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Animas Environmental Services, LLC

3R-447

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August 10, 2011

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

Re: Periodic Progress Report for the Benson-Montin-Greer Highway 537 Llaves Pipeline 2008 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 remedial activities at the BMG Highway 537 Llaves Pipeline 2008 release location. This Periodic Progress Report details remediation activities and groundwater monitoring and sampling events conducted at the site between April and June 2011. Remediation activities were conducted in accordance with recommendations presented in the Corrective Action Plan prepared by AES and submitted to the New Mexico Oil Conservation Division (NMOCD) on January 11, 2011. Groundwater monitoring and sampling was conducted in accordance with recommendations presented in the Site Investigation Report prepared by AES and submitted in June 2008.

The release originated on the Schmitz Ranch, on the south side of Highway 537, within the NW¼ NE¼ of Section 18, T25N, R3W (latitude and longitude recorded as N36° 24.214' and W107° 11.053') and flowed south and southwest through a small unnamed arroyo for a distance of approximately 920 linear feet. A topographic site location map is presented as Figure 1, and a map of the release investigation area is presented as Figure 2.

1.0 Release History

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

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

AES conducted a site investigation during April and May 2008, which included the installation of nine groundwater monitoring wells (MW-1 through MW-9). Details of the investigation were presented in the AES Site Investigation Report submitted to NMOCD and dated June 23, 2008.

2.0 Recent Site Activities

2.1 MPE Remediation Well Installation

On March 21 and 22, 2011, AES installed five remediation wells, MPE-1 through MPE-5, in and around the area of the release, primarily in the area of MW-9. On April 14, 2011, AES installed two additional MPE wells, MPE-6 and MPE-7, at the site. The locations of the remediation wells are presented on Figure 2.

2.1.1 Health and Safety Plan

AES prepared and implemented a comprehensive site-specific Health and Safety Plan (HASP) for high vacuum multi-phase extraction (MPE) well installation on March 21 and 22, and April 14, 2011. All employees and subcontractors were required to read and sign the HASP to acknowledge their understanding of the information contained in it. The HASP was implemented and enforced on site by the assigned Site Safety and Health Officer. Daily tailgate safety meetings were held and documented and addressed specific health and safety concerns or issues.

2.1.2 Department Notification

AES provided written project notification to the NMOCD Project Manager, site owner, and pipeline owner on March 17, 2011, prior to installation of the MPE wells.

2.1.3 Utilities

AES utilized the New Mexico One-Call system on March 14 and April 11, 2011, to identify and mark all underground utilities at the site before initiating drilling activities (Ticket numbers: 2011120222 and 2011160548).2.4 Installation of Soil Borings

2.1.4 Drilling Methods

All remediation wells (MPE-1 through MPE-7) were installed to depths between 36 feet below ground surface (bgs) and 40 feet bgs. MPE-1 through MPE-5 were advanced with a CME-75 hollow stem auger rig operated by Envirodrill, Albuquerque, New Mexico. MPE-6

and MPE-7 were advanced with a CME-95 hollow stem auger rig operated by Envirotech, Farmington, New Mexico.

2.1.5 MPE Well Construction Details

General soil lithology, based on oberservation of the drill cuttings, was recorded in the field. Soil lithology for MPE-1 through MPE-5 consisted of interbedded layers of red-brown to brown sandy clays and sands. MPE-6 and MPE-7 soil lithology consisted of interbedded brown to tan-brown sandy clays, sands, and silt.

All remediation wells were installed to depths between 36 and 40 feet bgs. The MPE wells were constructed of 2-inch diameter PVC well casing and slotted screen (0.010-inch slot size) with interlocking, o-ring sealed joints. Ten-foot well screens extended from the base of each boring. The well casings extend from 10 feet above well depth to above ground surface for stick up construction. The annular space, 4 inches in diameter, was filled with 10-20 silica sand from the base of the boring up to a depth of 23 to 28 feet bgs, depending on well depth. A 5 to 6 feet thick hydrated bentonite seal was placed on top of the sand pack. Grout filled the remaining portion of each well. A concrete collar and steel surface protector were added to ensure surface protection for the well.

Soil boring logs with corresponding MPE well construction details have been included in this report as Appendix A. Photographs 1 through 8 documenting the MPE well installation are also included within Appendix A.

2.2 Remediation Unit Installation and Start-Up

A mobile MPE remediation system was placed at the site on May 10, 2011, and consists of a trailer-mounted remediation unit with an internal combustion engine (ICE) to provide high (>20" Hg) vacuum for conducting multi-phase (vapor/liquid) extraction and treatment.

AES installed 1-inch diameter reinforced nylon tubing inside each MPE well and capped each wellhead with a slip-fit cap with compression-fit vacuum hose inlet. The MPE wells are connected to the MPE unit via a single 2-inch reinforced vacuum hose that is attached to the main air inlet on the MPE unit.

The system was installed using above ground piping to connect the extraction wells and manifold piping to the MPE unit. A diagram of the system layout is included as Figure 3. Photographs 9 through 12, which show the MPE unit on site, are included in Appendix A.

3.0 Groundwater Monitoring and Sampling - May 2011

AES personnel conducted groundwater monitoring and sampling at the project area on May 10, 2011. Groundwater samples were laboratory analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH) per EPA Methods 8021/8015 at Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico.

3.1 Groundwater Measurements and Water Quality Data

During the May 2011 sampling event, groundwater and water quality measurements were recorded for MW-1 through MW-4 and MW-6 through MW-8. Groundwater measurements and water quality data were not recorded for MW-5 (dry) and MW-9 (contained free product). Groundwater elevations, as measured with a Keck water level (with accuracy to 0.01 foot), ranged from 29.99 feet bgs in MW-2 to 38.72 feet bgs in MW-7. Groundwater gradient was calculated to be 0.005 ft/ft in a southwest direction.

Water quality measurements were made with an YSI Water Quality Meter, and temperatures ranged from 12.74 °C in MW-8 to 14.93 °C in MW-7. Groundwater pH measurements ranged from 7.44 to 7.80, and dissolved oxygen concentrations were between 1.06 mg/L in MW-8 and 3.31 mg/L in MW-6. Oxidation reduction potential (ORP) measurements were between -69.3 mV and 86.8 mV, and conductivity readings were between 1.526 mS/cm and 3.543 mS/cm. Depth to groundwater measurements and water quality data are presented in Table 1. Groundwater elevation contours are presented on Figure 3, and Water Sample Collection Forms are included in Appendix A.

3.2 Non-Aqueous Phase Liquid (NAPL)

Non-aqueous phase liquid (NAPL) or "free product" was first observed in MW-9 during the January 2010 sampling event, with a thickness of 2.37 feet. Free product was once again observed during the May 2011 sampling event in MW-9 (2.53 feet). Note that MPE-1 through MPE-7 were installed around MW-9 in order to remove free product.

3.3 Groundwater Analytical Results

Groundwater samples were collected from MW-1 through MW-4 and MW-6 through MW-8 for laboratory analysis. BTEX concentrations were below applicable New Mexico Water Quality Control Commission (WQCC) standards in each of the wells sampled. TPH concentrations for gasoline, diesel and motor oil range organics were also below laboratory detection limits in each of the wells sampled. Tabulated laboratory analytical results are included in Table 2, and laboratory analytical reports are presented in Appendix A.

4.0 Measurement of Groundwater and Free Product in MPE Wells

AES personnel measured depth to groundwater in the recently installed MPE wells on May 9, 2011. Depth to water ranged from 30.88 feet below top of casing (TOC) in MPE-7 to 37.70 feet below TOC in MPE-5. On May 9, 2011, free product was reported in MPE-1 (3.0 feet), MPE-2 (1.23 feet), MPE-3 (2.22 feet), MPE-4 (2.29 feet), MPE-5 (2.77 feet), and MPE-7 (0.01 feet). MPE well data is included in Table 1, and free product thickness contours from May 2011 are presented on Figure 4.

5.0 MPE System Operation & Maintenance

The MPE system has operated intermittently since its startup on May 10, 2011. The system operated with approximately 45 percent run time during May and 23 percent run time during June 2011. The lower than anticipated run times were related to mechanical issues, which have since been resolved. The MPE unit is currently in full operation.

AES personnel have conducted on-site inspections of the system and recorded performance data on a weekly basis. During these visits, AES personnel performed routine maintenance on the unit. Maintenance included cleaning pitot tubes, checking fluid levels, changing fluids as needed, checking and replacing filters, and inspecting the catox unit.

MPE Unit MPE Well Summary, 2008 Highway 537 Pipeline Spill, Rio Arriba County, New Mexico

May 10, 2011	MPE-1 and MPE-5
May 12, 2011	MPE-1, MPE-5, and MPE-6
May 16, 2011	MPE-1, MPE-2, MPE-3, and MPE-4
May 17, 2011	MPE-1, MPE-3, and MPE-5
May 31, 2011	MPE-1 and MPE-5
June 2, 2011	MPE-3 and MPE-4
June 29, 2011	MPE-1 and MPE-5

A 210-bbl capacity tank was installed onsite to collect and store the recovered water and product during operation of the MPE remediation unit. As of June 30, 2011, an estimated 30,395 gallons of water and free product have been recovered since the unit was installed on May 10, 2011. Of this total volume, approximately 840 gallons were free product. The onsite tank was emptied three times during the second quarter: May 16, May 31, and June 6, 2011. The produced water and product were drained from the onsite tank into a tank truck and transported to the TNT Landfarm in Lindrith, New Mexico, for disposal.

5.1 Air Emissions Sampling

Influent and effluent total volatile hydrocarbon samples were collected from the pre-engine and post-cat sample ports, respectively, on May 11, 2011. Air samples were collected in Tedlar bags and subsequently submitted to Hall for analysis of BTEX per EPA Method 8021B and EPA Method 8015B for TPH gasoline range organics (GRO).

Analytical results for the pre-engine sample, showed:

- Benzene – 19.24 parts per million by volume (ppmv);
- Toluene – 29.208 ppmv;
- Ethylbenzene – 2.75 ppmv;
- Xylenes – 13.9 ppmv; and
- TPH-GRO – 1,752 ppmv.

The analytical results for the post-cat sample were:

- Benzene – 0.373 ppmv;
- Toluene – 1.801 ppmv;
- Ethylbenzene – 0.486 ppmv;
- Xylenes – 3.168 ppmv; and
- TPH-GRO – 60 ppmv.

The analytical results indicate that a 99.9 percent reduction in contaminant emissions which was achieved through combustion and post-combustion catalytic oxidation. Air sample laboratory analytical results have been summarized in Table 3, and the laboratory analytical report is included in Appendix A.

6.0 Conclusions and Recommendations

AES installed seven MPE remediation wells at the site during March and April 2011. A MPE unit was installed at the site, and active remediation began on May 10, 2011. Based on MPE data, AES estimates that approximately 30,395 gallons of water and free product have been recovered during May and June 2011, including about 840 gallons of free product. Remedial efforts at the site are in accordance with recommendations contained within the CAP submitted to NMOCD.

AES also conducted a groundwater monitoring and sampling event on May 10, 2011. All sampled wells were below applicable WQCC standards for all analyzed contaminants in May 2011. Free product was observed within MW-9 in May 2011 (2.53 feet). Free product was also observed in six MPE wells including: MPE-1 (3.0 feet), MPE-2 (1.23 feet), MPE-3 (2.22

feet), MPE-4 (2.29 feet), MPE-5 (2.77 feet), and MPE-7 (0.01 feet). MPE operations are targeting areas with free product present.

Based on recent laboratory analytical results, AES recommends sampling MW-1 through MW-7 on an annual basis (May 2012), with quarterly measurement of groundwater elevations. Monitor well MW-8 and MW-9 will continue to be monitored on a quarterly basis.

7.0 Scheduled Site Activities

Planned activities for the third quarter of 2011 include the following:

- Continued operation of the MPE remediation system. AES will continue with regularly scheduled inspection and maintenance of the unit. System operation details for the remediation unit will be included with the next quarterly progress report, which will be submitted in October 2011.

- Groundwater measurements in MW-1 through MW-7 and groundwater water monitoring and sampling in MW-8 and MW-9.

- Collection of influent and effluent total volatile hydrocarbon samples from the pre-engine and post-cat sample ports

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

Deborah Watson
Project Manager

Elizabeth McNally

Elizabeth McNally, P.E.

Tables

Table 1. Summary of Groundwater Measurement Data
Table 2. Summary of Groundwater Analytical Results
Table 3. Summary of Air Laboratory Analytical Results

Figures

Figure 1. Topographic Site Location Map
Figure 2. General Site Plan
Figure 3. Groundwater Elevation Contours, May 2011
Figure 4. Free Product Thickness Contours, May 2011

Appendices

Appendix A. Soil Boring Logs (MPE1 through MPE-8)
Photograph Log (March, April, and May)
Water Sample Collection Forms
Laboratory Analytical Results

cc: Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Rd.
Aztec, NM 87410

Craig Schmitz
#70 CR 405
Lindrith, NM 87029

Private Landowner
C/O Mike Dimond
Benson-Montin-Greer Drilling Corp.

Mike Dimond
Benson-Montin-Greer Drilling Corp.
4900 College Blvd
Farmington NM 87402

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

Well ID	Date Sampled	Surveyed TOC (ft)	Depth to Product (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	pH	Conductivity (mS)	DO (mg/L)	Temperature (C)	ORP (mV)
MW-1	05-May-08	7082.57		31.45		7051.12	7.62	4.051	1.48	15.57	141.9
MW-1	24-Sep-08	7082.57		31.91		7050.66	6.80	3.588	2.97	15.32	18.1
MW-1	02-Jan-09	7082.57		31.90		7050.67	NM				
MW-1	07-Apr-09	7082.57		31.92		7050.65	7.31	4.536	3.19	13.86	16.8
MW-1	07-Jul-09	7082.57		31.95		7050.62	7.31	3.161	1.48	16.43	52.6
MW-1	12-Oct-09	7082.57		32.20		7050.37	7.43	2.553	5.91	13.97	293.3
MW-1	12-Jan-10	7082.57		32.41		7050.16	7.72	4.035	3.35	11.12	-11.2
MW-1	13-Oct-10	7082.57		32.62		7049.95	7.38	3.596	0.50	14.60	-75.8
MW-1	20-Jan-11	7082.57		32.64		7049.93	7.48	3.726	1.50	11.89	44.6
MW-1	09-May-11	7082.57		32.27		7050.30	7.61	3.543	1.69	13.38	-5.4
MW-2	05-May-08	7079.94		29.01		7050.93	7.59	2.276	2.21	16.43	90.8
MW-2	24-Sep-08	7079.94		29.61		7050.33	6.93	2.073	2.75	14.93	36.0
MW-2	02-Jan-09	7079.94		29.52		7050.42	NM				
MW-2	07-Apr-09	7079.94		29.50		7050.44	6.93	2.560	1.93	13.38	21.5
MW-2	07-Jul-09	7079.94		29.65		7050.29	7.22	2.067	1.07	15.28	45.9
MW-2	12-Oct-09	7079.94		29.93		7050.01	7.37	1.665	5.63	14.10	178.1
MW-2	12-Jan-10	7079.94		30.01		7049.93	7.51	2.297	2.82	10.88	-2.9
MW-2	13-Oct-10	7079.94				7079.94	NM - Well Filled with Roots				
MW-2	20-Jan-11	7079.94		30.33		7049.61	NM - Well Filled with Roots				
MW-2	09-May-11	7079.94		29.99		7049.95	7.62	2.134	2.54	13.64	-34.1
MW-3	05-May-08	7081.10		29.49		7051.61	7.79	4.083	2.42	15.91	75.7
MW-3	24-Sep-08	7081.10		30.07		7051.03	6.85	2.778	2.80	14.44	18.5
MW-3	02-Jan-09	7081.10		30.01		7051.09	NM				
MW-3	07-Apr-09	7081.10		30.02		7051.08	6.86	4.596	2.08	12.19	24.7
MW-3	07-Jul-09	7081.10		30.16		7050.94	NM - FILLED WITH SEDIMENT				

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MW-3	12-Oct-09	7081.10		30.41		7050.69	7.23	2.316	2.24	13.88	8.3
MW-3	12-Jan-10	7081.10		30.50		7050.60	7.35	2.985	2.87	11.75	-27.2
MW-3	13-Oct-10	7081.10		30.84		7050.26	7.51	3.973	1.71	13.71	-49.8
MW-3	20-Jan-11	7081.10		30.85		7050.25	7.43	3.528	3.30	10.48	53.4
MW-3	10-May-11	7081.10		30.54		7050.56	7.55	3.270	2.06	13.47	-69.3
MW-4	05-May-08	7084.79		32.74		7052.05	7.70	2.699	2.36	14.62	-37.5
MW-4	24-Sep-08	7084.79		33.21		7051.58	6.98	2.163	3.04	13.70	42.9
MW-4	02-Jan-09	7084.79		33.29		7051.50	NM				
MW-4	07-Apr-09	7084.79		33.27		7051.52	6.91	2.779	1.35	11.90	21.1
MW-4	07-Jul-09	7084.79		33.32		7051.47	7.20	2.124	0.80	17.17	-41.5
MW-4	12-Oct-09	7084.79		33.56		7051.23	7.29	1.792	2.00	13.70	43.7
MW-4	12-Jan-10	7084.79		33.68		7051.11	7.36	2.374	2.03	11.53	-26.7
MW-4	13-Oct-10	7084.79		33.93		7050.86	7.42	2.233	1.18	14.11	-56.8
MW-4	20-Jan-11	7084.79		34.01		7050.78	7.55	2.292	2.14	11.57	126.2
MW-4	09-May-11	7084.79		33.79		7051.00	7.65	2.234	1.85	13.05	-20.0
MW-5	05-May-08	7087.98				NA	NM - WELL DRY				
MW-5	24-Sep-08	7087.98				NA	NM - WELL DRY				
MW-5	02-Jan-09	7087.98				NA	NM - WELL DRY				
MW-5	07-Apr-09	7087.98				NA	NM - WELL DRY				
MW-5	07-Jul-09	7087.98				NA	NM - WELL DRY				
MW-5	12-Oct-09	7087.98				NA	NM - WELL DRY				
MW-5	12-Jan-10	7087.98				NA	NM - WELL DRY				
MW-5	13-Oct-10	7087.98				NA	NM - WELL DRY				
MW-5	20-Jan-11	7087.98				NA	NM - WELL DRY				
MW-5	09-May-11	7087.98				NA	NM - WELL DRY				

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MW-6	05-May-08	7088.43		36.03		7052.40	7.73	1.764	2.43	13.95	87.3
MW-6	24-Sep-08	7088.43		36.44		7051.99	7.00	1.464	3.95	14.19	50.3
MW-6	02-Jan-09	7088.43		36.50		7051.93	NM				
MW-6	07-Apr-09	7088.43		36.46		7051.97	7.00	1.854	2.21	11.98	22.2
MW-6	07-Jul-09	7088.43		36.67		7051.76	7.27	1.557	1.35	17.51	57.8
MW-6	12-Oct-09	7088.43		36.78		7051.65	7.43	1.297	2.06	13.11	66.0
MW-6	12-Jan-10	7088.43		36.92		7051.51	7.44	1.615	2.24	11.82	-19.2
MW-6	13-Oct-10	7088.43		37.19		7051.24	7.54	1.502	1.68	14.44	57.9
MW-6	20-Jan-11	7088.43		37.18		7051.25	7.85	1.539	1.83	11.52	174.9
MW-6	09-May-11	7088.43		37.05		7051.38	7.80	1.526	3.31	13.01	31.9
MW-7	05-May-08	7090.15		37.71		7052.44	NM - LOW YIELD				
MW-7	24-Sep-08	7090.15		38.16		7051.99	7.08	1.572	6.11	13.99	36.3
MW-7	02-Jan-09	7090.15		38.21		7051.94	NM				
MW-7	07-Apr-09	7090.15		38.16		7051.99	6.87	1.955	1.46	12.80	22.0
MW-7	07-Jul-09	7090.15		38.29		7051.86	7.06	1.599	2.27	16.48	92.6
MW-7	12-Oct-09	7090.15		38.49		7051.66	7.18	1.365	4.64	13.48	77.0
MW-7	12-Jan-10	7090.15		38.64		7051.51	7.22	1.679	1.97	11.02	-6.5
MW-7	13-Oct-10	7090.15		38.89		7051.26	7.57	2.227	1.68	16.25	66.3
MW-7	20-Jan-11	7090.15		38.92		7051.23	8.20	2.569	2.63	10.71	193.4
MW-7	09-May-11	7090.15		38.72		7051.43	7.67	2.066	2.19	14.93	86.8
MW-8	05-May-08	7085.20		33.71		7051.49	NM - LOW YIELD				
MW-8	24-Sep-08	7085.20		34.20		7051.00	6.88	1.672	3.06	15.24	-9.6
MW-8	05-Jan-09	7085.20		34.21		7050.99	NM				
MW-8	07-Apr-09	7085.20		34.28		7050.92	6.98	2.061	1.81	13.30	-108.8

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MW-8	07-Jul-09	7085.20		34.31		7050.89	7.11	1.811	1.17	16.26	-74.0
MW-8	12-Oct-09	7085.20		34.54		7050.66	7.00	1.416	1.48	13.27	-102.1
MW-8	12-Jan-10	7085.20		34.69		7050.51	7.02	1.699	1.73	11.13	-159.8
MW-8	13-Oct-10	7085.20		34.92		7050.28	7.32	1.786	0.77	14.65	-126.5
MW-8	20-Jan-11	7085.20		34.99		7050.21	7.40	1.776	1.32	11.42	-71.1
MW-8	20-Jan-11	7085.20		34.99		7050.21	7.40	1.776	1.32	11.42	-71.1
MW-8	10-May-11	7085.20		34.67		7050.53	7.44	1.698	1.06	12.74	-52.5
MW-9	05-May-08	7083.64		31.81		7051.83	7.85	1.955	2.59	15.01	-37.9
MW-9	24-Sep-08	7083.64		32.26		7051.38	7.08	1.515	2.84	14.03	43.3
MW-9	05-Jan-09	7083.64				7083.64	NM - WELL DRY				
MW-9	07-Apr-09	7083.64		32.34		7051.30	6.89	1.876	1.11	12.85	7.0
MW-9	07-Jul-09	7083.64		32.41		7051.23	7.19	1.672	1.14	16.77	-9.7
MW-9	12-Oct-09	7083.64		32.63		7051.01	7.22	1.352	2.10	13.78	72.9
MW-9	12-Jan-10	7083.64	32.43	34.80	2.37	7050.68	NM - 2.37 feet of Crude oil or Free Product				
MW-9	13-Oct-10	7083.64	32.63	35.29	2.66	7050.42	NM - 2.66 feet of Crude oil or Free Product				
MW-9	20-Jan-11	7083.64	32.71	35.21	2.50	7050.38	NM - 2.50 feet of Crude oil or Free Product				
MW-9	09-May-11	7083.64	32.43	34.96	2.53	7050.65	NM - 2.53 feet of Crude oil or Free Product				
MPE-1	09-May-11	TBS	33.87	36.87	3.00	NA	NM - 3.00 feet of Crude oil or Free Product				
MPE-2	09-May-11	TBS	32.50	33.73	1.23	NA	NM - 1.23 feet of Crude oil or Free Product				
MPE-3	09-May-11	TBS	32.43	34.65	2.22	NA	NM - 2.22 feet of Crude oil or Free Product				
MPE-4	09-May-11	TBS	33.45	35.74	2.29	NA	NM - 2.29 feet of Crude oil or Free Product				

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

Well ID	Date Sampled	Surveyed TOC (ft)	Depth to Product (ft)	Depth to Water (ft)	NAPL Thickness (ft)	GW Elev. (ft)	pH	Conductivity (mS)	DO (mg/L)	Temperature (C)	ORP (mV)
MPE-5	09-May-11	TBS	34.93	37.70	2.77	NA	NM - 2.77 feet of Crude oil or Free Product				
MPE-6	09-May-11	TBS		33.05		NA	NM - DUE TO HIGH CONTAMINATION OF CRUDE OIL				
MPE-7	09-May-11	TBS	30.87	30.88	0.01	NA	NM - 0.01 feet of Crude oil or Free Product				

NOTE: NS = NOT SAMPLED
NM = NOT MEASURED
NA = NOT AVAILABLE
TBS = TO BE SURVEYED

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B
New Mexico WQCC		*10*	*750*	*750*	*620*	*NE*	*NE*	*NE*
MW-1	05-May-08	<1.0	<1.0	<1.0	<2.0	0.092	<1.0	<5.0
MW-1	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	13-Oct-10	NS - Well filled with Roots						
MW-2	20-Jan-11	NS - Well filled with Roots						
MW-2	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	07-Jul-09	NS - Well filled with sediment						
MW-3	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B
New Mexico WQCC		*10*	*750*	*750*	*620*	*NE*	*NE*	*NE*
MW-4	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	09-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	05-May-08	NS - Well Dry						
MW-5	24-Sep-08	NS - Well Dry						
MW-5	02-Jan-09	NS - Well Dry						
MW-5	07-Apr-09	NS - Well Dry						
MW-5	07-Jul-09	NS - Well Dry						
MW-5	12-Oct-09	NS - Well Dry						
MW-5	12-Jan-10	NS - Well Dry						
MW-5	13-Oct-10	NS - Well Dry						
MW-5	20-Jan-11	NS - Well Dry						
MW-5	09-May-11	NS - Well Dry						
MW-6	05-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	24-Sep-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	09-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	05-May-08	2.8	<1.0	<1.0	<2.0	0.40	<1.0	<5.0
MW-7	24-Sep-08	<1.0	<1.0	<1.0	<2.0	0.069	<1.0	<5.0
MW-7	02-Jan-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	07-Apr-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	07-Jul-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	12-Oct-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	12-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	13-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO
		(µg/L)	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*
Analytical Method		**8021B**	**8021B**	**8021B**	**8021B**	**8015B**	**8015B**	**8015B**
New Mexico WQCC		***10***	***750***	***750***	***620***	***NE***	***NE***	***NE***
MW-7	20-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-7	09-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-8	05-May-08	**26**	10	<1.0	<2.0	1.10	<1.0	<5.0
MW-8	24-Sep-08	**65**	26	<1.0	<2.0	0.90	<1.0	<5.0
MW-8	05-Jan-09	**45**	25	<1.0	2.2	1.0	<1.0	<5.0
MW-8	07-Apr-09	**25**	20	<1.0	2.9	0.89	<1.0	<5.0
MW-8	07-Jul-09	7.5	4.5	<1.0	<2.0	0.21	<1.0	<5.0
MW-8	12-Oct-09	**15**	11	<1.0	<2.0	0.52	<1.0	<5.0
MW-8	12-Jan-10	<1.0	<1.0	<1.0	<2.0	0.088	<1.0	<5.0
MW-8	13-Oct-10	**12**	<1.0	1.7	16	0.25	<1.0	<5.0
MW-8	20-Jan-11	**35**	<1.0	6.5	6.3	0.16	<1.0	<5.0
MW-8	10-May-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-9	05-May-08	6.2	7.5	<1.0	2.3	0.90	<1.0	<5.0
MW-9	24-Sep-08	**17**	12	<1.0	<2.0	0.32	<1.0	<5.0
MW-9	05-Jan-09	NS - Well Dry						
MW-9	07-Apr-09	**12**	6.2	<1.0	<2.0	0.32	<1.0	<5.0
MW-9	07-Jul-09	7.0	5.3	<1.0	<2.0	0.28	<1.0	<5.0
MW-9	12-Oct-09	**26**	2.0	<1.0	<2.0	0.31	<1.0	<5.0
MW-9	12-Jan-10	NS - 2.37 FEET OF CRUDE OIL						
MW-9	13-Oct-10	NS - 2.66 FEET OF CRUDE OIL						
MW-9	20-Jan-11	NS - 2.50 FEET OF CRUDE OIL						
MW-9	09-May-11	NS - 2.53 FEET OF CRUDE OIL						

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

TABLE 3
SUMMARY OF AIR LABORATORY ANALYTICAL RESULTS
BMG HWY 537 LLAVES PIPELINE 2008 OIL RELEASE
Rio Arriba County, New Mexico

Sample ID	*Sample Date*	*Lab Analytical Method*	*Benzene (ppmv)*	*Toluene (ppmv)*	*Ethyl-benzene (ppmv)*	*Xylene (ppmv)*	*TPH GRO (ppmv)*
Engine #1 Pre-Engine†	11-May-11	8021/8015	19.24	29.208	2.75	13.9	1,752
Engine #1 Post-Cat†	11-May-11	8021/8015	0.373	1.801	0.486	3.168	60
Percent Contaminant Reduction by Catox (%) May 2011			**99.981**	**99.938**	**99.823**	**99.772**	**99.966**

Notes:

< **Analyte not detected above listed method limit**

ppmv **Parts per million (by volume)**

† **These results were reported in µg/L, they were converted to ppmv using the following formulas**

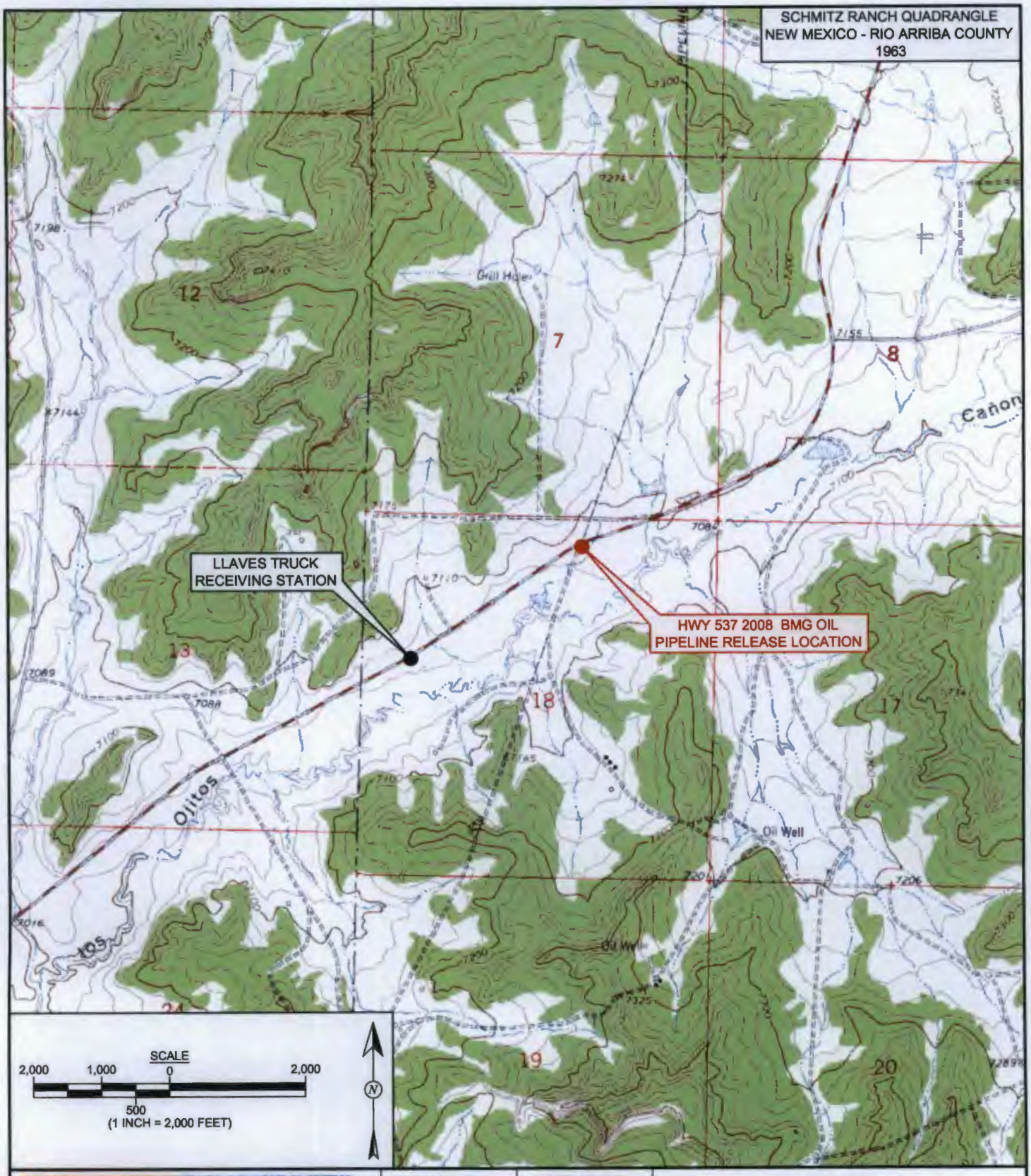
Benzene ppmv = µg/L x 0.2871

Toluene ppmv = µg/L x 0.2434

Ethylbenzene ppmv = µg/L x 0.2112

Xylenes ppmv = µg/L x 0.2112

GRO ppmv = µg/L x 0.24 **GRO is an estimati



DRAWN BY: N. Willis	**DATE DRAWN:** April 4, 2011	**FIGURE 1**
REVISIONS BY: C. Lameman	**DATE REVISED:** August 10, 2011	**TOPOGRAPHIC SITE LOCATION MAP**
CHECKED BY: E. McNally	**DATE CHECKED:** August 10, 2011	BMG HIGHWAY 537 LLAVES 2008 PIPELINE OIL RELEASE NW ¼ NE ¼, SEC. 18, T25N, R3W SCHMITZ RANCH RIO ARRIBA COUNTY, NEW MEXICO N 36° 24.214', W 107° 11.053'
APPROVED BY: E. McNally	**DATE APPROVED:** August 10, 2011	

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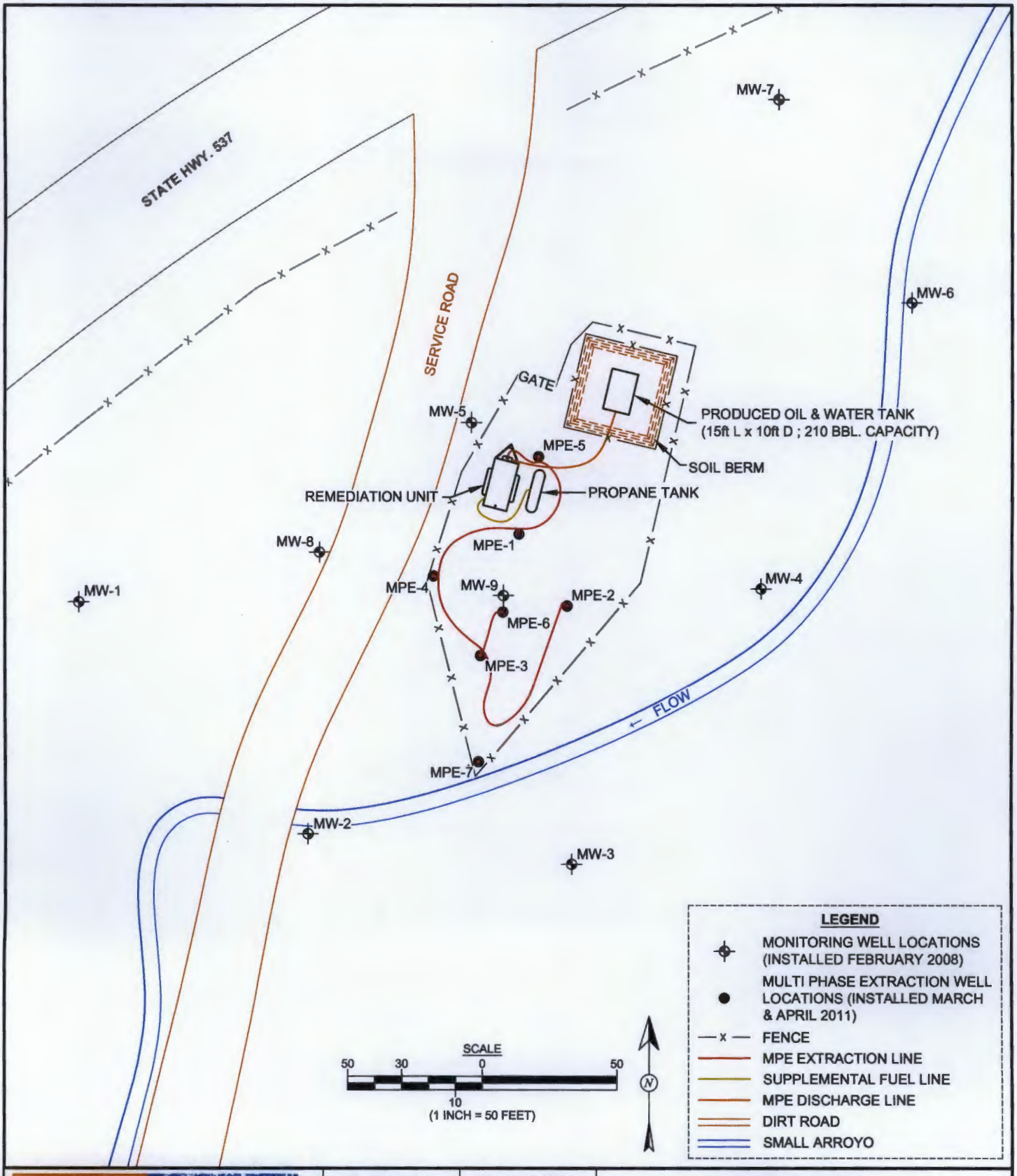

Animas Environmental Services, LLC

DRAWN BY: N. Willis	**DATE DRAWN:** April 4, 2011
REVISIONS BY: C. Lameman	**DATE REVISED:** June 28, 2011
CHECKED BY: E. McNally	**DATE CHECKED:** August 10, 2011
APPROVED BY: E. McNally	**DATE APPROVED:** August 10, 2011

FIGURE 2

GENERAL SITE PLAN

BMG HIGHWAY 537
LLAVES 2008 PIPELINE OIL RELEASE
NW ¼ NE ¼, SEC. 18, T25N, R3W
SCHMITZ RANCH
RIO ARRIBA COUNTY, NEW MEXICO
N 36° 24.214', W 107° 11.053'

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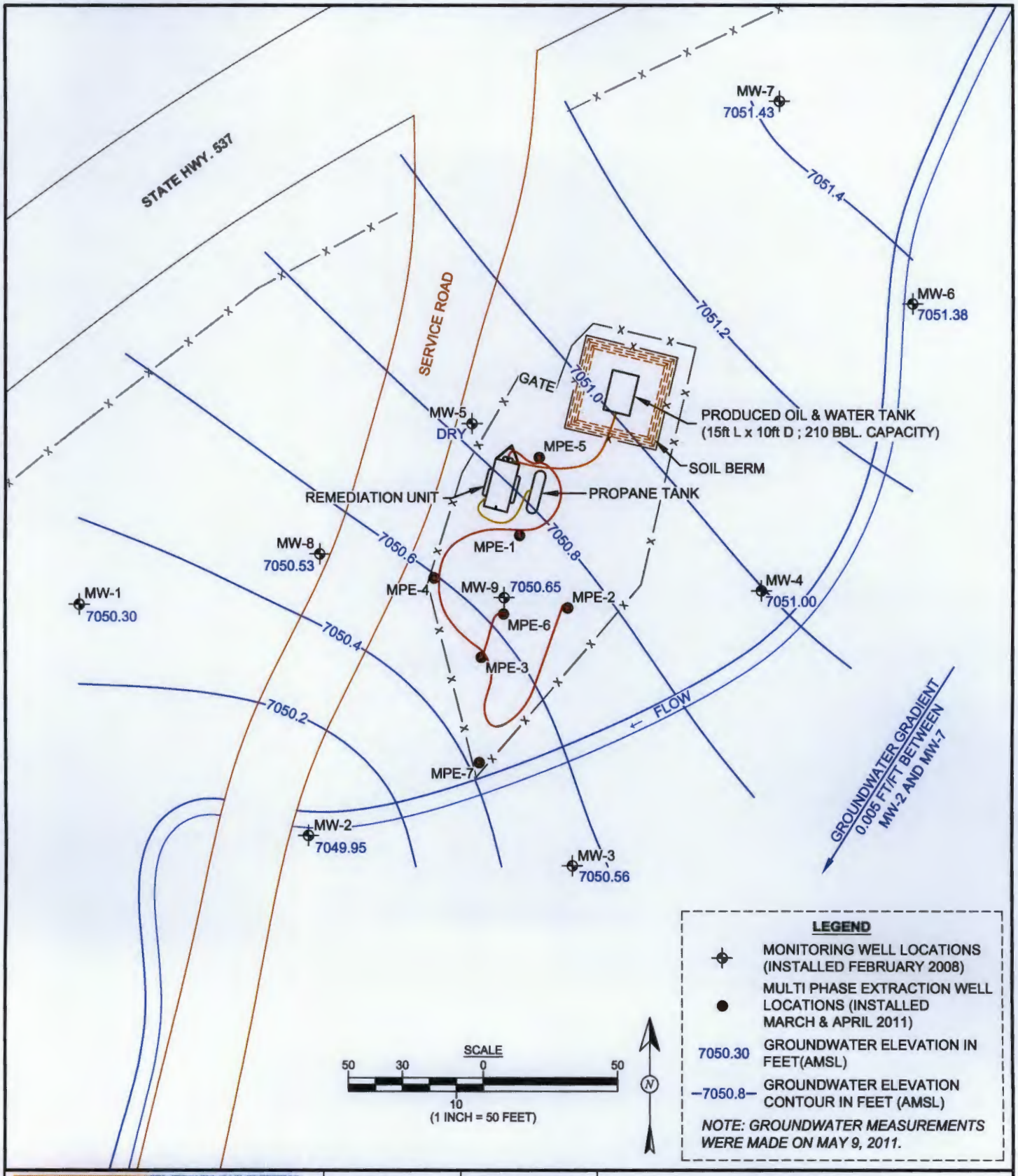

Animas Environmental Services, LLC

DRAWN BY: N. Willis	**DATE DRAWN:** April 4, 2011
REVISIONS BY: C. Lameman	**DATE REVISED:** June 28, 2011
CHECKED BY: D. Watson	**DATE CHECKED:** July 19, 2011
APPROVED BY: E. McNally	**DATE APPROVED:** August 10, 2011

FIGURE 3

GROUNDWATER ELEVATION CONTOURS, MAY 2011

BMG HIGHWAY 537
LLAVES 2008 PIPELINE OIL RELEASE
NW ¼ NE ¼, SEC. 18, T25N, R3W
SCHMITZ RANCH, RIO ARRIBA COUNTY, NEW MEXICO
N 36° 24.214', W 107° 11.053'

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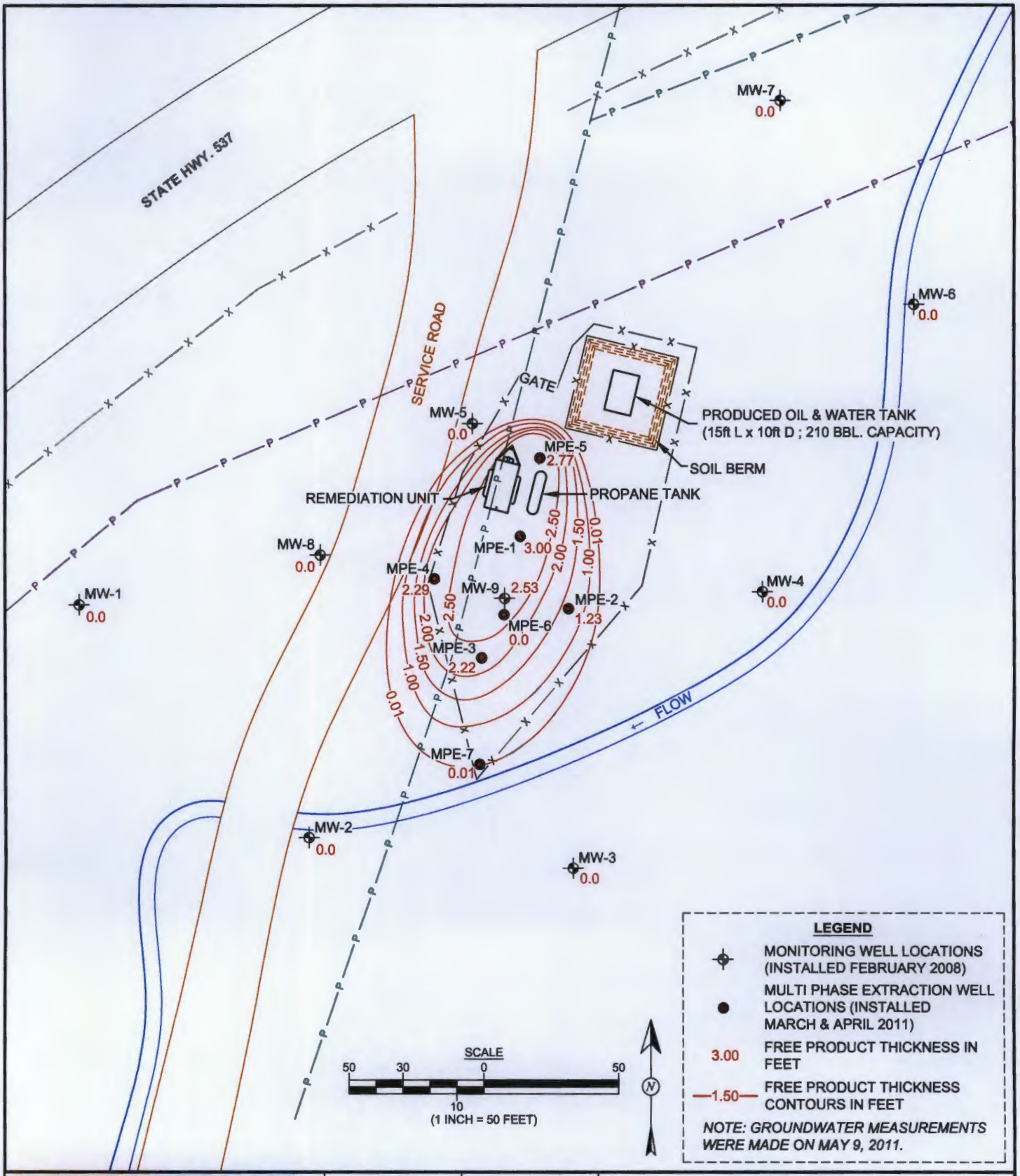


Animas Environmental Services, LLC

DRAWN BY: N. Willis	**DATE DRAWN:** April 4, 2011
REVISIONS BY: C. Lameman	**DATE REVISED:** June 28, 2011
CHECKED BY: D. Watson	**DATE CHECKED:** July 19, 2011
APPROVED BY: E. McNally	**DATE APPROVED:** August 10, 2011

FIGURE 4

FREE PRODUCT THICKNESS CONTOURS, MAY 2011

BMG HIGHWAY 537
LLAVES 2008 PIPELINE OIL RELEASE
NW ¼ NE ¼, SEC. 18, T25N, R3W
SCHMITZ RANCH, RIO ARRIBA COUNTY, NEW MEXICO
N 36° 24.214', W 107° 11.053'

S:\ANIMAS 2000\2011 PROJECTS\BMG\HWY 537 2008 RELEASE\DRAWINGS\JUNE REPORT FIGURES\FIGURE 4 FREE PRODUCT THICKNESS MAP

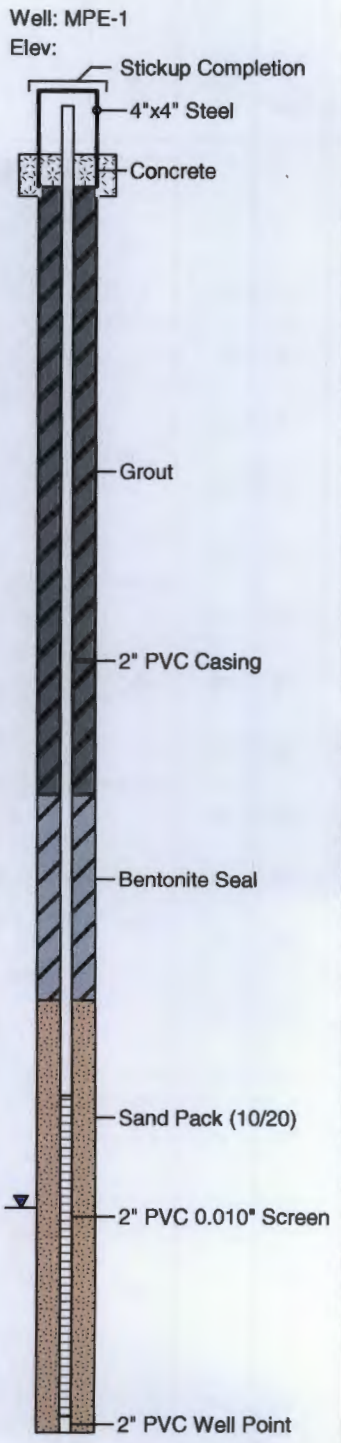
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

MPE-1

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 3/21/11	Latitude	: N36°24.207'
Date Completed	: 3/21/11	Longitude	: W107°11.052'
Hole Diameter	: 7.25 in.	Survey By	: GPS
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SC		SANDY CLAY, red-brown, loose, and dry.		
2	-2					
4	-4					
6	-6	SP		SAND, fine grained, red-brown, loose, and dry.		
8	-8					
10	-10					
12	-12					
14	-14	SC		SANDY CLAY, red-brown, dry and loose.		
16	-16					
18	-18					
20	-20	SP		SAND, med-grained, red-brown, loose and dry to slightly moist.		
22	-22	SP		SAND, fine grained, red-brown, loose, dry and slight odor.		
24	-24					
26	-26					
28	-28	SC		CLAY with sand, brown, moist and noted odor.		
30	-30	SP		SAND, brown, fine grained, dry to wet (at 33'), noted odor and staining.		
32	-32					
34	-34					
36	-36					
38	-38					
40				End Boring at 40 feet.		



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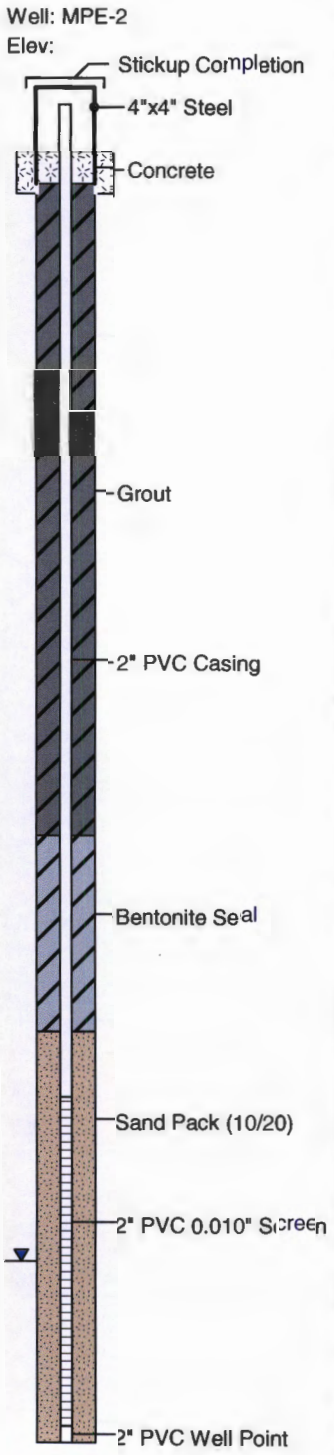
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

MPE-2

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 3/21/11	Latitude	: N36°24.203'
Date Completed	: 3/22/11	Longitude	: W107°11.049'
Hole Diameter	: 7.25 in.	Survey By	: GPS
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	DESCRIPTION	Blow Count	PID (ppm)
0 – 2	0 – -2	SC	SANDY CLAY, brown, dry and loose.		
2 – 6	-2 – -6	SW	SAND, fine-grained, red-brown, loose and dry.		
6 – 14	-6 – -14	SC	SANDY CLAY, red-brown, dry and loose.		
14 – 20	-14 – -20	SP	SAND, medium-grained, loose, dry and red-brown.		
20 – 28	-20 – -28	SC	SANDY CLAY, brown and moist.		
28 – 40	-28 – -38	SP	SAND, brown, dry to wet (at 34 feet), loose and noted odor.		
40	-38		End Boring at 39.5 feet.		



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AES
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

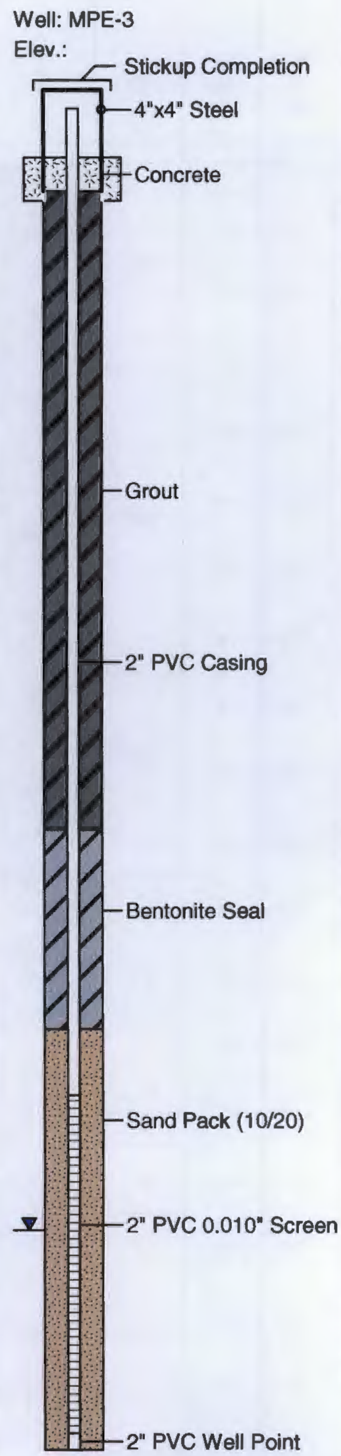
MPE-3

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 3/22/11	Latitude	: N36°24.200'
Date Completed	: 3/22/11	Longitude	: W107°11.057'
Hole Diameter	: 7.25 in.	Survey By	: GPS
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0–6	0 to -6	SC		SANDY CLAY, red-brown and moist.		
6–12	-6 to -12	SW		SAND, brown, fine-grained, well sorted, dry and loose.		
12–19	-12 to -19	SC		SANDY CLAY, red-brown and dry.		
19–27	-19 to -27	SP		SAND, medium-grained and red-brown.		
27–31	-27 to -31	SC		SANDY CLAY, red-brown, slightly moist, and slight odor.		
31–38.5	-31 to -38.5	SP		SAND, brown, medium-grained, poorly sorted, slightly moist, becomes wet at 32 feet and noted odor.		

End Boring at 38.5 feet.



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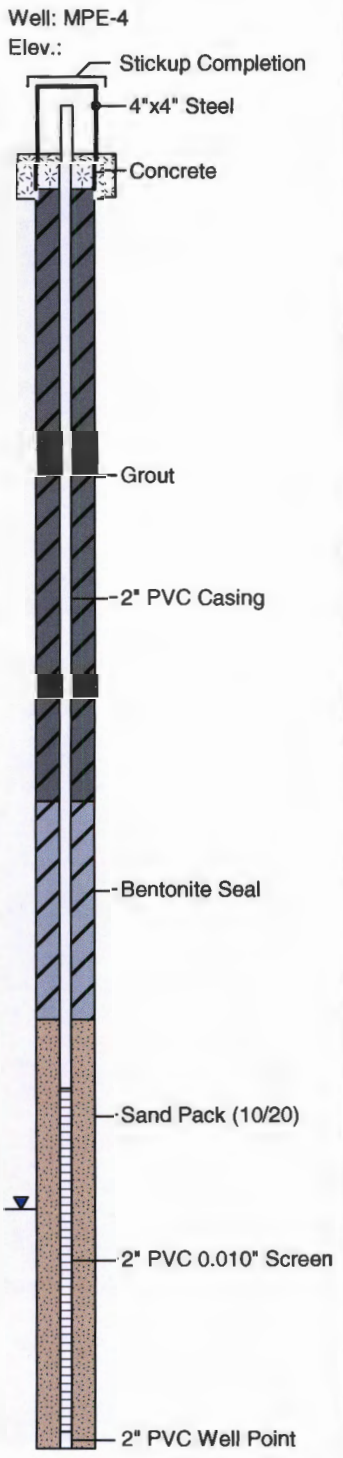
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

MPE-4

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 3/22/11	Latitude	: N36°24.205'
Date Completed	: 3/22/11	Longitude	: W107°11.059'
Hole Diameter	: 7.25 in.	Survey By	: GPS
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	DESCRIPTION	Blow Count	PID (ppm)
0	0	SC	SANDY CLAY, brown, loose and slightly moist.		
6	-6	SW	SAND, brown, fine-grained, loose and dry.		
16	-16	SC	SANDY CLAY, red-brown, dry, and loose.		
20	-20	SP	SAND, red-brown, loose, dry, medium-grained, with clay and silt.		
28	-28	SC	SANDY CLAY, brown and slightly moist.		
30	-30	SP	SAND, medium-grained, red-brown, with silt and clay.		
32	-32	SP	SAND, gray-brown, saturated, loose, medium-grained and noted odor and staining.		
38	-38		End Boring at 38 feet.		



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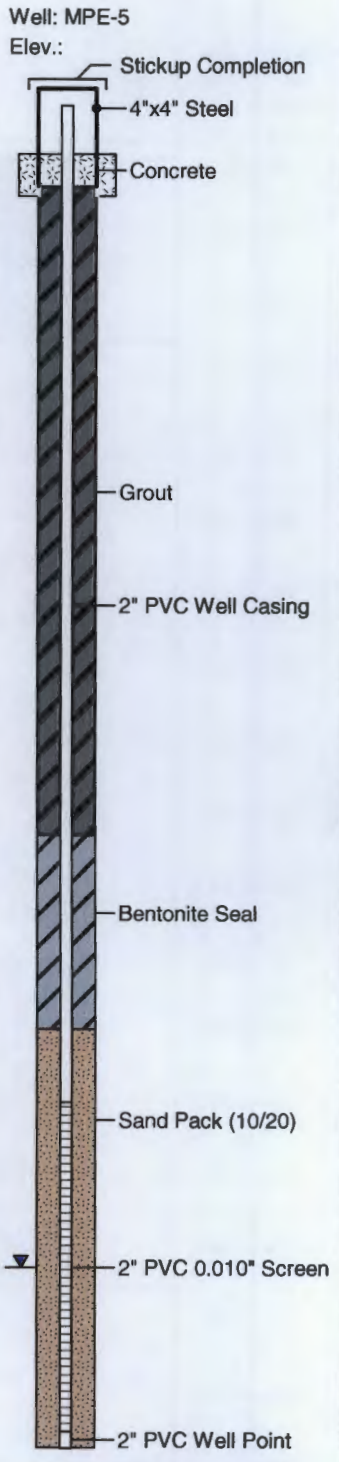
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

MPE-5

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 3/21/11	Latitude	: N36°24.212'
Date Completed	: 3/21/11	Longitude	: W107°11.052'
Hole Diameter	: 7.25 in.	Survey By	: GPS
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SC		SANDY CLAY, brown, loose, dry to slight moisture.		
2	-2					
4	-4					
6	-6	SW		SAND, fine-grained, red-brown, loose and dry.		
8	-8					
10	-10					
12	-12					
14	-14					
16	-16					
18	-18	CL		CLAY, brown, red-brown, odor, medium stiff, dry to slightly moist and trace of sand.		
20	-20					
22	-22					
24	-24	SW		SAND, red-brown, fine to medium grained, slight to no odor and slightly moist.		
26	-26					
28	-28	SC		SANDY CLAY, red-brown, slight odor and slightly moist.		
30	-30	SP		SAND, medium-grained, with silt and clay, tan-brown, dry to wet (at 34 feet) and noted odor and staining.		
32	-32					
34	-34					
36	-36					
38	-38					
40				Sandstone, End Boring at 39.5 feet.		



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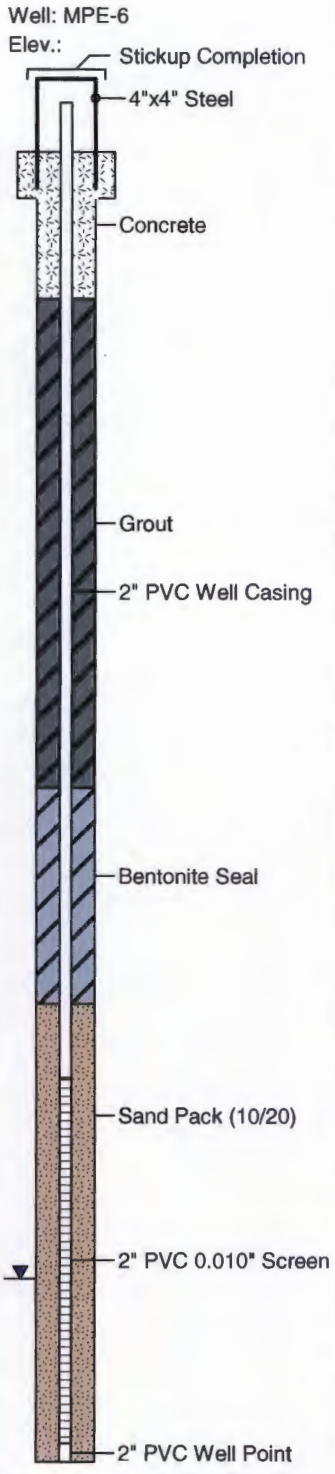
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

MPE-6

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 4/14/11	Latitude	:
Date Completed	: 4/14/11	Longitude	:
Hole Diameter	: 7.25 in.	Survey By	:
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	DESCRIPTION	Blow Count	PID (ppm)
0 – 2 – 4	0 – -2 – -4		SANDY CLAY, brown, medium stiff, dry to slight moisture, and no odor.		
6 – 8	-6 – -8		SILT , tan-brown, sandy, loose, dry, and no odor.		
10 – 12 – 14 – 16 – 18	-10 – -12 – -14 – -16 – -18	SW	SAND, tan-brown, fine-grained, well sorted, with silt, loose, dry, and no odor.		
20	-20		SANDY CLAY, tan-brown, medium stiff, dry, and no odor.		
22 – 24 – 26	-22 – -24 – -26	SP	SAND, red-tan, medium grained, poorly sorted, loose, dry, no odor, and becomes slightly moist by base.		
28 – 30	-28 – -30		SANDY CLAY, brown, medium stiff, and slightly moist.		
32 – 34 – 36	-32 – -34	SP	SAND, gray-brown, medium grained, poorly sorted, with clay and silt, moist, and slight odor		



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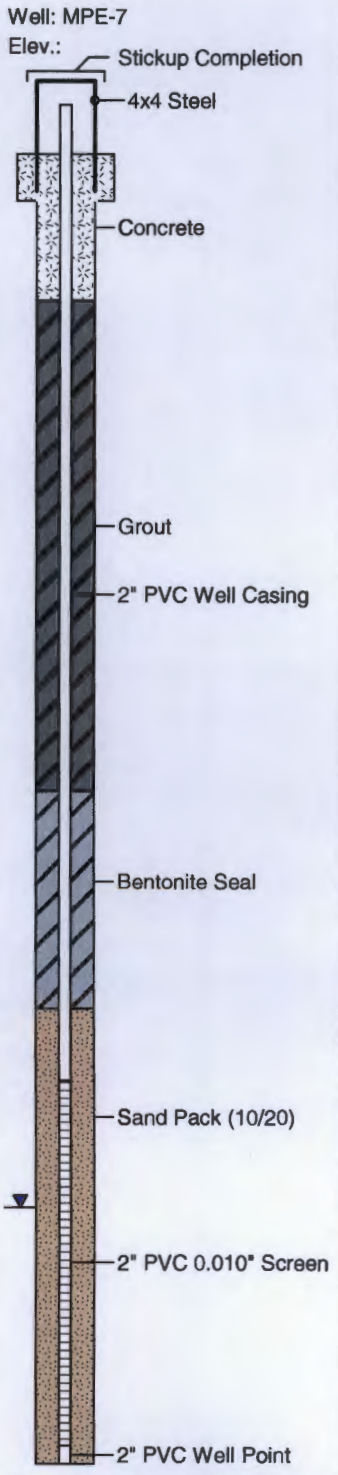
Animas Environmental Services, LLC.
624 East Comanche
Farmington, NM 87401

MPE-7

BMG Hwy 537 Llaves 2008 Pipeline Oil Release
NW 1/4, NE 1/4, Sec. 18, T25N, R3W
Rio Arriba County, New Mexico

Date Started	: 4/14/11	Latitude	:
Date Completed	: 4/14/11	Longitude	:
Hole Diameter	: 7.25 in.	Survey By	:
Drilling Method	: HSA	Logged By	: Blaine Watson
Sampling Method	: None		

Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			SANDY CLAY, brown, dry, medium stiff, and no odor.		
2	-2					
4	-4			SILT, brown, sandy, loose, dry, and no odor.		
6	-6					
8	-8	SW		SAND, tan-brown, fine grained, well sorted, silty, loose, dry, and no odor.		
10	-10					
12	-12					
14	-14					
16	-16					
18	-18			SANDY CLAY, tan-brown, medium stiff, dry, and no odor.		
20	-20					
22	-22					
24	-24	SP		SAND, brown, medium grained, poorly sorted, loose, dry, and no odor.		
26	-26					
28	-28			SANDY CLAY, brown, medium stiff, dry to slightly moist, and no odor.		
30	-30	SP		SAND, gray-brown, medium grained, poorly sorted, with clay and silt, moist, and slight odor.		
32	-32			CLAY, sandy, brown, moist, and medium stiff.		
34	-34	SP		SAND, brown, medium grained, poorly sorted, and wet.		
36						



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1. March 21, 2011: Facing E, looking at site prior to drilling activities.

2. March 21, 2011: Facing SW, pouring cement grout at MPE-5.

3. March 21, 2011: Facing SE, preparing to drill MPE-2.

4. March 22, 2011: Facing NW, surface completion of MPE-3.

5. March 22, 2011: Facing N, completions of wells MPE-1 through MPE-5.

6. April 14, 2011: Facing N, setting sand pack at MPE-6.

7. April 14, 2011: Facing N, hydrating bentonite seal of MPE-6.

8. April 14, 2011: Facing S, drilling of MPE-7.

9. May 10, 2011: Facing SW, installed mobile ICE system and propane tank.

10. May 10, 2011: Facing N, MPE system connected to MPE-1 through MPE-6.

11. May 10, 2011: Facing N, 210-bbl tank used to collect produced water and crude oil.

12. May 10, 2011: Signage posted on gate at the site.

DEPTH TO GROUNDWATER MEASUREMENT FORM

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

Project: Groundwater Monitoring
Site: Hwy 537 2008 Spill
Location: Rio Arriba County, New Mexico
Tech: A. Wills

Project No.: AES 080101
Date: 5-9-11
Time: 0930
Form: 1 of 1

Well I.D.	Time	Depth to NAPL (ft.)	Depth to Water (ft.)	NAPL Thickness (ft.)	Notes / Observations
MW-1	0945		32.27		
MW-2	0949		29.99		
MW-3	0952		30.54		
MW-4	0955		33.79		
MW-5	0936		DRY		
MW-6	0959		37.05		
MW-7	1002		38.72		
MW-8	0941		34.67		
MW-9	1033	32.43	34.96	2.53	
MPE-1	1041	33.87	36.97	3.00	
MPE-2	1012	32.50	33.73	1.23	
MPE-3	1027	32.43	34.65	2.22	
MPE-4	1037	33.45	35.74	2.29	
MPE-5	1018	34.93	37.70	2.77	
MPE-6	1031		33.05		? Well is beside MW-9 but No Product this time
MPE-7	1025	30.87	30.88	0.01	

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

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-1

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 32.27 **Time:** 0945 (5-9) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 32.32 **Time:** 1417 (5-10) *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-10-11
Arrival Time: 1412
Air Temp: 60°F
T.O.C. Elev. (ft): 7082.57
Total Well Depth (ft):

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
1419	13.38	3.543	1.69	7.61	-5.4	55 mL	
1424							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

Monitor Well No: MW-2

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 29.99 **Time:** 0949 (5-9) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 29.95 **Time:** 1340 (5-10) *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: D.T.P.:_____ D.T.W.:_____ Thickness:_____ Time:_____

Project No.: AES 080101
Date: 5-10-11
Arrival Time: 1335
Air Temp: 65°F
T.O.C. Elev. (ft): 7079.94
Total Well Depth (ft):

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
1344	13.64	2.134	2.54	7.62	-34.1	55mL	
1349	~						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

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 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. WILLIS
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 30.54 **Time:** 0952 (5-9) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 30.56 **Time:** 1305 (5-10) *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 080101
Date: 5-10-11
Arrival Time: 1302
Air Temp: 65°F
T.O.C. Elev. (ft): 7081.1
Total Well Depth (ft): _____

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
1307	13.47	3.270	2.06	7.55	-69.3	55 mL	
1312	~						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

Monitor Well No: MW-4

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 33.79 **Time:** 0955 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 33.73 **Time:** 1306 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1304
Air Temp: 65°F
T.O.C. Elev. (ft): 7084.79
Total Well Depth (ft):

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
1311	13.05	2.234	1.85	7.65	-20.0	55 mL	
1316							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

Monitor Well No: MW-5

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: NWILLIS
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 0936 **Time:** DRY *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 0936 **Time:** DRY *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 0930
Air Temp: 60°F
T.O.C. Elev. (ft): 7087.98
Total Well Depth (ft):

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

NO SAMPLE WELL DRY

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

Monitor Well No: MW-6

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 37.05 **Time:** 0959 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 37.02 **Time:** 1219 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1216
Air Temp: 65°F
T.O.C. Elev. (ft): 7088.43
Total Well Depth (ft):

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
1223	13.01	1.526	3.31	7.80	31.9	55 mL	
1228	—	—	—	—	—	—	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

Monitor Well No: MW-7

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 38.72 **Time:** 1002 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 38.71 **Time:** 1117 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1114
Air Temp: 60°F
T.O.C. Elev. (ft): 7090.15
Total Well Depth (ft):

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
1121	14.93	2.066	2.19	7.67	86.8	55mL	
1126							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

Monitor Well No: MW-8

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. WILLIS
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 34.67 **Time:** 0941 (5-9) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 34.69 **Time:** 1445 (5-10) *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-10-11
Arrival Time: 1441
Air Temp: 60°F
T.O.C. Elev. (ft): 7085.2
Total Well Depth (ft):

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
1448	12.74	1.698	1.06	7.44	-52.5	55 mL	
1453							SAMPLES COLLECTED
							Due to Low Yield I was Unable to collect one 40 mL vial.

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

Monitor Well No: MW-9

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: No Purge
Well Diameter (in): 0.75
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.:** 32.43 **D.T.W.:** 34.96 **Thickness:** 2.53 **Time:** 1033

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1032
Air Temp: 60°F
T.O.C. Elev. (ft): 7083.64
Total Well Depth (ft):

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

NO SAMPLE TAKEN CRUDE OIL PRESENT

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: MPE-1	624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022

Site: Highway 537 2008 Spill — Project No.: AES 080101
Location: Rio Arriba County, New Mexico — Date: 5-9-11
Project: Groundwater Monitoring and Sampling — Arrival Time: 1040
Sampling Technician: N. WILLIS — Air Temp: 60°F
Purge / No Purge: PURGE — T.O.C. Elev. (ft):
Well Diameter (in): 2 — Total Well Depth (ft):
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.: 33.87 D.T.W.: 36.87 Thickness: 3.00 Time: 1041

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

NO SAMPLE CRUDE OIL PRESENT

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:

revised: 01/06/10

MONITORING WELL SAMPLING RECORD	Animas Environmental Services
Monitor Well No: MPE-2	624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022

Site: Highway 537 2008 Spill — **Project No.:** AES 080101
Location: Rio Arriba County, New Mexico — **Date:** 5-9-11
Project: Groundwater Monitoring and Sampling — **Arrival Time:** 1011
Sampling Technician: N. WILLIS — **Air Temp:** 60°F
Purge / No Purge: PURGE — **T.O.C. Elev. (ft):**
Well Diameter (in): 2 — **Total Well Depth (ft):**
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.: 32.50 D.T.W.: 33.73 Thickness: 1.23 Time: 1012

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

NO SAMPLE COLLECTED OIL PRESENT

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:

revised: 01/06/10

MONITORING WELL SAMPLING RECORD	Animas Environmental Services
Monitor Well No: MPE-3	624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022

Site: Highway 537 2008 Spill — **Project No.:** AES 080101
Location: Rio Arriba County, New Mexico — **Date:** 5-9-11
Project: Groundwater Monitoring and Sampling — **Arrival Time:** 1026
Sampling Technician: N. WILLS — **Air Temp:** 60°F
Purge / No Purge: PURGE — **T.O.C. Elev. (ft):**
Well Diameter (in): 2 — **Total Well Depth (ft):**
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.: 32.43 D.T.W.: 34.65 Thickness: 2.22 Time: 1027

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

NO SAMPLE CRUDE OIL PRESENT

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:

revised: 01/06/10

MONITORING WELL SAMPLING RECORD

Monitor Well No: MPE - 4

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

Site: Highway 537 2008 Spill
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:** _____ *(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.: 33.45 D.T.W.: 35.74 Thickness: 2.29 Time: 1037

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1036
Air Temp: 60°F
T.O.C. Elev. (ft): _____
Total Well Depth (ft): _____

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

NO SAMPLE CRUDE OIL PRESENT

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:

revised: 01/06/10

MONITORING WELL SAMPLING RECORD

Monitor Well No: MPE-5

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 2

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1016
Air Temp: 60°F
T.O.C. Elev. (ft):
Total Well Depth (ft):

Initial D.T.W. (ft): _____ **Time:** 1031 *(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.:** 34.93 **D.T.W.:** 37.70 **Thickness:** 2.77 **Time:** 1018

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

NO SAMPLE CRUDE OIL PRESENT

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

Monitor Well No: MPE-6

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

Site: Highway 537 2008 Spill
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): 33.05 **Time:** 1031 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): **Time:** *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*
If NAPL Present: **D.T.P.:** **D.T.W.:** **Thickness:** **Time:**

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1029
Air Temp: 60°F
T.O.C. Elev. (ft):
Total Well Depth (ft):

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

SEE NOTES BELOW

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: MPE-6 is by MW-9 (3 feet away). MW-9 and all well around MPE-6 has crude oil on them. Due to this reason Ross and I agreed to not sample this well.

revised: 01/06/10

MONITORING WELL SAMPLING RECORD

Monitor Well No: MPE-7

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

Site: Highway 537 2008 Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. WILLIS
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): _____ **Time:** _____
Confirm D.T.W. (ft): _____ **Time:** _____
Final D.T.W. (ft): _____ **Time:** _____
If NAPL Present: **D.T.P.:** 30.87 **D.T.W.:** 30.88 **Thickness:** 0.01 **Time:** 1025

Project No.: AES 080101
Date: 5-9-11
Arrival Time: 1023
Air Temp: 60°F
T.O.C. Elev. (ft):
Total Well Depth (ft):
(taken at initial gauging of all wells)
(taken prior to purging well)
(taken after sample collection)

Water Quality Parameters - Recorded During Well Purging

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

NO SAMPLE COLLECTED PRESENT

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:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, May 19, 2011

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 564-2281
FAX (505) 324-2022

RE: BMG Highway 537 2008 Spill

Order No.: 1105514

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 5/12/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to 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.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	PRE-ENGINE
Lab Order:	1105514	**Collection Date:**	5/11/2011 11:33:00 AM
Project:	BMG Highway 537 2008 Spill	**Date Received:**	5/12/2011
Lab ID:	1105514-01	**Matrix:**	AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	7300	250		µg/L	50	5/13/2011 10:43:38 AM
Surr: BFB	129	79.4-132		%REC	50	5/13/2011 10:43:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	67	5.0		µg/L	50	5/13/2011 10:43:38 AM
Toluene	120	5.0		µg/L	50	5/13/2011 10:43:38 AM
Ethylbenzene	13	5.0		µg/L	50	5/13/2011 10:43:38 AM
Xylenes, Total	66	15		µg/L	50	5/13/2011 10:43:38 AM
Surr: 4-Bromofluorobenzene	131	96.8-145		%REC	50	5/13/2011 10:43:38 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: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	POST-CAT
Lab Order:	1105514	**Collection Date:**	5/11/2011 11:38:00 AM
Project:	BMG Highway 537 2008 Spill	**Date Received:**	5/12/2011
Lab ID:	1105514-02	**Matrix:**	AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	250	5.0		µg/L	1	5/13/2011 11:10:59 AM
Surr: BFB	401	79.4-132	S	%REC	1	5/13/2011 11:10:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1.3	0.10		µg/L	1	5/13/2011 11:10:59 AM
Toluene	7.4	0.10		µg/L	1	5/13/2011 11:10:59 AM
Ethylbenzene	2.3	0.10		µg/L	1	5/13/2011 11:10:59 AM
Xylenes, Total	15	0.30		µg/L	1	5/13/2011 11:10:59 AM
Surr: 4-Bromofluorobenzene	145	96.8-145	S	%REC	1	5/13/2011 11:10:59 AM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: BMG Highway 537 2008 Spill **Work Order:** 1105514

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 8:15:02 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		*LCS*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 12:08:27 PM	
Gasoline Range Organics (GRO)	0.5132	mg/L	0.050	0.5	0	103	81.8	120			
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 8:15:02 AM	
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:	**R45342**	Analysis Date:		5/13/2011 12:38:30 PM	
Benzene	22.07	µg/L	1.0	20	0	110	93.4	120			
Toluene	22.69	µg/L	1.0	20	0	113	96.2	122			
Ethylbenzene	21.21	µg/L	1.0	20	0	106	95	121			
Xylenes, Total	66.27	µg/L	2.0	60	0	110	97.6	122			

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 5/12/2011

Work Order Number 1105514 | Received by: LNM

Checklist completed by: _____ 5/12/11 | Sample ID labels checked by: _____

Signature | Date | Initials

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?		*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E Comanche
Farmington NM 87401

Phone #: 505-564-2281

email or Fax#: 505-324-2022

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
BMG
HWY 537 2008 Spill

Project #:
AES 080101

Project Manager:
Ross Kennemer

Sampler: N. Willis

On Ice: ☐ Yes ☐ No

Sample Temperature:

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1105514	BTEX + [redacted] (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
5-11-11	1133	AIR	PRE-ENGINE	2-AIR BAGS	—	-1	X		X									
5-11-11	1138	AIR	POST-CAT	2 AIR BAGS	—	-2	X		X									

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
5-11-11	1520	[signature]	[signature]	5-11-11	1520
5-11-11	1630	[signature]	[signature]	5/12/11	840

Remarks:

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

COVER LETTER

Thursday, May 19, 2011

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 564-2281
FAX (505) 324-2022

RE: BMG Highway Spill 2008

Order No.: 1105515

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 8 sample(s) on 5/12/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to 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.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Trip Blank
Lab Order:	1105515	**Collection Date:**	
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-01	**Matrix:**	TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 1:08:24 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 1:08:24 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 1:08:24 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 1:08:24 PM
Surr: 4-Bromofluorobenzene	104	96.8-145		%REC	1	5/13/2011 1:08:24 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-7
Lab Order:	1105515	**Collection Date:**	5/9/2011 11:26:00 AM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 2:45:54 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 2:45:54 PM
Surr: DNOP	125	97.7-132		%REC	1	5/13/2011 2:45:54 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 1:38:29 PM
Surr: BFB	99.5	79.4-132		%REC	1	5/13/2011 1:38:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 1:38:29 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 1:38:29 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 1:38:29 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 1:38:29 PM
Surr: 4-Bromofluorobenzene	110	96.8-145		%REC	1	5/13/2011 1:38:29 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-6
Lab Order:	1105515	**Collection Date:**	5/9/2011 12:28:00 PM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 3:54:43 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 3:54:43 PM
Surr: DNOP	124	97.7-132		%REC	1	5/13/2011 3:54:43 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 2:08:37 PM
Surr: BFB	89.2	79.4-132		%REC	1	5/13/2011 2:08:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 2:08:37 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 2:08:37 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 2:08:37 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 2:08:37 PM
Surr: 4-Bromofluorobenzene	97.6	96.8-145		%REC	1	5/13/2011 2:08:37 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-4
Lab Order:	1105515	**Collection Date:**	5/9/2011 1:16:00 PM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 4:29:09 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 4:29:09 PM
Surr: DNOP	130	97.7-132		%REC	1	5/13/2011 4:29:09 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 2:38:51 PM
Surr: BFB	91.4	79.4-132		%REC	1	5/13/2011 2:38:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 2:38:51 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 2:38:51 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 2:38:51 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 2:38:51 PM
Surr: 4-Bromofluorobenzene	98.8	96.8-145		%REC	1	5/13/2011 2:38:51 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-3
Lab Order:	1105515	**Collection Date:**	5/10/2011 1:12:00 PM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-05	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 5:03:33 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 5:03:33 PM
Surr: DNOP	125	97.7-132		%REC	1	5/13/2011 5:03:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 3:09:02 PM
Surr: BFB	96.3	79.4-132		%REC	1	5/13/2011 3:09:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 3:09:02 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 3:09:02 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 3:09:02 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 3:09:02 PM
Surr: 4-Bromofluorobenzene	104	96.8-145		%REC	1	5/13/2011 3:09:02 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: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-2
Lab Order:	1105515	**Collection Date:**	5/10/2011 1:49:00 PM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-06	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						**Analyst: JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 5:37:56 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 5:37:56 PM
Surr: DNOP	124	97.7-132		%REC	1	5/13/2011 5:37:56 PM
EPA METHOD 8015B: GASOLINE RANGE						**Analyst: NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 3:38:59 PM
Surr: BFB	90.0	79.4-132		%REC	1	5/13/2011 3:38:59 PM
EPA METHOD 8021B: VOLATILES						**Analyst: NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 3:38:59 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 3:38:59 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 3:38:59 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 3:38:59 PM
Surr: 4-Bromofluorobenzene	97.8	96.8-145		%REC	1	5/13/2011 3:38:59 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-1
Lab Order:	1105515	**Collection Date:**	5/10/2011 2:24:00 PM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-07	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 6:11:54 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 6:11:54 PM
Surr: DNOP	125	97.7-132		%REC	1	5/13/2011 6:11:54 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 4:08:58 PM
Surr: BFB	96.5	79.4-132		%REC	1	5/13/2011 4:08:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 4:08:58 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 4:08:58 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 4:08:58 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 4:08:58 PM
Surr: 4-Bromofluorobenzene	107	96.8-145		%REC	1	5/13/2011 4:08:58 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-May-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-8
Lab Order:	1105515	**Collection Date:**	5/10/2011 2:53:00 PM
Project:	BMG Highway Spill 2008	**Date Received:**	5/12/2011
Lab ID:	1105515-08	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/13/2011 6:46:17 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/13/2011 6:46:17 PM
Surr: DNOP	125	97.7-132		%REC	1	5/13/2011 6:46:17 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/13/2011 8:39:27 PM
Surr: BFB	90.4	79.4-132		%REC	1	5/13/2011 8:39:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/13/2011 8:39:27 PM
Toluene	ND	1.0		µg/L	1	5/13/2011 8:39:27 PM
Ethylbenzene	ND	1.0		µg/L	1	5/13/2011 8:39:27 PM
Xylenes, Total	ND	2.0		µg/L	1	5/13/2011 8:39:27 PM
Surr: 4-Bromofluorobenzene	104	96.8-145		%REC	1	5/13/2011 8:39:27 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: BMG Highway Spill 2008 **Work Order:** 1105515

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range											
Sample ID: MB-26800		*MBLK*				Batch ID:	**26800**	Analysis Date:		5/13/2011 1:04:05 PM	
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-26800		*LCS*				Batch ID:	**26800**	Analysis Date:		5/13/2011 1:38:01 PM	
Diesel Range Organics (DRO)	5.872	mg/L	1.0	5	0	117	74	157			
Sample ID: LCSD-26800		*LCSD*				Batch ID:	**26800**	Analysis Date:		5/13/2011 2:12:16 PM	
Diesel Range Organics (DRO)	6.138	mg/L	1.0	5	0	123	74	157	4.43	23	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1105515-02A MSD		*MSD*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 5:09:08 PM	
Gasoline Range Organics (GRO)	0.5028	mg/L	0.050	0.5	0	101	75.4	121	1.64	10.5	
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 8:15:02 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		*LCS*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 12:08:27 PM	
Gasoline Range Organics (GRO)	0.5132	mg/L	0.050	0.5	0	103	81.8	120			
Sample ID: 1105516-02A MS		*MS*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 4:39:06 PM	
Gasoline Range Organics (GRO)	0.4946	mg/L	0.050	0.5	0	98.9	75.4	121			
Method: EPA Method 8021B: Volatiles											
Sample ID: 1105515-03A MSD		*MSD*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 6:09:08 PM	
Benzene	22.68	µg/L	1.0	20	0	113	92.7	114	0.449	14	
Toluene	22.85	µg/L	1.0	20	0	114	94.6	116	0.932	16.2	
Ethylbenzene	21.65	µg/L	1.0	20	0	108	94.3	114	0.231	12.6	
Xylenes, Total	66.58	µg/L	2.0	60	0	111	95.7	116	0.963	11.9	
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 8:15:02 AM	
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:	**R45342**	Analysis Date:		5/13/2011 12:38:30 PM	
Benzene	22.07	µg/L	1.0	20	0	110	93.4	120			
Toluene	22.69	µg/L	1.0	20	0	113	96.2	122			
Ethylbenzene	21.21	µg/L	1.0	20	0	106	95	121			
Xylenes, Total	66.27	µg/L	2.0	60	0	110	97.6	122			
Sample ID: 1105515-03A MS		*MS*				Batch ID:	**R45342**	Analysis Date:		5/13/2011 5:39:12 PM	
Benzene	22.79	µg/L	1.0	20	0	114	92.7	114			
Toluene	23.06	µg/L	1.0	20	0	115	94.6	116			
Ethylbenzene	21.60	µg/L	1.0	20	0	108	94.3	114			
Xylenes, Total	65.94	µg/L	2.0	60	0	110	95.7	116			

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL Date Received: 5/12/2011

Work Order Number 1105515 Received by: LNM

Checklist completed by: _____ 5/12/11 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	_____ *<2 >12 unless noted below.*
Container/Temp Blank temperature?	**2.4°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #: 505-564-2281

email or Fax#: 505-324-2022

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: BMG HWY 2008 Spill

Project #: AES 080101

Project Manager: Ross Kennemer

Sampler: N. Willis

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1105515	BTEX + MTBE + TPH (Gasoline) (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
		H_2O	TRIP Blank	Glass 2-40mL	HCl	-1	X															
5-9-11	1126		MW-7	Glass 6-40mL	5-HCl 1-NON	-2	X		X													
	1228		MW-6			-3	X		X													
	1316		MW-4			-4	X		X													
5-10-11	1312		MW-3			-5	X		X													
	1349		MW-2			-6	X		X													
	1424		MW-1			-7	X		X													
	1453		MW-8	5-40mL	4-HCl 1-NON	-8	X		X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
5-10-11	1800	Nathan Willis		5-10-11	1800
5-11-11	1630			5/12/11	8:10

Remarks:

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.