

**3R - 448**

**GWMR**

**04 / 19 / 2012**

PERIODIC PROGRESS REPORT  
APR 25 - APR 16 12



April 19, 2012

Glenn von Gonten  
New Mexico Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

624 E. Comanche  
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505 564-2281  
Durango, Colorado  
970 403 3274

**Re: Periodic Progress Report for the Benson-Montin-Greer Highway 537 Truck  
Receiving Station 2009 Oil Release, Rio Arriba County, New Mexico**

Dear Mr. von Gonten:

On behalf of Benson-Montin-Greer Drilling Corporation (BMG), Animas Environmental Services, LLC (AES) has prepared this Periodic Progress Report detailing site activities at the BMG Highway 537 Truck Receiving Station 2009 oil release location. This Periodic Progress Report provides details of groundwater monitoring and sampling events conducted at the site in November 2011 and February 2012. Sampling was conducted in accordance with recommendations presented in the Site Investigation Report prepared by AES and submitted on April 10, 2009.

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## 1.0 Site Information

### 1.1 Site Location

The BMG Highway 537 Truck Receiving Station consists 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.

The truck receiving station is located along the south side of New Mexico 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 $\frac{1}{4}$  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. A topographic site location map, based on an excerpt from the United States Geological 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 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, and immediately contacted BMG. BMG personnel arrived on-site later in the morning 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 Mr. Brandon Powell, 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 around the buried 6-inch line measuring 10 feet by 20 feet by 15 feet in depth. 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 soil sample was analyzed by Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico. 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.

Following a thorough inspection of the buried 6-inch line, BMG personnel discovered a small external corrosion hole, measuring approximately 1/8 inch in diameter, 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 excavating additional soils in order to determine the extent of the release would be difficult and 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.

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## 2.0 Groundwater Sampling – November 2011 and February 2012

### 2.1 November 2011

AES personnel conducted groundwater monitoring and sampling at the project area on November 16, 2011. Groundwater samples were laboratory analyzed for BTEX and TPH per EPA Methods 8021/8015 at Hall, Albuquerque, New Mexico.

Following depth to water measurement, each well was purged with a disposable bailer until recorded temperature, pH, conductivity, and dissolved oxygen (DO) measurements were stabilized. All data was recorded onto Water Sample Collection Forms.

#### 2.1.1 Groundwater Measurements and Water Quality Data

During the November 2011 sampling event, groundwater and water quality measurements were recorded for MW-1 through MW-11. Average groundwater elevations decreased across the site by an average of 0.14 feet since the August 2011 sampling event. Groundwater gradient was calculated between MW-2 and MW-9, with a magnitude of 0.008 ft/ft to the southwest, for November 2011. Depth to groundwater ranged from 14.99 feet bgs in MW-6 to 30.07 feet bgs in MW-11.

Water quality measurements were made with an YSI Water Quality Meter, and temperatures ranged from 10.81°C in MW-10 to 12.01°C in MW-6. DO concentrations were between 2.15 mg/L in MW-4 and 4.47 mg/L in MW-5. ORP measurements were between -115.4 mV in MW-8 and 307.9 mV in MW-11, and conductivity readings were between 3.912 mS/cm and 4.814 mS/cm. Depth to groundwater measurements and water quality data are presented in Table 1, and Water Sample Collection Forms are included as Appendix A.

#### 5.1.2 Groundwater Analytical Results

Laboratory results showed benzene concentrations above the applicable New Mexico Water Quality Control Commission (WQCC) standard of 10 µg/L in MW-1 (2,700 µg/L), MW-3 (63 µg/L), and MW-9 (200 µg/L). Benzene concentrations were below laboratory detection limits or the WQCC standard in the remaining sampled wells. Toluene, ethylbenzene, and xylene concentrations were below applicable WQCC standards in each of the wells sampled. TPH concentrations for gasoline range organics (GRO) were reported above laboratory

detection limits in MW-1 (3.9 mg/L), MW-8 (0.17 mg/L), and MW-9 (0.57 mg/L). TPH concentrations for diesel and motor oil range organics (DRO and MRO) were reported below laboratory detection limits in all sampled wells, except MW-3 which had a reported DRO concentration of 3.9 mg/L. Tabulated laboratory analytical results are included in Table 2, and laboratory analytical reports for November 2011 are presented in Appendix B.

## 5.2 February 2012

The first quarterly groundwater and sampling event of 2012 was conducted by AES personnel on February 21, 2012. Groundwater samples from MW-1, MW-3, MW-4, MW-8, and MW-9 were laboratory analyzed for BTEX per EPA Method 8021 and TPH per EPA Method 8015 at Hall. No samples were collected from MW-2, MW-5 through MW-7, MW-10, and MW-11 because these wells have remained below laboratory detection limits for BTEX and TPH for eight sampling events.

### 5.2.1 Groundwater Measurements and Water Quality Data

During the February 2012 sampling event, groundwater measurements were recorded for MW-1 through MW-11. Average groundwater elevations increased across the site by an average of 0.06 feet since the November 2011 sampling event. Groundwater gradient was calculated between MW-2 and MW-9, with a magnitude of 0.008 ft/ft to the southwest, for February 2012. Groundwater elevations ranged from 7,033.21 feet bgs in MW-9 and 7,035.19 feet bgs in MW-2. Groundwater elevation data and contours are presented in Figure 3.

Groundwater quality measurements were recorded for MW-1, MW-3, MW-4, MW-8 and MW-9. Recorded temperatures ranged from 10.27°C in MW-4 to 12.21°C in MW-8. Groundwater pH measurements ranged from 6.78 to 7.09, and DO concentrations were between 0.88 mg/L in MW-8 and 1.37 mg/L in MW-9. ORP measurements were between -127.0 mV in MW-9 and -11.3 mV in MW-4, and conductivity readings were between 4.063 mS/cm and 4.927 mS/cm. Depth to groundwater measurements and water quality data are presented in Table 1. Water Sample Collection Forms are included as Appendix A.

### 5.2.2 Groundwater Analytical Results

Dissolved phase benzene concentrations above the applicable WQCC standard of 10 µg/L continue to be reported in MW-1 (360 µg/L) and MW-9 (120 µg/L), but concentrations decreased since the November 2011 sampling event. Benzene concentrations were below laboratory detection limits or the WQCC standard in the remaining sampled wells. Toluene, ethylbenzene, and xylene concentrations were below applicable WQCC standards in each of the wells sampled. GRO concentrations above the laboratory detection limit were reported in MW-1 (1.2 mg/L), MW-3 (0.18 mg/L), and MW-9 (0.30 mg/L), but note that GRO concentrations have also decreased since the November 2011 sampling event. DRO and

MRO concentrations were reported below the laboratory detection limits in all wells sampled. Tabulated laboratory analytical results are included in Table 2. Contaminant concentrations are included in Figure 4, and dissolved phase benzene contours are presented in Figure 5. Graphs 1 through 4 present groundwater elevations and dissolved phase benzene concentrations for MW-1, MW-3, MW-8, and MW-9, respectively. Laboratory analytical reports for February 2012 are included in Appendix A.

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### 3.0 Conclusions and Recommendations

AES conducted groundwater monitoring and sampling events on November 16, 2011, and February 21, 2012. All eleven wells (MW-1 through MW-11) were sampled during the November 2011 event. In February 2012, samples were collected from monitor wells MW-1, MW-3, MW-8, and MW-9. Monitor wells MW-2, MW-5 through MW-7, MW-10, and MW-11 have remained below the WQCC standards for BTEX and below laboratory detection limits for TPH for eight sampling events and therefore were not sampled during the February 2012 sampling event.

Benzene concentrations have fluctuated within MW-1, MW-3, MW-8, and MW-9 since well installation in 2009. Significant decreases in benzene concentrations since the November 2011 sampling event were reported in February 2012 in MW-1 (from 2,700 µg/L to 360 µg/L), MW-3 (from 63 µg/L to 4.8 µg/L), and MW-9 (from 200 µg/L to 120 µg/L). Toluene, ethylbenzene, and xylenes have remained below the applicable WQCC standards in all wells. GRO concentrations from the February 2012 sampling event were reported above the laboratory detection limit in MW-1, MW-3, and MW-9, with the highest concentration being reported in MW-1 (1.2 mg/L). GRO concentrations in these wells have decreased since the November 2011 sampling event. DRO and MRO concentrations were reported below the laboratory detection limit in all wells during the February 2012 sampling event.

Based on laboratory analytical results, AES recommends continuing groundwater monitoring and sampling of monitor wells for MW-1, MW-3, MW-8, and MW-9 on a quarterly basis through the end of 2012. It is recommended that MW-4 be sampled one more time, and if dissolved phase concentrations are below applicable WQCC standards, then subsequent sampling of this well can be suspended.

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## 4.0 Scheduled Site Activities

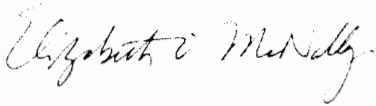
The next groundwater sampling event has tentatively been scheduled for May 2012. Samples collected from monitor wells MW-1, MW-3, MW-4, MW-8, and MW-9 will be laboratory analyzed for BTEX per EPA Method 8021 and TPH per EPA Method 8015.

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

Sincerely,



Deborah Watson  
Project Manager



Elizabeth McNally, P.E.

## Tables

Table 1. Summary of Groundwater Measurement 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, February 2012

Figure 4. Groundwater Contaminant Concentrations, February 2012

Figure 5. Dissolved Phase Benzene Contours, February 2012

## Graphs

Graph 1. MW-1 Groundwater Elevations and Benzene Concentrations, February 2012

Graph 2. MW-3 Groundwater Elevations and Benzene Concentrations, February 2012

Graph 3. MW-8 Groundwater Elevations and Benzene Concentrations, February 2012

Graph 4. MW-9 Groundwater Elevations and Benzene Concentrations, February 2012

## Appendices

Appendix A. Water Sample Collection Forms, November 2011 and February 2012

Appendix B. Laboratory Analytical Reports, 1111785 and 1202828

cc:

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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-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
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-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

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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-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-5	05-Mar-09	28.24	7064.79	7036.55	11.80	6.088	3.89	6.61	-17.3
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-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

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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
MW-6	21-Feb-12	14.90	7049.54	7034.64	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-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

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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
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-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
MW-10	21-Feb-12	28.13	7063.27	7035.14	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

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	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
Downgradient MW-7*	09-Mar-09	13.09	7051.30	7038.21	8.14	3.441	4.52	6.49	12.8

**NOTE:**

NM = NOT MEASURED

NA = NOT AVAILABLE

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

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-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
MW-3	21-Feb-12	4.8	<1.0	<1.0	<2.0	0.18	<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

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-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-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
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

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 ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	GRO ( $\text{mg/L}$ )	DRO ( $\text{mg/L}$ )	MRO ( $\text{mg/L}$ )
<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-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-9	06-Mar-09	170	350	49	530	2.5	<1.0	<5.0
MW-9	06-Apr-09	82	62	16	210	1.6	<1.0	<5.0
MW-9	10-Sep-09	46	<1.0	3.8	19	0.86	<1.0	<5.0
MW-9	15-Jan-10	62	<1.0	4.2	12	0.49	<1.0	<5.0
MW-9	15-Oct-10	53	<1.0	2.3	<2.0	0.22	<1.0	<5.0
MW-9	21-Jan-11	390	<1.0	5.1	<2.0	0.41	<1.0	<5.0
MW-9	12-May-11	390	<1.0	11	<2.0	0.92	<1.0	<5.0
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-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
Downgradient MW-7*	09-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

NOTE: NS = Not Sampled



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
		( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\text{mg/L}$ )	( $\text{mg/L}$ )	( $\text{mg/L}$ )
<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>

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil Range Organics

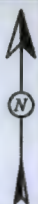
\* = Monitoring Well from HWY 537 '06-'07 spill

SCHMITZ RANCH QUADRANGLE  
NEW MEXICO - RIO ARRIBA COUNTY  
1963

HWY 537 TRUCK  
RECEIVING STATION

4 INCH BMG LLAVES PIPELINE

2,000 1,000 SCALE 0 2,000  
500  
(1 INCH = 2,000 FEET)



AES



Animas Environmental Services, LLC

DRAWN BY:  
N. Willis

DATE DRAWN:  
April 4, 2011

REVISIONS BY:  
C. Lameman

DATE REVISED:  
April 19, 2012

CHECKED BY:  
D. Watson

DATE CHECKED:  
April 19, 2012

APPROVED BY:  
E. McNally

DATE APPROVED:  
April 19, 2012

FIGURE 1

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



Arimas Environmental Services, LLC

<b>DRAWN BY:</b>	<b>DATE DRAWN:</b>
R. Kennemer	March 16, 2009
<b>REVISIONS BY:</b>	<b>DATE REVISED:</b>
C. Lameman	April 19, 2012
<b>CHECKED BY:</b>	<b>DATE CHECKED:</b>
D. Watson	April 19, 2012
<b>APPROVED BY:</b>	<b>DATE APPROVED:</b>
E. McNally	April 19, 2012

**LEGEND**

 MONITORING WELL INSTALLED  
FEBRUARY 2009

AERIAL SOURCE: (C) GOOGLE EARTH 2010

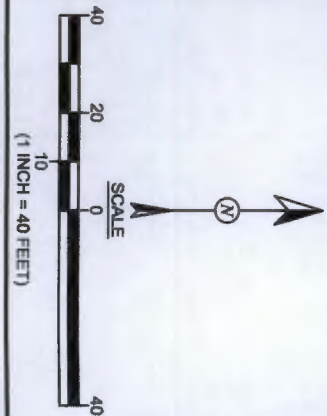




FIGURE 3

GROUNDWATER ELEVATION  
CONTOURS, FEBRUARY 2012

BENSON-MONTIN-GREER  
LLAVES PIPELINE HWY. 537  
TRUCK RECEIVING STATION 2009 RELEASE  
SW ¼, SW ¼, NW ¼, SEC. 18, T25N, R3W  
RIO ARriba COUNTY, NEW MEXICO  
N36.39866, W107.19328



Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
R. Kennemer	March 16, 2009
REVISIONS BY:	DATE REVISED:
C. Lameman	April 19, 2012
CHECKED BY:	DATE CHECKED:
D. Watson	April 19, 2012
APPROVED BY:	DATE APPROVED:
E. McNally	April 19, 2012

LEGEND

- MONITOR WELL LOCATIONS  
(INSTALLED FEBRUARY 2009)
- FENCE
- PONDS, WET LANDS, & FLOOD  
PLANES
- 7034.84 GROUNDWATER ELEVATION  
IN FEET (A.M.S.L.)
- 7034.5- GROUNDWATER ELEVATION  
CONTOUR IN FEET (A.M.S.L.)

NOTE: ALL GROUNDWATER ELEVATION  
MEASUREMENTS WERE MADE ON  
FEBRUARY 21, 2012.

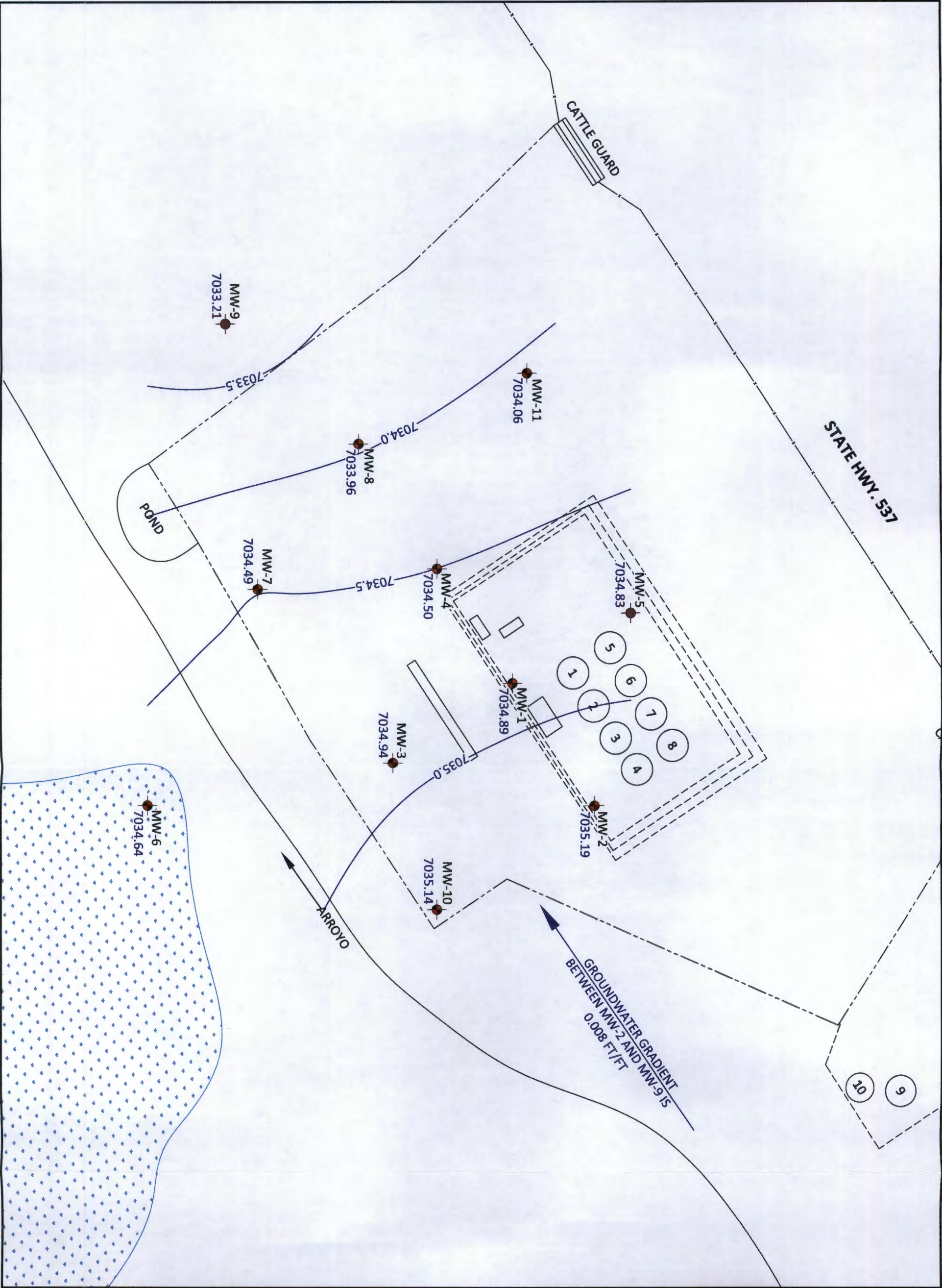
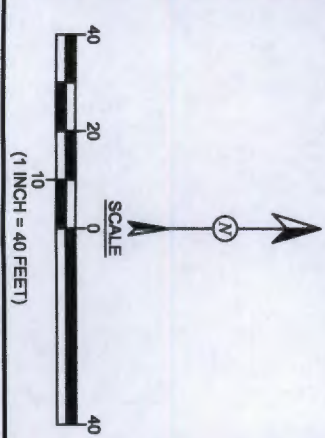




FIGURE 4

GROUNDWATER CONTAMINANT  
CONCENTRATIONS, FEBRUARY 2012

BENSON-MONTIN-GREER  
LLAVES PIPELINE HWY. 537  
TRUCK RECEIVING STATION 2009 RELEASE  
SW ¼, SW ¼, NW ¼ SEC. 18, T25N, R3W  
RIO ARRIAGA COUNTY, NEW MEXICO  
N36.39866, W107.19328



Animas Environmental Services, LLC

DRAWN BY:	R. Kennemer	DATE DRAWN:	March 16, 2009
REVISIONS BY:	C. Lammeman	DATE REVISED:	April 19, 2012
CHECKED BY:	D. Watson	DATE CHECKED:	April 19, 2012
APPROVED BY:	E. McNally	DATE APPROVED:	April 19, 2012

**LEGEND**

- MONITOR WELL LOCATIONS (INSTALLED FEBRUARY 2009)
- FENCE
- PONDS, WET LANDS, & FLOOD PLANES

**B** BENZENE  
**T** TOLUENE  
**E** ETHYLBENZENE  
**X** XYLENES  
**GRO** GASOLINE RANGED ORGANICS  
**DRO** DIESEL RANGED ORGANICS  
**MRO** MOTOR OIL RANGED ORGANICS  
**µg/L** MICROGRAMS PER LITER (PPB)  
< ANALYTE NOT DETECTED ABOVE LISTED METHOD LIMIT

NOTE: ALL SAMPLES COLLECTED ON FEBRUARY 21, 2012, AND ANALYZED PER EPA METHOD 8021B AND 8015B.

SCALE

40 20 0 20 40

(1 INCH = 40 FEET)

N

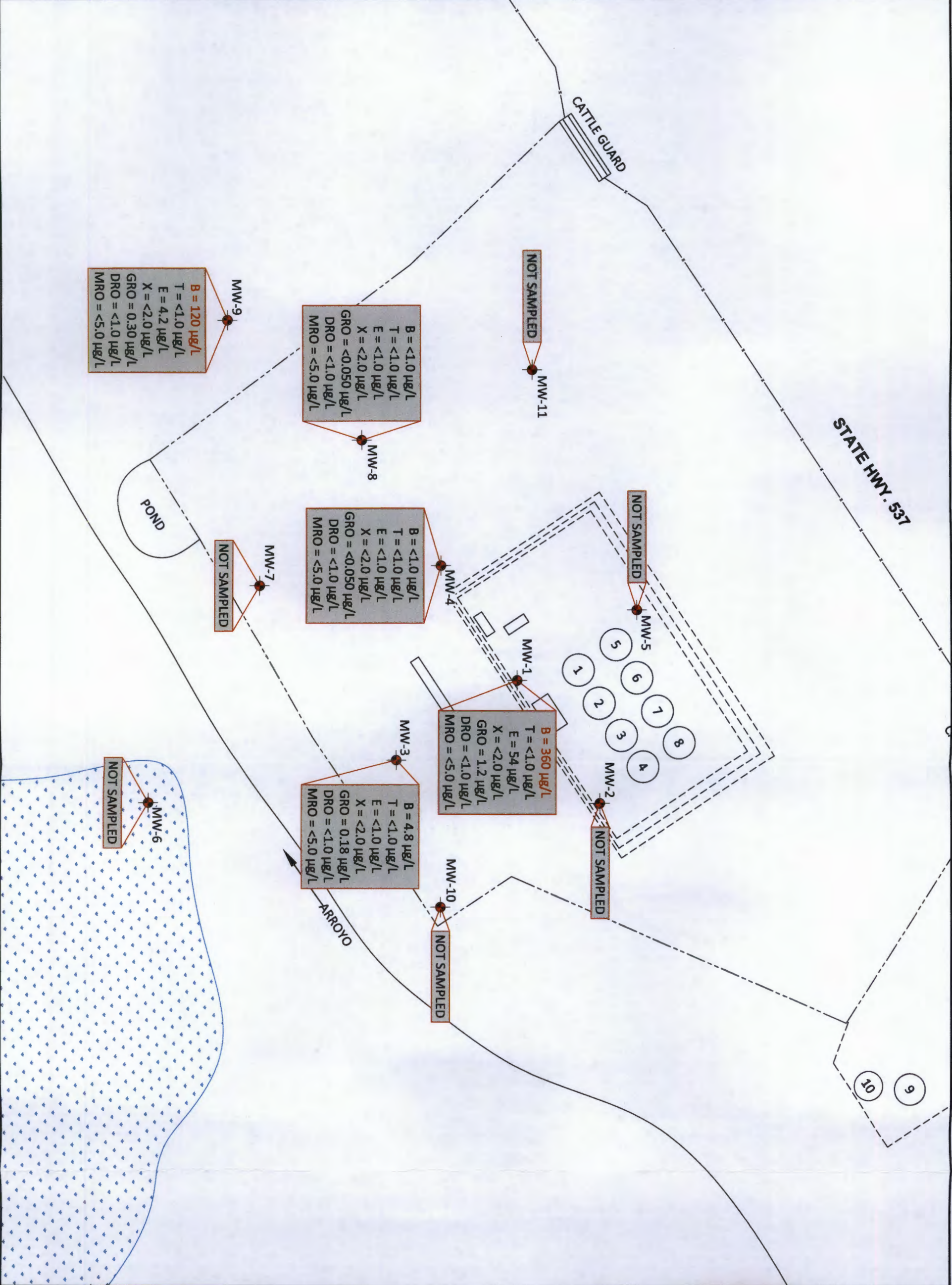




FIGURE 5

DISSOLVED BENZENE  
CONCENTRATION CONTOURS  
FEBRUARY 2012  
BENSON-MONTIN-GREER  
LLAVES PIPELINE HWY. 537  
TRUCK RECEIVING STATION 2009 RELEASE  
SW ¼, SW ¼, NW ¼, SEC. 18, T25N, R3W  
RIO ARriba COUNTY, NEW MEXICO  
N36.39866, W107.19328



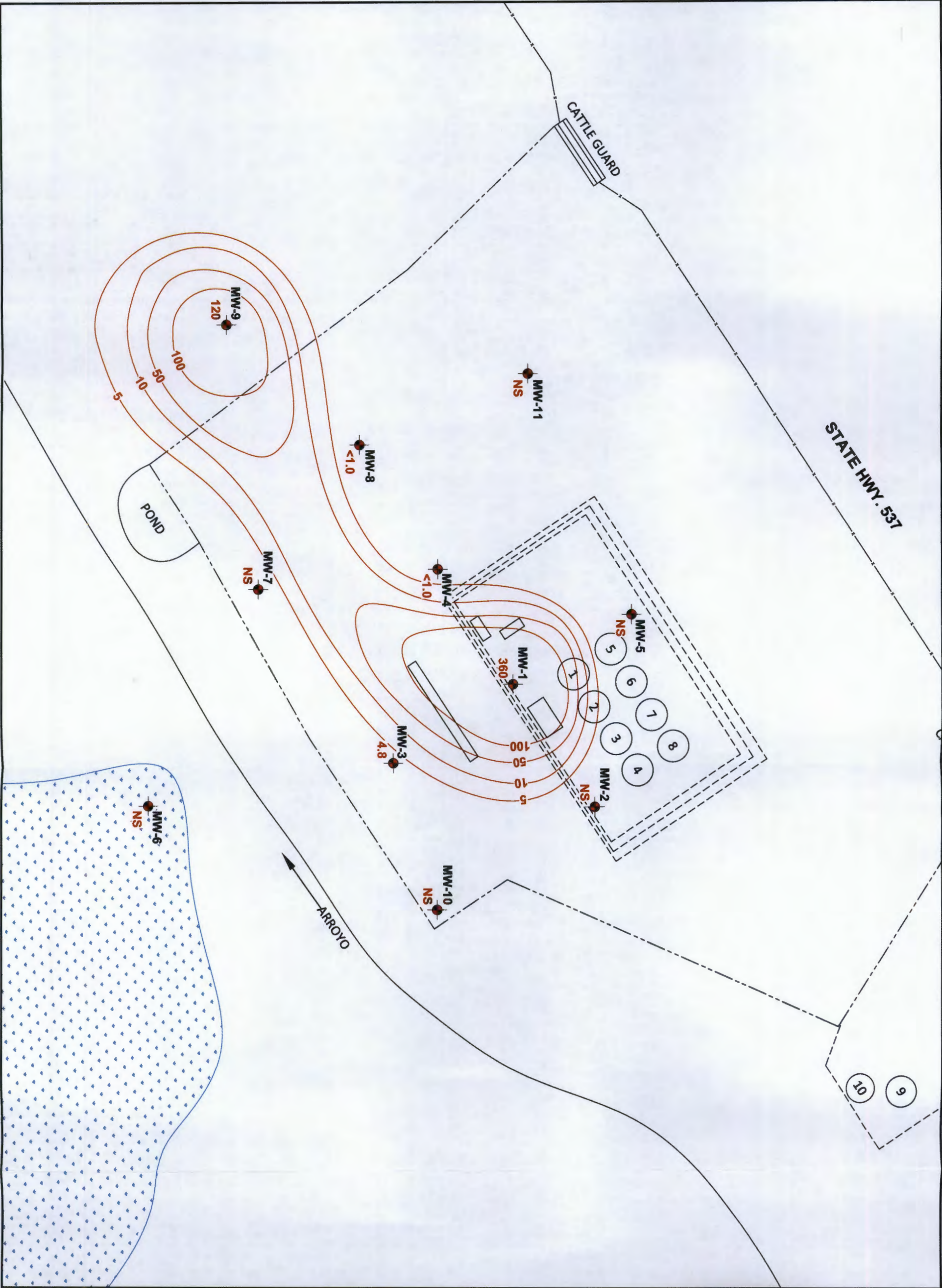
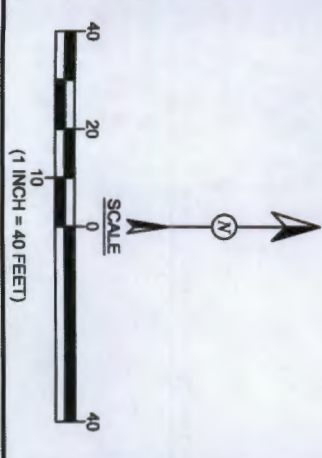
Arimas Environmental Services, LLC

DRAWN BY: R. Kennemer	DATE DRAWN: March 16, 2009
REVISIONS BY: C. Lameman	DATE REVISED: April 19, 2012
CHECKED BY: D. Watson	DATE CHECKED: April 19, 2012
APPROVED BY: E. McNally	DATE APPROVED: April 19, 2012

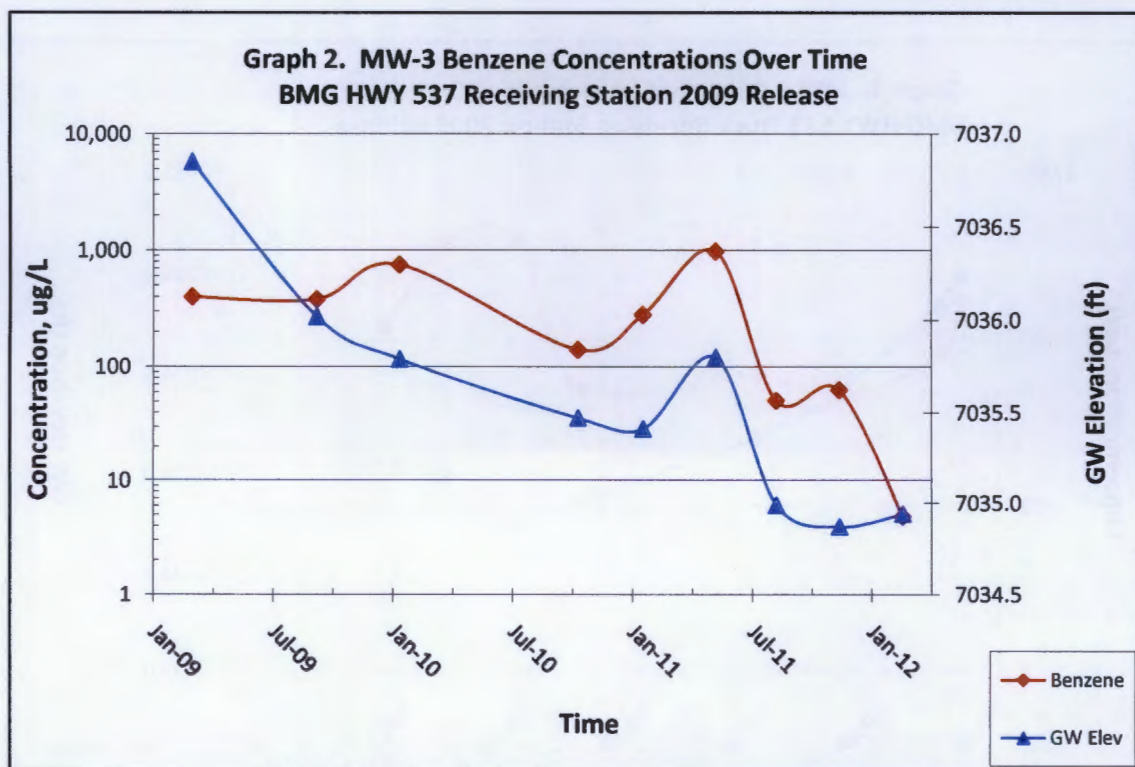
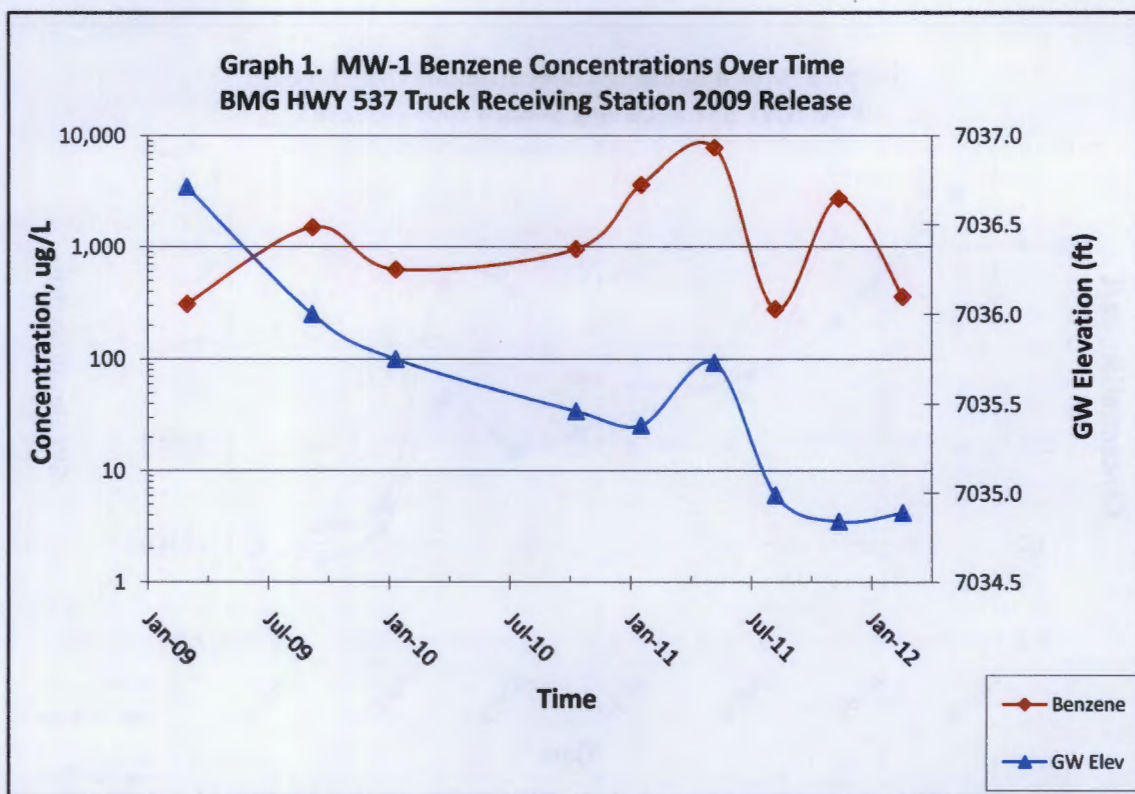
LEGEND

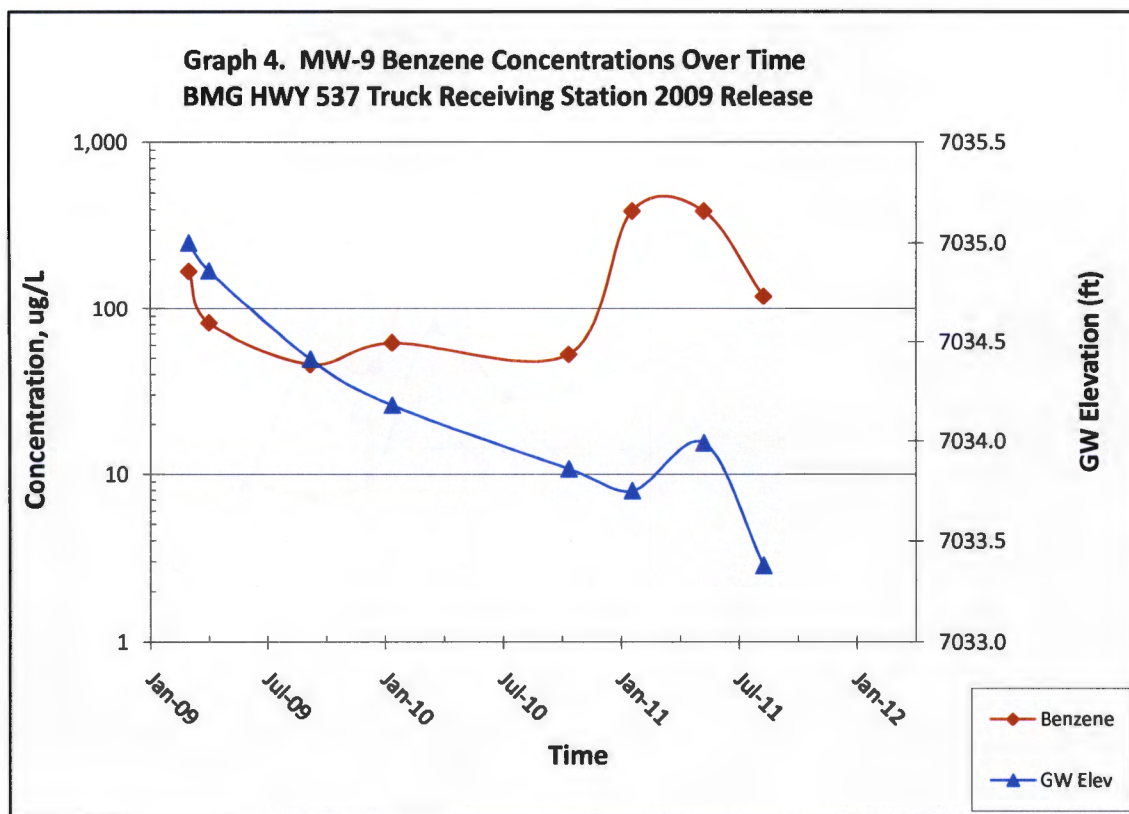
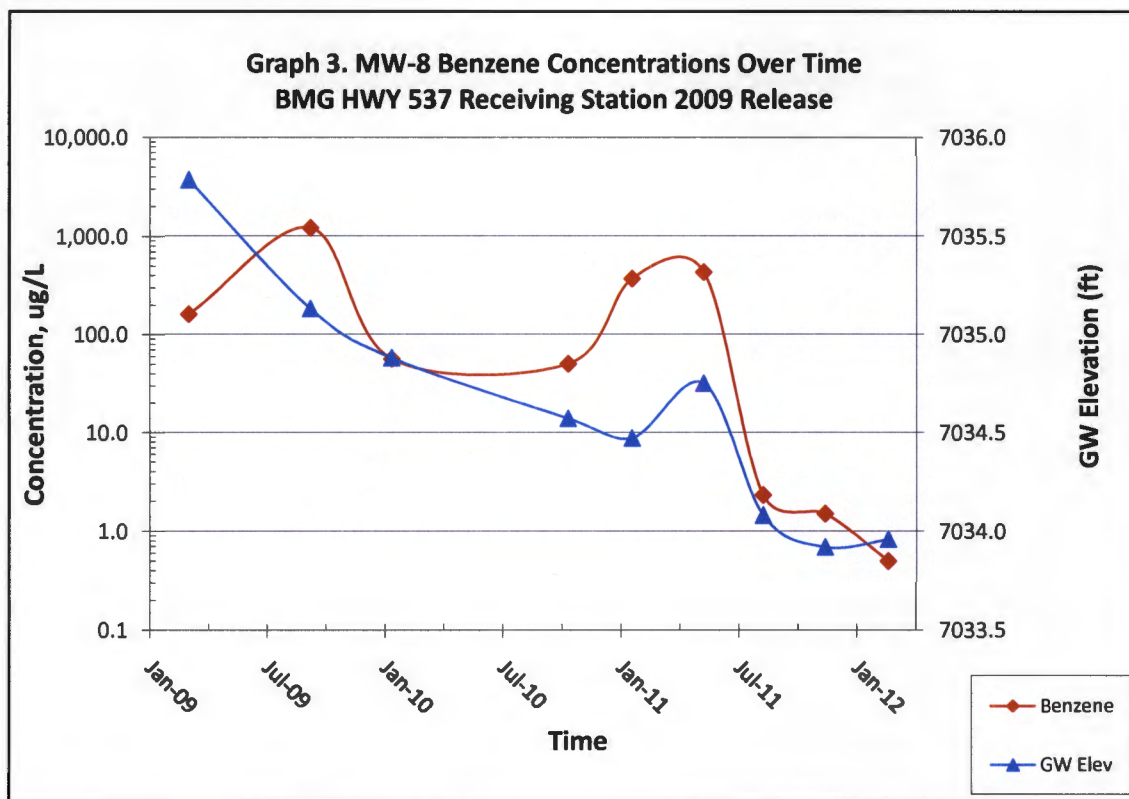
- MONITOR WELL LOCATIONS  
(INSTALLED FEBRUARY 2009)
- FENCE
- PONDS, WET LANDS, & FLOOD  
PLANES
- 360 DISSOLVED BENZENE  
CONCENTRATION IN µg/L
- 50 DISSOLVED BENZENE  
CONCENTRATION CONTOURS µg/L

NOTE: ALL SAMPLES COLLECTED ON FEBRUARY  
21, 2012, AND ANALYZED PER EPA METHOD  
8021B AND 8015B.











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

Form: 1 of 1

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

**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

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 11-16-11

Project: Groundwater Monitoring and Sampling

Arrival Time: 1622

Sampling Technician: N. Willis

Air Temp: 50°F

Purge / No Purge: Purge

T.O.C. Elev. (ft): 7064.66

Well Diameter (in): 2

Total Well Depth (ft): 43.65

Initial D.T.W. (ft): Time: (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.82

Time: 1624 (taken prior to purging well)

Final D.T.W. (ft): Time: (taken after sample collection)

If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

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

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1627	11.16	3.427	3.48	5.52	-73.1	0.25 gal.	
1630	10.88	3.518	3.14	5.30	-92.2	0.25	
1633	10.98	3.754	2.75	5.29	-95.2	1.25	
1636	11.35	4.030	3.21	5.31	-91.4	1.25	
1639	11.50	4.261	2.70	5.32	-84.6	1.25	
1642	11.70	4.332	2.70	5.33	-65.4	1.25	
1645	11.57	4.385	2.89	5.35	-69.7	1.25	
1650							Samples 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:

Collected Samples Stored on Ice in Cooler:

Chain of Custody Record Complete:

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:

<b>MONITORING WELL SAMPLING RECORD</b>				<b>Animas Environmental Services</b>			
Monitor Well No: <b>MW-2</b>				624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022			
Site: Highway 537 Truck Station Spill 2009				Project No.: AES 090201			
Location: Rio Arriba County, New Mexico				Date: 11-16-11			
Project: Groundwater Monitoring and Sampling				Arrival Time: 1237			
Sampling Technician: N. Willis				Air Temp: 52°F			
Purge / No Purge: Purge				T.O.C. Elev. (ft): 7064.65			
Well Diameter (in): 2				Total Well Depth (ft): 44.2			
Initial D.T.W. (ft):		Time:		(taken at initial gauging of all wells)			
Confirm D.T.W. (ft): 29.52		Time: 1238		(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: _____							
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1241	11.99	4.092	3.82	7.51	144.4	0.25 gal.	
1244	12.02	4.090	2.96	7.66	152.3	0.75	
1247	12.00	4.088	2.67	7.73	159.2	1.25	
1250	11.77	4.060	2.20	7.68	164.9	1.25	
1253	11.69	4.036	2.27	7.59	169.8	1.25	
1256	11.77	4.017	2.83	7.54	173.5	1.25	
1259	11.60	4.021	2.48	7.51	176.2	1.25	
1304							Samples Collected
					Possible Malfunction		
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
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: _____							
Collected Samples Stored on Ice in Cooler: _____							
Chain of Custody Record Complete: _____							
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

Monitor Well No: **MW-3**

Animas Environmental Services

624 E. Comanche, Farmington NM 87401

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

**Site:** Highway 537 Truck Station Spill 2009

**Project No.: AES 090201**

**Location:** Rio Arriba County, New Mexico

Date: 11-16-11

**Project:** Groundwater Monitoring and Sampling

Arrival Time: 1515

**Sampling Technician:** N. Willis

Air Temp: 50°F

Purge / No Purge: \_\_\_\_\_ Purge

T.O.C. Elev. (ft): 7064.01

Well Diameter (in): 2

**Total Well Depth (ft):** 41.1

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:

### Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity ( $\mu$ S) ( $mS$ )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1520	11.59	4.226	2.44	6.48	-131.1	0.25 gal.	
1523	10.85	4.249	1.88	6.49	-129.6	1	
1526	10.77	4.265	1.82	6.51	-131.2	1	
1529	10.92	4.258	1.62	6.50	-130.2	1	
1532	10.71	4.305	1.80	6.52	-109.2	1	
1535	10.72	4.316	2.41	6.52	-105.4	1	
1538	10.87	4.326	2.17	6.53	-105.7	1	
1543							Samples 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:

**Collected Samples Stored on Ice in Cooler:**

**Chain of Custody Record Complete:**

**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-4624 E. Comanche, Farmington NM 87401  
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 11-16-11

Project: Groundwater Monitoring and Sampling

Arrival Time: 1200

Sampling Technician: N. Willis

Air Temp: 51°FPurge / No Purge: PurgeT.O.C. Elev. (ft): 7063.72Well Diameter (in): 2Total Well Depth (ft): 44

Initial D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_

(taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.26Time: 1202

(taken prior to purging well)

Final D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_

(taken after sample collection)

If NAPL Present: D.T.P.: \_\_\_\_\_

D.T.W.: \_\_\_\_\_

Thickness: \_\_\_\_\_

Time: \_\_\_\_\_

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

Time	Temp (deg C)	Conductivity ( $\mu$ S) ( <del>ms</del> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1205	12.21	4.675	3.05	7.12	251.0	0.25 gal.	
1208	12.01	4.716	2.97	7.09	215.1	0.75	
1211	11.92	4.709	2.97	7.09	185.2	1.25	
1214	11.72	4.724	2.67	7.10	172.4	1.25	
1217	11.94	4.713	2.29	7.10	164.1	1.25	
1220	12.05	4.701	2.37	7.11	160.4	1.25	
1223	11.66	4.725	2.15	7.11	153.0	1.25	
1228							Samples Collected
					Possible Malfunction		

**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: \_\_\_\_\_

Collected Samples Stored on Ice in Cooler: \_\_\_\_\_

Chain of Custody Record Complete: \_\_\_\_\_

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-5

624 E. Comanche, Farmington NM 87401

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

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 11-16-11

Project: Groundwater Monitoring and Sampling

Arrival Time: 1120

Sampling Technician: N. Willis

Air Temp: 48°FPurge / No Purge: PurgeT.O.C. Elev. (ft): 7064.79Well Diameter (in): 2Total Well Depth (ft): 44.5

Initial D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_

(taken at initial gauging of all wells)

Confirm D.T.W. (ft): 30.00Time: 1122

(taken prior to purging well)

Final D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_

(taken after sample collection)

If NAPL Present: D.T.P.: \_\_\_\_\_

D.T.W.: \_\_\_\_\_

Thickness: \_\_\_\_\_

Time: \_\_\_\_\_

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

Time	Temp (deg C)	Conductivity (µS) ( <del>mS</del> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1133	11.53	4.802	4.30	7.13	291.8	0.25 gal.	
1136	11.38	4.810	4.33	7.15	290.7	0.75	
1139	11.32	4.827	4.67	7.15	290.5	1.25	
1142	11.18	4.823	4.65	7.16	290.3	1.25	
1145	11.25	4.820	3.83	7.17	289.9	1.25	
1148	11.20	4.810	4.65	7.17	289.9	1.25	
1151	11.16	4.814	4.47	7.18	290.4	1.25	
1156	_____	_____	_____	_____	_____	_____	Samples Collected
					Possible Malfunction		

**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: \_\_\_\_\_

Collected Samples Stored on Ice in Cooler: \_\_\_\_\_

Chain of Custody Record Complete: \_\_\_\_\_

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:

[illegible]

# MONITORING WELL SAMPLING RECORD

Animas Environmental Services

Monitor Well No: MW-7

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

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 11-16-11

Project: Groundwater Monitoring and Sampling

Arrival Time: 1336

Sampling Technician: N. Willis

Air Temp: 53°F

Purge / No Purge: Purge

T.O.C. Elev. (ft): 7062.8

Well Diameter (in): 2

Total Well Depth (ft): 44.6

Initial D.T.W. (ft): Time: (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 28.38 Time: 1339 (taken prior to purging well)

Final D.T.W. (ft): Time: (taken after sample collection)

If NAPL Present: D.T.P.: Time: Thickness: Time:

## 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
1342	11.88	4.029	2.85	6.21	188.4	0.25 gal.	
1345	11.39	4.050	3.35	6.25	185.3	0.5	
1348	11.52	4.050	2.98	6.28	183.5	<del>1.5</del> 1.5	
1351	11.54	4.061	3.47	6.30	181.8	<del>1.5</del> 1.5	
1354	11.44	4.066	2.84	6.30	181.2	<del>1.5</del> 1.5	
1357	11.28	4.068	3.31	6.31	178.7	<del>1.5</del> 1.5	
1400	11.24	4.077	2.75	6.32	168.0	<del>1.5</del> 1.5	
<del>1405</del>							
1405							Samples 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:

Collected Samples Stored on Ice in Cooler:

Chain of Custody Record Complete:

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-8624 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: N. Willis  
Purge / No Purge: Purge  
Well Diameter (in): 2  
Initial D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_  
Confirm D.T.W. (ft): 29.35 Time: 1445  
Final D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_  
If NAPL Present: D.T.P.: \_\_\_\_\_ D.T.W.: \_\_\_\_\_ Thickness: \_\_\_\_\_ Time: \_\_\_\_\_

Project No.: AES 090201  
Date: 11-16-11  
Arrival Time: 1443  
Air Temp: 50°F  
T.O.C. Elev. (ft): 7063.27  
Total Well Depth (ft): 44.1  
(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) ( <u>mS</u> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1448	11.99	3.924	3.16	6.54	-113.3	0.25 gal.	
1451	11.77	3.920	3.00	6.56	-132.5	0.75	
1454	11.99	4.070	2.37	6.55	-133.6	1.25	
1457	11.53	4.166	2.46	6.55	-130.1	1.25	
1500	11.51	4.174	2.62	6.52	-124.6	1.25	
1503	11.61	4.194	2.44	6.50	-119.4	1.25	
1506	11.49	4.218	2.57	6.49	-115.4	1.25	
1511							Samples 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: \_\_\_\_\_

Collected Samples Stored on Ice in Cooler: \_\_\_\_\_

Chain of Custody Record Complete: \_\_\_\_\_

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 Bailor

Notes/Comments:



**MONITORING WELL SAMPLING RECORD**

Animas Environmental Services

Monitor Well No: **MW-10**

624 E. Comanche, Farmington NM 87401

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

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 11-16-11

Project: Groundwater Monitoring and Sampling

Arrival Time: 1308

Sampling Technician: N. Willis

Air Temp: 53°F

Purge / No Purge: Purge

T.O.C. Elev. (ft): 7063.27

Well Diameter (in): 2

Total Well Depth (ft): 38.8

Initial D.T.W. (ft): Time: (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 28.20 Time: 1310 (taken prior to purging well)

Final D.T.W. (ft): Time: (taken after sample collection)

If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

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

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1313	11.41	3.892	2.92	6.38	178.9	0.25 gal.	
1316	11.31	3.890	2.90	6.29	181.3	1	
1319	11.19	3.896	3.06	6.24	184.4	1	
1322	11.09	3.905	2.68	6.21	186.6	1	
1325	10.84	3.919	3.43	6.18	189.2	1	
1328	10.81	3.912	2.81	6.17	190.7	1	
1333							Samples 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:

Collected Samples Stored on Ice in Cooler:

Chain of Custody Record Complete:

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-1

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

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 2-21-12

Project: Groundwater Monitoring and Sampling

Arrival Time: 1540

Sampling Technician: N. Willis

Air Temp: 40°F

Purge / No Purge: Purge

T.O.C. Elev. (ft): 7064.66

Well Diameter (in): 2

Total Well Depth (ft): 43.65

Initial D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_ (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.77

Time: 1542 (taken prior to purging well)

Final D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_ (taken after sample collection)

If NAPL Present: D.T.P.: \_\_\_\_\_

D.T.W.: \_\_\_\_\_

Thickness: \_\_\_\_\_

Time: \_\_\_\_\_

## Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity ( $\mu$ S) ( <del>mS</del> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1548	12.03	4.531	1.16	6.87	-129.4	0.25 gal.	
1551	12.05	4.034	1.09	6.75	-137.8	0.5	
1555	12.07	4.037	1.06	6.73	-139.6	1.25	
1559	12.11	4.139	1.04	6.72	-143.8	1.25	
1602	12.08	4.041	1.10	6.71	-141.9	1.25	
1606	12.06	4.044	1.03	6.71	-142.6	1.25	
1610	12.01	4.063	1.09	6.78	-123.9	1.25	
1615							Samples 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: \_\_\_\_\_

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-3624 E. Comanche, Farmington NM 87401  
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 2-21-12

Project: Groundwater Monitoring and Sampling

Arrival Time: 1500

Sampling Technician: N. Willis

Air Temp: 40°FPurge / No Purge: PurgeT.O.C. Elev. (ft): 7064.01Well Diameter (in): 2Total Well Depth (ft): 41.1

Initial D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_

(taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.07Time: 1502

(taken prior to purging well)

Final D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_

(taken after sample collection)

If NAPL Present: D.T.P.: \_\_\_\_\_

D.T.W.: \_\_\_\_\_

Thickness: \_\_\_\_\_

Time: \_\_\_\_\_

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

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1508	11.11	4.519	1.55	7.13	138.9	0.25 gal.	
1510	11.91	4.382	0.93	7.04	-160.0	0.75	
1513	11.56	4.478	0.96	7.10	-138.0	1	
1517	11.66	4.464	0.94	7.08	-142.1	1	
1520	11.49	4.466	1.07	7.09	-128.2	1	
1524	11.46	4.473	1.13	7.10	-123.6	1	
1528	11.36	4.481	1.01	7.09	-118.0	1	
1533	—	—	—	—	—	—	Samples 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: \_\_\_\_\_

Collected Samples Stored on Ice in Cooler: YesChain of Custody Record Complete: YesAnalytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NMEquipment 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-4624 E. Comanche, Farmington NM 87401  
Tel. (505) 564-2281 Fax (505) 324-2022Site: Highway 537 Truck Station Spill 2009Project No.: AES 090201Location: Rio Arriba County, New MexicoDate: 2-21-12Project: Groundwater Monitoring and SamplingArrival Time: 1423Sampling Technician: N. WillisAir Temp: 40°FPurge / No Purge: PurgeT.O.C. Elev. (ft): 7063.72Well Diameter (in): 2Total Well Depth (ft): 44

Initial D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_ (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.22Time: 1425 (taken prior to purging well)

Final D.T.W. (ft): \_\_\_\_\_

Time: \_\_\_\_\_ (taken after sample collection)

If NAPL Present: D.T.P.: \_\_\_\_\_

D.T.W.: \_\_\_\_\_

Thickness: \_\_\_\_\_

Time: \_\_\_\_\_

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

Time	Temp (deg C)	Conductivity ( $\mu$ S) ( <del>mS</del> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1430	13.04	4.834	0.98	6.92	-67.2	0.25 gal.	
1433	12.59	4.882	1.00	6.93	-42.2	0.75	
1437	11.22	4.840	1.21	7.05	-22.5	1.25	
1440	10.84	4.884	1.10	7.06	-20.6	1.25	
1443	10.53	4.921	1.03	7.05	-19.3	1.25	
1446	10.28	4.941	0.99	7.05	-17.7	1.25	
1449	10.27	4.927	1.02	7.02	-11.3	1.25	
1454							Samples 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: \_\_\_\_\_

Collected Samples Stored on Ice in Cooler: YesChain of Custody Record Complete: YesAnalytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NMEquipment 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-8

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

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 2-27-12

Project: Groundwater Monitoring and Sampling

Arrival Time: 1337

Sampling Technician: N. Willis

Air Temp: 70°F

Purge / No Purge: Purge

T.O.C. Elev. (ft): 7063.27

Well Diameter (in): 2

Total Well Depth (ft): 44.1

Initial D.T.W. (ft): Time:

(taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.31

Time: 1339

(taken prior to purging well)

Final D.T.W. (ft): Time:

(taken after sample collection)

If NAPL Present: D.T.P.: Time:

D.T.W.: Thickness:

Time: Time:

## Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity ( $\mu$ S) ( <del>mS</del> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1348	13.94	4.352	1.59	7.02	-148.8	0.25 gal.	
1351	13.29	4.193	1.20	6.86	-158.5	0.75	
1355	13.26	4.485	1.01	6.96	-142.4	1.25	
1359	12.71	4.531	0.86	6.96	-135.8	1.25	
1405	12.56	4.440	0.98	6.98	-126.6	1.25	
1408	12.27	4.467	1.38	6.95	-119.9	1.25	
1412	12.21	4.500	0.88	6.96	-116.0	1.25	
1417							Samples 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: Yes

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-9

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

Site: Highway 537 Truck Station Spill 2009

Project No.: AES 090201

Location: Rio Arriba County, New Mexico

Date: 2-21-12

Project: Groundwater Monitoring and Sampling

Arrival Time: 1625

Sampling Technician: N. Willis

Air Temp: 40°F

Purge / No Purge: Purge

T.O.C. Elev. (ft): 7062.6

Well Diameter (in): 2

Total Well Depth (ft): 39.15

Initial D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_ (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 29.39 Time: 1627 (taken prior to purging well)

Final D.T.W. (ft): \_\_\_\_\_ Time: \_\_\_\_\_ (taken after sample collection)

If NAPL Present: D.T.P.: \_\_\_\_\_ D.T.W.: \_\_\_\_\_ Thickness: \_\_\_\_\_ Time: \_\_\_\_\_

## Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) ( <u>mS</u> )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1634	12.22	4,089	2.31	7.02	-109.2	0.25 gal.	
1638	12.13	4,242	2.36	6.97	-121.0	1	
1642	11.90	4,234	1.72	6.96	-123.1	1	
1646	11.82	4,246	1.55	6.96	-124.8	1	
1650	11.87	4,239	1.46	6.95	-128.6	1	
1654	11.89	4,241	1.37	6.95	-127.0	1	
1659	_____	_____	_____	_____	_____	_____	Samples 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: \_\_\_\_\_

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:

# Job/Jobsite Hazard Assessment Worksheet

**INSTRUCTIONS:** This Assessment should be completed at the outset of any new task or work location and again whenever location or conditions change sufficiently to suggest potential changes in hazards. A single Assessment may be appropriate for multiple days or even weeks of work provided no new hazards are introduced. It is the responsibility of the jobsite supervisor or lead worker to assure that all employees are made aware of all listed hazards and the associated mitigation plan and that they are provided with the opportunity to review the Assessment, including those employees who join the project after the Assessment has been completed.

Date of Assessment	February 21, 2012	Assessment Conducted by:	Nathan Willis	Assessment Manager	Ross Kennemer
Type of Work	GW Monitor Well Sampling	Employee(s) Performing Work	Nathan Willis		
Objective of Work	Sample GW Monitor Wells	Employer Name	Animas Environmental Services, LLC.		
Date(s) of Work	Feb 21, 2012	Employer Address	624 East Comanche, Farmington, New Mexico 87401		
Location of Work	BMG Hwy 537:2009 Spill	Work Manager	Ross Kennemer	Phone Number	1-505-486-4072

**INVENTORY:** Mark each hazard YES or NO as a potential risk for the site and work defined above. Standard hazards consistently associated with the "Type of Work" identified above need not be specifically detailed on this form. It is not necessary to list loud noise, rough terrain, working near traffic, and so forth if those hazards are known and common hazards associated with the defined work type. However, any identified hazard that is **NOT** a standard component in the named "Type of Work" should be inventoried and mitigated below. In addition, any hazard not included in the inventory should be of such a standard nature that any member of the crew is able to explain the risks and safeguards inherent in that hazard.

YES	NO	# Equipment Hazards	YES	NO	# Utility Hazards	YES	NO	# Personal Hazards (Cont.)	YES	NO	# Environmental Hazards (Cont.)
		11 Nearby Vehicular Traffic			23 Overhead Utility Contact			34 Ladders/Elevated Platforms			45 Open Trench /Entrapment
		12 Heavy Equip. Operation			24 Underground Utility Contact			35 Fall Hazard/ Working at Heights			46 Falling or Flying Debris
		13 Heavy Equip. Back/Run-over			25 Exposed Utility Lines			36 Other			47 Confined Space
		14 Heavy Equip. Tip-over /Roll-over			26 Exposed Electrical Wires/Components			37 Other			48 High Noise Level
		15 Heavy Equip. Pinch Points			27 Bottled gasses			38 Other			49 Weather: snow/ice, cold/hot
		16 Equip. Contact with Overhead Wires			28 Other			39 Other			50 Lighting (Darkness, Glare, Flash)
X		17 Vehicle Operation			29 Other			40 Other			51 Vegetation Hazards
		18 Vehicle with Trailer Operation			30 Other	YES	NO	# Environmental Hazards			52 Livestock, Wildlife, or Pet Hazards
		19 Other	YES	NO	# Personal Hazards	X		41 Chemical Exposure			53 Other
		20 Other	X		31 Twisting/Bending/ Awkward Positions	X		42 Flammable Gasses			54 Other
		21 Other			32 Lifting and Carrying	X		43 Flammable Liquids			55 Other
		22 Other	X		33 Slip/Trip/Fall Hazard or Unstable footing			44 Flammable Solids			56 Other

**MITIGATIONS:** For each hazard marked "YES", list the hazard # from above table in the left column and then describe the risk(s) identified. Across from each risk, list in the right column the steps taken/planned to mitigate that risk or safeguard the employee(s). Use additional sheets as needed.

Identified Hazard	Mitigation/Safeguard
17) <del>Do</del> Travel to and from site	17) Defensive Driving, seat belts + speed limits while operating vehicle
31) Twisting / Bending / <del>Fall hazard on uneven ground wells</del> <sup>awkward position on ground</sup>	31) Use proper Twist/Bend technique avoid awkward positions
33) Slip / Trip / Fall hazards on uneven ground	33) Awareness of footing
41) Chemical Exposure from sample vials	41) Use latex gloves and Safety glasses while sampling
42 + 43) Natural gas + crude oil transfer station	42 + 43) FRCs, no open flames

## COVER LETTER

Thursday, December 01, 2011

Debbie Watson  
Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401

TEL: (505) 564-2281

FAX (505) 324-2022

RE: BMG Highway 537 2009 Spill

Order No.: 1111785

Dear Debbie Watson:

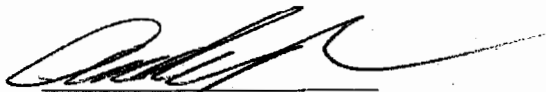
Hall Environmental Analysis Laboratory, Inc. received 12 sample(s) on 11/18/2011 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued November 30, 2011

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,



Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901

AZ license # AZ0682

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Dec-11

Analytical Report

CLIENT: Animas Environmental Services

Client Sample ID: Trip Blank

Lab Order: 1111785

Collection Date:

Project: BMG Highway 537 2009 Spill

Date Received: 11/18/2011

Lab ID: 1111785-01

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/23/2011 11:08:12 PM
Toluene	ND	1.0		µg/L	1	11/23/2011 11:08:12 PM
Ethylbenzene	ND	1.0		µg/L	1	11/23/2011 11:08:12 PM
Xylenes, Total	ND	2.0		µg/L	1	11/23/2011 11:08:12 PM
Surr: 4-Bromofluorobenzene	109	76.5-115		%REC	1	11/23/2011 11:08:12 PM

## Qualifiers:

\* Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

NC Non-Chlorinated

PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-02

**Client Sample ID:** MW-1  
**Collection Date:** 11/16/2011 4:50:00 PM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 12:30:16 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 12:30:16 AM
Surr: DNOP	105	81.1-147		%REC	1	11/21/2011 12:30:16 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	3.9	0.25		mg/L	5	11/23/2011 11:37:04 PM
Surr: BFB	112	65.4-141		%REC	5	11/23/2011 11:37:04 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	2700	50		µg/L	50	11/28/2011 12:52:07 PM
Toluene	ND	5.0		µg/L	5	11/23/2011 11:37:04 PM
Ethylbenzene	76	5.0		µg/L	5	11/23/2011 11:37:04 PM
Xylenes, Total	ND	10		µg/L	5	11/23/2011 11:37:04 PM
Surr: 4-Bromofluorobenzene	116	76.5-115	S	%REC	5	11/23/2011 11:37:04 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**Date: 01-Dec-11  
Analytical ReportCLIENT: Animas Environmental Services  
Lab Order: 1111785  
Project: BMG Highway 537 2009 Spill  
Lab ID: 1111785-03Client Sample ID: MW-2  
Collection Date: 11/16/2011 1:04:00 PM  
Date Received: 11/18/2011  
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 1:38:46 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 1:38:46 AM
Surr: DNOP	104	81.1-147		%REC	1	11/21/2011 1:38:46 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 1:32:10 AM
Surr: BFB	97.4	65.4-141		%REC	1	11/24/2011 1:32:10 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 1:32:10 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 1:32:10 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 1:32:10 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 1:32:10 AM
Surr: 4-Bromofluorobenzene	109	76.5-115		%REC	1	11/24/2011 1:32:10 AM

**Qualifiers:**\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation LimitB Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

**Analytical Report**

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-04

**Client Sample ID:** MW-3  
**Collection Date:** 11/16/2011 3:43:00 PM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	3.3	1.0		mg/L	1	11/21/2011 2:12:58 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 2:12:58 AM
Surr: DNOP	102	81.1-147		%REC	1	11/21/2011 2:12:58 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	0.46	0.050		mg/L	1	11/24/2011 3:27:31 AM
Surr: BFB	165	65.4-141	S	%REC	1	11/24/2011 3:27:31 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	63	1.0		µg/L	1	11/24/2011 3:27:31 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 3:27:31 AM
Ethylbenzene	6.0	1.0		µg/L	1	11/24/2011 3:27:31 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 3:27:31 AM
Surr: 4-Bromofluorobenzene	123	76.5-115	S	%REC	1	11/24/2011 3:27:31 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

CLIENT: Animas Environmental Services

Client Sample ID: MW-4

Lab Order: 1111785

Collection Date: 11/16/2011 12:28:00 PM

Project: BMG Highway 537 2009 Spill

Date Received: 11/18/2011

Lab ID: 1111785-05

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 2:47:10 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 2:47:10 AM
Surr: DNOP	105	81.1-147		%REC	1	11/21/2011 2:47:10 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 5:51:34 AM
Surr: BFB	98.6	65.4-141		%REC	1	11/24/2011 5:51:34 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 5:51:34 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 5:51:34 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 5:51:34 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 5:51:34 AM
Surr: 4-Bromofluorobenzene	111	76.5-115		%REC	1	11/24/2011 5:51:34 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

NC Non-Chlorinated

PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-06

**Client Sample ID:** MW-5  
**Collection Date:** 11/16/2011 11:56:00 AM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 3:21:33 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 3:21:33 AM
Surr: DNOP	104	81.1-147		%REC	1	11/21/2011 3:21:33 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 6:20:17 AM
Surr: BFB	98.2	65.4-141		%REC	1	11/24/2011 6:20:17 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 6:20:17 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 6:20:17 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 6:20:17 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 6:20:17 AM
Surr: 4-Bromofluorobenzene	112	76.5-115		%REC	1	11/24/2011 6:20:17 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-07

**Client Sample ID:** MW-6  
**Collection Date:** 11/16/2011 2:37:00 PM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 3:56:12 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 3:56:12 AM
Surr: DNOP	109	81.1-147		%REC	1	11/21/2011 3:56:12 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 6:49:09 AM
Surr: BFB	98.4	65.4-141		%REC	1	11/24/2011 6:49:09 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 6:49:09 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 6:49:09 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 6:49:09 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 6:49:09 AM
Surr: 4-Bromofluorobenzene	111	76.5-115		%REC	1	11/24/2011 6:49:09 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-08

**Client Sample ID:** MW-7**Collection Date:** 11/16/2011 2:05:00 PM**Date Received:** 11/18/2011**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 4:30:52 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 4:30:52 AM
Surr: DNOP	105	81.1-147		%REC	1	11/21/2011 4:30:52 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 7:17:57 AM
Surr: BFB	97.9	65.4-141		%REC	1	11/24/2011 7:17:57 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 7:17:57 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 7:17:57 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 7:17:57 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 7:17:57 AM
Surr: 4-Bromofluorobenzene	111	76.5-115		%REC	1	11/24/2011 7:17:57 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-09

**Client Sample ID:** MW-8  
**Collection Date:** 11/16/2011 3:11:00 PM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 5:05:51 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 5:05:51 AM
Surr: DNOP	110	81.1-147		%REC	1	11/21/2011 5:05:51 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	0.17	0.050		mg/L	1	11/24/2011 7:46:47 AM
Surr: BFB	116	65.4-141		%REC	1	11/24/2011 7:46:47 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	1.5	1.0		µg/L	1	11/24/2011 7:46:47 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 7:46:47 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 7:46:47 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 7:46:47 AM
Surr: 4-Bromofluorobenzene	113	76.5-115		%REC	1	11/24/2011 7:46:47 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-10

**Client Sample ID:** MW-9  
**Collection Date:** 11/16/2011 4:14:00 PM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 5:40:28 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 5:40:28 AM
Surr: DNOP	106	81.1-147		%REC	1	11/21/2011 5:40:28 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	0.57	0.25		mg/L	5	11/24/2011 8:15:34 AM
Surr: BFB	104	65.4-141		%REC	5	11/24/2011 8:15:34 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	200	5.0		µg/L	5	11/24/2011 8:15:34 AM
Toluene	ND	5.0		µg/L	5	11/24/2011 8:15:34 AM
Ethylbenzene	9.6	5.0		µg/L	5	11/24/2011 8:15:34 AM
Xylenes, Total	ND	10		µg/L	5	11/24/2011 8:15:34 AM
Surr: 4-Bromofluorobenzene	113	76.5-115		%REC	5	11/24/2011 8:15:34 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1111785  
**Project:** BMG Highway 537 2009 Spill  
**Lab ID:** 1111785-11

**Client Sample ID:** MW-10  
**Collection Date:** 11/16/2011 1:33:00 PM  
**Date Received:** 11/18/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 6:15:09 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 6:15:09 AM
Surr: DNOP	104	81.1-147		%REC	1	11/21/2011 6:15:09 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 9:13:03 AM
Surr: BFB	97.9	65.4-141		%REC	1	11/24/2011 9:13:03 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 9:13:03 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 9:13:03 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 9:13:03 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 9:13:03 AM
Surr: 4-Bromofluorobenzene	110	76.5-115		%REC	1	11/24/2011 9:13:03 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Dec-11

**Analytical Report****CLIENT:** Animas Environmental Services**Client Sample ID:** MW-11**Lab Order:** 1111785**Collection Date:** 11/16/2011 11:10:00 AM**Project:** BMG Highway 537 2009 Spill**Date Received:** 11/18/2011**Lab ID:** 1111785-12**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2011 6:49:49 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2011 6:49:49 AM
Surr: DNOP	113	81.1-147		%REC	1	11/21/2011 6:49:49 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/24/2011 9:41:49 AM
Surr: BFB	98.1	65.4-141		%REC	1	11/24/2011 9:41:49 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/24/2011 9:41:49 AM
Toluene	ND	1.0		µg/L	1	11/24/2011 9:41:49 AM
Ethylbenzene	ND	1.0		µg/L	1	11/24/2011 9:41:49 AM
Xylenes, Total	ND	2.0		µg/L	1	11/24/2011 9:41:49 AM
Surr: 4-Bromofluorobenzene	110	76.5-115		%REC	1	11/24/2011 9:41:49 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services

Project: BMG Highway 537 2009 Spill

Work Order: 1111785

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8015B: Diesel Range

Sample ID: MB-29438 MBLK Batch ID: 29438 Analysis Date: 11/20/2011 7:55:51 PM

Diesel Range Organics (DRO) ND mg/L 1.0

Motor Oil Range Organics (MRO) ND mg/L 5.0

Sample ID: LCS-29438 LCS Batch ID: 29438 Analysis Date: 11/20/2011 8:30:16 PM

Diesel Range Organics (DRO) 5.115 mg/L 1.0 5 0 102 74 157

Sample ID: LCSD-29438 LCSD Batch ID: 29438 Analysis Date: 11/20/2011 9:04:34 PM

Diesel Range Organics (DRO) 5.386 mg/L 1.0 5 0 108 74 157 5.17 23

Method: EPA Method 8015B: Gasoline Range

Sample ID: 1111785-03A MSD MSD Batch ID: R49269 Analysis Date: 11/24/2011 2:29:52 AM

Gasoline Range Organics (GRO) 0.4664 mg/L 0.050 0.5 0 93.3 66.1 127 34.3 15.5 R

Sample ID: 5ML-RB MBLK Batch ID: R49269 Analysis Date: 11/23/2011 8:43:59 PM

Gasoline Range Organics (GRO) ND mg/L 0.050

Sample ID: 2.5UG GRO LCS LCS Batch ID: R49269 Analysis Date: 11/23/2011 7:46:23 PM

Gasoline Range Organics (GRO) 0.5348 mg/L 0.050 0.5 0 107 92.1 117

Sample ID: 1111785-03A MS MS Batch ID: R49269 Analysis Date: 11/24/2011 2:01:02 AM

Gasoline Range Organics (GRO) 0.3300 mg/L 0.050 0.5 0 66.0 66.1 127 S

### Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services  
**Project:** BMG Highway 537 2009 Spill

**Work Order:** 1111785

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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**Method:** EPA Method 8021B: Volatiles

**Sample ID:** 1111785-02A MSD

**MSD**

**Batch ID:** R49269 **Analysis Date:** 11/24/2011 12:34:37 AM

Benzene	1547	µg/L	5.0	100	1578	-31.7	76.6	119	10.5	16.4	SE
Toluene	83.17	µg/L	5.0	100	0	83.2	77.3	118	10.9	13.9	
Ethylbenzene	153.6	µg/L	5.0	100	76.26	77.4	76.6	114	11.9	13.5	
Xylenes, Total	243.1	µg/L	10	300	0	81.0	82	113	12.6	12.9	S

**Sample ID:** 5ML-RB

**MBLK**

**Batch ID:** R49269 **Analysis Date:** 11/23/2011 8:43:59 PM

Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								

**Sample ID:** b 9

**MBLK**

**Batch ID:** R49292 **Analysis Date:** 11/28/2011 1:20:50 PM

Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								

**Sample ID:** 100NG BTEX LCS

**LCS**

**Batch ID:** R49269 **Analysis Date:** 11/23/2011 8:15:12 PM

Benzene	20.66	µg/L	1.0	20	0	103	80	120			
Toluene	21.14	µg/L	1.0	20	0.4726	103	80	120			
Ethylbenzene	20.94	µg/L	1.0	20	0.4846	102	80	120			
Xylenes, Total	62.87	µg/L	2.0	60	1.012	103	80	120			

**Sample ID:** 100NG BTEX LCS

**LCS**

**Batch ID:** R49292 **Analysis Date:** 11/28/2011 11:02:39 PM

Benzene	21.68	µg/L	1.0	20	0.4742	108	80	120			
Toluene	21.66	µg/L	1.0	20	0	108	80	120			
Ethylbenzene	21.76	µg/L	1.0	20	0	109	80	120			
Xylenes, Total	65.36	µg/L	2.0	60	0	109	80	120			

**Sample ID:** 1111785-02A MS

**MS**

**Batch ID:** R49269 **Analysis Date:** 11/24/2011 12:05:47 AM

Benzene	1718	µg/L	5.0	100	1578	139	76.6	119			SE
Toluene	92.79	µg/L	5.0	100	0	92.8	77.3	118			
Ethylbenzene	173.0	µg/L	5.0	100	76.26	96.7	76.6	114			
Xylenes, Total	275.9	µg/L	10	300	0	92.0	82	113			

**Qualifiers:**

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

# Chain-of-Custody Record

Client: Animas Environmental Services

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Mailing Address 624 E Comanche Farmington NM

BMG HWY 537 2009 SPILL

87401

Project #:

Phone #: 505-564-2281

AES 090201

email or Fax#: 505-324-2022

Project Manager:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Debbie Watson

Accreditation:

☐ NELAP ☐ Other

Sampler: Nathan Willis

☐ EDD (Type)

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	TPH 8015 (C6 - C36) (GRO, DRO, MRO)	BTEX 8021	Air Bubbles (Y or N)
11-16-11	1650	H <sub>2</sub> O	Trip Blank	Glass 2-40 mL	HCl	X	X	
		H <sub>2</sub> O	MW-1	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1304	H <sub>2</sub> O	MW-2	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1543	H <sub>2</sub> O	MW-3	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1228	H <sub>2</sub> O	MW-4	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1156	H <sub>2</sub> O	MW-5	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1437	H <sub>2</sub> O	MW-6	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1405	H <sub>2</sub> O	MW-7	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1511	H <sub>2</sub> O	MW-8	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1614	H <sub>2</sub> O	MW-9	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1333	H <sub>2</sub> O	MW-10	Glass 6-40 mL	5-HCl 1-Non	X	X	
	1110	H <sub>2</sub> O	MW-11	Glass 6-40 mL	5-HCl 1-Non	X	X	

Remarks:

Received by: *Christie Watson* Date: 11/17/11 Time: 1611

Relinquished by: *NAT W* Date: 11/17/11 Time: 1628

Relinquished by: *Christie Watson* Date: 11/17/11 Time: 1628

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



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

February 29, 2012

Debbie Watson

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 564-2281

FAX (505) 324-2022

RE: BMG HWY 537 2009 SPILL

OrderNo.: 1202828

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/24/2012 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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1202828

Date Reported: 2/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: MW-1

Project: BMG HWY 537 2009 SPILL

Collection Date: 2/21/2012 4:15:00 PM

Lab ID: 1202828-001

Matrix: AQUEOUS

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	2/28/2012 9:48:15 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/28/2012 9:48:15 AM
Surr: DNOP	103	61.3-164		%REC	1	2/28/2012 9:48:15 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	1.2	0.50		mg/L	10	2/28/2012 1:37:34 PM
Surr: BFB	101	69.3-120		%REC	10	2/28/2012 1:37:34 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	360	10		µg/L	10	2/28/2012 1:37:34 PM
Toluene	ND	1.0		µg/L	1	2/28/2012 2:06:18 PM
Ethylbenzene	54	10		µg/L	10	2/28/2012 1:37:34 PM
Xylenes, Total	ND	2.0		µg/L	1	2/28/2012 2:06:18 PM
Surr: 4-Bromofluorobenzene	114	76.5-115		%REC	1	2/28/2012 2:06:18 PM

<b>Qualifiers:</b>	* / X	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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

## Analytical Report

Lab Order 1202828

Date Reported: 2/29/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: MW-3

Project: BMG HWY 537 2009 SPILL

Collection Date: 2/21/2012 3:33:00 PM

Lab ID: 1202828-002

Matrix: AQUEOUS

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	2/28/2012 10:09:59 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/28/2012 10:09:59 AM
Surr: DNOP	104	61.3-164		%REC	1	2/28/2012 10:09:59 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	0.18	0.050		mg/L	1	2/25/2012 2:06:16 AM
Surr: BFB	114	69.3-120		%REC	1	2/25/2012 2:06:16 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	4.8	1.0		µg/L	1	2/25/2012 2:06:16 AM
Toluene	ND	1.0		µg/L	1	2/25/2012 2:06:16 AM
Ethylbenzene	ND	1.0		µg/L	1	2/25/2012 2:06:16 AM
Xylenes, Total	ND	2.0		µg/L	1	2/25/2012 2:06:16 AM
Surr: 4-Bromofluorobenzene	112	76.5-115		%REC	1	2/25/2012 2:06:16 AM

Qualifiers: \*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

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

RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1202828

Date Reported: 2/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: MW-4

Project: BMG HWY 537 2009 SPILL

Collection Date: 2/21/2012 2:54:00 PM

Lab ID: 1202828-003

Matrix: AQUEOUS

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	2/28/2012 10:53:22 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/28/2012 10:53:22 AM
Surr: DNOP	102	61.3-164		%REC	1	2/28/2012 10:53:22 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/25/2012 2:35:06 AM
Surr: BFB	100	69.3-120		%REC	1	2/25/2012 2:35:06 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	1.0		µg/L	1	2/25/2012 2:35:06 AM
Toluene	ND	1.0		µg/L	1	2/25/2012 2:35:06 AM
Ethylbenzene	ND	1.0		µg/L	1	2/25/2012 2:35:06 AM
Xylenes, Total	ND	2.0		µg/L	1	2/25/2012 2:35:06 AM
Surr: 4-Bromofluorobenzene	110	76.5-115		%REC	1	2/25/2012 2:35:06 AM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit



# Analytical Report

Lab Order **1202828**

Date Reported: **2/29/2012**

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

**Client Sample ID:** MW-8

**Project:** BMG HWY 537 2009 SPILL

**Collection Date:** 2/21/2012 2:17:00 PM

**Lab ID:** 1202828-004

**Matrix:** AQUEOUS

**Received Date:** 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	2/28/2012 11:15:03 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/28/2012 11:15:03 AM
Surr: DNOP	102	61.3-164		%REC	1	2/28/2012 11:15:03 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/25/2012 3:03:52 AM
Surr: BFB	102	69.3-120		%REC	1	2/25/2012 3:03:52 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	1.0		µg/L	1	2/25/2012 3:03:52 AM
Toluene	ND	1.0		µg/L	1	2/25/2012 3:03:52 AM
Ethylbenzene	ND	1.0		µg/L	1	2/25/2012 3:03:52 AM
Xylenes, Total	ND	2.0		µg/L	1	2/25/2012 3:03:52 AM
Surr: 4-Bromofluorobenzene	110	76.5-115		%REC	1	2/25/2012 3:03:52 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

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

RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1202828

Date Reported: 2/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: MW-9

Project: BMG HWY 537 2009 SPILL

Collection Date: 2/21/2012 4:59:00 PM

Lab ID: 1202828-005

Matrix: AQUEOUS

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	2/28/2012 11:36:41 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/28/2012 11:36:41 AM
Surr: DNOP	104	61.3-164		%REC	1	2/28/2012 11:36:41 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	0.30	0.050		mg/L	1	2/28/2012 12:05:36 AM
Surr: BFB	126	69.3-120	S	%REC	1	2/28/2012 12:05:36 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	120	5.0		µg/L	5	2/25/2012 3:32:35 AM
Toluene	ND	1.0		µg/L	1	2/28/2012 12:05:36 AM
Ethylbenzene	4.2	1.0		µg/L	1	2/28/2012 12:05:36 AM
Xylenes, Total	ND	2.0		µg/L	1	2/28/2012 12:05:36 AM
Surr: 4-Bromofluorobenzene	121	76.5-115	S	%REC	1	2/28/2012 12:05:36 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

**Analytical Report**Lab Order **1202828**Date Reported: **2/29/2012****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** Trip Blank**Project:** BMG HWY 537 2009 SPILL**Collection Date:****Lab ID:** 1202828-006**Matrix:** TRIP BLANK**Received Date:** 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	1.0		µg/L	1	2/25/2012 4:01:20 AM
Toluene	ND	1.0		µg/L	1	2/25/2012 4:01:20 AM
Ethylbenzene	ND	1.0		µg/L	1	2/25/2012 4:01:20 AM
Xylenes, Total	ND	2.0		µg/L	1	2/25/2012 4:01:20 AM
Surr: 4-Bromofluorobenzene	108	76.5-115		%REC	1	2/25/2012 4:01:20 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

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

RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1202828

29-Feb-12

Client: Animas Environmental Services

Project: BMG HWY 537 2009 SPILL

Sample ID	MB-854	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	PBW	Batch ID:	854	RunNo:	1148					
Prep Date:	2/27/2012	Analysis Date:	2/28/2012	SeqNo:	32739	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	1.0		1.000		102	61.3	164			

Sample ID	LCS-854	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	LCSW	Batch ID:	854	RunNo:	1148					
Prep Date:	2/27/2012	Analysis Date:	2/28/2012	SeqNo:	32915	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	74	157			
Surr: DNOP	0.51		0.5000		102	61.3	164			

Sample ID	LCSD-854	SampType:	LCSD	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	LCSS02	Batch ID:	854	RunNo:	1148					
Prep Date:	2/27/2012	Analysis Date:	2/28/2012	SeqNo:	32916	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.1	1.0	5.000	0	123	74	157	19.5	23	
Surr: DNOP	0.51		0.5000		102	61.3	164	0	0	

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD 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

RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1202828

29-Feb-12

Client: Animas Environmental Services

Project: BMG HWY 537 2009 SPILL

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R1140	RunNo:	1140					
Prep Date:		Analysis Date:	2/24/2012	SeqNo:	32520	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	19		20.00		97.4	69.3	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R1140	RunNo:	1140					
Prep Date:		Analysis Date:	2/24/2012	SeqNo:	32524	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.57	0.050	0.5000	0	114	101	123			
Surr: BFB	21		20.00		105	69.3	120			

Sample ID	1202820-001A MS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R1140	RunNo:	1140					
Prep Date:		Analysis Date:	2/24/2012	SeqNo:	32525	Units:	mg/L			
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	106	75.4	121			
Surr: BFB	21		20.00		106	69.3	120			

Sample ID	1202820-001A MSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R1140	RunNo:	1140					
Prep Date:		Analysis Date:	2/24/2012	SeqNo:	32526	Units:	mg/L			
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	75.4	121	0.338	10.5	
Surr: BFB	21		20.00		107	69.3	120	0	0	

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R1157	RunNo:	1157					
Prep Date:		Analysis Date:	2/27/2012	SeqNo:	33060	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	20		20.00		99.6	69.3	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R1157	RunNo:	1157					
Prep Date:		Analysis Date:	2/27/2012	SeqNo:	33061	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.58	0.050	0.5000	0	116	101	123			
Surr: BFB	22		20.00		108	69.3	120			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1202828

29-Feb-12

Client: Animas Environmental Services

Project: BMG HWY 537 2009 SPILL

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R1174	RunNo:	1174					
Prep Date:		Analysis Date:	2/28/2012	SeqNo:	33419	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	19		20.00		94.5	69.3	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R1174	RunNo:	1174					
Prep Date:		Analysis Date:	2/28/2012	SeqNo:	33423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.57	0.050	0.5000	0	113	101	123			
Surr: BFB	21		20.00		105	69.3	120			

## Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1202828

29-Feb-12

Client: Animas Environmental Services

Project: BMG HWY 537 2009 SPILL

Sample ID	5ML-RB		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBW		Batch ID: R1140		RunNo: 1140					
Prep Date:			Analysis Date: 2/24/2012		SeqNo: 32619		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		107	76.5	115			

Sample ID	100NG BTEX LCS		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSW		Batch ID: R1140		RunNo: 1140					
Prep Date:			Analysis Date: 2/24/2012		SeqNo: 32623		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.2	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	20	1.0	20.00	0	102	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		110	76.5	115			

Sample ID	1202820-001A MS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	BatchQC		Batch ID: R1140		RunNo: 1140					
Prep Date:			Analysis Date: 2/24/2012		SeqNo: 32624		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.7	70.1	118			
Toluene	20	1.0	20.00	0	100	72.3	117			
Ethylbenzene	20	1.0	20.00	0	100	73.5	117			
Xylenes, Total	61	2.0	60.00	0	101	73.1	119			
Surr: 4-Bromofluorobenzene	22		20.00		112	76.5	115			

Sample ID	1202820-001A MSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	BatchQC		Batch ID:	R1140		RunNo:	1140				
Prep Date:			Analysis Date:	2/24/2012		SeqNo:	32625		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	18	1.0	20.00	0	91.7	70.1	118	6.35	16.4		
Toluene	19	1.0	20.00	0	94.4	72.3	117	6.01	13.9		
Ethylbenzene	19	1.0	20.00	0	94.4	73.5	117	5.97	13.5		
Xylenes, Total	56	2.0	60.00	0	94.1	73.1	119	6.96	12.9		
Surr: 4-Bromofluorobenzene	22		20.00		112	76.5	115	0	0		

### Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1202828

29-Feb-12

Client: Animas Environmental Services

Project: BMG HWY 537 2009 SPILL

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>R1157</b>		RunNo:	<b>1157</b>			
Prep Date:			Analysis Date:	<b>2/27/2012</b>		SeqNo:	<b>33082</b>		Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	22		20.00		110	76.5	115			

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>R1157</b>		RunNo:	<b>1157</b>			
Prep Date:			Analysis Date:	<b>2/27/2012</b>		SeqNo:	<b>33089</b>		Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	62	2.0	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		114	76.5	115			

Sample ID	<b>5ml-rb 7</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBW</b>		Batch ID:	<b>R1174</b>		RunNo:	<b>1174</b>			
Prep Date:			Analysis Date:	<b>2/28/2012</b>		SeqNo:	<b>33451</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	20		20.00		102	76.5	115			

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>R1174</b>		RunNo:	<b>1174</b>			
Prep Date:			Analysis Date:	<b>2/28/2012</b>		SeqNo:	<b>33455</b>		Units: <b>µg/L</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	21	1.0	20.00	0	105	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		106	76.5	115			

### Qualifiers:

\*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD 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

RL Reporting Detection Limit





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name:	Animas Environmental	Work Order Number:	1202828
Received by/date:	AG 2/24/12		
Logged By:	Lindsay Mangin	2/24/2012 10:05:00 AM	
Completed By:	Lindsay Mangin	2/24/2012 1:02:08 PM	
Reviewed By:	IO 2/29/12		

### Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush Project Name:		BMG HWY 537 2009 SPILL Project #:		AES 090201 Project Manager:		Debbie Watson Sampler:		
Billing Address 624 E Comanche Farmington NM 87401 Phone #: 505-564-2281 Mail or Fax#: 505-324-2022 VQC Package:		Standard <input type="checkbox"/> Level 4 (Full Validation) Accreditation:		NELAP <input type="checkbox"/> Other EDD (Type)				
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	TPH 8015 (C6 - C36) (GRO, DRO, MRO)	BTEX 8021	Air Bubbles (Y or N)
1/2	1615	H <sub>2</sub> O	MW-1	Glass 6 - 40 mL	5 - HCl 1 - Non	X	X	
	1833	H <sub>2</sub> O	MW-3	Glass 6 - 40 mL	5 - HCl 1 - Non	X	X	
	1464	H <sub>2</sub> O	MW-4	Glass 6 - 40 mL	5 - HCl 1 - Non	X	X	
	1417	H <sub>2</sub> O	MW-8	Glass 6 - 40 mL	5 - HCl 1 - Non	X	X	
	1659	H <sub>2</sub> O	MW-9	Glass 6 - 40 mL	5 - HCl 1 - Non	X	X	
		H <sub>2</sub> O	Trip Blank	Glass 2 - 40 mL	HCl	X	X	
Relinquished by:		Relinquished by:		Received by:		Remarks:		
1/2	1500	NH <sub>4</sub> Win						
1/2	1547	Christine Walters						

Received by: Christine Walters 2/23/12 1500  
 Received by: [Signature] 2/24/12 1005