



March 30, 2015

Jim Griswold  
New Mexico Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Periodic Progress Report 3<sup>rd</sup> and 4<sup>th</sup> Quarter 2014  
Benson-Montin-Greer  
Highway 537 Truck Receiving Station 2009 Release  
Rio Arriba County, New Mexico  
NMOCD ORDER #3RP-448-0**

Dear Mr. Griswold:

On behalf of Benson-Montin-Greer Drilling Corporation (BMG), Animas Environmental Services, LLC (AES) has prepared this Periodic Progress Report, which provides details of groundwater monitoring and sampling and remediation activities conducted for the 3<sup>rd</sup> and 4<sup>th</sup> quarter 2014 at the BMG Highway 537 Truck Receiving Station 2009 release location. Sampling was conducted on September 26, 2014, and gauging was conducted on December 3, 2014, in accordance with recommendations presented in the Site Investigation Report prepared by AES and submitted on April 10, 2009.

---

## 1.0 Site Information

The BMG Highway 537 Truck Receiving Station consisted of eight 500 barrel (bbl) oil storage tanks, one 600 bbl oil storage tank, one 80 bbl open top waste tank, and various pumps and meters associated with crude oil transport truck loading, unloading, and pipeline transport. Surface ownership in the area where the release occurred includes private land owned by the Schmitz Ranch.

### 1.1 Site Location

The truck receiving station is located along the south side of NM State Highway 537 and is adjacent to the Los Ojitos Arroyo, which eventually drains to Largo Canyon. The facility is described legally as being located within the SW $\frac{1}{4}$  NW $\frac{1}{4}$  Section 18, T25N, R3W in Rio Arriba County, New Mexico. Latitude and longitude were recorded as being N36.39866 and W107.19328, respectively. A topographic site location map, based on an excerpt from the U.S. Geological

604 W. Piñon St.  
Farmington, NM 87401  
505-564-2281

1911 Main, Ste 280  
Durango, CO  
970-403-3084

Survey (USGS) 7.5-minute Schmitz Ranch, Rio Arriba County, New Mexico topographic quadrangle (USGS 1963), is included as Figure 1. An aerial map with a site plan, including existing monitor wells, is presented as Figure 2.

## 1.2 Release History

On January 29, 2009, a Western Refining truck driver discovered crude condensate within the bermed area around the storage tanks, on the south side of Tank #1. BMG personnel arrived on-site and confirmed a leak at a buried 6-inch line between the storage tanks and the truck loading pump. BMG isolated the line and emptied it of residual oil. BMG then contacted Brandon Powell of New Mexico Oil Conservation Division (NMOCD) to provide notification and intended response to the release. Also on January 29, 2009, BMG contracted with TNT Excavating (TNT) to remove the buried 6-inch line in order to determine where the leak originated.

On January 30, 2009, TNT used a trackhoe to excavate an area (10 feet by 20 feet by 15 feet in depth) around the buried 6-inch line. AES collected soil samples from the base of the excavation for field screening with a photo-ionization detector (PID) organic vapor meter (OVM). Field screening results at 12 feet below ground surface (bgs) were 5,861 parts per million (ppm) volatile organic compounds (VOCs), and at 15 feet bgs VOCs were measured at 6,640 ppm. Additionally, AES collected one soil sample at 15 feet bgs for laboratory analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH). The analytical results of the soil sample collected on January 30, 2009, had total BTEX concentrations of 1,657 mg/kg and total TPH concentrations of 20,300 mg/kg.

The release was the result of a corrosion hole along the bottom of the pipe near the truck loading pumps. Because it was determined that the leak had impacted soils to at least 15 feet bgs, and due to the presence of tanks, buried pipe, buried conduit, and fixed pumps and meters within the release area, BMG and AES, in consultation with NMOCD, concluded that an assessment of the release area by installing soil borings and monitor wells would be the most appropriate assessment method.

On February 2, 2009, the 6-inch line was repaired, and the excavation was backfilled with clean fill material. Approximately 100 cubic yards of contaminated soil were transported to the TNT Landfarm for disposal. From February 16 through 20, 2009, site investigation activities were conducted by AES in order to delineate the full extent of petroleum hydrocarbon impact on surface and subsurface soils and groundwater resulting from the release. The investigation procedures included the installation of 11 monitor wells (MW-1 through MW-11) and collection of soil and groundwater samples. Work was completed in accordance with the *Sampling and Analysis Plan* prepared by AES and dated February 3, 2009, and also in accordance with U.S. Environmental Protection Agency (USEPA)

Environmental Response Team's Standard Operating Procedures (SOPs), and applicable American Society of Testing and Materials (ASTM) standards. Details of the site investigation are included in the *AES Site Investigation Report* submitted to NMOCD in April 2009.

### *1.1 Excavation Assessment, May-June 2014*

On May 12 and June 4, 2014, AES conducted a site assessment on behalf of BMG as part of termination of the site lease. The work included soil sampling during the excavation of hydrocarbon contaminated soils that were discovered when the storage tanks and truck loading station were removed from the site, and a subsequent assessment of subsurface soils, utilizing a Geoprobe. Approximately 600 cubic yards of petroleum impacted soil were removed from the excavated areas and transported to the BMG Landfarm by TPC, LLC.

Results of the excavation assessment confirmed that residual contaminants are present under the former loading area. However, with the exception of one discrete location there are minimal residual contaminants below the former tank area. Results of the excavation assessment were reported under a separate cover dated November 12, 2014.

---

## **2.0 Groundwater Monitoring and Sampling – September 2014**

The third quarterly groundwater monitoring and sampling event of 2014 was conducted by AES personnel on September 10 and 26, 2014, respectively. Groundwater samples from MW-3 were laboratory analyzed for BTEX per USEPA Method 8021 and TPH per USEPA Method 8015 at Hall in Albuquerque, New Mexico. MW-1 was not sampled due to the presence of 0.65 feet of product.

### *2.1 Groundwater Measurements and Water Quality Data*

On September 10, 2014, groundwater measurements were recorded for MW-2 through MW-11. The MPE unit was operating in MW-1, and therefore, MW-1 was not monitored until September 26 when the wells were sampled. Average groundwater elevations remained stable across the site since the April 2014 sampling event. Groundwater gradient was calculated between MW-9 and MW-10, with a magnitude of 0.007 ft/ft to the west-southwest. Depth to groundwater ranged from 15.06 feet below top of casing (TOC) in MW-6 to 30.90 feet below TOC in MW-1 (September 26, 2014). Depth to groundwater measurements are presented in Table 1. Groundwater elevation contours are presented in Figure 3.

AES personnel conducted groundwater sampling of MW-3 on September 26, 2014. In MW-3, parameters recorded were temperature (12.88°C), DO concentration (2.69 mg/L), pH

(7.11), ORP (27.2 mV), and conductivity (2.718 mS/cm). Water quality data are presented in Table 1. Water Sample Collection Forms are included in the Appendix.

## 2.2 Groundwater Analytical Results

Dissolved phase benzene, toluene, ethylbenzene, and xylene concentrations were below laboratory detection limits and applicable New Mexico (WQCC) standards in MW-3. TPH concentrations as GRO above laboratory detection limits were reported at 0.095 mg/L, and TPH concentrations as DRO and MRO were reported below laboratory detection limits. Tabulated laboratory analytical results are included in Table 2. Contaminant concentrations are included in Figure 4. Graphs 1 and 2 present groundwater elevations and dissolved phase benzene concentrations for MW-1 and MW-3. Laboratory analytical reports for September 2014 are included in the Appendix.

---

## 3.0 Groundwater Monitoring – December 2014

The fourth quarterly groundwater monitoring event of 2014 was conducted by AES personnel on December 3, 2014.

### 3.1 Groundwater Measurements and Water Quality Data

Groundwater measurements were recorded for MW-2 through MW-11, and average groundwater elevations decreased 0.41 feet across the site since the September 2014 sampling event. Groundwater gradient was calculated between MW-9 and MW-10, with a magnitude of 0.007 ft/ft to the west-southwest. Depth to groundwater ranged from 15.66 feet below top of casing (TOC) in MW-6 to 31.47 feet below TOC in MW-1. Depth to groundwater measurements are presented in Table 1. Groundwater elevation contours are presented in Figure 5. Water Sample Collection Forms are included in the Appendix.

---

## 4.0 Remediation System Re-Installation – August 2014

On August 4, 2014, AES re-installed a Remediation Service International (RSI) mobile extraction and treatment system at the site to treat residual contaminants. The system was set up in MW-1, based on the presence of free product during the April 2014 sampling event. Note that on September 8, 2014, Biotech personnel reported no NAPL in MW-1 and a depth to water of 30.13 feet. The RSI unit was in operation from August 4 through September 15, and from November 3 through 11, 2014. The unit was removed from the site on November 14, 2014. Note that because of data logging malfunctions, operations data was only recorded between November 3 and November 11, 2015.

#### 4.1 MPE Flow Rates

Vapor extraction flow rates averaged approximately 14 standard cubic feet per minute (SCFM). The cumulative process flow was approximately 83,727 SCFM from November 3 to November 11, 2015.

#### 4.2 Petroleum Hydrocarbon Recovery (3<sup>rd</sup> and 4<sup>th</sup> Quarter 2014)

It is estimated that approximately **1,960 lbs of petroleum hydrocarbons** (316 gallons) were removed through total fluids/free product removal (i.e. multiphase extraction) and storage in the onsite tank, along with petroleum hydrocarbons utilized as a supplemental fuel to operate the RSI unit. Note that mass removal calculations do not include petroleum hydrocarbon reductions resulting from natural attenuation or biodegradation.

##### 4.2.1 RSI Operations – Vapor Extraction

It is estimated that approximately **357.4 lbs of petroleum hydrocarbons** (57 gallons) of petroleum hydrocarbons were mechanically removed from the subsurface and utilized as fuel in the RSI Unit. This includes 57.4 lbs of petroleum hydrocarbons (equivalent to 9 gallons) between November 3 and 11, 2014. Extrapolating from these extraction quantities over a six week period, an additional 300 lbs of petroleum hydrocarbons (equivalent to 48 gallons) were removed from the subsurface from September 16 through October 3, 2014. The pounds of hydrocarbons removed (lbs/hr) were calculated by:

$$\text{lbs/hr} = (\mu\text{g/L}) \times \text{scfm} \times (28.3 \text{ L/scf}) \times (60 \text{ min/1 hour}) \times (2.2 \text{ lbs/kg}) \times (1/10^9)$$

where *L* = liter

*scfm* = standard cubic feet per minute

##### 4.2.2 RSI Operations – Fluids Recovery

It is estimated that approximately 850 gallons of mixed fluids (water and oil) were recovered during RSI operations, and of that volume, approximately 30 percent was oil. Therefore, approximately **1,600 lbs of petroleum hydrocarbons** (255 gallons) were removed as part of total fluids extraction during RSI operations. Recovered fluids were stored temporarily onsite until disposal at BMG's Surface Waste Management Facility.

---

## 5.0 Free Product Removal via Solar Sipper Pump 1<sup>st</sup> Quarter 2015

To continue recovering free product during the winter months while the RSI unit was off-line, AES installed a Geotech Solar Sipper™ free product recovery pump as a pilot test in

MW-1 on January 21, 2015, and utilized the unit through February 4, 2015. During that period a total of 1.3 gallons of free product were extracted from MW-1.

---

## 6.0 Conclusions and Recommendations

AES conducted groundwater monitoring and sampling at the BMG Highway 537 Truck Receiving Station on September 10 and 26, 2014, and December 3, 2014. During the September 2014 event, free product continued to be observed in MW-1, decreasing from a measurable thickness of 1.18 ft when first observed in April 2014, to 0.65 ft. Average groundwater elevations did not change between April 2014 and September 2014. Groundwater gradient for September 2014 was calculated to be approximately 0.007 ft/ft in a west-southwestern direction, which is consistent with historic site data.

On September 26, 2014, groundwater samples were collected from monitor well MW-3. MW-1 was not sampled due to the presence of NAPL. Monitor wells MW-2 and MW-4 through MW-11 have remained below the WQCC standards for BTEX and TPH for eight or more consecutive sampling events and therefore were not sampled in September 2014.

In MW-3 (September 2014), dissolved phase benzene, toluene, ethylbenzene, and xylenes remained below the applicable WQCC standards in September 2014. GRO concentrations above the laboratory detection limits were reported. In contrast, DRO and MRO concentrations were reported below laboratory detection limits.

In December 2014, free product continued to be observed in MW-1, increasing from 0.65 feet in September 2014 to 1.16 feet. Average groundwater elevations decreased 0.41 feet between September 2014 and December 2014. Groundwater gradient for December 2014 was calculated to be approximately 0.007 ft/ft in a west-southwestern direction, which is consistent with historic site data.

Based on laboratory analytical results and current remedial efforts, AES recommends continuing groundwater monitoring and sampling of monitor wells MW-1 and MW-3 on a semi-annual basis during active remediation.

---

## 7.0 Scheduled Site Activities

The following site activities have been tentatively scheduled:

- First quarter monitoring and sampling scheduled for March 2015;
- MPE unit re-installation is scheduled for April 2015, if needed; and

- Results of the 1<sup>st</sup> quarter 2015 monitor and sampling event will be submitted in a semi-annual report, along with the results of the 2<sup>nd</sup> quarter 2015 gauging event scheduled for June 2015.

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

Sincerely,



David J. Reese  
Environmental Scientist



Brent Everett  
Sr. Hydrogeologist/Project Manager



Elizabeth McNally, P.E.

## Tables

Table 1. Summary of Groundwater Measurement and Water Quality Data

Table 2. Summary of Groundwater Analytical Results

## Figures

Figure 1. Topographic Site Location Map

Figure 2. Aerial Map with General Site Plan

Figure 3. Groundwater Elevation Contours, September 2014

Figure 4. Groundwater Contaminant Concentrations, September 2014

Figure 5. Groundwater Elevation Contours, December 2014

## Graphs

Graph 1. MW-1 Groundwater Elevations and Benzene Concentrations, December 2014

Graph 2. MW-3 Groundwater Elevations and Benzene Concentrations, December 2014

## Appendix

Water Sample Collection Forms—September and December 2014  
Hall Analytical Report 1409E13 (September 2014)

Cc: Mike Dimond  
Zach Stradling  
Benson-Montin-Greer Drilling Corp.  
4900 College Blvd  
Farmington, NM 87401  
Craig Schmitz, Private Land Owner  
#70 County Road 405  
Lindrith, NM 87029

Brandon Powell  
New Mexico Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, NM 87410

Q:\Animas 2000\Dropbox (Animas Environmental)\0000 Animas Server Dropbox EM\2015 Projects\BMG\HWY  
537 2009 Release\Reports and Workplans\2009 Periodic Progress Report 3rd and 4th Qtr 2014 033015.docx

Tables

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-1	05-Mar-09	27.95	7064.66	7036.71	12.29	5.231	1.27	6.64	-36.1
MW-1	11-Sep-09	28.66	7064.66	7036.00	13.15	7.016	0.65	8.60	-118.5
MW-1	15-Jan-10	28.91	7064.66	7035.75	13.30	3.714	2.74	6.79	-167.8
MW-1	15-Oct-10	29.20	7064.66	7035.46	13.77	4.642	1.51	7.14	-17.9
MW-1	21-Jan-11	29.28	7064.66	7035.38	12.42	4.246	1.63	6.92	-85.8
MW-1	12-May-11	28.93	7064.66	7035.73	13.08	3.830	2.95	7.00	-96.1
MW-1	12-Aug-11	29.67	7064.66	7034.99	14.03	4.637	3.83	6.94	-107.9
MW-1	16-Nov-11	29.82	7064.66	7034.84	11.57	4.385	2.89	5.35	-69.7
MW-1	21-Feb-12	29.77	7064.66	7034.89	12.01	4.063	1.09	6.78	-123.9
MW-1	24-May-12	29.77	7064.66	7034.89	12.94	4.563	1.04	6.95	-46.5
MW-1	10-Sep-12	30.14	7064.66	7034.52	14.63	4.705	1.16	7.12	-15.7
MW-1	04-Dec-12	30.33	7064.66	7034.33	12.55	4.430	1.30	7.11	-7.1
MW-1	26-Mar-13	29.87	7064.66	7034.79	12.20	4.556	1.66	6.72	-5.9
MW-1	01-Jul-13	30.41	7064.66	7034.25	13.52	4.372	3.61	7.18	9.2
MW-1	25-Sep-13	29.51	7064.66	7035.15	12.62	8.264	1.64	7.21	-48.6
MW-1	14-Jan-14	30.10	7064.66	7034.56	12.78	4.905	1.75	NM	-59.5
MW-1	04-Apr-14	31.02	7064.66	7033.64	Not Measured - Free Product Present (1.18 ft thickness)				
MW-1	26-Sep-14	30.90	7064.66	7033.76	Not Measured - Free Product Present (0.65 ft thickness)				
MW-1	03-Dec-14	31.47	7064.66	7033.19	Not Measured - Free Product Present (1.16 ft thickness)				
MW-2	05-Mar-09	27.69	7064.65	7036.96	12.00	4.567	2.59	6.82	-29.8
MW-2	10-Sep-09	28.38	7064.65	7036.27	12.93	6.480	1.09	7.58	62.2
MW-2	15-Jan-10	28.62	7064.65	7036.03	12.49	3.604	2.10	7.57	-70.3
MW-2	14-Oct-10	28.91	7064.65	7035.74	12.49	3.968	1.71	7.40	98.9
MW-2	21-Jan-11	28.99	7064.65	7035.66	11.44	4.045	1.62	8.56	-6.2
MW-2	12-May-11	28.63	7064.65	7036.02	13.14	4.087	1.43	7.67	-66.7
MW-2	12-Aug-11	29.37	7064.65	7035.28	14.08	4.102	4.36	7.09	160.2

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-2	16-Nov-11	29.52	7064.65	7035.13	11.60	4.021	2.48	7.51	176.2
MW-2	21-Feb-12	29.46	7064.65	7035.19	NM	NM	NM	NM	NM
MW-2	24-May-12	29.47	7064.65	7035.18	NM	NM	NM	NM	NM
MW-2	10-Sep-12	29.84	7064.65	7034.81	NM	NM	NM	NM	NM
MW-2	04-Dec-12	30.03	7064.65	7034.62	NM	NM	NM	NM	NM
MW-2	26-Mar-13	29.60	7064.65	7035.05	NM	NM	NM	NM	NM
MW-2	27-Jun-13	30.11	7064.65	7034.54	NM	NM	NM	NM	NM
MW-2	25-Sep-13	29.28	7064.65	7035.37	NM	NM	NM	NM	NM
MW-2	14-Jan-14	29.81	7064.65	7034.84	NM	NM	NM	NM	NM
MW-2	04-Apr-14	29.84	7064.65	7034.81	NM	NM	NM	NM	NM
MW-2	10-Sep-14	29.88	7064.65	7034.77	NM	NM	NM	NM	NM
MW-2	03-Dec-14	30.24	7064.65	7034.41	NM	NM	NM	NM	NM
MW-3	05-Mar-09	27.16	7064.01	7036.85	12.29	4.310	2.17	6.66	-28.2
MW-3	11-Sep-09	27.99	7064.01	7036.02	13.50	6.080	0.53	9.43	-163.6
MW-3	15-Jan-10	28.22	7064.01	7035.79	11.99	3.607	1.85	7.27	-222.5
MW-3	14-Oct-10	28.54	7064.01	7035.47	12.41	4.180	1.46	7.24	-53.1
MW-3	21-Jan-11	28.60	7064.01	7035.41	11.92	4.224	1.60	7.20	-122.5
MW-3	12-May-11	28.21	7064.01	7035.80	12.56	4.172	2.25	7.28	-145.8
MW-3	12-Aug-11	29.02	7064.01	7034.99	13.32	4.372	2.35	7.17	-158.5
MW-3	16-Nov-11	29.14	7064.01	7034.87	10.87	4.326	2.17	6.53	-105.7
MW-3	21-Feb-12	29.07	7064.01	7034.94	11.36	4.481	1.01	7.09	-118.0
MW-3	24-May-12	29.09	7064.01	7034.92	13.30	4.325	0.81	7.07	-70.3
MW-3	10-Sep-12	29.45	7064.01	7034.56	13.26	4.377	2.49	7.23	-42.7
MW-3	04-Dec-12	29.65	7064.01	7034.36	12.08	4.294	0.69	7.26	-46.8
MW-3	26-Mar-13	29.12	7064.01	7034.89	11.93	2.337	5.85	7.46	59.3
MW-3	01-Jul-13	29.74	7064.01	7034.27	14.64	4.119	11.22	7.69	-36.8

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-3	25-Sep-13	28.65	7064.01	7035.36	12.50	7.764	2.08	7.22	-79.5
MW-3	14-Jan-14	29.38	7064.01	7034.63	12.23	4.764	1.74	NM	-59.9
MW-3	10-Sep-14	29.39	7064.01	7034.62	12.88	2.718	2.69	7.11	27.2
MW-3	03-Dec-14	29.83	7064.01	7034.18	NM	NM	NM	NM	NM
MW-4	05-Mar-09	27.39	7063.72	7036.33	12.36	4.760	1.72	6.58	-29.2
MW-4	06-Apr-09	27.58	7063.72	7036.14	11.87	4.599	2.06	6.75	18.0
MW-4	10-Sep-09	28.12	7063.72	7035.60	13.09	6.337	0.81	6.98	54.6
MW-4	15-Jan-10	28.34	7063.72	7035.38	11.65	3.812	2.78	7.20	-125.1
MW-4	15-Oct-10	28.64	7063.72	7035.08	12.52	4.491	1.42	7.13	42.8
MW-4	21-Jan-11	28.72	7063.72	7035.00	11.90	4.748	1.14	7.19	5.4
MW-4	12-May-11	28.39	7063.72	7035.33	13.11	4.576	2.58	7.29	-25.8
MW-4	12-Aug-11	29.10	7063.72	7034.62	13.89	4.759	3.98	6.85	74.9
MW-4	16-Nov-11	29.26	7063.72	7034.46	11.66	4.725	2.15	7.11	153.0
MW-4	21-Feb-12	29.22	7063.72	7034.50	10.27	4.927	1.02	7.02	-11.3
MW-4	24-May-12	29.23	7063.72	7034.49	13.75	4.687	1.04	6.98	39.3
MW-4	10-Sep-12	29.58	7063.72	7034.14	NM	NM	NM	NM	NM
MW-4	04-Dec-12	29.77	7063.72	7033.95	NM	NM	NM	NM	NM
MW-4	26-Mar-13	29.33	7063.72	7034.39	NM	NM	NM	NM	NM
MW-4	27-Jun-13	29.85	7063.72	7033.87	NM	NM	NM	NM	NM
MW-4	25-Sep-13	28.96	7063.72	7034.76	NM	NM	NM	NM	NM
MW-4	14-Jan-14	29.54	7063.72	7034.18	NM	NM	NM	NM	NM
MW-4	04-Apr-14	29.54	7063.72	7034.18	12.16	0.435	2.86	6.90	89.4
MW-4	10-Sep-14	29.60	7063.72	7034.12	NM	NM	NM	NM	NM
MW-4	03-Dec-14	29.97	7063.72	7033.75	NM	NM	NM	NM	NM
MW-5	05-Mar-09	28.24	7064.79	7036.55	11.80	6.088	3.89	6.61	-17.3

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-5	10-Sep-09	28.87	7064.79	7035.92	12.78	7.785	1.22	7.09	60.5
MW-5	15-Jan-10	29.10	7064.79	7035.69	11.19	4.288	1.93	7.27	-85.8
MW-5	14-Oct-10	29.38	7064.79	7035.41	12.34	4.725	1.24	7.23	98.1
MW-5	21-Jan-11	29.47	7064.79	7035.32	11.93	5.038	2.71	7.31	103.9
MW-5	12-May-11	29.17	7064.79	7035.62	12.40	4.957	2.44	7.42	-44.4
MW-5	12-Aug-11	29.84	7064.79	7034.95	13.73	4.968	3.87	6.83	189.8
MW-5	16-Nov-11	30.00	7064.79	7034.79	11.16	4.814	4.47	7.18	290.4
MW-5	21-Feb-12	29.96	7064.79	7034.83	NM	NM	NM	NM	NM
MW-5	25-May-12	29.96	7064.79	7034.83	NM	NM	NM	NM	NM
MW-5	10-Sep-12	30.31	7064.79	7034.48	NM	NM	NM	NM	NM
MW-5	04-Dec-12	30.52	7064.79	7034.27	NM	NM	NM	NM	NM
MW-5	26-Mar-13	30.14	7064.79	7034.65	NM	NM	NM	NM	NM
MW-5	27-Jun-13	30.60	7064.79	7034.19	NM	NM	NM	NM	NM
MW-5	25-Sep-13	29.87	7064.79	7034.92	NM	NM	NM	NM	NM
MW-5	14-Jan-14	30.31	7064.79	7034.48	NM	NM	NM	NM	NM
MW-5	04-Apr-14	30.30	7064.79	7034.49	NM	NM	NM	NM	NM
MW-5	10-Sep-14	30.37	7064.79	7034.42	NM	NM	NM	NM	NM
MW-5	03-Dec-14	30.70	7064.79	7034.09	NM	NM	NM	NM	NM
MW-6	05-Mar-09	12.67	7049.54	7036.87	9.21	4.967	4.30	6.53	4.6
MW-6	10-Sep-09	13.90	7049.54	7035.64	11.85	6.287	1.15	7.12	75.9
MW-6	15-Jan-10	14.02	7049.54	7035.52	10.81	3.789	2.46	7.35	-66.7
MW-6	15-Oct-10	14.39	7049.54	7035.15	12.45	4.353	1.40	7.24	20.7
MW-6	21-Jan-11	14.42	7049.54	7035.12	11.59	4.516	3.10	7.32	-37.3
MW-6	12-May-11	14.00	7049.54	7035.54	10.69	4.349	1.89	7.47	-24.9
MW-6	12-Aug-11	14.93	7049.54	7034.61	11.99	4.492	4.24	7.56	0.2
MW-6	16-Nov-11	14.99	7049.54	7034.55	12.01	4.398	2.74	6.46	182.1

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-6	21-Feb-12	14.90	7049.54	7034.64	NM	NM	NM	NM	NM
MW-6	25-May-12	14.92	7049.54	7034.62	NM	NM	NM	NM	NM
MW-6	10-Sep-12	NM	7049.54	NM	NM - Well is Dry				
MW-6	04-Dec-12	15.48	7049.54	7034.06	NM	NM	NM	NM	NM
MW-6	26-Mar-13	14.79	7049.54	7034.75	NM	NM	NM	NM	NM
MW-6	27-Jun-13	15.60	7049.54	7033.94	NM	NM	NM	NM	NM
MW-6	25-Sep-13	14.92	7049.54	7034.62	NM	NM	NM	NM	NM
MW-6	14-Jan-14	15.17	7049.54	7034.37	NM	NM	NM	NM	NM
MW-6	04-Apr-14	15.20	7049.54	7034.34	NM	NM	NM	NM	NM
MW-6	10-Sep-14	15.06	7049.54	7034.48	NM	NM	NM	NM	NM
MW-6	03-Dec-14	15.66	7049.54	7033.88	NM	NM	NM	NM	NM
MW-7	06-Mar-09	26.34	7062.80	7036.46	11.40	4.951	2.17	6.50	-3.3
MW-7	10-Sep-09	27.23	7062.80	7035.57	12.61	6.288	1.03	7.05	51.0
MW-7	15-Jan-10	27.44	7062.80	7035.36	11.02	3.820	2.92	7.27	-66.3
MW-7	14-Oct-10	27.76	7062.80	7035.04	12.79	4.047	1.24	7.19	68.6
MW-7	21-Jan-11	27.82	7062.80	7034.98	10.79	4.205	2.22	7.37	42.0
MW-7	12-May-11	27.46	7062.80	7035.34	12.80	4.118	1.73	7.38	-70.4
MW-7	12-Aug-11	28.24	7062.80	7034.56	13.88	4.119	2.90	7.30	112.8
MW-7	16-Nov-11	28.38	7062.80	7034.42	11.24	4.077	2.75	6.32	168.0
MW-7	21-Feb-12	28.31	7062.80	7034.49	NM	NM	NM	NM	NM
MW-7	24-May-12	28.34	7062.80	7034.46	NM	NM	NM	NM	NM
MW-7	10-Sep-12	28.69	7062.80	7034.11	NM	NM	NM	NM	NM
MW-7	04-Dec-12	28.86	7062.80	7033.94	NM	NM	NM	NM	NM
MW-7	26-Mar-13	28.33	7062.80	7034.47	NM	NM	NM	NM	NM
MW-7	27-Jun-13	28.97	7062.80	7033.83	NM	NM	NM	NM	NM
MW-7	25-Sep-13	27.78	7062.80	7035.02	NM	NM	NM	NM	NM

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-7	14-Jan-14	28.61	7062.80	7034.19	NM	NM	NM	NM	NM
MW-7	04-Apr-14	28.62	7062.80	7034.18	NM	NM	NM	NM	NM
MW-7	10-Sep-14	28.58	7062.80	7034.22	NM	NM	NM	NM	NM
MW-7	03-Dec-14	29.02	7062.80	7033.78	NM	NM	NM	NM	NM
MW-8	06-Mar-09	27.49	7063.27	7035.78	11.91	4.731	2.14	6.40	-4.4
MW-8	10-Sep-09	28.14	7063.27	7035.13	13.53	5.987	1.12	8.51	-93.2
MW-8	15-Jan-10	28.39	7063.27	7034.88	11.43	2.891	1.86	6.68	-162.2
MW-8	15-Oct-10	28.70	7063.27	7034.57	12.80	4.017	1.21	7.04	-39.1
MW-8	21-Jan-11	28.80	7063.27	7034.47	12.30	4.002	1.55	7.08	-91.2
MW-8	12-May-11	28.52	7063.27	7034.75	13.16	3.966	1.60	7.16	-121.2
MW-8	12-Aug-11	29.19	7063.27	7034.08	13.85	4.194	3.45	6.97	-148.3
MW-8	16-Nov-11	29.35	7063.27	7033.92	11.49	4.218	2.57	6.49	-115.4
MW-8	21-Feb-12	29.31	7063.27	7033.96	12.21	4.500	0.88	6.96	-116.0
MW-8	24-May-12	29.34	7063.27	7033.93	13.43	4.402	0.65	6.93	-41.2
MW-8	10-Sep-12	29.68	7063.27	7033.59	12.98	4.499	1.34	7.12	-27.3
MW-8	04-Dec-12	29.87	7063.27	7033.40	12.53	3.045	3.78	7.13	-3.1
MW-8	26-Mar-13	29.47	7063.27	7033.80	12.65	4.449	4.10	6.95	22.0
MW-8	27-Jun-13	29.97	7063.27	7033.30	14.39	6.908	8.14	7.01	-43.6
MW-8	25-Sep-13	29.14	7063.27	7034.13	NM	NM	NM	NM	NM
MW-8	14-Jan-14	29.65	7063.27	7033.62	NM	NM	NM	NM	NM
MW-8	04-Apr-14	29.64	7063.27	7033.63	13.14	0.424	1.70	6.80	-14.9
MW-8	04-Apr-14	29.68	7063.27	7033.59	NM	NM	NM	NM	NM
MW-8	03-Dec-14	30.00	7063.27	7033.27	NM	NM	NM	NM	NM
MW-9	06-Mar-09	27.60	7062.60	7035.00	9.47	5.418	5.12	6.39	-1.8
MW-9	06-Apr-09	27.74	7062.60	7034.86	11.86	5.174	2.24	6.72	25.2

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-9	10-Sep-09	28.19	7062.60	7034.41	13.10	7.257	0.86	7.03	-129.8
MW-9	15-Jan-10	28.42	7062.60	7034.18	10.89	3.960	2.29	7.13	-187.4
MW-9	15-Oct-10	28.74	7062.60	7033.86	12.85	4.561	1.89	7.17	-74.4
MW-9	21-Jan-11	28.85	7062.60	7033.75	12.67	4.452	1.34	7.16	-90.8
MW-9	12-May-11	28.61	7062.60	7033.99	13.12	4.120	2.31	7.28	-94.1
MW-9	12-Aug-11	29.22	7062.60	7033.38	12.92	4.492	5.42	7.33	-132.7
MW-9	16-Nov-11	29.41	7062.60	7033.19	11.80	4.402	2.67	5.56	-75.1
MW-9	21-Feb-12	29.39	7062.60	7033.21	11.89	4.241	1.37	6.95	-127.0
MW-9	24-May-12	29.39	7062.60	7033.21	13.68	4.470	0.80	7.08	-56.4
MW-9	10-Sep-12	29.73	7062.60	7032.87	13.41	4.439	1.41	7.13	-52.2
MW-9	04-Dec-12	29.90	7062.60	7032.70	12.87	4.374	1.34	7.19	-60.5
MW-9	26-Mar-13	29.56	7062.60	7033.04	12.57	4.396	1.24	6.72	-15.8
MW-9	27-Jun-13	30.00	7062.60	7032.60	20.04	6.761	2.38	7.10	-48.5
MW-9	25-Sep-13	29.28	7062.60	7033.32	13.08	8.437	2.44	7.19	-84.6
MW-9	14-Jan-14	29.68	7062.60	7032.92	12.61	5.160	1.11	NM	-54.8
MW-9	04-Apr-14	29.69	7062.60	7032.91	12.89	0.407	2.81	6.89	-48.2
MW-9	10-Sep-14	29.72	7062.60	7032.88	NM	NM	NM	NM	NM
MW-9	03-Dec-14	30.00	7062.60	7032.60	NM	NM	NM	NM	NM
MW-10	09-Mar-09	26.25	7063.27	7037.02	10.51	4.572	3.44	6.62	15.6
MW-10	10-Sep-09	27.10	7063.27	7036.17	12.62	5.133	1.83	6.97	80.7
MW-10	15-Jan-10	27.29	7063.27	7035.98	10.82	3.210	2.47	7.10	-99.3
MW-10	14-Oct-10	27.61	7063.27	7035.66	11.98	3.811	1.80	7.22	119.2
MW-10	21-Jan-11	27.66	7063.27	7035.61	10.73	3.946	1.78	7.45	90.1
MW-10	12-May-11	27.28	7063.27	7035.99	12.26	3.839	1.34	7.26	84.9
MW-10	12-Aug-11	28.08	7063.27	7035.19	12.84	3.948	4.99	6.62	175.8
MW-10	16-Nov-11	28.20	7063.27	7035.07	10.81	3.912	2.81	6.17	190.7

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-10	21-Feb-12	28.13	7063.27	7035.14	NM	NM	NM	NM	NM
MW-10	24-May-12	28.15	7063.27	7035.12	NM	NM	NM	NM	NM
MW-10	10-Sep-12	28.54	7063.27	7034.73	NM	NM	NM	NM	NM
MW-10	04-Dec-12	28.72	7063.27	7034.55	NM	NM	NM	NM	NM
MW-10	26-Mar-13	28.20	7063.27	7035.07	NM	NM	NM	NM	NM
MW-10	27-Jun-13	28.79	7063.27	7034.48	NM	NM	NM	NM	NM
MW-10	25-Sep-13	27.80	7063.27	7035.47	NM	NM	NM	NM	NM
MW-10	14-Jan-14	28.44	7063.27	7034.83	NM	NM	NM	NM	NM
MW-10	04-Apr-14	28.46	7063.27	7034.81	NM	NM	NM	NM	NM
MW-10	10-Sep-14	28.48	7063.27	7034.79	NM	NM	NM	NM	NM
MW-10	03-Dec-14	28.92	7063.27	7034.35	NM	NM	NM	NM	NM
MW-11	09-Mar-09	28.33	7064.10	7035.77	11.47	5.730	3.52	6.63	17.1
MW-11	10-Sep-09	28.88	7064.10	7035.22	13.32	7.785	0.67	7.02	61.2
MW-11	15-Jan-10	29.13	7064.10	7034.97	10.20	3.995	1.86	7.16	-59.2
MW-11	14-Oct-10	29.44	7064.10	7034.66	13.00	4.901	1.93	7.20	94.5
MW-11	21-Jan-11	29.53	7064.10	7034.57	11.55	4.937	1.75	7.37	216.0
MW-11	12-May-11	29.25	7064.10	7034.85	12.97	4.701	2.71	7.41	-16.0
MW-11	12-Aug-11	29.89	7064.10	7034.21	12.89	4.872	3.24	7.39	122.2
MW-11	16-Nov-11	30.07	7064.10	7034.03	11.49	4.762	3.61	7.00	307.9
MW-11	21-Feb-12	30.04	7064.10	7034.06	NM	NM	NM	NM	NM
MW-11	24-May-12	30.06	7064.10	7034.04	NM	NM	NM	NM	NM
MW-11	10-Sep-12	30.38	7064.10	7033.72	NM	NM	NM	NM	NM
MW-11	04-Dec-12	30.58	7064.10	7033.52	NM	NM	NM	NM	NM
MW-11	26-Mar-13	30.23	7064.10	7033.87	NM	NM	NM	NM	NM
MW-11	27-Jun-13	30.66	7064.10	7033.44	NM	NM	NM	NM	NM
MW-11	25-Sep-13	30.00	7064.10	7034.10	NM	NM	NM	NM	NM

TABLE 1  
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	Temperature (C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)
MW-11	14-Jan-14	30.39	7064.10	7033.71	NM	NM	NM	NM	NM
MW-11	04-Apr-14	30.36	7064.10	7033.74	NM	NM	NM	NM	NM
MW-11	10-Sep-14	30.42	7064.10	7033.68	NM	NM	NM	NM	NM
MW-11	03-Dec-14	30.73	7064.10	7033.37	NM	NM	NM	NM	NM

**NOTE:** NM = NOT MEASURED  
NA = NOT AVAILABLE

TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)	MRO (mg/L)
<b>Analytical Method</b>		<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8015B</b>	<b>8015B</b>	<b>8015B</b>
<b>New Mexico WQCC</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
MW-1	05-Mar-09	310	91	5.1	200	2.1	<1.0	<5.0
MW-1	11-Sep-09	1,500	1.1	48	170	4.8	<1.0	<5.0
MW-1	15-Jan-10	630	<5.0	19	47	2.1	<1.0	<5.0
MW-1	15-Oct-10	960	53	37	94	4.1	<1.0	<5.0
MW-1	21-Jan-11	3,600	<10	140	160	10	<1.0	<5.0
MW-1	12-May-11	7,800	42	270	33	19	<1.0	<5.0
MW-1	12-Aug-11	280	<1.0	18	<2.0	1.2	<1.0	<5.0
MW-1	16-Nov-11	2,700	<5.0	76	<10	3.9	<1.0	<5.0
MW-1	21-Feb-12	360	<1.0	54	<2.0	1.2	<1.0	<5.0
MW-1	24-May-12	210	2.1	31	5.1	0.59	<1.0	<5.0
MW-1	10-Sep-12	54	<2.0	36	<4.0	0.45	<1.0	<5.0
MW-1	04-Dec-12	<2.0	<2.0	17	<4.0	0.19	<1.0	<5.0
MW-1	26-Mar-13	1.2	<1.0	1.8	<2.0	<0.050	<1.0	<5.0
MW-1	01-Jul-13	1.6	<1.0	6.5	<2.0	0.090	<1.0	<5.0
MW-1	25-Sep-13	180	2.9	36	8.8	0.53	<1.0	<5.0
MW-1	14-Jan-14	14	<2.0	15	<4.0	0.21	<1.0	<5.0
MW-1	04-Apr-14	NS - Free Product Present (1.18 ft thickness)						
MW-1	26-Sep-14	NS - Free Product Present (0.65 ft thickness)						
MW-2	05-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	10-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	15-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	14-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	21-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	05-Mar-09	400	1,100	110	1,300	8.2	3.4	<5.0
MW-3	11-Sep-09	380	27	26	61	4.2	9.6	6.0
MW-3	15-Jan-10	750	11	34	<20	3.4	7.0	6.1
MW-3	14-Oct-10	140	<1.0	6.8	2.8	0.76	1.9	<5.0
MW-3	21-Jan-11	280	<1.0	24	9.1	1.7	3.5	<5.0
MW-3	12-May-11	980	<1.0	42	<2.0	3.0	4.8	<5.0
MW-3	12-Aug-11	51	<1.0	4.2	<2.0	0.38	<1.0	<5.0
MW-3	16-Nov-11	63	<1.0	6.0	<2.0	0.46	3.3	<5.0

TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)	MRO (mg/L)
<b>Analytical Method</b>		<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8015B</b>	<b>8015B</b>	<b>8015B</b>
<b>New Mexico WQCC</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
MW-3	21-Feb-12	4.8	<1.0	<1.0	<2.0	0.18	<1.0	<5.0
MW-3	24-May-12	50	<1.0	3.0	<2.0	0.33	<1.0	<5.0
MW-3	10-Sep-12	6.2	<2.0	<2.0	<4.0	0.29	<1.0	<5.0
MW-3	04-Dec-12	<2.0	<2.0	<2.0	<4.0	0.26	<1.0	<5.0
MW-3	26-Mar-13	2.5	<1.0	<1.0	<2.0	0.23	<1.0	<5.0
MW-3	01-Jul-13	<1.0	<1.0	<1.0	<2.0	0.11	<1.0	<5.0
MW-3	25-Sep-13	30	<1.0	1.5	3.2	0.23	<1.0	<5.0
MW-3	14-Jan-14	<1.0	<1.0	<1.0	<2.0	0.12	<1.0	<5.0
MW-3	04-Apr-14	<1.0	<1.0	<1.0	<2.0	0.20	<1.0	<5.0
MW-3	26-Sep-14	<1.0	<1.0	<1.0	<2.0	0.095	<1.0	<5.0
MW-4	05-Mar-09	2.7	1.4	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	06-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	10-Sep-09	13	<1.0	<1.0	<2.0	0.051	<1.0	<5.0
MW-4	15-Jan-10	8.6	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	15-Oct-10	6.3	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	21-Jan-11	3.6	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	21-Feb-12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	24-May-12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	04-Apr-14	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	05-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	10-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	15-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	14-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	21-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	06-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	10-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	15-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	15-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)	MRO (mg/L)
<b>Analytical Method</b>		<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8015B</b>	<b>8015B</b>	<b>8015B</b>
<b>New Mexico WQCC</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
MW-6	21-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	06-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	10-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	15-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	14-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	21-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	06-Mar-09	<b>160</b>	170	12	350	2.1	1.5	<5.0
MW-8	11-Sep-09	<b>1,200</b>	<20	36	75	4.1	1.1	<5.0
MW-8	15-Jan-10	<b>56</b>	<1.0	2.3	2.2	0.24	<1.0	<5.0
MW-8	15-Oct-10	<b>50</b>	<1.0	1.7	<2.0	0.21	<1.0	<5.0
MW-8	21-Jan-11	<b>370</b>	<1.0	4.6	<2.0	0.58	<1.0	<5.0
MW-8	12-May-11	<b>430</b>	<1.0	25	<2.0	1.4	<1.0	<5.0
MW-8	12-Aug-11	2.3	<1.0	<1.0	<2.0	0.070	<1.0	<5.0
MW-8	16-Nov-11	1.5	<1.0	<1.0	<2.0	0.17	<1.0	<5.0
MW-8	21-Feb-12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	24-May-12	<1.0	<1.0	<1.0	<2.0	0.12	<1.0	<5.0
MW-8	10-Sep-12	<1.0	<1.0	<1.0	<2.0	0.16	<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	27-Jun-13	<1.0	<1.0	<1.0	<2.0	0.052	<1.0	<5.0
MW-8	04-Apr-14	<1.0	<1.0	<1.0	<2.0	0.072	<1.0	<5.0
MW-9	06-Mar-09	<b>170</b>	350	49	530	2.5	<1.0	<5.0
MW-9	06-Apr-09	<b>82</b>	62	16	210	1.6	<1.0	<5.0
MW-9	10-Sep-09	<b>46</b>	<1.0	3.8	19	0.86	<1.0	<5.0
MW-9	15-Jan-10	<b>62</b>	<1.0	4.2	12	0.49	<1.0	<5.0
MW-9	15-Oct-10	<b>53</b>	<1.0	2.3	<2.0	0.22	<1.0	<5.0
MW-9	21-Jan-11	<b>390</b>	<1.0	5.1	<2.0	0.41	<1.0	<5.0
MW-9	12-May-11	<b>390</b>	<1.0	11	<2.0	0.92	<1.0	<5.0

TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)	MRO (mg/L)
<b>Analytical Method</b>		<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8015B</b>	<b>8015B</b>	<b>8015B</b>
<b>New Mexico WQCC</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
MW-9	12-Aug-11	120	<1.0	5.6	<2.0	0.35	<1.0	<5.0
MW-9	16-Nov-11	200	<5.0	9.6	<10	0.57	<1.0	<5.0
MW-9	21-Feb-12	120	<1.0	4.2	<2.0	0.30	<1.0	<5.0
MW-9	24-May-12	3.8	<1.0	1.4	<2.0	0.076	<1.0	<5.0
MW-9	10-Sep-12	<1.0	<1.0	<1.0	<2.0	0.072	<1.0	<5.0
MW-9	04-Dec-12	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-9	26-Mar-13	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-9	27-Jun-13	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-9	25-Sep-13	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-9	14-Jan-14	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-9	04-Apr-14	<1.0	<1.0	<1.0	<2.0	0.075	<1.0	<5.0
MW-10	09-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	10-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	15-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	14-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	21-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-10	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	09-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	10-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	15-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	14-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	21-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	12-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	12-Aug-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-11	16-Nov-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
<b>Downgradient MW-7*</b>	09-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

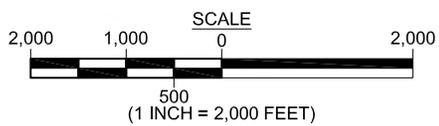
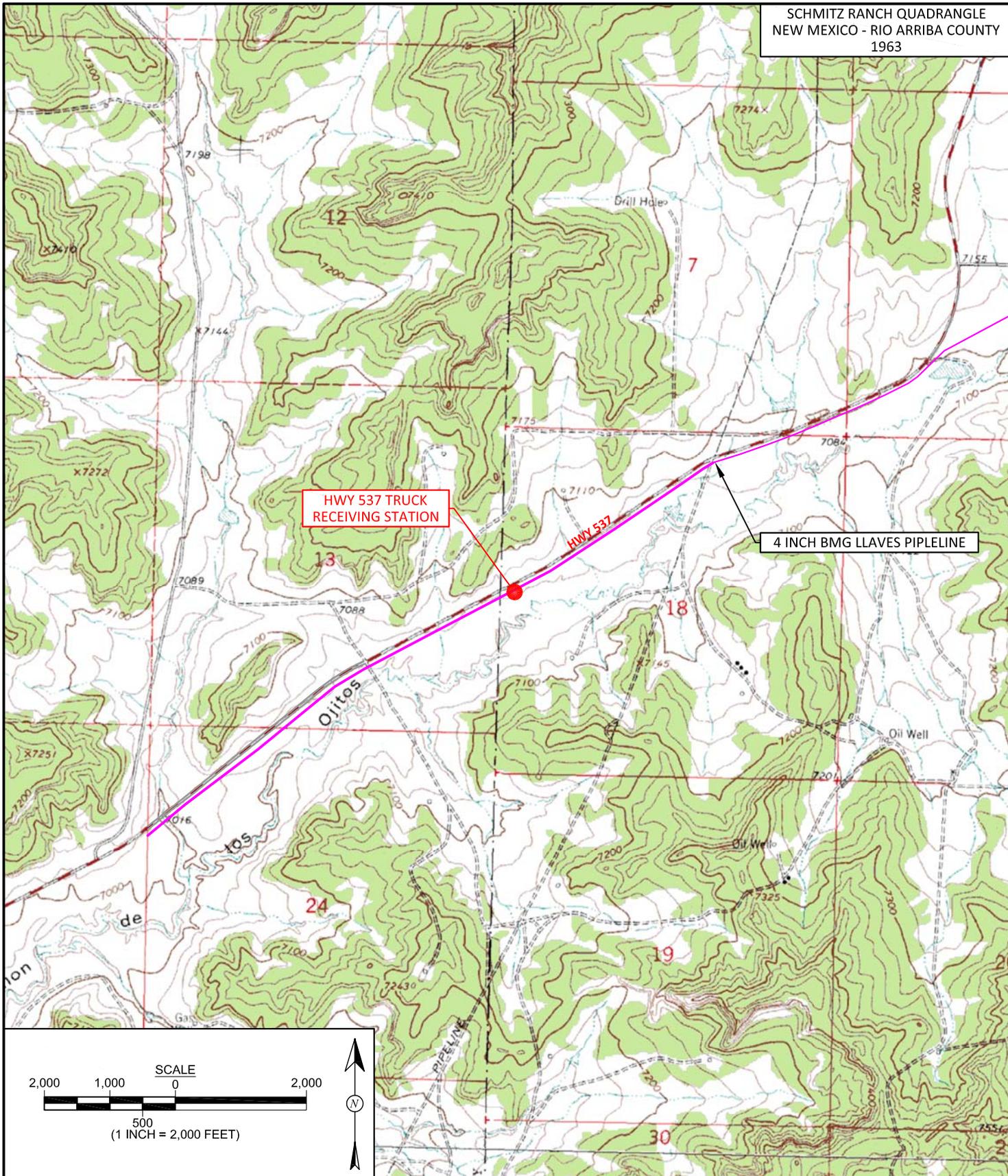
**NOTE:** NS = Not Sampled  
GRO = Gasoline Range Organics  
DRO = Diesel Range Organics  
MRO = Motor Oil Range Organics

TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
BMG HWY 537 TRUCK RECEIVING STATION 2009 RELEASE  
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO
		( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\text{mg/L}$ )	( $\text{mg/L}$ )	( $\text{mg/L}$ )
<i>Analytical Method</i>		8021B	8021B	8021B	8021B	8015B	8015B	8015B
<i>New Mexico WQCC</i>		10	750	750	620	NE	NE	NE

\* = Monitoring Well from HWY 537 '06-'07 spill

## Figures



<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> January 10, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 26, 2014
<b>CHECKED BY:</b> B. Everett	<b>DATE CHECKED:</b> November 26, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 26, 2014

**FIGURE 1**  
**TOPOGRAPHIC SITE LOCATION MAP**  
 BENSON-MONTIN-GREER  
 LLAVES PIPELINE HWY. 537  
 TRUCK RECEIVING STATION 2009 RELEASE  
 SW ¼ NW ¼ SECTION 18, T25N, R3W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.39866, W107.19328

**FIGURE 2**

**GENERAL SITE PLAN**  
 BENSON-MONTIN-GREER  
 LLAVES PIPELINE HWY. 537  
 TRUCK RECEIVING STATION 2009 RELEASE  
 SW¼ NW¼ SECTION 18, T25N, R3W  
 RIO ARriba COUNTY, NEW MEXICO  
 N36.39866, W107.19328



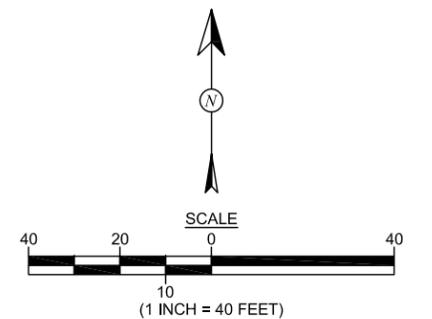
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> January 10, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 26, 2014
<b>CHECKED BY:</b> B. Everett	<b>DATE CHECKED:</b> November 26, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 26, 2014

**LEGEND**

 MONITORING WELL INSTALLED  
FEBRUARY 2009

AERIAL SOURCE: © 2012 MICROSOFT  
CORPORATION - AVAILABLE EXCLUSIVELY  
BY DIGITALGLOBE



**FIGURE 3**

**GROUNDWATER ELEVATION  
CONTOURS, SEPTEMBER 2014**  
 BENSON-MONTIN-GREER  
 LLAVES PIPELINE HWY. 537  
 TRUCK RECEIVING STATION 2009 RELEASE  
 SW¼ NW¼ SECTION 18, T25N, R3W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.39866, W107.19328



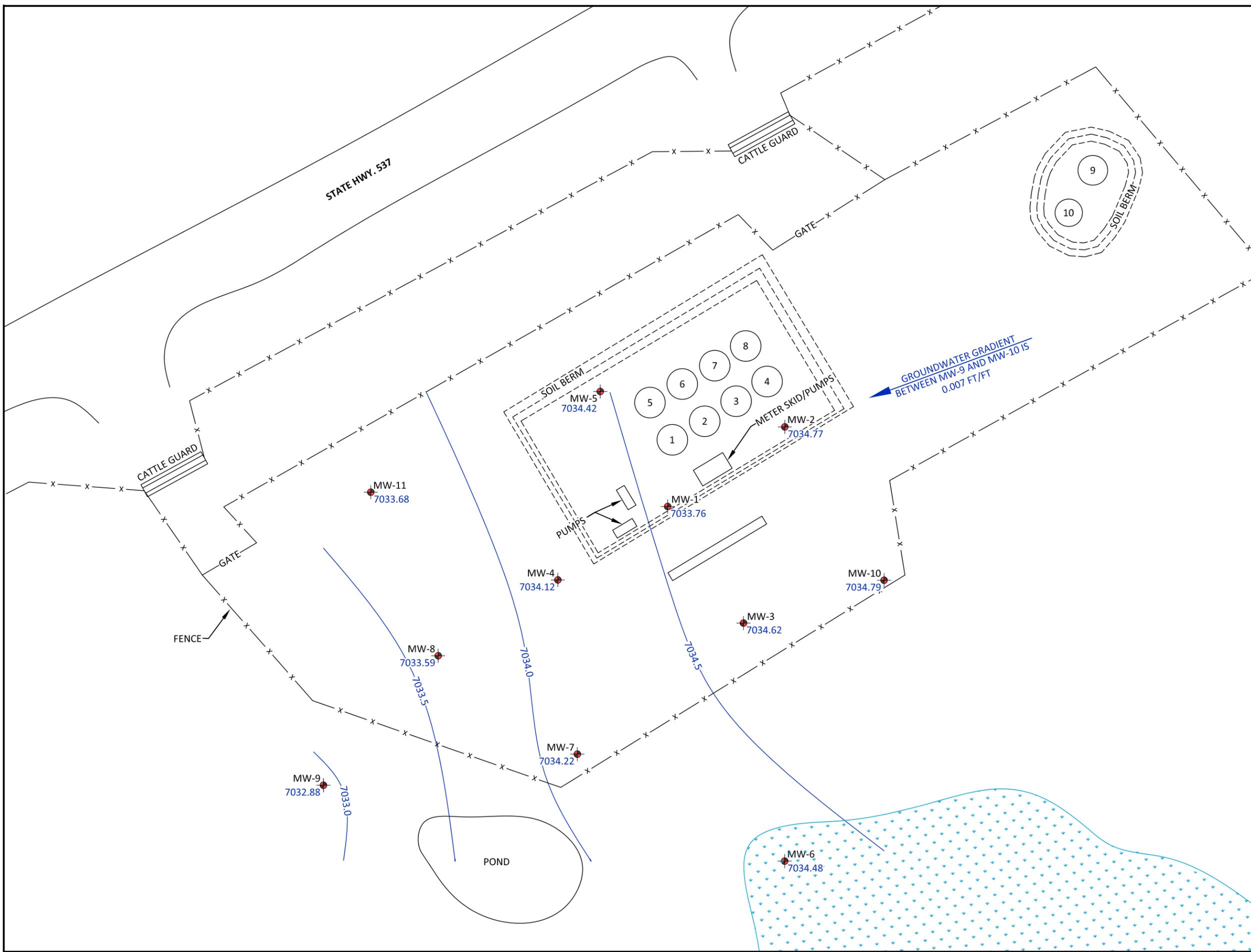
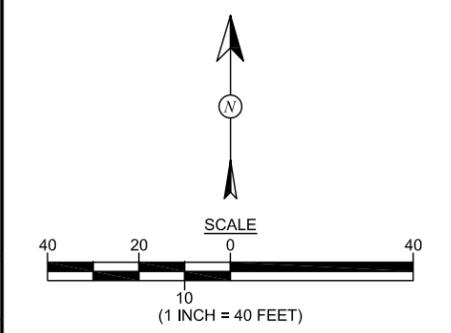
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> January 10, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 26, 2014
<b>CHECKED BY:</b> B. Everett	<b>DATE CHECKED:</b> November 26, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 26, 2014

**LEGEND**

- MONITORING WELL INSTALLED FEBRUARY 2009
- FENCE
- PONDS, WET LANDS, & FLOOD PLANES
- 7034.83 GROUNDWATER ELEVATION IN FEET (A.M.S.L.)
- 7034.0- GROUNDWATER ELEVATION CONTOUR IN FEET (A.M.S.L.)

NOTE: GROUNDWATER ELEVATION MEASUREMENTS WERE MADE ON SEPTEMBER 26, 2014.





**FIGURE 5**

**GROUNDWATER ELEVATION  
CONTOURS, DECEMBER 2014**  
 BENSON-MONTIN-GREER  
 LLAVES PIPELINE HWY. 537  
 TRUCK RECEIVING STATION 2009 RELEASE  
 SW¼ NW¼ SECTION 18, T25N, R3W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.39866, W107.19328



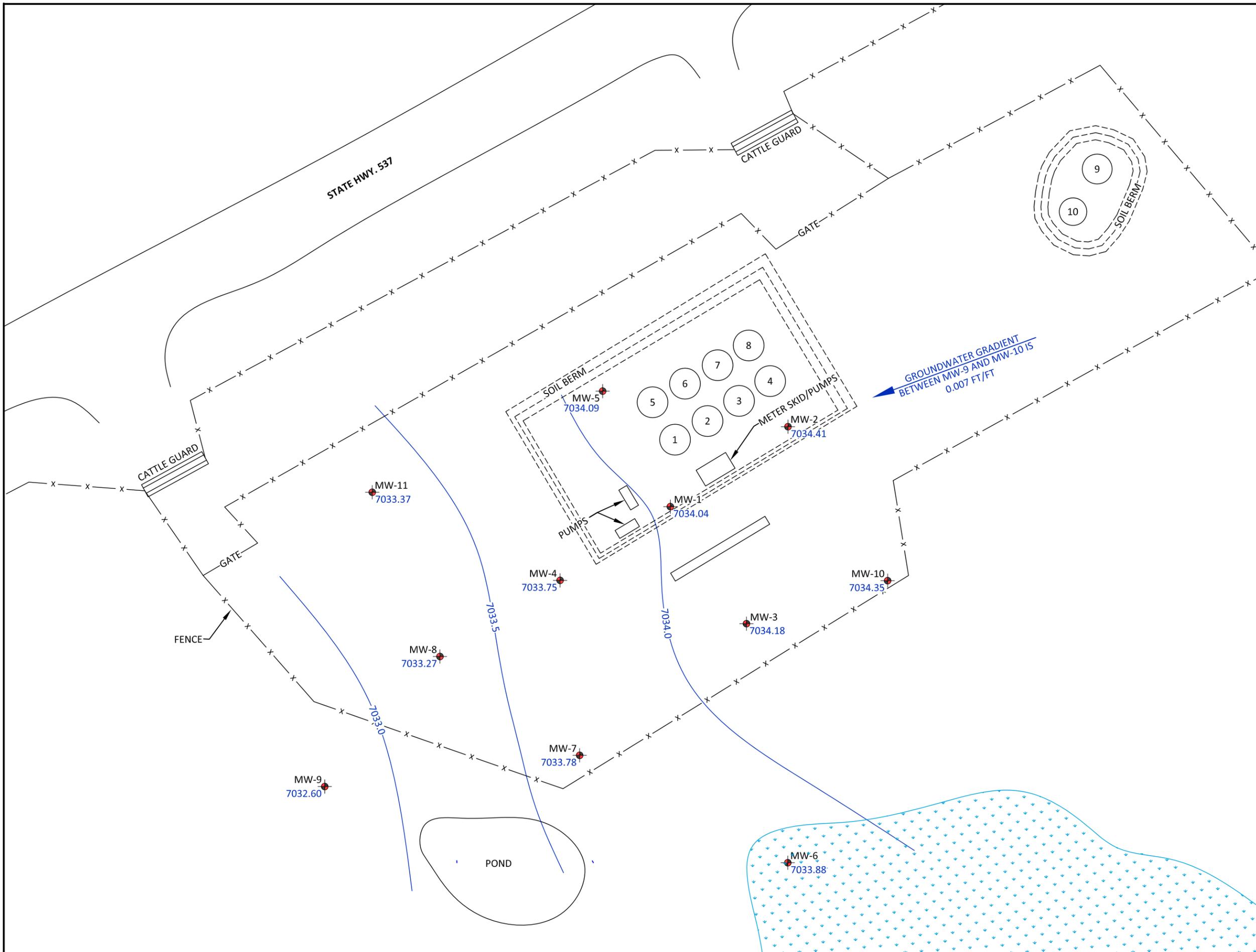
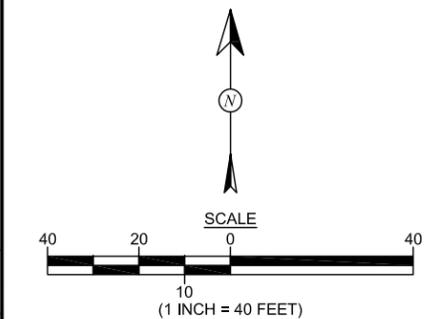
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> January 10, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> March 24, 2015
<b>CHECKED BY:</b> B. Everett	<b>DATE CHECKED:</b> March 24, 2015
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> March 24, 2015

**LEGEND**

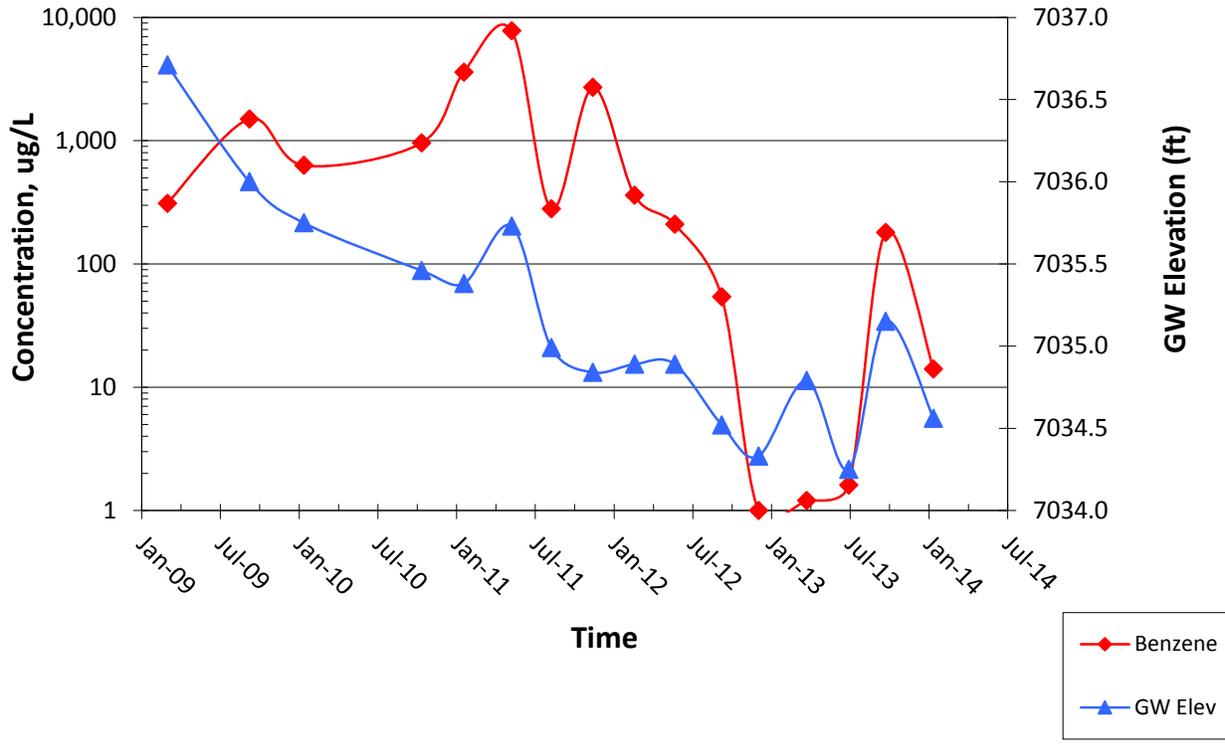
- MONITORING WELL INSTALLED FEBRUARY 2009
- FENCE
- PONDS, WET LANDS, & FLOOD PLANES
- 7034.35 GROUNDWATER ELEVATION IN FEET (A.M.S.L.)
- 7034.0 GROUNDWATER ELEVATION CONTOUR IN FEET (A.M.S.L.)

*NOTE: GROUNDWATER ELEVATION MEASUREMENTS WERE MADE ON DECEMBER 3, 2014.*

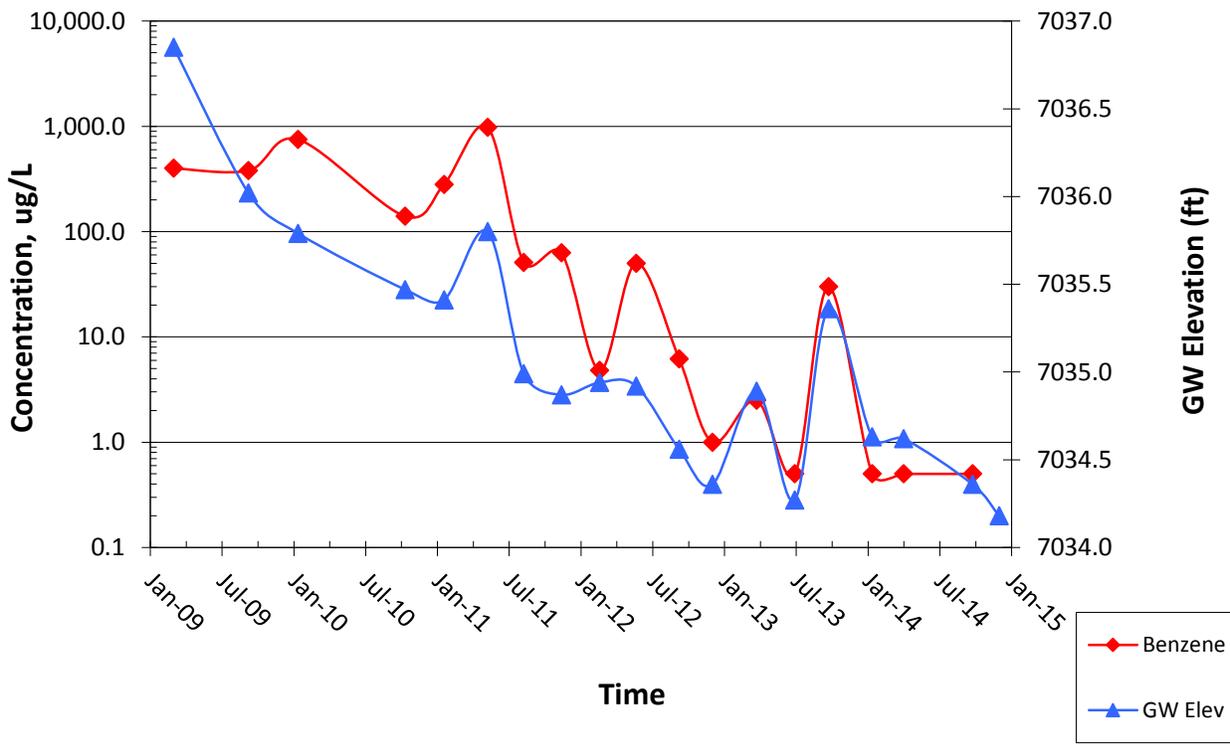


## Graphs

**Graph 1. MW-1 Benzene Concentrations Over Time  
BMG HWY 537 Truck Receiving Station 2009 Release**



**Graph 2. MW-3 Benzene Concentrations Over Time  
BMG HWY 537 Receiving Station 2009 Release**



## Appendix



**MONITORING WELL SAMPLING RECORD**

**Animas Environmental Services**

Monitor Well No:           MW-1          

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

Site: Highway 537 Truck Station Spill 2009  
Location: Rio Arriba County, New Mexico  
Project: Groundwater Monitoring and Sampling  
Sampling Technician: S. Glasser  
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.: 30.25 D.T.W.: 30.90 Thickness:           

Project No.: AES 090201  
Date: 9-20-14  
Arrival Time:             
Air Temp:             
T.O.C. Elev. (ft): 7064.66  
Total Well Depth (ft): 43.65  
*(taken at initial gauging of all wells)*  
*(taken prior to purging well)*  
*(taken after sample collection)*

**Water Quality Parameters - Recorded During Well Purging**

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations

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

BTEX per EPA Method 8021 (3 40mL Vials w/ HCl preserve)

TPH C6-C36 per EPA Method 8015B (2 40mL Vials w/ HCl preserve)

TPH C6-C36 per EPA Method 8015B (40mL Vial w/ no preservative)

Disposal of Purged Water:   N/A  

Collected Samples Stored on Ice in Cooler:   N/A  

Chain of Custody Record Complete:   N/A  

Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM

Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments: 0.65 of product was present.

revised: 08/10/09

**MONITORING WELL SAMPLING RECORD**

Animas Environmental Services

Monitor Well No: MW-3

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

Site: Highway 537 Truck Station Spill 2009  
Location: Rio Arriba County, New Mexico  
Project: Groundwater Monitoring and Sampling  
Sampling Technician: S. Glasses  
Purge / No Purge: Purge  
Well Diameter (in): \_\_\_\_\_  
Initial D.T.W. (ft): 13.68  Time: 1000  
Confirm D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_  
Final D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_  
If NAPL Present: D.T.P.: \_\_\_\_\_ D.T.W.: \_\_\_\_\_ Thickness: \_\_\_\_\_ Time: \_\_\_\_\_

Project No.: AES 090201  
Date: 9-26-14  
Arrival Time: 955  
Air Temp: \_\_\_\_\_  
T.O.C. Elev. (ft): \_\_\_\_\_  
Total Well Depth (ft): 43.33  
(taken at initial gauging of all wells)  
(taken prior to purging well)  
(taken after sample collection)

**Water Quality Parameters - Recorded During Well Purging**

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1020	14.76	2.762	3.48	7.31	36.8	1.5	Cloudy w/ organics
1030	13.98	2.898	3.54	7.38	47.9	2.5	Tan/Cloudy
1040	14.01	2.604	3.15	7.16	40.3	3.5	Tan/Cloudy
1050	13.93	2.923	3.74	7.20	18.6	4.5	Brown/Cloudy
1100	13.34	2.722	2.76	7.21	31.5	5.5	Tan/Cloudy
1120	12.88	2.718	2.69	7.11	27.2	6.5	Tan/Cloudy
1125							sample collected

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

BTEX per EPA Method 8021 (3 40mL Vials w/ HCl preserve)

TPH C6-C36 per EPA Method 8015B (2 40mL Vials w/ HCl preserve)

TPH C6-C36 per EPA Method 8015B (40mL Vial w/ no preservative)

Disposal of Purged Water: On site

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:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**MONITORING WELL SAMPLING RECORD**

Animas Environmental Services

Monitor Well No: MW-3

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

Site: Highway 537 Truck Station Spill 2009  
Location: Rio Arriba County, New Mexico  
Project: Groundwater Monitoring and Sampling  
Sampling Technician: S. Glasses  
Purge / No Purge: Purge  
Well Diameter (in): 2  
Initial D.T.W. (ft): 13.68 Time: 1000  
Confirm D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_  
Final D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_  
If NAPL Present: D.T.P.: \_\_\_\_\_ D.T.W.: \_\_\_\_\_ Thickness: \_\_\_\_\_ Time: \_\_\_\_\_

Project No.: AES 090201  
Date: 9-26-14  
Arrival Time: 955  
Air Temp: \_\_\_\_\_  
T.O.C. Elev. (ft): \_\_\_\_\_  
Total Well Depth (ft): 43.33  
(taken at initial gauging of all wells)  
(taken prior to purging well)  
(taken after sample collection)

**Water Quality Parameters - Recorded During Well Purging**

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1020	14.76	2.762	3.48	7.31	36.8	1.5	Cloudy w/ organics
1030	13.98	2.898	3.54	7.38	47.9	2.5	Tan/Cloudy
1040	14.01	2.604	3.15	7.16	40.3	3.5	Tan/Cloudy
1050	13.93	2.923	3.74	7.20	18.6	4.5	Brown/Cloudy
1100	13.34	2.722	2.76	7.21	31.5	5.5	Tan/Cloudy
1120	12.88	2.718	2.69	7.11	27.2	6.5	Tan/Cloudy
1125							sample collected

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

BTEX per EPA Method 8021 (3 40mL Vials w/ HCl preserve)

TPH C6-C36 per EPA Method 8015B (2 40mL Vials w/ HCl preserve)

TPH C6-C36 per EPA Method 8015B (40mL Vial w/ no preservative)

Disposal of Purged Water: On site

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:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DEPTH TO GROUNDWATER  
MEASUREMENT FORM**

**Animas Environmental Services**

604 W. Pinon St, Farmington NM 87401

Tel. (505) 564-2281 Fax (505) 324-2022

**Project:** Groundwater Monitoring  
**Site:** Hwy 537 Truck Station 2009 Spill  
**Location:** Rio Arriba County, New Mexico  
**Tech:** LAMONE, L.

**Project No.:** AES 090201  
**Date:** 12-03-2014  
**Time:** 1017  
**Form:** 1 of 1

Time

1128  
1109  
1115  
1118  
1039  
1050  
1103  
1055  
1024  
1059

Well I.D.	Depth to NAPL (ft.)	Depth to Water (ft.)	NAPL Thickness (ft.)	TDW	Notes / Observations
MW-1	30.31	31.47	1.16	39.56	3'6" Above ground casing
MW-2		30.24		43.92	3'7" Above ground well casing
MW-3		29.83		43.18	3'3" Above ground well casing
MW-4		29.97		43.80	3' Above ground well casing
MW-5		30.70		44.03	2'10" Above ground well casing
MW-6		15.66		23.58	3'6" Above ground well casing
MW-7	<del>29.02</del>	29.02		43.82	3'2" Above ground well casing.
MW-8		30.00		44.00	3'4" Above ground well casing
MW-9		30.00		38.84	3'4" Above ground well casing
MW-10		28.92		38.45	3' Above ground well casing.
MW-11		30.73		43.58	3'4" Above ground well casing
					MW-5 well casing has lock, however the top plate on casing lid is missing.
					MW-1 - Collected @ 1149 - 15.2°C

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



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

October 03, 2014

Brent Everett

Animas Environmental Services  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX (505) 324-2022

RE: BMG HWY 537 2009 Release

OrderNo.: 1409E13

Dear Brent Everett:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/27/2014 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](http://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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409E13

Date Reported: 10/3/2014

**CLIENT:** Animas Environmental Services

**Client Sample ID:** MW-3

**Project:** BMG HWY 537 2009 Release

**Collection Date:** 9/26/2014 11:25:00 AM

**Lab ID:** 1409E13-001

**Matrix:** AQUEOUS

**Received Date:** 9/27/2014 5:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/1/2014 4:51:07 PM	15594
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/1/2014 4:51:07 PM	15594
Surr: DNOP	113	59-141		%REC	1	10/1/2014 4:51:07 PM	15594
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	0.095	0.050		mg/L	1	9/29/2014 4:19:23 PM	R21524
Surr: BFB	104	70.9-130		%REC	1	9/29/2014 4:19:23 PM	R21524
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	9/29/2014 4:19:23 PM	R21524
Toluene	ND	1.0		µg/L	1	9/29/2014 4:19:23 PM	R21524
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 4:19:23 PM	R21524
Xylenes, Total	ND	2.0		µg/L	1	9/29/2014 4:19:23 PM	R21524
Surr: 4-Bromofluorobenzene	93.2	66.6-167		%REC	1	9/29/2014 4:19:23 PM	R21524

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409E13

Date Reported: 10/3/2014

**CLIENT:** Animas Environmental Services

**Client Sample ID:** TRIP BLANK

**Project:** BMG HWY 537 2009 Release

**Collection Date:**

**Lab ID:** 1409E13-002

**Matrix:** TRIP BLANK

**Received Date:** 9/27/2014 5:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/29/2014 4:48:05 PM	R21524
Surr: BFB	87.8	70.9-130		%REC	1	9/29/2014 4:48:05 PM	R21524
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	9/29/2014 4:48:05 PM	R21524
Toluene	ND	1.0		µg/L	1	9/29/2014 4:48:05 PM	R21524
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 4:48:05 PM	R21524
Xylenes, Total	ND	2.0		µg/L	1	9/29/2014 4:48:05 PM	R21524
Surr: 4-Bromofluorobenzene	90.5	66.6-167		%REC	1	9/29/2014 4:48:05 PM	R21524

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	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	Page 2 of 5
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E13

03-Oct-14

**Client:** Animas Environmental Services

**Project:** BMG HWY 537 2009 Release

Sample ID <b>MB-15594</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Diesel Range</b>								
Client ID: <b>PBW</b>	Batch ID: <b>15594</b>	RunNo: <b>21572</b>								
Prep Date: <b>9/29/2014</b>	Analysis Date: <b>10/1/2014</b>	SeqNo: <b>632217</b>	Units: <b>mg/L</b>							
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	1.2		1.000		116	59	141			

Sample ID <b>LCS-15594</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Diesel Range</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>15594</b>	RunNo: <b>21572</b>								
Prep Date: <b>9/29/2014</b>	Analysis Date: <b>10/1/2014</b>	SeqNo: <b>632218</b>	Units: <b>mg/L</b>							
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	103	69.7	142			
Surr: DNOP	0.55		0.5000		109	59	141			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E13

03-Oct-14

**Client:** Animas Environmental Services

**Project:** BMG HWY 537 2009 Release

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R21524</b>		RunNo: <b>21524</b>							
Prep Date:	Analysis Date: <b>9/29/2014</b>		SeqNo: <b>629697</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		87.7	70.9	130			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R21524</b>		RunNo: <b>21524</b>							
Prep Date:	Analysis Date: <b>9/29/2014</b>		SeqNo: <b>629698</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	107	80	120			
Surr: BFB	19		20.00		96.1	70.9	130			

Sample ID <b>1409E13-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>MW-3</b>	Batch ID: <b>R21524</b>		RunNo: <b>21524</b>							
Prep Date:	Analysis Date: <b>9/29/2014</b>		SeqNo: <b>629700</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0.09540	89.8	70.4	127			
Surr: BFB	21		20.00		106	70.9	130			

Sample ID <b>1409E13-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>MW-3</b>	Batch ID: <b>R21524</b>		RunNo: <b>21524</b>							
Prep Date:	Analysis Date: <b>9/29/2014</b>		SeqNo: <b>629701</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0.09540	91.1	70.4	127	1.13	20	
Surr: BFB	21		20.00		105	70.9	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E13

03-Oct-14

**Client:** Animas Environmental Services

**Project:** BMG HWY 537 2009 Release

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBW</b>	Batch ID:	<b>R21524</b>	RunNo:	<b>21524</b>					
Prep Date:		Analysis Date:	<b>9/29/2014</b>	SeqNo:	<b>629730</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		90.9	66.6	167			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSW</b>	Batch ID:	<b>R21524</b>	RunNo:	<b>21524</b>					
Prep Date:		Analysis Date:	<b>9/29/2014</b>	SeqNo:	<b>629731</b>	Units:	<b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	63	2.0	60.00	0	105	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		97.4	66.6	167			

**Qualifiers:**

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

**Sample Log-In Check List**

Client Name: Animas Environmental

Work Order Number: 1409E13

RcptNo: 1

Received by/date: AM 09/27/14

Logged By: Ashley Gallegos 9/27/2014 5:45:00 AM AG

Completed By: Ashley Gallegos 9/27/2014 6:35:51 AM AG

Reviewed By: AS 09/27/14

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

**Log In**

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

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

- 16. 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: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

