaminated groundwater and residual NAPL.

3.3 Scheduled Site Activities

The following site activities are currently scheduled for the remainder of 2022:

- Continue recovery of residual NAPL via solar sipper from wells where NAPL thickness is sufficient for removal; Quarterly hand-bailing and solar sipper O&M checks.
- Semi-annual gauging events of the remaining monitor wells, MW-2, MW-7 and MW-9R; Sampling of MW-9R for volatile organic compounds (VOCs) per USEPA 8260 and TPH (GRO, DRO, MRO) per USEPA 8015. Sample MW-7 (upgradient well) for total dissolved solids (TDS) because there was not enough volume to previously include this analysis.

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

Lany Cupps
Environmental Coordinator

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

Figures

1. Topographic Site Location Map
2. General Site Plan
3. Groundwater Elevation Contours, Residual NAPL Contours, and Groundwater Contaminant Concentrations, March 2021, June 2021, September 2021, November 2021

Appendices

A. Water Sample Collection Forms and NAPL Recovery Documentation – March, June, September, and November 2021
B. Laboratory Analytical Report (Hall No.2103963)

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

Craig Schmitz, Private Landowner (hard copy)
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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	04-Apr-14	7082.57			33.50		7049.07	NM	NM	NM	NM	NM
MW-1	10-Sep-14	7082.57			33.75		7048.82	NM	NM	NM	NM	NM
MW-1	03-Dec-14	7082.57			33.83		7048.74	NM	NM	NM	NM	NM
MW-1	27-Mar-15	7082.57			33.64		7048.93	NM	NM	NM	NM	NM
MW-1	08-Dec-15	7082.57			33.84		7048.73	NM	NM	NM	NM	NM
MW-1	17-Jun-16	7082.57			33.91		7048.66	NM	NM	NM	NM	NM
MW-1	20-Oct-16	7082.57			34.20		7048.37	NM	NM	NM	NM	NM
MW-1	27-Jan-17	7082.57			34.12		7048.45	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				

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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)
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-3	14-Jan-14	7081.10			31.77		7049.33	NM	NM	NM	NM	NM
MW-3	04-Apr-14	7081.10			31.66		7049.44	NM	NM	NM	NM	NM
MW-3	10-Sep-14	7081.10			32.19		7048.91	NM	NM	NM	NM	NM
MW-3	03-Dec-14	7081.10			32.18		7048.92	NM	NM	NM	NM	NM
MW-3	27-Mar-15	7081.10			31.78		7049.32	NM	NM	NM	NM	NM
MW-3	08-Dec-15	7081.10			32.12		7048.98	NM	NM	NM	NM	NM
MW-3	17-Jun-16	7081.10			32.21		7048.89	NM	NM	NM	NM	NM
MW-3	20-Oct-16	7081.10			32.47		7048.63	NM	NM	NM	NM	NM
MW-3	27-Jan-17	7081.10			32.36		7048.74	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	04-Apr-14	7084.79			34.84		7049.95	NM	NM	NM	NM	NM
MW-4	10-Sep-14	7084.79			35.14		7049.65	NM	NM	NM	NM	NM
MW-4	03-Dec-14	7084.79			35.21		7049.58	NM	NM	NM	NM	NM
MW-4	27-Mar-15	7084.79			35.04		7049.75	NM	NM	NM	NM	NM
MW-4	08-Dec-15	7084.79			35.28		7049.51	NM	NM	NM	NM	NM
MW-4	17-Jun-16	7084.79			35.31		7049.48	NM	NM	NM	NM	NM
MW-4	20-Oct-16	7084.79			35.54		7049.25	NM	NM	NM	NM	NM

TABLE 1
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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-4	27-Jan-17	7084.79			35.52		7049.27	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	24-Sep-08	7087.98			Dry		NA	NM - WELL DRY				
MW-5	02-Jan-09	7087.98			Dry		NA	NM - WELL DRY				
MW-5	07-Apr-09	7087.98			Dry		NA	NM - WELL DRY				
MW-5	07-Jul-09	7087.98			Dry		NA	NM - WELL DRY				
MW-5	12-Oct-09	7087.98			Dry		NA	NM - WELL DRY				
MW-5	12-Jan-10	7087.98			Dry		NA	NM - WELL DRY				
MW-5	13-Oct-10	7087.98			Dry		NA	NM - WELL DRY				
MW-5	20-Jan-11	7087.98			Dry		NA	NM - WELL DRY				
MW-5	09-May-11	7087.98			Dry		NA	NM - WELL DRY				
MW-5	15-Aug-11	7087.98			Dry		NA	NM - WELL DRY				
MW-5	21-Nov-11	7087.98			Dry		NA	NM - WELL DRY				
MW-5	21-Feb-12	7087.98			Dry		NA	NM - WELL DRY				
MW-5	24-May-12	7087.98			Dry		NA	NM - WELL DRY				
MW-5	18-Sep-12	7087.98			Dry		NA	NM - WELL DRY				
MW-5	04-Dec-12	7087.98			Dry		NA	NM - WELL DRY				
MW-5	26-Mar-13	7087.98			Dry		NA	NM - WELL DRY				
MW-5	26-Jun-13	7087.98			Dry		NA	NM - WELL DRY				
MW-5	25-Sep-13	7087.98			Dry		NA	NM - WELL DRY				
MW-5	14-Jan-14	7087.98			Dry		NA	NM - WELL DRY				
MW-5	04-Apr-14	7087.98			Dry		NA	NM - WELL DRY				
MW-5	10-Sep-14	7088.98			Dry		NA	NM - WELL DRY				
MW-5	03-Dec-14	7088.98			Dry		NA	NM - WELL DRY				

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MW-5	27-Mar-15	7088.98			Dry		NA	NM - WELL DRY				
MW-5	08-Dec-15	7088.98			Dry		NA	NM - WELL DRY				
MW-5	17-Jun-16	7088.98			Dry		NA	NM - WELL DRY				
MW-5	20-Oct-16	7088.98			Dry		NA	NM - WELL DRY				
MW-5	27-Jan-17	7088.98			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	04-Apr-14	7088.43			38.14		7050.29	NM	NM	NM	NM	NM
MW-6	10-Sep-14	7088.43			38.37		7050.06	NM	NM	NM	NM	NM
MW-6	03-Dec-14	7088.43			38.55		7049.88	NM	NM	NM	NM	NM
MW-6	27-Mar-15	7088.43			38.28		7050.15	NM	NM	NM	NM	NM
MW-6	08-Dec-15	7088.43			38.55		7049.88	NM	NM	NM	NM	NM
MW-6	17-Jun-16	7088.43			38.57		7049.86	NM	NM	NM	NM	NM
MW-6	20-Oct-16	7088.43			38.79		7049.64	NM	NM	NM	NM	NM
MW-6	27-Jan-17	7088.43			38.81		7049.62	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

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-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
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-8	14-Jan-14	7085.20			35.87		7049.33	NM	NM	NM	NM	NM
MW-8	04-Apr-14	7085.20			35.79		7049.41	NM	NM	NM	NM	NM
MW-8	10-Sep-14	7085.20			36.04		7049.16	NM	NM	NM	NM	NM
MW-8	03-Dec-14	7085.20			36.15		7049.05	NM	NM	NM	NM	NM
MW-8	27-Mar-15	7085.20			35.94		7049.26	NM	NM	NM	NM	NM
MW-8	08-Dec-15	7085.20			36.19		7049.01	NM	NM	NM	NM	NM
MW-8	17-Jun-16	7085.20			36.28		7048.92	NM	NM	NM	NM	NM
MW-8	20-Oct-16	7085.20			36.54		7048.66	NM	NM	NM	NM	NM
MW-8	27-Jan-17	7085.20			36.49		7048.71	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				

TABLE 1
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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)
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				
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				

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	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				
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			35.32		NA	13.6	1.413	1.41	6.65	24.9
MW-9R	10-Mar-20	TBS		--	35.20	--	NA	Not Measured				
MW-9R	25-Mar-20	TBS		35.07	35.12	0.05	NA	NM - 0.05 feet NAPL				
MW-9R	23-Jun-20	TBS		35.30	35.37	0.07	NA	NM - 0.07 feet NAPL				
MW-9R	23-Sep-20	TBS		35.57	35.86	0.29	NA	NM - 0.29 feet NAPL				
MW-9R	23-Nov-20	TBS		35.55	35.70	0.15	NA	NM - 0.15 feet NAPL				
MW-9R	17-Mar-21	TBS		35.66	35.76	0.10	NA	NM - 0.10 feet NAPL				
MW-9R	17-Jun-21	TBS		35.77	35.89	0.12	NA	NM - 0.12 feet NAPL				
MW-9R	29-Sep-21	TBS		36.01	36.14	0.13	NA	NM - 0.13 feet NAPL				
MW-9R	30-Nov-21	TBS		36.05	36.28	0.23	NA	NM - 0.23 feet NAPL				

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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	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
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

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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	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
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-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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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-3	14-Jan-14	TBS	38	33.86	34.32	0.46	NA	NM	NM	NM	NM	NM

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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-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
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

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-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-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
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

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	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				
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-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

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-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
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

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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-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-6	14-Jan-14	TBS	36	33.88	36.14	2.26	NA	NM	NM	NM	NM	NM
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

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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	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
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-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

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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-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
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

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						

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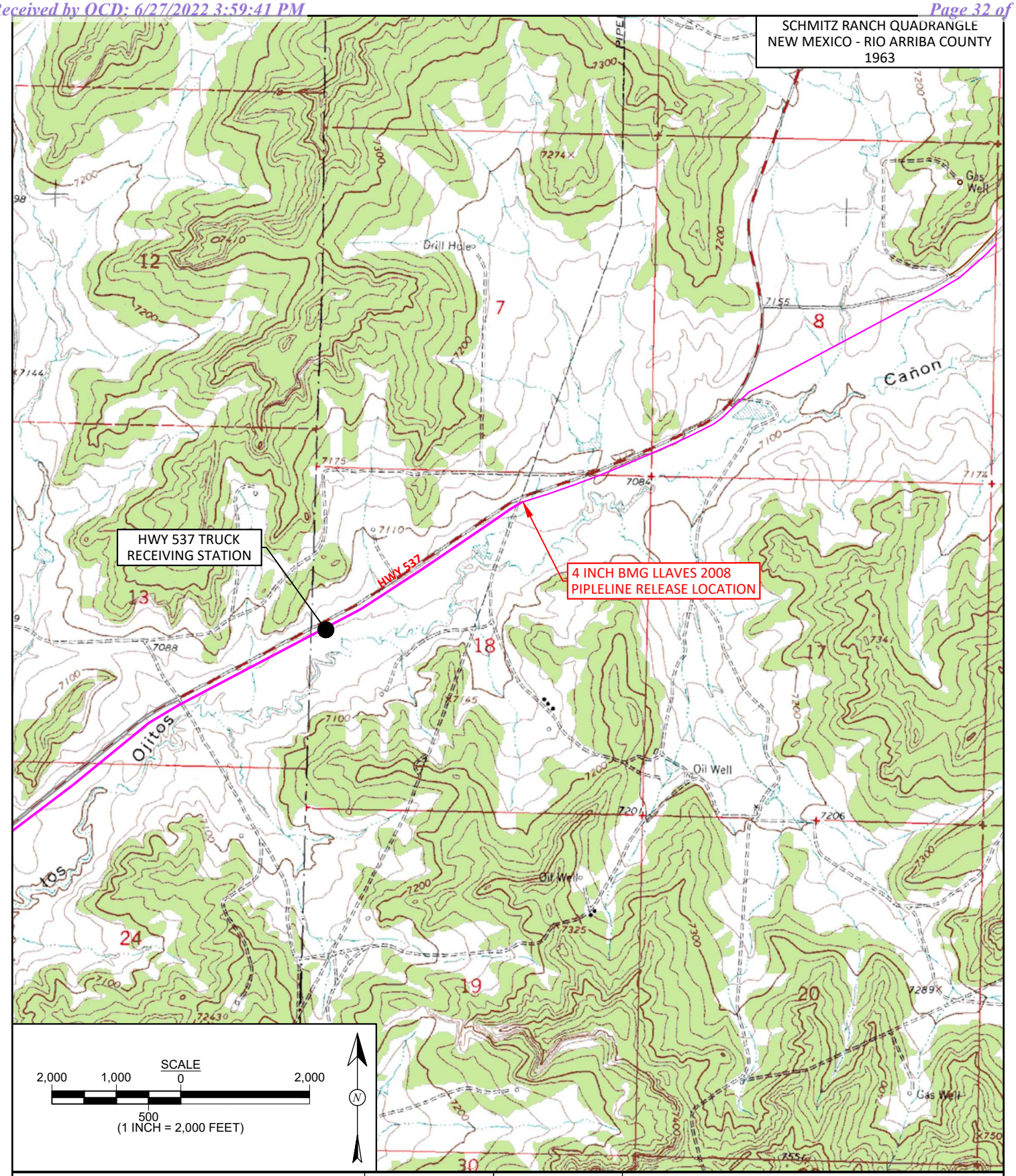
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

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						

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

Figures



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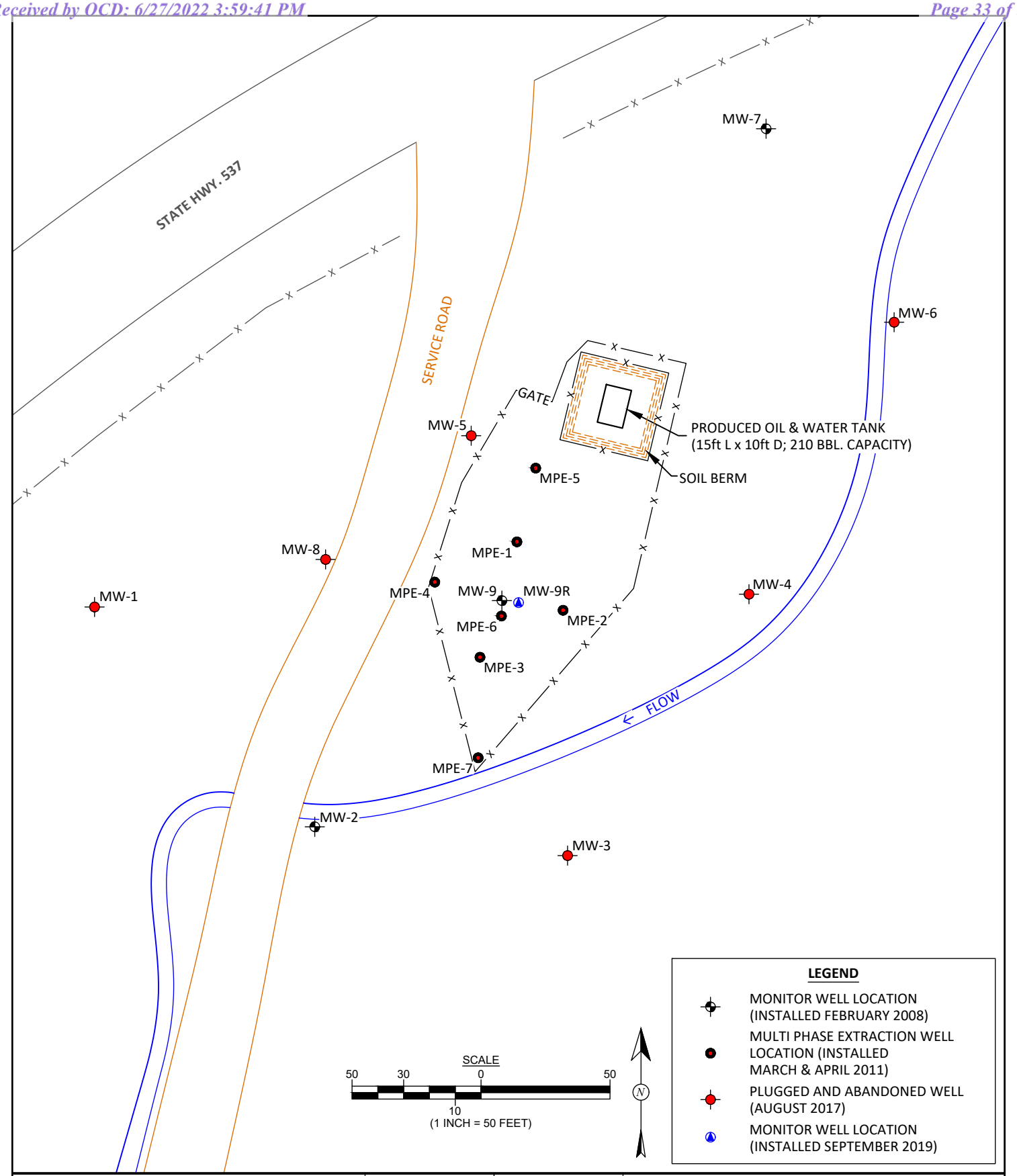
DRAWN BY: C. Lameman	**DATE DRAWN:** March 3, 2017
REVISIONS BY: C. Lameman	**DATE REVISED:** October 1, 2021
CHECKED BY: D. Reese	**DATE CHECKED:** October 1, 2021
APPROVED BY: E. McNally	**DATE APPROVED:** October 1, 2021

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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animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	March 3, 2017
REVISIONS BY:	**DATE REVISED:**
C. Lameman	October 1, 2021
CHECKED BY:	**DATE CHECKED:**
D. Reese	October 1, 2021
APPROVED BY:	**DATE APPROVED:**
E. McNally	October 1, 2021

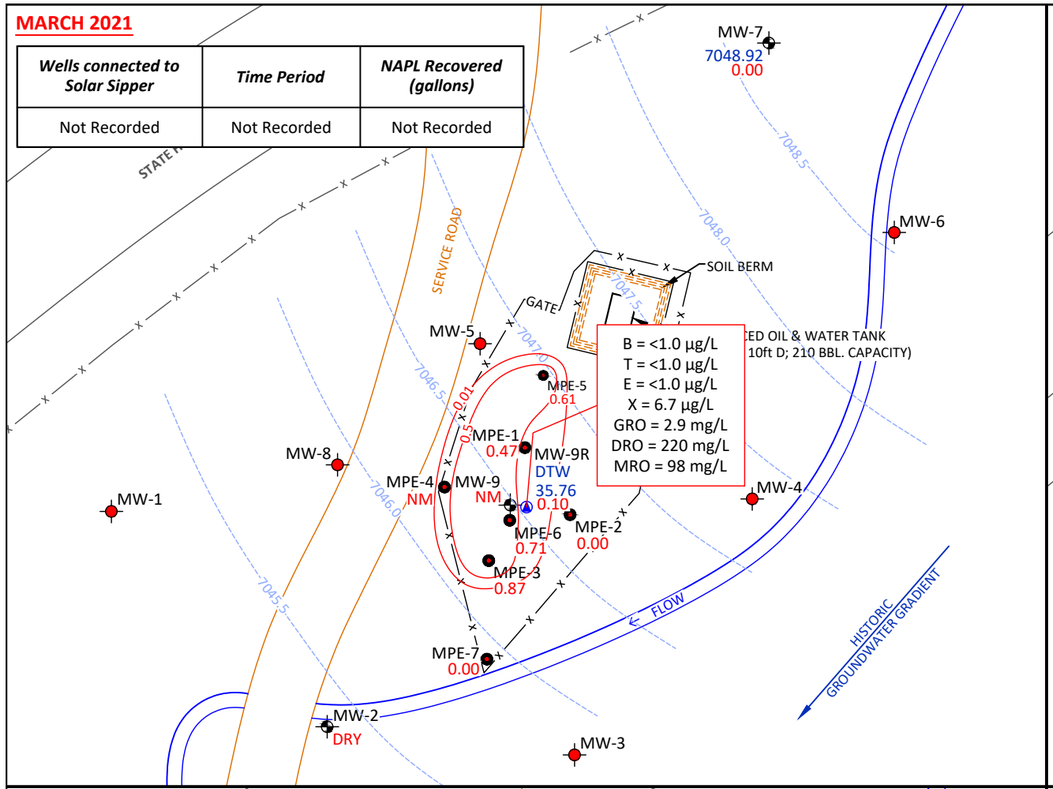
FIGURE 2

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

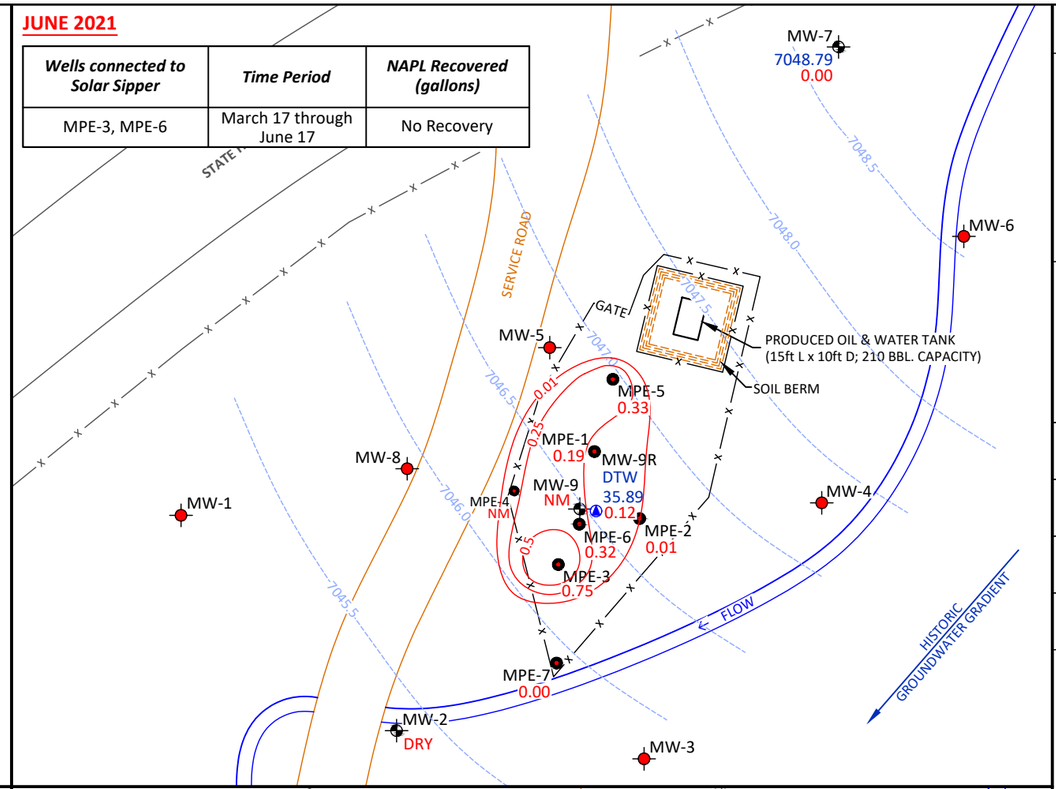
MARCH 2021

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



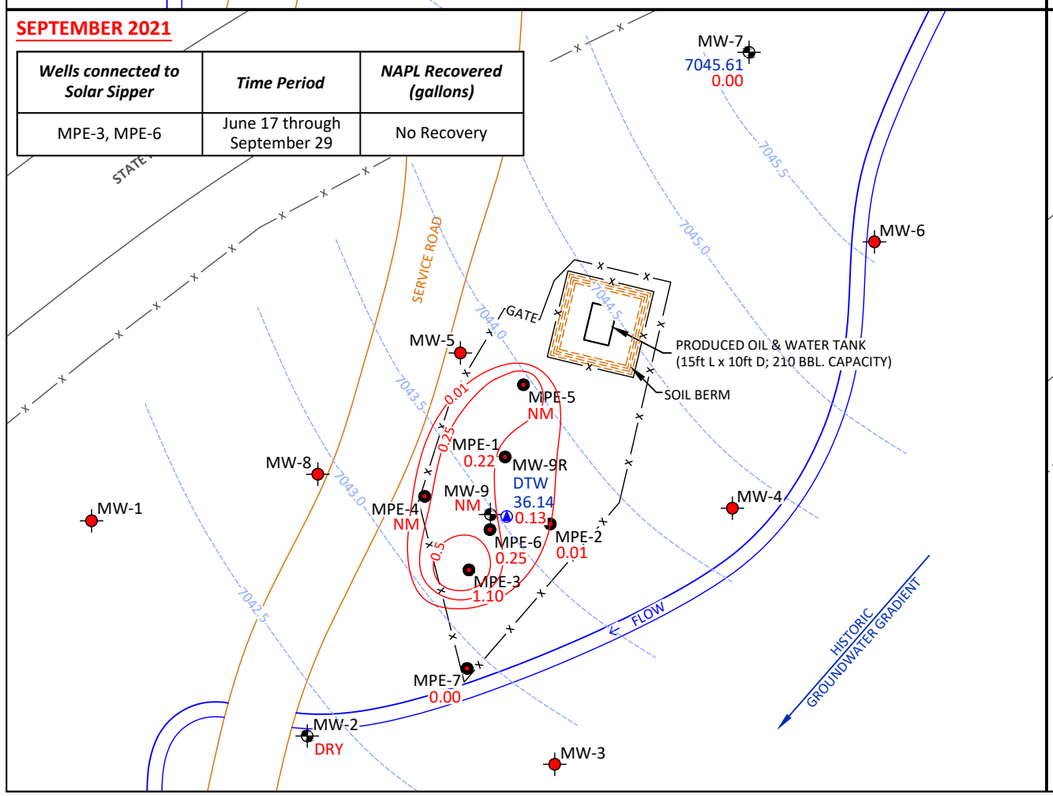
JUNE 2021

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
MPE-3, MPE-6	March 17 through June 17	No Recovery



SEPTEMBER 2021

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
MPE-3, MPE-6	June 17 through September 29	No Recovery



NOVEMBER 2021

Wells connected to Solar Sipper	Time Period	NAPL Recovered (gallons)
MPE-1, MPE-3	September 29 through November 30	No Recovery

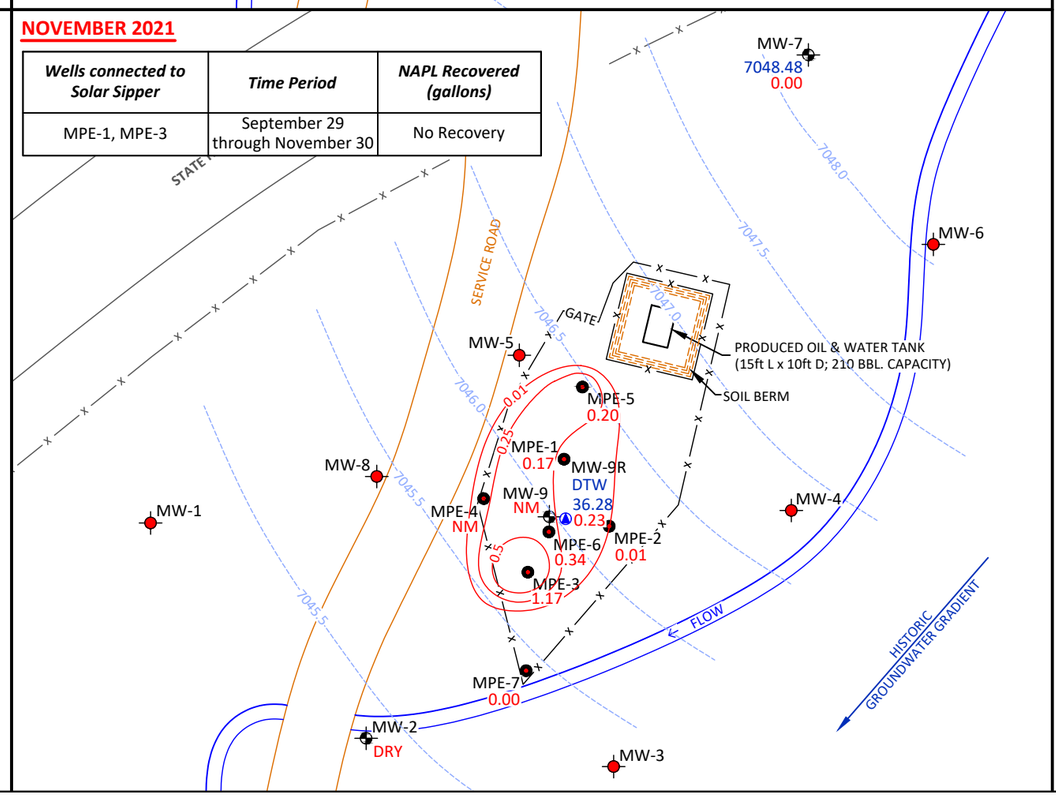


FIGURE 3

2021 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

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

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 17, JUNE 17, SEPTEMBER 29, AND NOVEMBER 30, 2021. ALL SAMPLED WERE ANALYZED PER EPA METHOD 8021B OR 8260B AND 8015.

N

SCALE
60 40 0 60
20
(1 INCH = 60 FEET)

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: E. Hubbard

Project No.:
Date: 3/17/21
Time: 1245
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	1256	—	—	—	Dry @ 30.98
MW-7	1305	—	41.23	—	
MW-9R	1319	35.66	35.76	0.10	
MPE-1	1328	36.75	37.22	0.47	2" Well
MPE-2	1316	—	35.21		2" Well
MPE-3	1332	35.18	36.05	0.87	2" Well
MPE-4	—	—	—	—	2" Well obstructed @ 35.28
MPE-5	1325	37.80	38.41	0.61	2" Well
MPE-6	1321	35.48	36.19	0.71	2" Well
MPE-7	1311	—	33.50	—	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:

MW-9R	1300	35.68	35.72	0.04	Removed ≈ 0.1 gal NAPL
MPE-1	1302	38.86	39.00	0.14	Removed ≈ 0.1 gal NAPL
MPE-3	1304	35.37	35.50	0.13	Removed ≈ 1.0 gal NAPL
MPE-5	1306	37.88	38.05	0.17	Removed ≈ .15 gal NAPL
MPE-6	1308	35.75	35.99	0.24	Removed ≈ 0.25 gal NAPL

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: C Hobbs
Purge / No Purge:
Well Diameter (in): 2
Initial D.T.W. (ft): — **Time:** — *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): — **Time:** — *(taken prior to purging well)*
Final D.T.W. (ft): — **Time:** — *(taken after sample collection)*
If NAPL Present: D.T.P.: 35.66 **D.T.W.:** 35.76 **Thickness:** 0.10 **Time:** 1319

Project No.: AES 080101
Date: 3/17/21
Arrival Time: 1245
Air Temp: 42°F
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
		Water Quality measurements not					
		taken due to presence of NAPL					
		Purged approximately				2.5 gal	

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

USEPA Method 8021 for BTEX and 8015 for TPH (GRO/DRO/MRO) -
(5 - 40 mL VOAs w/ HgCl2 and 1 - 125 mL Amber glass w/ non-preserve)

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

Notes/Comments: Bailed off NAPL collected samples from bottom NAPL layer
Sample collected @ 1400 on 3/17/21

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: C. Lameman

Project No.:
Date: June 17, 2021
Time: 1345 – 1555
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	14:03	—	DRY	—	@ 30.98
MW-7	14:06	—	41.36	—	
MW-9R	14:21	35.77	35.89	0.12	
MPE-1	14:17	36.94	37.13	0.19	2" Well
MPE-2	14:19	35.32	35.33	0.01	2" Well
MPE-3	14:26	35.32	36.07	0.75	2" Well
MPE-4	14:10	—	—	—	2" Well – Obstruction @ 35.28
MPE-5	14:14	37.95	38.28	0.33	2" Well
MPE-6	14:23	35.68	36.00	0.32	2" Well
MPE-7	14:09	—	33.57	—	2" Well
Waste NAPL Drum	14:29	NA	Empty Drum	NA	Depth to Bottom of Drum = 2.75 Diameter = 1.9 ft

Source of the NAPL: Sipper ~~center~~ connected to MPE-3 and MPE-6
Time period NAPL has been collected from here: 3/17/21 to 6/17/21 – 3 months

– NAPL RECOVERY					
MW-9R	14:45	36.45	36.42	0.03	Removed ≈ 0.2 gal NAPL
MPE-1	14:59	38.22	38.20	0.02	Removed ≈ 0.2 gal NAPL
MPE-3	15:15	36.75	36.85	0.10	Removed ≈ 0.5 gal NAPL
MPE-5	15:30	39.05	39.13	0.08	Removed ≈ 0.3 gal NAPL
MPE-6	15:44	36.49	36.56	0.07	Removed ≈ 0.4 gal NAPL
Set Solar Sipper in MPE-3 @ 36.50 ft					
		MPE-6 @ 36.50 ft			

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

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: Corwin Lawerman, Jason Oyebi

Project No.:
Date: 9-29-21
Time: 1234 - 1540
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	12:49	—	DRY	—	
MW-7	12:44	—	44.54	—	
MW-9R	13:25	36.01	36.14	0.13	
MPE-1	13:00	37.18	37.40	0.22	2" Well 40 ft MPE well
MPE-2	13:03	35.58	35.59	0.01	2" Well 40 ft MPE well
MPE-3	13:08	35.51	36.61	0.10	2" Well 38 ft MPE well
MPE-4	12:51				2" Well Obstruction - 35.25 ft 38 ft MPE
MPE-5	12:56	37.93	~~*39.3~~		2" Well Obstruction? @ 39.3 ft 40 ft MPE
MPE-6	13:06	36.00	36.25	0.25	2" Well Good Viscosity 36 ft MPE well
MPE-7	12:53	—	33.80	—	2" Well 36 ft MPE well
Waste NAPL Drum	13:10	0	0	0	Depth to Bottom of Drum = Empty Drum Diameter = 1.9 ft

Source of the NAPL: MPE-3 and MPE-6. Solar Sipper now in MPE-1 and MPE-3

Time period NAPL has been collected from here: No NAPL, unknown if any was collected.

* Interface probe may have hit an obstruction or was @ Bottom of well.

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: CL/JO
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): — **Time:** —
Confirm D.T.W. (ft): — **Time:** —
Final D.T.W. (ft): — **Time:** —
If NAPL Present: D.T.P.: ~~(40.41)~~ 36.01 D.T.W.: 36.14 Thickness: 0.13 Time: 13:25

Project No.: AES 080101
Date: 9-29-21
Arrival Time:
Air Temp: 70F Cloudy, Sprinkles
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): ~~approx. 38~~ 40.9
(taken at initial gauging of all wells)
(taken prior to purging well)
(taken after sample collection)

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
—	No Water Quality Readings due to NAPL Presence						—
	— SEE NOTES BELOW —						

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

~~VOCs per USEPA Method 8260 (5-40mL VOAs with HgCl2 preserve)~~ CL

~~TPH-GRO/DRO/MRO per USEPA Method 8015 (1-250mL Amber Glass nonpreserved)~~ CL

Disposal of Purged Water: into 55 drum
Collected Samples Stored on Ice in Cooler: No Samples
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: Insufficient water to collect Samples. Very low Recharge
DTP: 40.41 DTW: 40.41 Thickness: ≈ 0.01 (sheen) Time: 13:45
40.9 Total Depth

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.: BMG 2008
Date: 11-30-21
Time: 13:12
Form: 1 of 1

Well ID	Time	Depth to NAPL (ft)	Depth to Water (ft)	NAPL Thickness (ft)	Notes / Observations
MW-2	13:19	—	DRY	—	DRY – Bottom @ 31' (30.98')
MW-7	13:22	—	41.67	—	
MW-9R	14:55	36.05	36.28	.23	
MPE-1	14:11	37.22	37.39	0.17	2" Well
MPE-2	14:21	35.61	35.62	.01	2" Well
MPE-3	14:07	35.54	36.71	1.17	2" Well
MPE-4	13:48	—	—	—	2" Well obstruction @ 35.28'
MPE-5	13:52	37.93	—	1.37*	2" Well 39.5 bottom NAPL @ 39.30 / ~~obstruction~~ 2
MPE-6	14:38	35.94	36.28	0.34	2" Well
MPE-7	13:39	33.85 *	33.86	—	2" Well
Waste NAPL Drum	14:54	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:

MW-9R	15:21	40.21	40.22	0.01	Removed ~ 0.2 gal of NAPL
MPE-1	15:35	41.20	41.21	0.01	0.2 gal of NAPL
MPE-3	15:45	~~37.91~~ 36.62	~~36.58~~	0.04	0.3 gal of NAPL
MPE-5	16:21	38.26	38.62	0.36	0.5 gal of NAPL
MPE6	16:53	39.00	39.01	0.01	0.2 gal of NAPL
Solar Sipper previously removed for Winter – Per Ben					
* Interface Probe not reading correctly, bailers showed less NAPL in MPE-5 and no NAPL in MPE-7					

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): — **Time:** — *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): — **Time:** — *(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: 11-30-21
Arrival Time: 15:21
Air Temp: Sunny, Slight breeze
T.O.C. Elev. (ft): TBS
Total Well Depth (ft): approx. 38 40.9

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
—	NO WATER QUALITY READINGS						—
—	DUE TO NAPL PRESENCE						—

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: into 55 gal drum
Collected Samples Stored on Ice in Cooler: No Samples
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: Insufficient water to collect samples - Very low recharge
DTP - 40.21 DTW - 40.22 Thickness: < 0.01 Time: 15:21

40.9 total depth of well

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 13, 2021

Elizabeth McNally

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

RE: BMG Hwy 537 2008 OrderNo.: 2103963

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/19/2021 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 **2103963**
Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9R
Project: BMG Hwy 537 2008
Collection Date: 3/17/2021 2:00:00 PM
Lab ID: 2103963-001 **Matrix:** AQUEOUS **Received Date:** 3/19/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **JME**	
Diesel Range Organics (DRO)	220	10		mg/L	10	3/20/2021 6:48:50 PM	58849
Motor Oil Range Organics (MRO)	98	50		mg/L	10	3/20/2021 6:48:50 PM	58849
Surr: DNOP	0	63.7-164	S	%Rec	10	3/20/2021 6:48:50 PM	58849
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	2.9	0.25		mg/L	5	3/23/2021 3:42:00 AM	R76132
Surr: BFB	172	66.7-119	S	%Rec	5	3/23/2021 3:42:00 AM	R76132
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Toluene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Ethylbenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2,4-Trimethylbenzene	37	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,3,5-Trimethylbenzene	39	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Naphthalene	5.8	2.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1-Methylnaphthalene	48	4.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
2-Methylnaphthalene	17	4.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Acetone	ND	10		µg/L	1	3/27/2021 5:08:08 AM	A76266
Bromobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Bromodichloromethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Bromoform	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Bromomethane	ND	3.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
2-Butanone	ND	10		µg/L	1	3/27/2021 5:08:08 AM	A76266
Carbon disulfide	ND	10		µg/L	1	3/27/2021 5:08:08 AM	A76266
Carbon Tetrachloride	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Chlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Chloroethane	ND	2.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Chloroform	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Chloromethane	ND	3.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
2-Chlorotoluene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
4-Chlorotoluene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
cis-1,2-DCE	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Dibromochloromethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Dibromomethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266

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

Qualifiers:

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

Analytical Report
Lab Order **2103963**
Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: MW-9R
Project: BMG Hwy 537 2008
Collection Date: 3/17/2021 2:00:00 PM
Lab ID: 2103963-001 **Matrix:** AQUEOUS **Received Date:** 3/19/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1-Dichloroethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1-Dichloroethene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2-Dichloropropane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,3-Dichloropropane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
2,2-Dichloropropane	ND	2.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1-Dichloropropene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Hexachlorobutadiene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
2-Hexanone	ND	10		µg/L	1	3/27/2021 5:08:08 AM	A76266
Isopropylbenzene	1.2	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
4-Isopropyltoluene	9.4	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
4-Methyl-2-pentanone	ND	10		µg/L	1	3/27/2021 5:08:08 AM	A76266
Methylene Chloride	ND	3.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
n-Butylbenzene	ND	3.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
n-Propylbenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
sec-Butylbenzene	2.4	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Styrene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
tert-Butylbenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
trans-1,2-DCE	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Trichlorofluoromethane	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Vinyl chloride	ND	1.0		µg/L	1	3/27/2021 5:08:08 AM	A76266
Xylenes, Total	6.7	1.5		µg/L	1	3/27/2021 5:08:08 AM	A76266
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	3/27/2021 5:08:08 AM	A76266
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	3/27/2021 5:08:08 AM	A76266
Surr: Dibromofluoromethane	102	70-130		%Rec	1	3/27/2021 5:08:08 AM	A76266
Surr: Toluene-d8	103	70-130		%Rec	1	3/27/2021 5:08:08 AM	A76266

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

Qualifiers:

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

Analytical Report
Lab Order **2103963**
Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: BMG Hwy 537 2008 **Collection Date:**
Lab ID: 2103963-002 **Matrix:** TRIP BLANK **Received Date:** 3/19/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Toluene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Ethylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Naphthalene	ND	2.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1-Methylnaphthalene	ND	4.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
2-Methylnaphthalene	ND	4.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Acetone	ND	10		µg/L	1	3/27/2021 5:36:44 AM	A76266
Bromobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Bromodichloromethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Bromoform	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Bromomethane	ND	3.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
2-Butanone	ND	10		µg/L	1	3/27/2021 5:36:44 AM	A76266
Carbon disulfide	ND	10		µg/L	1	3/27/2021 5:36:44 AM	A76266
Carbon Tetrachloride	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Chlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Chloroethane	ND	2.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Chloroform	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Chloromethane	ND	3.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
2-Chlorotoluene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
4-Chlorotoluene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
cis-1,2-DCE	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Dibromochloromethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Dibromomethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,1-Dichloroethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,1-Dichloroethene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2-Dichloropropane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,3-Dichloropropane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
2,2-Dichloropropane	ND	2.0		µg/L	1	3/27/2021 5:36:44 AM	A76266

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

Qualifiers:

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

Analytical Report
Lab Order **2103963**
Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services **Client Sample ID:** Trip Blank
Project: BMG Hwy 537 2008 **Collection Date:**
Lab ID: 2103963-002 **Matrix:** TRIP BLANK **Received Date:** 3/19/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Hexachlorobutadiene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
2-Hexanone	ND	10		µg/L	1	3/27/2021 5:36:44 AM	A76266
Isopropylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
4-Isopropyltoluene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
4-Methyl-2-pentanone	ND	10		µg/L	1	3/27/2021 5:36:44 AM	A76266
Methylene Chloride	ND	3.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
n-Butylbenzene	ND	3.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
n-Propylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
sec-Butylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Styrene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
tert-Butylbenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
trans-1,2-DCE	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Trichlorofluoromethane	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Vinyl chloride	ND	1.0		µg/L	1	3/27/2021 5:36:44 AM	A76266
Xylenes, Total	ND	1.5		µg/L	1	3/27/2021 5:36:44 AM	A76266
Surr: 1,2-Dichloroethane-d4	83.1	70-130		%Rec	1	3/27/2021 5:36:44 AM	A76266
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	3/27/2021 5:36:44 AM	A76266
Surr: Dibromofluoromethane	103	70-130		%Rec	1	3/27/2021 5:36:44 AM	A76266
Surr: Toluene-d8	104	70-130		%Rec	1	3/27/2021 5:36:44 AM	A76266

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103963**
13-Apr-21

Client: Animas Environmental Services
Project: BMG Hwy 537 2008

Sample ID: **MB-58849**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **58849**	RunNo: **76096**
Prep Date: **3/19/2021**	Analysis Date: **3/20/2021**	SeqNo: **2694195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		110	63.7	164			

Sample ID: **LCS-58849**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **58849**	RunNo: **76096**
Prep Date: **3/19/2021**	Analysis Date: **3/20/2021**	SeqNo: **2694196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	105	70	130			
Surr: DNOP	0.55		0.5000		110	63.7	164			

Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103963**
13-Apr-21

Client: Animas Environmental Services
Project: BMG Hwy 537 2008

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSW**	Batch ID: **R76132**	RunNo: **76132**							
Prep Date:	Analysis Date: **3/23/2021**	SeqNo: **2695414**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	104	72.5	114			
Surr: BFB	21		20.00		106	66.7	119			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBW**	Batch ID: **R76132**	RunNo: **76132**							
Prep Date:	Analysis Date: **3/23/2021**	SeqNo: **2695415**	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	17		20.00		85.2	66.7	119			

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
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RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103963**
13-Apr-21

Client: Animas Environmental Services
Project: BMG Hwy 537 2008

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A76266**	RunNo: **76266**
Prep Date:	Analysis Date: **3/26/2021**	SeqNo: **2700496** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Chlorobenzene	19	1.0	20.00	0	96.7	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A76266**	RunNo: **76266**
Prep Date:	Analysis Date: **3/26/2021**	SeqNo: **2700497** 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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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103963**
13-Apr-21

Client: Animas Environmental Services
Project: BMG Hwy 537 2008

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A76266**	RunNo: **76266**
Prep Date:	Analysis Date: **3/26/2021**	SeqNo: **2700497** 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
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103963**
13-Apr-21

Client: Animas Environmental Services
Project: BMG Hwy 537 2008

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A76266**	RunNo: **76266**
Prep Date:	Analysis Date: **3/26/2021**	SeqNo: **2700497** 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	8.7		10.00		87.0	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Animas Environmental Services** Work Order Number: **2103963** RcptNo: **1**

Received By: **Juan Rojas** **3/19/2021 8:45:00 AM**

Completed By: **Sean Livingston** **3/19/2021 9:23:34 AM**

Reviewed By: JR 3/19/21

Chain of Custody

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

Log In

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

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

Adjusted?

Checked by: CM 3/19/21

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good				

Chain-of-Custody Record

Client: Animas Environmental Services

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

Phone #: 505-564-2281

Email or Fax#: emcnally@animasenvironmental.com

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

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

Turn-Around Time:
X Standard ☐ Rush_____

Project Name:
BMG Hwy 537 - 2008

Project #:

Project Manager:
Elizabeth McNally

Sampler: E Hubbert
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.2+0.2=1.4

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2103963 ~~2103~~ SCT 3/19/21	Analysis Request: VOCs 8260	TPH (GRO, DRO, MRO) - (8015)									Air Bubbles (Y or N)
3/17/21	1400	H2O	MW-9R	5 - 40 mL VOA 1-250 mL amber glass	5 - HgCl2 1 - cool	001	X	X									
		H2O	Trip Blanks	2- 40 mL VOA	2 - HgCl2	002	X	X									

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/18/21	1630			3/18/21	1630
Date:	Time:	Relinquished by:	Received by:	Date	Time
3/18/21	1753			3/19/21	8:41 ST

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

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

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 120938

CONDITIONS

Operator: BENSON-MONTIN-GREER DRILLING CORP 4900 College Blvd. Farmington, NM 87402	OGRID: 2096
	Action Number: 120938
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the Q1 through Q4 2021 Progress Report for Highway 537 Llaves Pipeline Release: Content Satisfactory 1. Conduct activities to redevelop MPE wells to increase NAPL transmissivity and increase productivity. 2. Continue NAPL recovery by solar stripper and quarterly hand bailing. 3. Conduct semi-annual gauging events of the remaining monitor wells, MW-2, MW-7 and MW-9R for VOCs per 8260 and TPH. Sample MW-7 for TDS. 4. Submit next progress report on or before April 1, 2024.	8/7/2023