

**NM2-4**

**July 2011 Evaporation  
pond GW Sampling,  
Vadose Zone Sampling,**

**Date  
1/4/2012**

January 4, 2012

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OIL CONS. DIV.

DIST. 3

Brad Jones  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**RE: Results of the July 2011 Evaporation Pond Groundwater Sampling, Treatment Zone Soil Sampling, and Vadose Zone Soil Sampling and Request for Permit Modification for BMG's Centralized Surface Waste Management Facility, Rio Arriba County, New Mexico**

Dear Mr. Jones:

On July 15 and 28, 2011, Animas Environmental Services, LLC (AES) completed 1) evaporation pond quarterly groundwater monitoring and sampling, 2) treatment zone sampling, and 3) vadose zone sampling at the Benson-Montin-Greer Drilling Corporation (BMG) Centralized Surface Waste Management Facility, located near the Canada Ojitos Unit (COU) Gas Plant in Rio Arriba County, New Mexico. The Centralized Surface Waste Management Facility is located off of Forest Rd 313 in the NW $\frac{1}{4}$ , NW $\frac{1}{4}$  Section 20, T25N, R1E, Rio Arriba County, New Mexico.

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## 1.0 Evaporation Pond Groundwater Monitoring and Sampling

### 1.0 Site History

On April 14, 2008, AES personnel confirmed the presence of liquid within the interstitial well (IW) at the BMG Evaporation Pond. Site investigation activities conducted in May 2008 confirmed that although the primary liner had failed, the integrity of the secondary liner was not compromised, and no release to the environment had occurred. As a precautionary measure, the New Mexico Oil Conservation Division (NMOCD) requested that four groundwater monitor wells (MW-1 through MW-4) be installed around the evaporation pond and monitored quarterly in conjunction with on-going landfarm sampling. BMG installed a replacement 69 mil HDPE primary liner over the existing secondary liner in late September 2008. The BMG Evaporation Pond is located at the BMG Centralized Surface Waste Management Facility to the northeast of the shop and office area. A site map is included as Figure 1.



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## 2.0 Evaporation Pond Groundwater Monitoring and Sampling

AES personnel completed groundwater monitoring and sampling of the evaporation pond monitor wells on July 15 and 28, 2011. Groundwater samples were collected from monitor wells MW-1 through MW-4 and the interstitial well (IW). All samples were analyzed at Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico.

Groundwater samples were collected with new disposable bailers and transferred into appropriate sample containers, labeled accordingly, and documented on Water Sample Collection Forms. The Chain of Custody Record was then completed, and samples were transported to the laboratory in chilled and insulated coolers at less than 6 °C.

All groundwater analytical samples were submitted to Hall for analysis of the following parameters:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) – EPA Method 8021B;
- Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO) – EPA Method 8015B;
- Chlorides – EPA Method 300.0;
- Total Dissolved Solids (TDS) – Standard Method 2540C; and
- RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) – EPA 6010 and 7470.

### 2.1 *Groundwater Measurement Data*

Prior to sample collection, AES measured depth to water and recorded temperature, pH, conductivity, and oxidation reduction potential (ORP) for each well. All data was recorded on Water Sample Collection Forms. Groundwater temperature ranged from 12.29 °C (MW-2) to 19.36 °C (IW). Conductivity readings were between 0.867 mS/cm (MW-3) to 184.3 mS/cm (IW). pH readings ranged from 7.08 to 7.44. Groundwater ORP ranged from -100.6 mV (IW) to 152.5 mV (MW-3). A summary of water quality data is included in Table 1, and Water Sample Collection Forms are included in Appendix A.

### 2.2 *Groundwater Analytical Results*

Analytical results from groundwater samples collected during the July 2011 sampling event show that all of the wells sampled were below laboratory detection limits for BTEX and, therefore, below applicable New Mexico Water Quality Control Commission (WQCC) standards. All monitor wells also had TPH concentrations below laboratory detection limits, with the exception of the interstitial well, which had a reported concentration of 0.64 mg/L GRO and 13 mg/L DRO.

Concentrations of chloride and TDS were reported above laboratory detection limits in each of the wells sampled but have remained relatively stable. Analytical results for RCRA 8 metals showed that MW-1 through MW-4 were below laboratory detection limits or below applicable standards for each metal analyzed. The interstitial well (IW) had arsenic, barium, and cadmium concentrations above applicable WQCC standards. The results above laboratory detection limits have been summarized as follows:

- TPH-GRO: IW (0.64 mg/L);
- TPH-DRO: IW (13 mg/L);
- Chloride: IW (140,000 mg/L), MW-1 (12 mg/L), MW-2 (29 mg/L), MW-3 (32 mg/L), and MW-4 (15 mg/L);
- TDS: IW (193,000 mg/L), MW-1 (860 mg/L), MW-2 (615 mg/L), MW-3 (670 mg/L), and MW-4 (830 mg/L);
- Arsenic: IW (0.31 mg/L);
- Barium: IW (89 mg/L), MW-1 (0.19 mg/L), MW-2 (0.47 mg/L), MW-3 (0.074 mg/L), and MW-4 (0.093mg/L);
- Cadmium: IW(0.047 mg/L); and
- Chromium: MW-1 (0.014 mg/L), MW-2 (0.034 mg/L), and MW-4 (0.0097 mg/L);
- Lead: MW-1 (0.0090 mg/L) and MW-2 (0.0073 mg/L).

The analytical results for the groundwater samples collected during the July 2011 sampling event are presented in Tables 2 and 3 and also on Figure 1. Groundwater analytical laboratory reports are included in Appendix A.

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### 3.0 Treatment Zone Monitoring

As required by the NMOCD permit for this facility and specified by NMOCD in correspondence dated June 3, 2011, one composite soil sample consisting of four discrete samples was collected from the treatment zone. The composite sample was composed of one sample from Cell # 1, two samples from Cell # 2, and one sample from Cell # 3. The composite sample was comprised of samples collected in zones which are being tilled on a frequent basis. Cell #4 was not included in the composite sample because it is currently not in use.

A stainless steel hand auger, which was decontaminated between each sampling point to prevent cross-contamination, was used to collect the samples. Once collected, the sample container was labeled with the date, sample location, sample type, and sampler's initials. The containers were placed in a chilled, insulated cooler at less than

6°C until delivered to Hall. A Chain of Custody was completed at the time the samples were collected.

### ***3.1 Laboratory Analytical Methods***

The composite sample from the treatment zone was analyzed for the following:

- BTEX per USEPA Method 8021B;
- TPH (GRO, MRO, and DRO) per USEPA Method 8015B; and
- Chlorides per USEPA Method 300.0.

Samples for BTEX analysis were field-preserved with methanol at the time of collection with materials and equipment supplied by the analytical laboratory.

### ***3.2 Treatment Zone Analytical Results***

Based on AES observations of the treatment cells at the time of sample collection, Treatment Cells #1, #2, and #3 are in use and are being tilled on a frequent basis. Treatment Cell #4 is not in use and therefore was not sampled. Results are summarized as follows:

- BTEX concentrations were reported below the laboratory detection limit;
- TPH concentrations were reported at 3800 mg/kg DRO and 3,300 mg/kg MRO;
- The chloride concentration was reported at 8.8 mg/kg, which is below the applicable NMOCD threshold of .500 mg/kg.

The locations of all samples, as well as analytical results for BTEX, TPH, and chlorides, are presented in Table 4 and on Figure 2. Laboratory reports are presented in Appendix A.

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## **4.0 Vadose Zone Monitoring**

As required by the NMOCD permit for this facility and specified in NMOCD correspondence dated June 3, 2011, one random sample was collected for laboratory analysis from each individual cell (Cells #1 through #4) at 3.5 feet below the native ground surface. A stainless steel hand auger, which was decontaminated between each sampling point to prevent cross-contamination, was used to collect the samples. Once collected, each sample container was labeled with the date, sample location, sample type, and sampler's initials. The containers were placed in a chilled, insulated cooler at

less than 6 °C until delivered to. A Chain of Custody was completed at the time the samples were collected.

#### **4.1 Laboratory Analytical Methods**

Soil samples were analyzed for the following:

- Volatile organic compounds (VOCs) USEPA Method 8260B;
- TPH (GRO, MRO, and DRO) per USEPA Method 8015B; and
- Major cations and anions (including chloride, fluoride, nitrate as nitrogen, and sulfate) per USEPA Method 300.0;
- Metals (including As, Ba, Cd, Cr, Pb, Hg, Se, Ag, U, Cu, Fe, Mn, Zn, Mg, Na, K, and Ca) per USEPA Methods 6010, 6020, and 7471;
- PCBs per USEPA Method 8082;
- Polynuclear aromatic hydrocarbons (PAHs) (including benzo-pyrene and phenols) per USEPA Method 8270C;
- Cyanide per USEPA Method 335.4;
- Radioactivity (Radium-226 and Radium-228) per USEPA Method 901.1m;
- pH; and
- Specific conductivity

The above sampling suite meets the five year monitoring program for constituents listed in Subsections A and B of New Mexico Administrative Code (NMAC) 20.6.2.3103.

Samples for VOC analysis were field-preserved with methanol at the time of collection with materials and equipment supplied by the analytical laboratory.

#### **4.2 Vadose Zone Analytical Results**

Soil samples collected from the vadose zone within the four treatment cells are summarized as follows:

- VOCs - below laboratory detection limits in each cell;
- TPH - below the laboratory detection limits in Cell #3 and Cell #4. Cell #1 - 94 mg/kg (DRO and MRO), and Cell #2 - 21 mg/kg (DRO and MRO);
- Chloride - Cell #1 (15 mg/kg) and Cell #3 (6.3 mg/kg);
- Fluoride - Cell #1 (2.9 mg/kg), Cell #3 (3.1 mg/kg), and Cell #4 (5.3 mg/kg);
- Nitrate as N - Cell #1 (3.3 mg/kg) and Cell #3 (0.39 mg/kg);
- Sulfate - Cell #1 (7.9 mg/kg), Cell #2 (9.9 mg/kg), Cell #3 (350 mg/kg), and Cell #4 (10 mg/kg);
- Calcium - ranged from 5,600 mg/kg (Cell #1) to 8,900 mg/kg (Cell #2);
- Magnesium - ranged from 1,800 mg/kg (Cell #2) to 3,500 mg/kg (Cell #1);
- Potassium - ranged from 820 mg/kg (Cell #2) to 2,400 mg/kg (Cell #1);

- Sodium - below the laboratory detection limit of 250 mg/kg in each cell;
- Arsenic, cadmium, mercury, selenium, silver, and uranium - below the laboratory detection limits in each sample;
- Barium – ranged from 92 mg/kg (Cell #4) to 150 mg/kg (Cell #1 );
- Chromium - Cell #1 (16 mg/kg), Cell #2 (7.6 mg/kg), Cell #3 (15 mg/kg), and Cell #4 (15 mg/kg);
- Copper - ranged from 6.4 mg/kg (Cell #2) and 12 mg/kg (Cell #1 and #4);
- Iron concentrations were reported in Cell #1 (19,000 mg/kg), Cell #2 (12,000 mg/kg), Cell #3 (19,000 mg/kg), and Cell #4 (18,000 mg/kg);
- Lead - ranged from 5.4 mg/kg (Cell #2) to 9.1 mg/kg (Cell #1);
- Manganese - ranged from 240 mg/kg (Cell #4) to 410 mg/kg (Cell #1);
- Zinc - Cell #1(55 mg/kg), Cell #2 (28 mg/kg), Cell #3 (48 mg/kg), and Cell #4 (41 mg/kg);
- PAHs including benzo-pyrene and phenols –below laboratory detection limits in all four cells; and
- Radioactivity (combined Radium-226 and Radium-228) - Cell #1 (2.352 Pci/g), Cell #2 (1.788 Pci/g), Cell #3 (2.290 Pci/g), and Cell #4 (2.590 Pci/g).

The locations of all samples, as well as analytical results (BTEX, TPH, and chlorides) are presented on Figure 3. Laboratory analytical results are summarized in Tables 5 through 9, and laboratory reports are presented in Appendix A.

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## 5.0 Permit Modification Request

### 5.1 Treatment Zone

BMG proposes a modification request to update the original permit to include the following regarding treatment zone monitoring:

- *The operator shall spread contaminated soils on the surface in eight-inch or less lifts or approximately 1,000 cubic yards per acre per eight-inch lift. (See 19.15.36.15.DNMAC);*
- *TPH concentration of each lift, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg. (See 19.15.36.15.D NMAC).*
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### 5.2 Vadose Zone

In addition, BMG proposes a modification request to update the original permit to include the following vadose zone monitoring:

- *The operator shall take vadose zone samples from soils between three and four feet below the cell's original ground surface. (See 19.15.13.15.E(1) NMAC);*
- *The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone at least semi-annually. (See 19.15.36.15.E(2) NMAC).*

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## 6.0 Conclusions and Recommendations

AES personnel conducted groundwater and interstitial well sampling, along with landfarm sampling, at the BMG Surface Waste Management Facility in July 2011. Based on the results of the July 2011 sampling event, groundwater analytical results from monitor wells MW-1 through MW-4 (located around the Evaporation Pond) were below laboratory detection limits for BTEX and TPH.

Groundwater samples from the interstitial well (IW) also had concentrations below laboratory detection limits for BTEX. The interstitial well (IW) had reported concentrations above laboratory detection limits for TPH-GRO (0.64 mg/L), TPH-DRO (13 mg/L), chloride (140,000 mg/L), and TDS (193,000 mg/L). Metals reported above applicable WQCC standards include arsenic (0.31 mg/L), barium (89 mg/L), and cadmium (0.047 mg/L).

The treatment zone composite sample showed that BTEX concentrations were reported below laboratory detection limits and the NMOCD Rule 36 Threshold for BTEX (50 mg/kg) and benzene (10 mg/kg). The total TPH concentration was reported at 7,100 mg/kg.

Results from vadose zone sampling included quarterly sampling for BTEX, TPH, and chlorides, annual sampling for major cations and anions, and five year monitoring per constituents listed in Subsections A and B of 20.6.2.3103 NMAC. BTEX concentrations were below laboratory detection limits in all cells sampled, and TPH results from all four cells remained below laboratory detection limits. Chloride concentrations above the laboratory detection limit were reported in Cell #1 (45 mg/kg) and Cell #3 (7.9 mg/kg). All cells remained below the NMOCD threshold of 500 mg/kg for chloride. Results from the annual and five year monitoring event will be used to determine whether a release has occurred at the site in the future.

AES has scheduled the next semi-annual sampling event of the evaporation pond monitor wells, treatment zone soils, and vadose zone soils to occur in January 2012.

If you have any questions regarding the site conditions, sampling results, or the request for permit modifications, please do not hesitate to contact Elizabeth McNally or Ross Kennemer at (505) 564-2281.

Sincerely,

Deborah Watson  
Project Manager

Elizabeth McNally, PE

Attachments:

#### Tables

- Table 1. Water Quality and Well Data
- Table 2. Summary of Groundwater Analytical Results
- Table 3. Summary of Groundwater Metals Analytical Results
- Table 4. Treatment Zone Soil BTEX, TPH, and Chloride Analytical Results
- Table 5. Vadose Zone Soil BTEX and TPH Analytical Results
- Table 6. Vadose Zone Soil Summary of Major Cations/Anions
- Table 7. Vadose Zone Soil Summary of Metals
- Table 8. Vadose Zone Soil Volatile Organic Compounds Analytical Results
- Table 9. Vadose Zone Soil 8270, PCBs, and Radioactivity Analytical Results

#### Figures

- Figure 1. Location of BMG Evaporation Pond and Monitoring Wells and Contaminant Concentrations, July 2011
- Figure 2. Treatment Zone Monitoring Locations and Contaminant Concentrations, July 2011
- Figure 3. Vadose Zone Monitoring Locations and Contaminant Concentrations, July 2011

#### Appendices

- Appendix A. Water Sample Collection Forms  
Laboratory Analytical Reports

cc: **Mike Dimond**  
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**TABLE 1**  
**Water Quality and Well Data**  
**BMG Centralized Surface Waste Management Facility**  
**Rio Arriba County, New Mexico**

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to Water (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
Evaporation Pond Water	10-May-08	TBS	NM	12.66	116	NM	6.79	-3.6
Interstitial Well	10-May-08	TBS	9.41	11.82	213	NM	6.60	106.4
Interstitial Well	21-Jul-08	TBS	9.61	18.68	362.7	0.20	6.51	-26.1
Interstitial Well	9-Oct-08	TBS	9.86	19.01	183.7	0.98	6.11	-35.7
Interstitial Well	30-Dec-08	TBS	12.00			NM - LOW YIELD WATER		
Interstitial Well	25-Mar-09	TBS	9.87	8.51	209.9	1.79	6.00	12.6
Interstitial Well	15-Jun-09	TBS	9.79	16.09	181.1	1.45	6.72	21.8
Interstitial Well	16-Sep-09	TBS	9.77	20.87	335.5	0.11	6.77	-115.9
Interstitial Well	11-Jan-10	TBS	9.77	7.73	160.7	1.78	6.70	-13.7
Interstitial Well	16-Apr-10	TBS	9.71	9.54	181.0	0.42	7.06	NM
Interstitial Well	8-Jul-10	TBS	9.70	19.47	148.9	2.92	6.84	-13.1
Interstitial Well	12-Oct-10	TBS	9.88	19.37	176.1	0.42	6.67	-77.0
Interstitial Well	19-Jan-11	TBS	9.83	7.72	184.5	1.71	6.40	-65.6
Interstitial Well	28-Apr-11	TBS	9.79	12.54	176.6	4.33	NM	NM
Interstitial Well	15-Jul-11	TBS	9.67	19.36	184.3	1.30	7.31	-100.6
MW-1	10-May-08	TBS	38.03	12.73	2.59	NM	8.24	76.8
MW-1	21-Jul-08	TBS	38.11	12.18	2.236	4.85	6.57	173.2
MW-1	9-Oct-08	TBS	38.30	12.33	0.978	NM	6.65	45.2
MW-1	30-Dec-08	TBS	38.46	11.80	1.287	NM	6.08	43.6
MW-1	25-Mar-09	TBS	38.60	11.55	1.161	4.36	6.91	20.6
MW-1	15-Jun-09	TBS	38.71	13.09	0.820	3.08	6.99	106.8
MW-1	16-Sep-09	TBS	38.91	11.88	1.669	3.08	7.06	47.1
MW-1	11-Jan-10	TBS	39.06	11.57	0.769	3.46	7.19	48.1
MW-1	16-Apr-10	TBS	39.16	11.95	1.036	4.47	7.52	NM
MW-1	8-Jul-10	TBS	39.22	15.25	0.642	4.16	7.23	205.8
MW-1	12-Oct-10	TBS	39.32	12.16	0.892	3.66	7.33	142.8
MW-1	19-Jan-11	TBS	39.42	11.22	0.924	3.51	7.81	110.4
MW-1	28-Apr-11	TBS	39.51	12.80	0.901	4.07	NM	NM
MW-1	15-Jul-11	TBS	39.59	12.80	0.945	NM	7.08	175.8
MW-2	10-May-08	TBS	39.16	11.64	0.99	NM	7.78	97.7
MW-2	21-Jul-08	TBS	39.21	11.72	1.632	3.23	6.69	158.4
MW-2	9-Oct-08	TBS	39.37	11.41	0.833	NM	6.74	42.3
MW-2	30-Dec-08	TBS	39.52	11.11	0.995	NM	5.66	51.7
MW-2	25-Mar-09	TBS	39.64	10.94	1.129	4.11	7.50	29.6
MW-2	15-Jun-09	TBS	39.77	12.77	1.057	4.51	7.39	16.8

**TABLE 1**  
**Water Quality and Well Data**  
**BMG Centralized Surface Waste Management Facility**  
**Rio Arriba County, New Mexico**

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to Water (ft)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MW-2	16-Sep-09	TBS	39.97	11.26	1.494	3.62	7.32	31.3
MW-2	11-Jan-10	TBS	40.13	10.90	0.684	3.32	7.32	30.5
MW-2	16-Apr-10	TBS	40.22	11.70	0.869	4.51	7.50	NM
MW-2	8-Jul-10	TBS	40.28	11.95	0.729	4.73	7.38	152.0
MW-2	12-Oct-10	TBS	40.38	12.81	0.928	4.13	7.87	68.7
MW-2	19-Jan-11	TBS	40.49	10.51	0.888	3.22	7.96	122.7
MW-2	28-Apr-11	TBS	40.57	12.49	0.902	NM	NM	NM
MW-2	29-Jul-11	TBS	40.68	12.29	0.908	NM	7.44	90.7
MW-3	10-May-08	TBS	38.38	12.80	0.96	NM	7.73	103.2
MW-3	21-Jul-08	TBS	38.49	12.44	1.567	3.69	6.82	184.6
MW-3	9-Oct-08	TBS	38.61	12.60	0.837	NM	6.60	55.2
MW-3	30-Dec-08	TBS	38.77	11.38	0.975	NM	6.76	19.9
MW-3	25-Mar-09	TBS	38.87	11.54	1.046	6.32	7.46	29.2
MW-3	15-Jun-09	TBS	39.01	12.87	0.909	3.28	7.24	60.9
MW-3	16-Sep-09	TBS	39.21	12.26	1.421	4.87	7.34	35.8
MW-3	11-Jan-10	TBS	39.37	11.61	0.669	4.78	7.40	45.9
MW-3	16-Apr-10	TBS	39.44	12.65	0.845	4.86	7.19	NM
MW-3	8-Jul-10	TBS	39.51	12.48	0.695	7.18	7.41	168.5
MW-3	12-Oct-10	TBS	39.61	12.85	0.834	3.86	7.59	130.8
MW-3	19-Jan-11	TBS	39.71	10.94	0.870	5.11	7.78	132.8
MW-3	28-Apr-11	TBS	39.80	14.60	0.874	NM	NM	NM
MW-3	15-Jul-11	TBS	39.89	12.62	0.867	NM	7.22	152.5
MW-4	10-May-08	TBS	38.80	12.69	1.09	NM	7.92	78.5
MW-4	21-Jul-08	TBS	38.91	12.38	1.975	NM	7.26	163.3
MW-4	9-Oct-08	TBS	39.10	12.25	0.904	NM	6.58	53.8
MW-4	30-Dec-08	TBS	39.25	11.18	1.097	NM	6.73	25.9
MW-4	25-Mar-09	TBS	39.38	11.55	1.068	5.53	6.72	29.8
MW-4	15-Jun-09	TBS	39.51	12.53	0.809	3.84	7.10	97.0
MW-4	16-Sep-09	TBS	39.72	12.31	1.731	4.65	7.22	51.3
MW-4	11-Jan-10	TBS	39.86	11.89	0.856	6.47	7.38	43.5
MW-4	16-Apr-10	TBS	39.94	12.59	0.952	5.27	7.48	NM
MW-4	8-Jul-10	TBS	40.01	12.77	0.807	7.53	7.17	149.1
MW-4	12-Oct-10	TBS	40.12	12.84	0.963	5.04	7.28	162.5
MW-4	19-Jan-11	TBS	40.23	11.66	0.997	6.95	7.65	53.4
MW-4	28-Apr-11	TBS	40.30	12.37	0.966	4.63	NM	NM
MW-4	15-Jul-11	TBS	40.41	13.65	0.992	NM	7.20	126.7

NM - Not Measured

**TABLE 1**  
**Water Quality and Well Data**  
**BMG Centralized Surface Waste Management Facility**  
**Rio Arriba County, New Mexico**

<i>Well ID</i>	<i>Date Measured</i>	<i>Top of Casing Elevation (ft amsl)</i>	<i>Depth to Water (ft)</i>	<i>Temp. (°C)</i>	<i>Specific Conduct. (mS)</i>	<i>Dissolved Oxygen (mg/L)</i>	<i>pH</i>	<i>ORP (mV)</i>
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**TBS - To Be Surveyed**

TABLE 2  
 Summary of Groundwater Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Well ID</i>	<i>Date Sampled</i>	<i>Benzene</i> ( $\mu\text{g/L}$ )	<i>Toluene</i> ( $\mu\text{g/L}$ )	<i>Ethyl-benzene</i> ( $\mu\text{g/L}$ )	<i>Total Xylenes</i> ( $\mu\text{g/L}$ )	<i>GRO</i> ( $\text{mg/L}$ )	<i>DRO</i> ( $\text{mg/L}$ )	<i>MRO</i> ( $\text{mg/L}$ )	<i>Chlorides</i> ( $\text{mg/L}$ )	<i>TDS</i> ( $\text{mg/L}$ )
<i>Analytical Method</i>										
			8021B/8260B			8015B	8015B	8015B	300.0	SM 2540C
<i>New Mexico WQCC</i>		10	750	750	620	NE	NE	NE	NE	NE
<i>Evaporation Pond Water</i>	10-May-08	<10	37	<10	29	2.5	50	12	50,000	89,000
<i>Interstitial Well</i>	10-May-08	<5.0	50	6.8	25	0.56	58	8.0	140,000	220,000
<i>Interstitial Well</i>	21-Jul-08	<5.0	12	<5.0	<10	1.0	8.8	<15	120,000	210,000
<i>Interstitial Well</i>	09-Oct-08	<10	<10	<10	<20	<0.50	<10	<50	100,000	180,000
<i>Interstitial Well</i>	30-Dec-08				NOT SAMPLED - LOW YIELD					
<i>Interstitial Well</i>	25-Mar-09	<10	<10	<10	<20	<0.50	12	8.5	140,000	170,000**
<i>Interstitial Well</i>	15-Jun-09	<10	<10	<10	<20	<0.50	11	5.6	130,000	180,000
<i>Interstitial Well</i>	16-Sep-09	<10	<10	<10	<20	<0.50	15	<50	130,000	179,000
<i>Interstitial Well</i>	11-Jan-10	<10	<10	<10	<20	<0.50	8.1	5.4	120,000	184,000
<i>Interstitial Well</i>	16-Apr-10	<10	<10	<10	<20	<0.50	<3.0	<15	120,000	177,000
<i>Interstitial Well</i>	08-Jul-10	<10	<10	<10	<20	<0.50	4.8	<15	150,000	190,000
<i>Interstitial Well</i>	19-Jan-11	<1.0	<1.0	<1.0	<2.0	0.34	7.4	<5.0	140,000	173,000
<i>Interstitial Well</i>	28-Apr-11	<5.0	<5.0	<5.0	<10	0.51	7.7	<5.0	130,000	177,000
<i>Interstitial Well</i>	15-Jul-11	<2.0	<2.0	<2.0	<4.0	0.64	13	<15	140,000	193,000
<b>MW-1</b>	10-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	72	740
<b>MW-1</b>	21-Jul-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	64	830
<b>MW-1</b>	09-Oct-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	42	660
<b>MW-1</b>	30-Dec-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	51	730
<b>MW-1</b>	25-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	37	660
<b>MW-1</b>	15-Jun-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	29	780
<b>MW-1</b>	16-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	22	650
<b>MW-1</b>	11-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	17	710

**TABLE 2**  
**Summary of Groundwater Analytical Results**  
**BMG Centralized Surface Waste Management Facility**  
**Rio Arriba County, New Mexico**

Well ID	Date Sampled	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	GRO (mg/L)	DRO (mg/L)	MRO (mg/L)	Chlorides (mg/L)	TDS (mg/L)
<b>Analytical Method</b>										
<b>New Mexico WQCC</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>	<b>8015B</b>	<b>8015B</b>	<b>8015B</b>	<b>300.0</b>	<b>SM 2540C</b>
<b>MW-1</b>	16-Apr-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	17	656
<b>MW-1</b>	08-Jul-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	14	615
<b>MW-1</b>	12-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	15	643
<b>MW-1</b>	19-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	13	665
<b>MW-1</b>	28-Apr-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0	13	705
<b>MW-1</b>	15-Jul-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0	12	860
<b>MW-2</b>	10-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	49	600
<b>MW-2</b>	21-Jul-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	40	640
<b>MW-2</b>	09-Oct-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	35	550
<b>MW-2</b>	30-Dec-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	33	590
<b>MW-2</b>	25-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	32	540
<b>MW-2</b>	15-Jun-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	31	750
<b>MW-2</b>	16-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	32	590
<b>MW-2</b>	11-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	30	598
<b>MW-2</b>	16-Apr-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	31	616
<b>MW-2</b>	08-Jul-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	28	595
<b>MW-2</b>	12-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	37	615
<b>MW-2</b>	19-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	26	750
<b>MW-2</b>	28-Apr-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0	40	790
<b>MW-2</b>	28-Jul-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	29	615
<b>MW-3</b>	10-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	44	680
<b>MW-3</b>	21-Jul-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	38	610
<b>MW-3</b>	09-Oct-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	36	800

TABLE 2  
 Summary of Groundwater Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

Well ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)	MRO (mg/L)	Chlorides (mg/L)	TDS (mg/L)
<i>Analytical Method</i>										
<i>New Mexico WQCC</i>		10	750	750	620	8015B	8015B	8015B	300.0	SM 2540C
MW-3	30-Dec-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	37	560
MW-3	25-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	34	490
MW-3	15-Jun-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	32	650
MW-3	16-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	33	580
MW-3	11-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	30	615
MW-3	16-Apr-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	31	552
MW-3	08-Jul-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	28	567
MW-3	12-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	30	567
MW-3	19-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	27	630
MW-3	28-Apr-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0	31	660
MW-3	15-Jul-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0	32	670
MW-4	10-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	52	720
MW-4	21-Jul-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	57	770
MW-4	09-Oct-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	34	760
MW-4	30-Dec-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	21	650
MW-4	25-Mar-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	23	650
MW-4	15-Jun-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	19	1,000
MW-4	16-Sep-09	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	19	720
MW-4	11-Jan-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	16	664
MW-4	16-Apr-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	18	674
MW-4	08-Jul-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	21	700
MW-4	12-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	22	865
MW-4	19-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	19	690
MW-4	28-Apr-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	19	684

TABLE 2

Summary of Groundwater Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Well ID</i>	<i>Date Sampled</i>	<i>Benzene</i> ( $\mu\text{g/L}$ )	<i>Toluene</i> ( $\mu\text{g/L}$ )	<i>Ethyl-benzene</i> ( $\mu\text{g/L}$ )	<i>Total Xylenes</i> ( $\mu\text{g/L}$ )	<i>GRO</i> ( $\text{mg/L}$ )	<i>DRO</i> ( $\text{mg/L}$ )	<i>MRO</i> ( $\text{mg/L}$ )	<i>Chlorides</i> ( $\text{mg/L}$ )	<i>TDS</i> ( $\text{mg/L}$ )
<i>Analytical Method</i>				8021B/8260B		8015B	8015B	8015B	300.0	SM 2540C
<i>New Mexico WQCC</i>		10	750	750	620	NE	NE	NE	NE	NE
MW-4	15-Jul-11	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0	<5.0	15	830

NOTE: NE = Not Established

Note\* December 30, 2008, samples were analyzed past the holding times for 8015B Diesel and TDS.

\*\* March 25, 2009 Interstitial Well sample was reanalyzed past the holding time for TDS.

**TABLE 3**  
**Summary of Groundwater Metals Analytical Results**  
**BMG Centralized Surface Waste Management Facility**  
**Rio Arriba County, New Mexico**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Arsenic (mg/L)</b>	<b>Barium (mg/L)</b>	<b>Cadmium (mg/L)</b>	<b>Chromium (mg/L)</b>	<b>Lead (mg/L)</b>	<b>Mercury (mg/L)</b>	<b>Selenium (mg/L)</b>	<b>Silver (mg/L)</b>
<b>Analytical Method</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>7470</b>	<b>6010</b>	<b>6010</b>
<b>NM WQCC STANDARD</b>	<b>0.10</b>	<b>1.0</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.002</b>	<b>0.05</b>	<b>0.05</b>
<b>Interstitial Well</b>	21-Jul-08	<1.0	240	0.88	<0.30	0.35	<0.00080	<2.5	<0.25
<b>Interstitial Well</b>	16-Sep-09	0.094	74	<0.0050	<0.010	0.37	<0.00020	<0.10	<0.010
<b>Interstitial Well</b>	11-Jan-10	NA	NA	NA	<0.060	<0.050	NA	NA	NA
<b>Interstitial Well</b>	16-Apr-10	NA	NA	NA	<0.12	<0.10	NA	NA	NA
<b>Interstitial Well</b>	8-Jul-10	<0.50	110	0.075	<0.15	<0.13	<0.00020	<1.3	<0.13
<b>Interstitial Well</b>	12-Oct-10	NA	NA	NA	<0.30	<0.25	NA	NA	NA
<b>Interstitial Well</b>	15-Jul-11	0.31	89	0.047	<0.060	<0.050	<0.00020	<0.50	<0.050
<b>MW- 1</b>	21-Jul-08	<0.020	0.17	<0.0020	<0.0060	0.0079	<0.00020	<0.050	<0.0050
<b>MW- 1</b>	16-Sep-09	0.020	0.93	<0.0050	0.067	0.0450	<0.00020	<0.020	<0.010
<b>MW- 1</b>	11-Jan-10	NA	NA	NA	0.019	<0.0050	NA	NA	NA
<b>MW- 1</b>	16-Apr-10	NA	NA	NA	0.012	0.0070	NA	NA	NA
<b>MW- 1</b>	8-Jul-10	<0.020	0.13	<0.0020	0.0084	<0.0050	<0.00020	<0.050	<0.0050
<b>MW- 1</b>	12-Oct-10	NA	NA	NA	<0.0060	0.0055	NA	NA	NA
<b>MW- 1</b>	15-Jul-11	<0.020	0.19	<0.0020	0.014	<0.0050	<0.00020	<0.050	<0.0050
<b>MW-2</b>	21-Jul-08	<0.020	0.18	<0.0020	<0.0060	0.010	<0.00020	<0.050	<0.0050
<b>MW-2</b>	16-Sep-09	<0.020	0.48	<0.0050	0.048	0.026	<0.00020	<0.020	<0.010
<b>MW-2</b>	11-Jan-10	NA	NA	NA	0.039	0.0066	NA	NA	NA
<b>MW-2</b>	16-Apr-10	NA	NA	NA	<0.0060	<0.0050	NA	NA	NA
<b>MW-2</b>	8-Jul-10	<0.020	0.28	<0.0020	0.025	<0.0050	<0.00020	<0.050	<0.0050
<b>MW-2</b>	12-Oct-10	NA	NA	NA	<0.0060	0.0078	NA	NA	NA
<b>MW-2</b>	28-Jul-11	<0.020	0.47	<0.0020	0.034	0.0090	<0.00020	<0.050	<0.0050
<b>MW-3</b>	21-Jul-08	<0.020	0.22	<0.0020	<0.0060	0.010	<0.00020	<0.050	<0.0050
<b>MW-3</b>	16-Sep-09	<0.020	0.40	<0.0050	0.045	0.026	<0.00020	<0.020	<0.010
<b>MW-3</b>	11-Jan-10	NA	NA	NA	0.025	<0.0050	NA	NA	NA
<b>MW-3</b>	16-Apr-10	NA	NA	NA	0.010	<0.0050	NA	NA	NA
<b>MW-3</b>	8-Jul-10	<0.020	0.28	<0.0020	0.028	0.0065	<0.00020	<0.050	<0.0050
<b>MW-3</b>	12-Oct-10	NA	NA	NA	<0.0060	0.0073	NA	NA	NA
<b>MW-3</b>	15-Jul-11	<0.020	0.074	<0.0020	<0.0060	<0.0050	<0.00020	<0.050	<0.0050

**TABLE 3**  
**Summary of Groundwater Metals Analytical Results**  
**BMG Centralized Surface Waste Management Facility**  
**Rio Arriba County, New Mexico**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Arsenic (mg/L)</b>	<b>Barium (mg/L)</b>	<b>Cadmium (mg/L)</b>	<b>Chromium (mg/L)</b>	<b>Lead (mg/L)</b>	<b>Mercury (mg/L)</b>	<b>Selenium (mg/L)</b>	<b>Silver (mg/L)</b>
	<b>Analytical Method</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>6010</b>	<b>7470</b>	<b>6010</b>	<b>6010</b>
	<b>NM WQCC STANDARD</b>	<b>0.10</b>	<b>1.0</b>	<b>0.01</b>	<b>0.05</b>	<b>0.05</b>	<b>0.002</b>	<b>0.05</b>	<b>0.05</b>
<b>MW-4</b>	21-Jul-08	<0.020	0.34	<0.0020	<0.0060	0.0078	<0.00020	<0.050	<0.0050
<b>MW-4</b>	16-Sep-09	0.024	0.68	<0.0050	<b>0.10</b>	<b>0.052</b>	<0.00020	<0.020	<0.010
<b>MW-4</b>	11-Jan-10	NA	NA	NA	0.0089	<0.0050	NA	NA	NA
<b>MW-4</b>	16-Apr-10	NA	NA	NA	0.0079	<0.0050	NA	NA	NA
<b>MW-4</b>	8-Jul-10	<0.020	0.16	<0.0020	0.019	<0.0050	<0.00020	<0.050	<0.0050
<b>MW-4</b>	12-Oct-10	NA	NA	NA	<0.0060	0.0079	NA	NA	NA
<b>MW-4</b>	15-Jul-11	<0.020	0.093	<0.0020	0.0097	<0.0050	<0.00020	<0.050	<0.0050

**Notes:** < Analyte not detected above listed method limit  
 mg/L Milligrams per liter (ppm)

TABLE 4  
 Treatment Zone Soil BTEX, TPH, and Chloride Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Landfarm ID</i>	<i>Sample ID</i>	<i>Composite Sample Locations</i>	<i>Sample Date</i>	<i>Sample Depth (ft)</i>	<i>Benzene (mg/kg)</i>	<i>Toluene (mg/kg)</i>	<i>Ethyl benzene (mg/kg)</i>	<i>Xylene (mg/kg)</i>	<i>TPH GRO (C6-C10) (mg/kg)</i>	<i>TPH DRO (C10-C22) (mg/kg)</i>	<i>TPH MRO (C22-C32) (mg/kg)</i>	<i>Chloride (mg/kg)</i>
		<i>Laboratory Analytical Method</i>									<i>8015</i>	
		<i>NMOCD Rule 36 Threshold</i>									<i>100/2500</i>	
<i>Treatment Zone</i>	#1	1)N 36° 23.383' W 106° 52.054' 2)N 36° 23.376' W 106° 51.943' 3)N 36° 23.341' W 106° 51.881' 4)N 36° 23.403' W 106° 52.002'	28-Jul-11	0.5	<1.0	<1.0	<1.0	<2.0	<100	3,800	3,300	8.8

\* = Samples were analyzed by per EPA Method 8260B

TABLE 5  
 Vadose Zone Soil BTEX and TPH Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Landfarm ID</i>	<i>Sample ID</i>	<i>Sample Location</i>	<i>Sample Date</i>	<i>Sample Depth (ft)</i>	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylene (mg/kg)	TPH GRO (C6-C10) (mg/kg)	TPH DRO (C10-C22) (mg/kg)	TPH MRO (C22-C32) (mg/kg)
		<i>Laboratory Analytical Method</i>			8021/8260B				8015M/8015B		
		<i>NMOCD Rule 36 Threshold</i>			50 BTEX (Benzene <10 ppm)				100		
Cell #1	#1	N 36° 23.376' W 106° 52.059'	25-Mar-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	69
Cell #1	#1	N 36° 23.331' W 106° 51.948'	15-Jun-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	36	74
Cell #1	#1	N 36° 23.380' W 106° 52.067'	11-Sep-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	160	300
Cell #1	#1	N 36° 23.356' W 106° 51.999'	11-Jan-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	91	140
Cell #1	#1	N 36° 23.329' W 106° 51.937'	16-Apr-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #1	#1	N 36° 23.379' W 106° 52.064'	8-Jul-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #1	#1	N 36° 23.353' W 106° 51.999'	12-Oct-10	2	<0.050	<0.050	<0.050	<0.10	6.7	<10	<50
Cell #1	#1	N 36° 23.372' W 106° 52.051'	19-Jan-11	2	<0.050	<0.050	<0.050	<0.10	<5.0	22	50
Cell #1	#1	N 36° 23.336' W 106° 51.954'	28-Apr-11	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #1 Vadose Zone	VZ-1	N 36° 23.357' W 106° 52.007'	28-Jul-11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	34	60
Cell #2	#2	N 36° 23.372' W 106° 51.952'	25-Mar-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	120	160

TABLE 5  
 Vadose Zone Soil BTEX and TPH Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Landfarm ID</i>	<i>Sample ID</i>	<i>Sample Location</i>	<i>Sample Date</i>	<i>Sample Depth (ft)</i>	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylene (mg/kg)	TPH GRO (C6-C10) (mg/kg)	TPH DRO (C10-C22) (mg/kg)	TPH MRO (C22-C32) (mg/kg)
<i>Laboratory Analytical Method</i>					8021/8260B				8015M/8015B		
Cell #2	#2	N 36° 23.426' W 106° 52.013'	15-Jun-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #2	#2	N 36° 23.404' W 106° 52.004'	11-Sep-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #2	#2	N 36° 23.422' W 106° 52.003'	11-Jan-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #2	#2	N 36° 23.397' W 106° 51.975'	16-Apr-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	110	310
Cell #2	#2	N 36° 23.404' W 106° 52.012'	8-Jul-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #2	#2	N 36° 23.403' W 106° 51.943'	12-Oct-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	28	63
Cell #2	#2	N 36° 23.405' W 106° 52.011'	19-Jan-11	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #2	#2	N 36° 23.384' W 106° 51.933'	28-Apr-11	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #2 Vadose Zone	VZ-2	N 36° 23.413' W 106° 51.982'	28-Jul-11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	21	<51
Cell #3	#3	N 36° 23.330' W 106° 51.868'	25-Mar-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.367' W 106° 51.843'	15-Jun-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.355' W 106° 51.869'	11-Sep-09	2	<0.050	<0.050	<0.050	<0.10	<5.0	14	51

TABLE 5  
 Vadose Zone Soil BTEX and TPH Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Landfarm ID</i>	<i>Sample ID</i>	<i>Sample Location</i>	<i>Sample Date</i>	<i>Sample Depth (ft)</i>	<i>Benzene (mg/kg)</i>	<i>Toluene (mg/kg)</i>	<i>Ethyl benzene (mg/kg)</i>	<i>Xylene (mg/kg)</i>	<i>TPH GRO (C6-C10) (mg/kg)</i>	<i>TPH DRO (C10-C22) (mg/kg)</i>	<i>TPH MRO (C22-C32) (mg/kg)</i>
<i>Laboratory Analytical Method</i>											
Cell #3	#3	N 36° 23.353' W 106° 51.911'	11-Jan-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.349' W 106° 51.873'	16-Apr-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.354' W 106° 51.908'	8-Jul-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.353' W 106° 51.855'	12-Oct-10	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.352' W 106° 51.911'	19-Jan-11	2	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #3	#3	N 36° 23.351' W 106° 51.866'	28-Apr-11	2	<0.25	<0.25	<0.25	<0.50	<25	3,400	5,300
Cell #3 Vadose Zone	VZ-3	N 36° 23.358' W 106° 51.860'	28-Jul-11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50
Cell #4	#4	N 36° 23.363' W 106° 51.784'	21-Jun-04	2	<0.025	<0.025	<0.025	<0.050	<20	NA	-
Cell #4 Vadose Zone	VZ-4	N 36° 23.358' W 106° 51.787'	28-Jul-11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	<9.8	<49

\* = Samples were analyzed by per EPA Method 8260B

Note\*\* 3/13/06 TPH for Cell #3 was analyzed past the 14 day hold time. Insufficient sample available for extraction with 8015B QC. Blank and sample from BTEX extraction used.

TABLE 5  
 Vadose Zone Soil BTEX and TPH Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Landfarm ID</i>	<i>Sample ID</i>	<i>Sample Location</i>	<i>Sample Date</i>	<i>Sample Depth (ft)</i>	<i>Benzene (mg/kg)</i>	<i>Toluene (mg/kg)</i>	<i>Ethyl benzene (mg/kg)</i>	<i>Xylene (mg/kg)</i>	<i>TPH GRO (C6-C10) (mg/kg)</i>	<i>TPH DRO (C10-C22) (mg/kg)</i>	<i>TPH MRO (C22-C32) (mg/kg)</i>				
					<i>Laboratory Analytical Method</i>									8021/8260B	8015M/8015B

Note\*\* 11/28/07 EPA method 8021B was added to sample Cell #2 after the GRO analysis was completed. The BTEX Analysis for this sample does not have a closing QC standard.

Note\*\* Prior to the April 14, 2008, sampling event TPH-DRO was reported as C10-C36.

TABLE 6  
 Vadose Zone Soil Summary of Major Cations/Anions  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Land Farm ID</i>	<i>Sample ID</i>	<i>Sample Date</i>	<i>Sample Depth (ft)</i>	<i>pH</i>	<i>Spec. Cond. (umhos/cm)</i>	<i>Fluoride (mg/kg)</i>	<i>Chloride (mg/kg)</i>	<i>Nitrate as N (mg/kg)</i>	<i>Sulfate as SO<sub>4</sub> (mg/kg)</i>	<i>Calcium (mg/kg)</i>	<i>Magnesium (mg/kg)</i>	<i>Potassium (mg/kg)</i>	<i>Sodium (mg/kg)</i>
Cell #1	#1	7-Jun-06	2.5	7.7	42.8	NA	33.7*	NA	13.2	2,780	1,340	NA	<50
Cell #1	#1	22-May-07	3	7.37	NA	4.26*	23.5	NA	20.3*	8,000	2,820	2,460	64
Cell #1	#1	21-Jul-08	2	7.67	360	<1.5*	8	NA	8.8*	NA	NA	NA	NA
Cell #1	#1	11-Sep-09	2	7.65	370	<1.5	10	NA	23	3,000	1,300	860	<25
Cell #1	#1	8-Jul-10	2	8.43	380	<3.0	<15	NA	<15	2,500	1,900	1,300	<130
Cell #1 Vadose	VZ-1	28-Jul-11	3.5	8.32	983	2.9	15	3.3	7.9	5,600	3,500	2,400	<250
Cell #2	#2	7-Jun-06	2.5	7.7	64.1	NA	20.4*	NA	9.31	1,950	979	NA	<50
Cell #2	#2	22-May-07	3	7.59	NA	4.94*	17.4	NA	19.9*	6,690	2,230	1,650	64
Cell #2	#2	21-Jul-08	2	7.97	650	2.4*	14	NA	130*	NA	NA	NA	NA
Cell #2	#2	11-Sep-09	2	7.67	150	<1.5	8.9	NA	26	940	710	470	<25
Cell #2	#2	8-Jul-10	2	8.37	330	<3.0	<15	NA	73	2,200	1,300	820	<130
Cell #2 Vadose	VZ-2	28-Jul-11	3.5	8.63	831	<1.5	<7.5	<1.5	9.9	8,900	1,800	820	<250
Cell #3	#3	7-Jun-06	2.5	9.1	54.2	2.92	26.3*	NA	23.5	2,140	1,110	NA	<50
Cell #3	#3	22-May-07	3	7.30	NA	5.01*	57.6	NA	45.2*	5,570	2,660	2,620	70
Cell #3	#3	21-Jul-08	2	7.53	1,200	<1.5*	2.86	NA	2,200*	NA	NA	NA	NA
Cell #3	#3	11-Sep-09	2	7.32	870	<1.5	28	NA	140	3,000	2,400	2400	76
Cell #3	#3	8-Jul-10	2	8.29	330	<3.0	<15	NA	<15	2,000	1,400	1,000	<130
Cell #3 Vadose	VZ-3	28-Jul-11	3.5	8.04	2,730	3.1	6.3	0.39	350	8,000	3,100	2,100	<250
Cell #4 Vadose	VZ-4	28-Jul-11	3.5	8.39	972	5.3	<7.5	<1.5	10	7,000	2,300	1,500	<250

Note: \* = Concentrations reported are in mg/kg

NA = Not Analyzed

TABLE 7  
 Vadose Zone Soil Summary of Metals  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

<i>Land Farm ID</i>	<i>Sample Date</i>	<i>Arsenic (mg/kg)</i>	<i>Barium (mg/kg)</i>	<i>Cadmium (mg/kg)</i>	<i>Chromium (mg/kg)</i>	<i>Copper (mg/kg)</i>	<i>Cyanide (mg/kg)</i>	<i>Iron (mg/kg)</i>	<i>Mercury (mg/kg)</i>	<i>Lead (mg/kg)</i>	<i>Manganese (mg/kg)</i>	<i>Selenium (mg/kg)</i>	<i>Silver (mg/kg)</i>	<i>Uranium (mg/kg)</i>	<i>Zinc (mg/kg)</i>
<b>Cell #1</b>	7-Jun-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Cell #1</b>	22-May-07	5.4	169	0.26	33.9	NA	NA	NA	<0.033	11.90	NA	<4.0	<0.50	NA	NA
<b>Cell #1</b>	21-Jul-08	<12	81	<0.50	7.4	NA	NA	NA	<0.033	5.2	NA	<12	<1.2	NA	NA
<b>Cell #1</b>	11-Sep-09	2.0	50	0.27	5.9	NA	NA	NA	<0.020	3.5	NA	<1.0	<0.50	NA	NA
<b>Cell #1</b>	8-Jul-10	<13	77	<0.50	7.3	NA	NA	NA	<0.033	3.9	NA	<13	<1.3	NA	NA
<b>Cell #1 Vadose Zone</b>	28-Jul-11	<25	150	<1.0	16	12	<0.3	19,000	<0.033	9.1	410	<25	<2.5	<50	55
<b>Cell #2</b>	7-Jun-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Cell #2</b>	22-May-07	5.3	171	0.34	54.5	NA	NA	NA	<0.033	10.60	NA	<4.0	<0.50	NA	NA
<b>Cell #2</b>	21-Jul-08	<12	92	<0.50	9.2	NA	NA	NA	<0.033	7.3	NA	<12	<1.2	NA	NA
<b>Cell #2</b>	11-Sep-09	1.9	48	<0.25	3.8	NA	NA	NA	<0.020	2.8	NA	<1.0	<0.50	NA	NA
<b>Cell #2</b>	8-Jul-10	<13	95	<0.50	5.6	NA	NA	NA	<0.033	3.5	NA	<13	<1.3	NA	NA
<b>Cell #2 Vadose Zone</b>	28-Jul-11	<13	110	<0.50	7.6	6.4	<0.3	12,000	<0.033	5.4	280	<13	<1.3	<25	28
<b>Cell #3</b>	7-Jun-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Cell #3</b>	22-May-07	4.9	181	0.37	36.9	NA	NA	NA	<0.033	13.90	NA	<4.0	<0.50	NA	NA
<b>Cell #3</b>	21-Jul-08	<12	77	<0.50	7.2	NA	NA	NA	0.033	11	NA	<12	<1.2	NA	NA
<b>Cell #3</b>	11-Sep-09	2.6	120	0.48	14	NA	NA	NA	<0.020	6.9	NA	<1.0	<0.50	NA	NA
<b>Cell #3</b>	8-Jul-10	<13	91	<0.50	6.2	NA	NA	NA	<0.033	3.7	NA	<13	<1.3	NA	NA
<b>Cell #3 Vadose Zone</b>	28-Jul-11	<13	97	<0.50	15	11	<0.3	19,000	<0.033	6.4	340	<13	<1.3	<25	48

TABLE 7  
 Vadose Zone Soil Summary of Metals  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

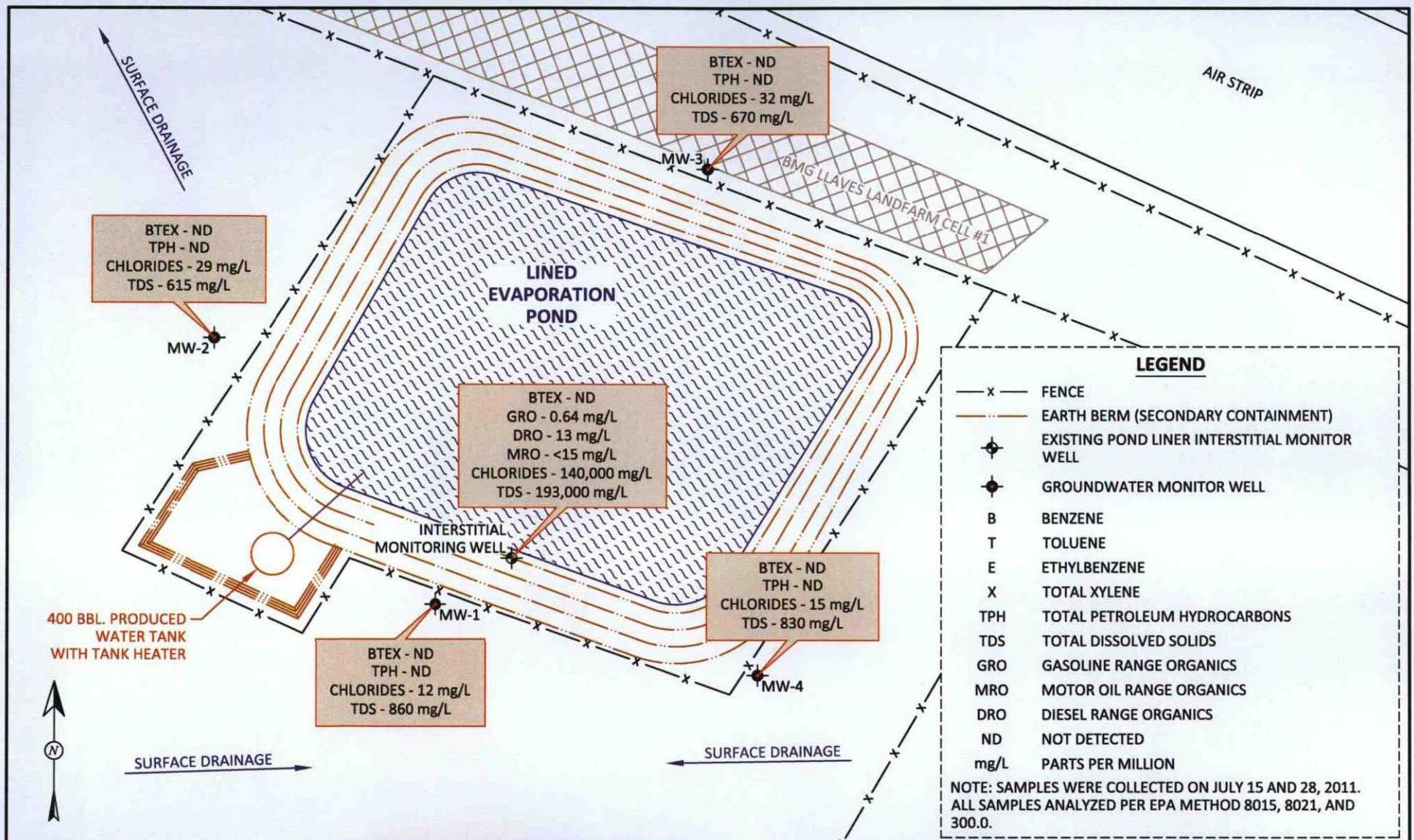
<i>Land Farm ID</i>	<i>Sample Date</i>	<i>Arsenic (mg/kg)</i>	<i>Barium (mg/kg)</i>	<i>Cadmium (mg/kg)</i>	<i>Chromium (mg/kg)</i>	<i>Copper (mg/kg)</i>	<i>Cyanide (mg/kg)</i>	<i>Iron (mg/kg)</i>	<i>Mercury (mg/kg)</i>	<i>Lead (mg/kg)</i>	<i>Manganese (mg/kg)</i>	<i>Selenium (mg/kg)</i>	<i>Silver (mg/kg)</i>	<i>Uranium (mg/kg)</i>	<i>Zinc (mg/kg)</i>
<b>Cell #4 Vadose Zone</b>	28-Jul-11	<13	92	<0.50	15	12	<0.3	18,000	<0.033	6.0	240	<13	<1.3	<25	41

TABLE 8  
 Vadose Zone Soil Volatile Organic Compound Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

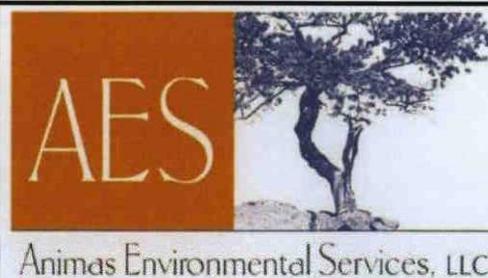
<i>Landfarm ID</i>	<i>Sample Date</i>	<i>EDC (mg/kg)</i>	<i>EDB (mg/kg)</i>	<i>Total Naphthalenes (mg/kg)</i>	<i>Carbon Tetrachloride (mg/kg)</i>	<i>Chloroform (mg/kg)</i>	<i>1,1-DCE (mg/kg)</i>	<i>1,1-dichloroethane (mg/kg)</i>	<i>Methylene Chloride (mg/kg)</i>	<i>1,1,2,2-tetrachloroethane (mg/kg)</i>	<i>TCE (mg/kg)</i>	<i>Vinyl Chloride (mg/kg)</i>
Cell #1 Vadose Zone	28-Jul-11	<0.050	<0.050	<0.50	<0.10	<0.050	<0.10	<0.050	<0.15	<0.050	<0.050	<0.050
Cell #2 Vadose Zone	28-Jul-11	<0.050	<0.050	<0.50	<0.10	<0.050	<0.10	<0.050	<0.15	<0.050	<0.050	<0.050
Cell #3 Vadose Zone	28-Jul-11	<0.050	<0.050	<0.50	<0.10	<0.050	<0.10	<0.050	<0.15	<0.050	<0.050	<0.050
Cell #4 Vadose Zone	28-Jul-11	<0.050	<0.050	<0.50	<0.10	<0.050	<0.10	<0.050	<0.15	<0.050	<0.050	<0.050

TABLE 9  
 Vadose Zone Soil 8270, PCBs, and Radioactivity Analytical Results  
 BMG Centralized Surface Waste Management Facility  
 Rio Arriba County, New Mexico

Landfarm ID	Sample ID	Sample Date	Sample Depth (ft)	Benzo(a) pyrene (mg/kg)	Phenol (mg/kg)	PCBs (mg/kg)	Radioactivity	
							Radium-226 (Pci/g)	Radium-228 (Pci/g)
				8270C	8270C	8082	901.1m	
<b>Cell #1 Vadose Zone</b>	VZ-1	28-Jul-11	3.5	<0.20	<0.20	<0.14	0.962	1.39
<b>Cell #2 Vadose Zone</b>	VZ-2	28-Jul-11	3.5	<0.050	<0.050	<0.50	0.728	1.06
<b>Cell #3 Vadose Zone</b>	VZ-3	28-Jul-11	3.5	<0.050	<0.050	<0.50	1.06	1.23
<b>Cell #4 Vadose Zone</b>	VZ-4	28-Jul-11	3.5	<0.050	<0.050	<0.50	1.26	1.33



SCALE  
50 30 0 50  
10  
(1 INCH = 50 FEET)



DRAWN BY: N. Willis	DATE DRAWN: April 11, 2011
REVISIONS BY: C. Lameman	DATE REVISED: January 4, 2012
CHECKED BY: D. Watson	DATE CHECKED: January 5, 2012
APPROVED BY: E. McNally	DATE APPROVED: January 5, 2012

**FIGURE 1**

**BENSON-MONTIN-GREER  
LOCATION OF BMG EVAPORATION POND AND  
MONITORING WELLS AND CONTAMINANT  
CONCENTRATIONS, JULY 2011**  
NW ¼, NW ¼, SEC. 20, T25N, R1E  
LLAVES, RIO ARRIBA COUNTY, NEW MEXICO

**SUMMARY OF SEMI-ANNUAL  
TREATMENT ZONE MONITORING  
JULY 2011**

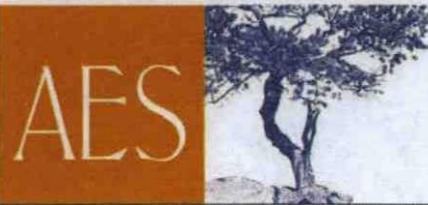
SAMPLE DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENE (mg/kg)	TPH (GRO, DRO, AND MRO)			Chloride (mg/kg)
					C6-C10 (mg/kg)	C10-C22 (mg/kg)	C22-C32 (mg/kg)	
07/28/11	<1.0	<1.0	<1.0	<2.0	<100	3,800	3,300	8.8

**TREATMENT ZONE MONITORING LOCATIONS  
JULY 2011**

SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH (ft.)
TZ-1	N 36°23.383' W 106°52.054'	0.5
TZ-2	N 36°23.376' W 106°51.943'	0.5
TZ-3	N 36°23.341' W 106°51.881'	0.5
TZ-4	N 36°23.403' W 106°52.002'	0.5

**FIGURE 2**

**BENSON-MONTIN-GREER  
TREATMENT ZONE MONITORING  
LOCATIONS AND CONTAMINANT  
CONCENTRATIONS, JULY 2011**  
NW1/4, NW1/4, SEC. 20, T25N, R12E  
LLAVES, RIO ARRIBA COUNTY, NEW MEXICO



Animas Environmental Services, LLC

DRAWN BY: N. Willis	DATE DRAWN: April 11, 2011
REVISIONS BY: C. Lameman	DATE REVISED: January 4, 2012
CHECKED BY: D. Watson	DATE CHECKED: January 4, 2012
APPROVED BY: E. McNally	DATE APPROVED: January 4, 2012

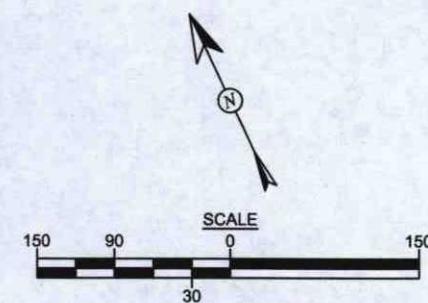
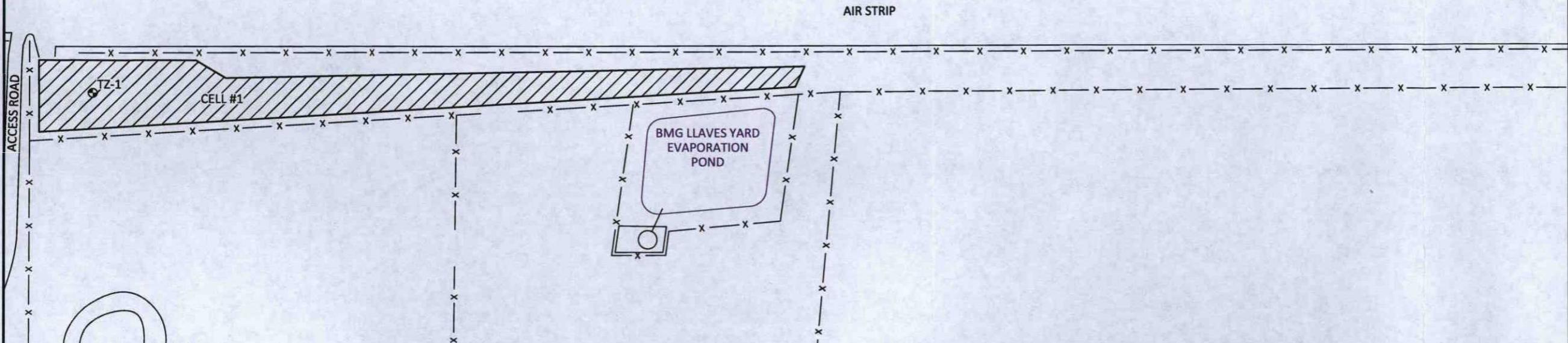
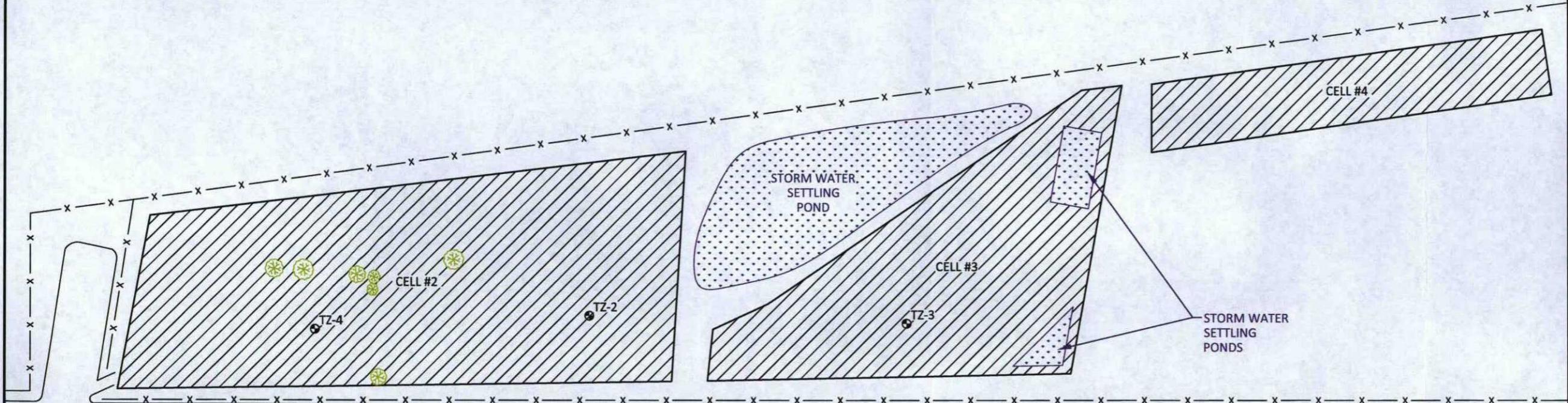
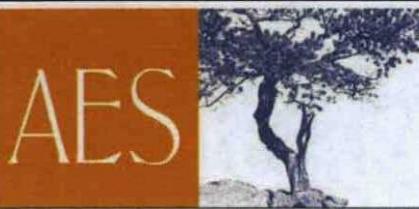


FIGURE 3

**BENSON-MONTIN-GREER  
VADOSE ZONE MONITORING  
LOCATIONS AND CONTAMINANT  
CONCENTRATIONS, JULY 2011**

NW1/4, NW1/4, SEC. 20, T25N, R12E  
LLAVES, RIO ARriba COUNTY, NEW MEXICO

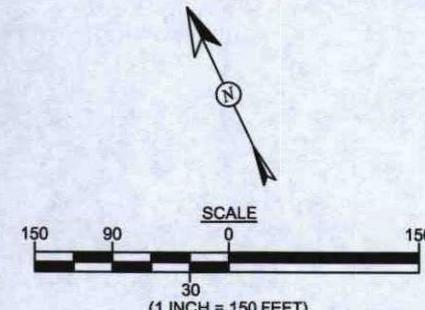
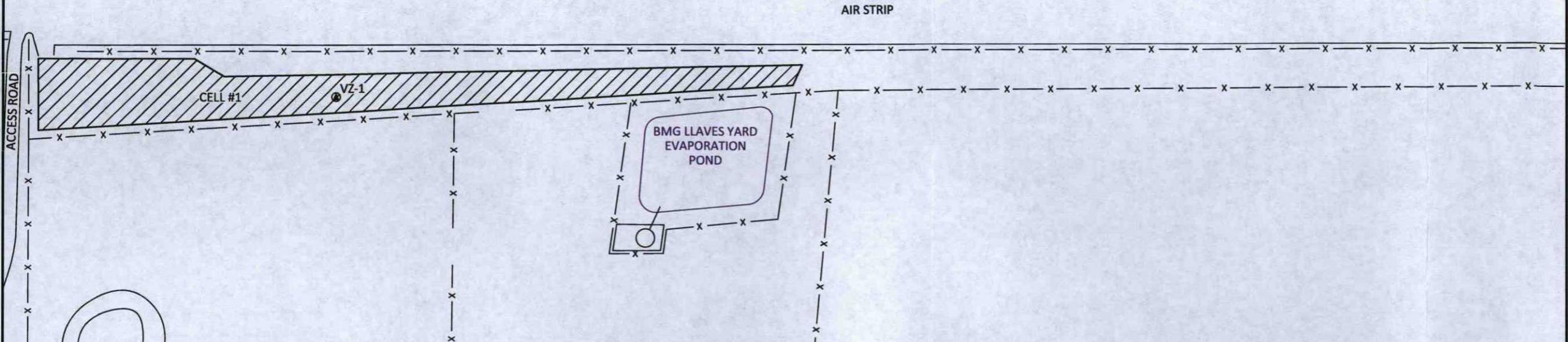
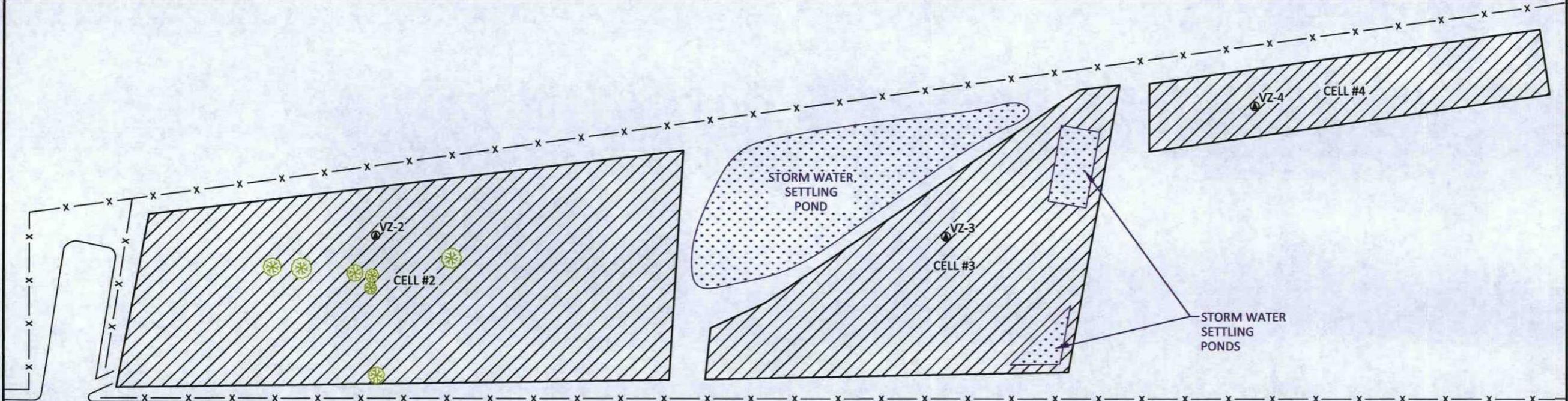


Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
N. Willis	April 11, 2011
REVISIONS BY:	DATE REVISED:
C. Lameman	January 4, 2012
CHECKED BY:	DATE CHECKED:
D. Watson	January 4, 2012
APPROVED BY:	DATE APPROVED:
E. McNally	January 4, 2012

LANDFARM ID	SAMPLE ID	SAMPLE LOCATION	SAMPLE DATE	SAMPLE DEPTH (ft.)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENE (mg/kg)	TPH (GRO, DRO, AND MRO)			Chloride (mg/kg)
									C6-C10 (mg/kg)	C10-C22 (mg/kg)	C22-C32 (mg/kg)	
CELL #1	VZ-1	N 36°23.357' W 106°52.007'	07/28/11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	34	60	15
CELL #2	VZ-2	N 36°23.413' W 106°51.982'	07/28/11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	21	<51	<7.5
CELL #3	VZ-3	N 36°23.358' W 106°51.860'	07/28/11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	6.3
CELL #4	VZ-4	N 36°23.358' W 106°51.787'	07/28/11	3.5	<0.050	<0.050	<0.050	<0.10	<5.0	<9.8	<49	<7.5

VADOSE ZONE SAMPLES WERE COLLECTED BETWEEN 3ft. TO 4ft. BELOW NATIVE SOIL SURFACE.



## **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:** BMG Llaves Yard Evaporation Pond

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

Tech: N. Willis

**Project No.: AES 040605**

Date: 7-15-11

Time: 1245

Form: 1 of 1

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

<b>MONITORING WELL SAMPLING RECORD</b>		Animas Environmental Services					
Monitor Well No: <u>MW-1</u>		624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022					
Site: BMG Llaves Yard Evaporation Pond		Project No.: AES 040605					
Location: Llaves, Rio Arriba County, New Mexico		Date: <u>7-15-11</u>					
Project: Groundwater Monitoring and Sampling		Arrival Time: <u>1347</u>					
Sampling Technician: N. Willis		Air Temp: <u>88°F</u>					
Purge / No Purge:	Purge	T.O.C. Elev. (ft):	<u>TBS</u>				
Well Diameter (in):	<u>2</u>	Total Well Depth (ft):	<u>45.55</u>				
Initial D.T.W. (ft):		(taken at initial gauging of all wells)					
Confirm D.T.W. (ft):	<u>39.59</u>	Time: <u>1350</u>	(taken prior to purging well)				
Final D.T.W. (ft):		Time: _____	(taken after sample collection)				
If NAPL Present: D.T.P.:	D.T.W.:	Thickness:	Time: _____				
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity ( $\mu\text{S}$ ) <u>(mS)</u>	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1353	13.89	0.992	11.29	7.39	143.6	0.25	
1356	12.78	0.941	11.58	7.18	159.9	0.5	
1358	12.80	0.945	11.50	7.08	175.8	0.5	
							VERY LOW YIELD
1402							SAMPLES COLLECTED
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
BTEX and TPH per EPA Method 8021/8015 (6 - 40mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)							
Chlorides and TDS (1 - 500 mL plastic w/ no preserve)							
<b>Disposal of Purged Water:</b> _____							
<b>Collected Samples Stored on Ice in Cooler:</b> _____							
<b>Chain of Custody Record Complete:</b> _____							
<b>Analytical Laboratory:</b> Hall Environmental Analysis Laboratory, Albuquerque, NM							
<b>Equipment Used During Sampling:</b> Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer							
<b>Notes/Comments:</b> _____ _____ _____							

<b>MONITORING WELL SAMPLING RECORD</b>		Animas Environmental Services					
Monitor Well No: <u>MW-2</u>		624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022					
Site: BMG Llaves Yard Evaporation Pond		Project No.: AES 040605					
Location: Llaves, Rio Arriba County, New Mexico		Date: <u>7-29-11</u>					
Project: Groundwater Monitoring and Sampling		Arrival Time: <u>1030</u>					
Sampling Technician: N. Willis		Air Temp: <u>81°F</u>					
Purge / No Purge:	<u>Purge</u>	T.O.C. Elev. (ft):	<u>TBS</u>				
Well Diameter (in):	<u>2</u>	Total Well Depth (ft):	<u>45.54</u>				
Initial D.T.W. (ft):		(taken at initial gauging of all wells)					
Confirm D.T.W. (ft):	<u>40.68</u>	Time:	<u>1040</u>				
Final D.T.W. (ft):		Time:	(taken prior to purging well)				
If NAPL Present: D.T.P.:		Time:	(taken after sample collection)				
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity ( $\mu\text{S}$ )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1043	13.04	0.954	4.74	7.67	64.3	0.25	
1046	12.48	0.914	6.40	7.46	81.3	0.5	
1049	12.29	0.908	7.41	7.44	90.7	0.5	
						.	VERY LOW
						.	YIELD
1055						→ SAMPLES COLLECTED	
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
BTEX and TPH per EPA Method 8021/8015 (6 - 40mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)							
Chlorides and TDS (1 - 500 mL plastic w/ no preserve)							
<b>Disposal of Purged Water:</b> _____							
Collected Samples Stored on Ice in Cooler: _____							
Chain of Custody Record Complete: _____							
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM							
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer							
Notes/Comments: _____ _____ _____ _____							

<b>MONITORING WELL SAMPLING RECORD</b>		Animas Environmental Services					
Monitor Well No: <u>MW-2</u>		624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022					
Site: BMG Llaves Yard Evaporation Pond		Project No.: AES 040605					
Location: Llaves, Rio Arriba County, New Mexico		Date: <u>7-15-11</u>					
Project: Groundwater Monitoring and Sampling		Arrival Time: <u>1452</u>					
Sampling Technician: N. Willis		Air Temp: <u>88°F</u>					
Purge / No Purge:	<u>Purge</u>	T.O.C. Elev. (ft):	<u>TBS</u>				
Well Diameter (in):	<u>2</u>	Total Well Depth (ft):	<u>45.54</u>				
Initial D.T.W. (ft):		(taken at initial gauging of all wells)					
Confirm D.T.W. (ft):		(taken prior to purging well)					
Final D.T.W. (ft):		(taken after sample collection)					
If NAPL Present: D.T.P.:		Thickness:					
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity ( $\mu\text{S}$ ) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
<del>SEE</del> <del>NOTES</del> <del>BELOW</del>							
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
BTEX and TPH per EPA Method 8021/8015 (6 - 40mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)							
Chlorides and TDS (1 - 500 mL plastic w/ no preserve)							
<b>Disposal of Purged Water:</b> _____							
<b>Collected Samples Stored on Ice in Cooler:</b> _____							
<b>Chain of Custody Record Complete:</b> _____							
<b>Analytical Laboratory:</b> Hall Environmental Analysis Laboratory, Albuquerque, NM							
<b>Equipment Used During Sampling:</b> Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer							
<b>Notes/Comments:</b> Due to heavy corrosion I was unable to get into the well. Lock was frozen. Tried two different ways to get into well but did not work.							

<b>MONITORING WELL SAMPLING RECORD</b>		Animas Environmental Services					
Monitor Well No: <u>MW-3</u>		624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022					
Site: BMG Llaves Yard Evaporation Pond		Project No.: AES 040605					
Location: Llaves, Rio Arriba County, New Mexico		Date: <u>7-15-11</u>					
Project: Groundwater Monitoring and Sampling		Arrival Time: <u>1423</u>					
Sampling Technician: N. Willis		Air Temp: <u>88°F</u>					
Purge / No Purge:	Purge	T.O.C. Elev. (ft):	<u>TBS</u>				
Well Diameter (in):	<u>2</u>	Total Well Depth (ft):	<u>45.59</u>				
Initial D.T.W. (ft):	Time: _____	(taken at initial gauging of all wells)					
Confirm D.T.W. (ft):	<u>39.81</u>	Time: <u>1430</u>	(taken prior to purging well)				
Final D.T.W. (ft):	Time: _____	(taken after sample collection)					
If NAPL Present: D.T.P.:	D.T.W.:	Thickness:	Time: _____				
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity ( $\mu\text{S}$ ) ( $\text{mS}$ )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1432	14.99	0.988	12.40	7.82	82.9	0.25	
1435	13.65	0.877	11.12	7.43	117.8	0.5	
1438	12.62	0.867	11.11	7.22	152.5	0.5	
1441	—	—	—	—	—	—	LOW YIELD SAMPLES COLLECTED
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
BTEX and TPH per EPA Method 8021/8015 (6 - 40mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)							
Chlorides and TDS (1 - 500 mL plastic w/ no preserve)							
<b>Disposal of Purged Water:</b> _____							
<b>Collected Samples Stored on Ice in Cooler:</b> _____							
<b>Chain of Custody Record Complete:</b> _____							
<b>Analytical Laboratory:</b> Hall Environmental Analysis Laboratory, Albuquerque, NM							
<b>Equipment Used During Sampling:</b> Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer							
<b>Notes/Comments:</b> _____ _____ _____							

<b>MONITORING WELL SAMPLING RECORD</b>		Animas Environmental Services					
Monitor Well No:	<b>MW-4</b>	624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022					
Site: BMG Llaves Yard Evaporation Pond		Project No.: AES 040605					
Location: Llaves, Rio Arriba County, New Mexico		Date: 7-15-11					
Project: Groundwater Monitoring and Sampling		Arrival Time: 13.19					
Sampling Technician: N. Willis		Air Temp: 88°F					
Purge / No Purge:	Purge	T.O.C. Elev. (ft): TBS					
Well Diameter (in):	2	Total Well Depth (ft): 45.6					
Initial D.T.W. (ft):	Time:	(taken at initial gauging of all wells)					
Confirm D.T.W. (ft):	Time: 1322	(taken prior to purging well)					
Final D.T.W. (ft):	Time:	(taken after sample collection)					
If NAPL Present: D.T.P.:	D.T.W.:	Thickness:	Time:				
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity ( $\mu\text{S}$ ) (ms)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1324	16.45	2.491	12.64	7.61	53.8	0.25	
1327	14.25	1.039	13.20	7.34	94.4	0.5	
1330	13.65	0.992	13.04	7.20	126.7	0.5	VERY LOW YIELD
1333	—	—	—	—	—	—	SAMPLES COLLECTED
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
BTEX and TPH per EPA Method 8021/8015 (6 - 40mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)							
Chlorides and TDS (1 - 500 mL plastic w/ no preserve)							
<b>Disposal of Purged Water:</b>							
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							
<b>Notes/Comments:</b>							

<b>MONITORING WELL SAMPLING RECORD</b>		Animas Environmental Services					
Monitor Well No: <u>Interstitial Well</u>		624 E. Comanche, Farmington NM 87401 Tel. (505) 564-2281 Fax (505) 324-2022					
Site: BMG Llaves Yard Evaporation Pond		Project No.: AES 040605					
Location: Llaves, Rio Arriba County, New Mexico		Date: <u>7-15-11</u>					
Project: Groundwater Monitoring and Sampling		Arrival Time: <u>1248</u>					
Sampling Technician: N. Willis		Air Temp: <u>88°F</u>					
Purge / No Purge:	<u>Purge</u>	T.O.C. Elev. (ft):	<u>TBS</u>				
Well Diameter (in):	<u>2</u>	Total Well Depth (ft):	<u>12.1</u>				
Initial D.T.W. (ft):		(taken at initial gauging of all wells)					
Confirm D.T.W. (ft):	<u>9.64</u>	Time:	<u>1252</u>				
Final D.T.W. (ft):		Time:	(taken prior to purging well)				
If NAPL Present: D.T.P.:		D.T.W.:	(taken after sample collection)				
Thickness: _____ Time: _____							
<b>Water Quality Parameters - Recorded During Well Purging</b>							
Time	Temp (deg C)	Conductivity ( $\mu\text{S}$ ) ( $\text{mS}$ )	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
<u>1254</u>	<u>19.36</u>	<u>184.3</u>	<u>1.30</u>	<u>7.31</u>	<u>-100.6</u>	<u>0.25</u>	<u>SAMPLES COLLECTED</u>
<u>1300</u>							
<b>Analytical Parameters (include analysis method and number and type of sample containers)</b>							
BTEX and TPH per EPA Method 8021/8015 (6 - 40mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)							
Chlorides and TDS (1 - 500 mL plastic w/ no preserve)							
<b>Disposal of Purged Water:</b> _____							
<b>Collected Samples Stored on Ice in Cooler:</b> _____							
<b>Chain of Custody Record Complete:</b> _____							
<b>Analytical Laboratory:</b> Hall Environmental Analysis Laboratory, Albuquerque, NM							
<b>Equipment Used During Sampling:</b> Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer							
<b>Notes/Comments:</b> _____							



## COVER LETTER

Wednesday, July 27, 2011

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

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

RE: BMG Landfarm/Pond Sampling

Order No.: 1107740

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 7/19/2011 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](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

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

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901  
AZ license # AZ0682



# Hall Environmental Analysis Laboratory, Inc.

Date: 27-Jul-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b> MW-1				
<b>Lab Order:</b>	1107740	<b>Collection Date:</b> 7/15/2011 2:02:00 PM				
<b>Project:</b>	BMG Landfarm/Pond Sampling	<b>Date Received:</b> 7/19/2011				
<b>Lab ID:</b>	1107740-01	<b>Matrix:</b> AQUEOUS				

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	7/21/2011 6:01:20 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	7/21/2011 6:01:20 PM
Surr: DNOP	97.9	97.7-132		%REC	1	7/21/2011 6:01:20 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	0.10		mg/L	2	7/20/2011 3:34:42 PM
Surr: BFB	83.8	65.4-141		%REC	2	7/20/2011 3:34:42 PM
<b>EPA METHOD 8021B: VOLATILES</b>						
Benzene	ND	2.0		µg/L	2	7/20/2011 3:34:42 PM
Toluene	ND	2.0		µg/L	2	7/20/2011 3:34:42 PM
Ethylbenzene	ND	2.0		µg/L	2	7/20/2011 3:34:42 PM
Xylenes, Total	ND	4.0		µg/L	2	7/20/2011 3:34:42 PM
Surr: 4-Bromofluorobenzene	89.1	89.6-125	S	%REC	2	7/20/2011 3:34:42 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	12	2.5		mg/L	5	7/21/2011 9:15:46 AM
<b>EPA METHOD 7470: MERCURY</b>						
Mercury	ND	0.00020		mg/L	1	7/21/2011 2:50:22 PM
<b>EPA 6010B: TOTAL RECOVERABLE METALS</b>						
Arsenic	ND	0.020		mg/L	1	7/21/2011 8:13:33 AM
Barium	0.19	0.020		mg/L	1	7/21/2011 8:13:33 AM
Cadmium	ND	0.0020		mg/L	1	7/21/2011 8:13:33 AM
Chromium	0.014	0.0060		mg/L	1	7/21/2011 8:13:33 AM
Lead	ND	0.0050		mg/L	1	7/21/2011 8:13:33 AM
Selenium	ND	0.050		mg/L	1	7/21/2011 8:13:33 AM
Silver	ND	0.0050		mg/L	1	7/21/2011 8:13:33 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	860	200		mg/L	1	7/22/2011 5:08:00 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: 27-Jul-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1107740  
**Project:** BMG Landfarm/Pond Sampling  
**Lab ID:** 1107740-02

**Client Sample ID:** MW-3

**Collection Date:** 7/15/2011 2:41:00 PM

**Date Received:** 7/19/2011

**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	7/21/2011 6:35:59 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	7/21/2011 6:35:59 PM
Surr: DNOP	96.4	97.7-132	S	%REC	1	7/21/2011 6:35:59 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	0.10		mg/L	2	7/20/2011 5:04:32 PM
Surr: BFB	84.7	65.4-141		%REC	2	7/20/2011 5:04:32 PM
<b>EPA METHOD 8021B: VOLATILES</b>						
Benzene	ND	2.0		µg/L	2	7/20/2011 5:04:32 PM
Toluene	ND	2.0		µg/L	2	7/20/2011 5:04:32 PM
Ethylbenzene	ND	2.0		µg/L	2	7/20/2011 5:04:32 PM
Xylenes, Total	ND	4.0		µg/L	2	7/20/2011 5:04:32 PM
Surr: 4-Bromofluorobenzene	92.0	89.6-125		%REC	2	7/20/2011 5:04:32 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	32	2.5		mg/L	5	7/21/2011 9:38:12 AM
<b>EPA METHOD 7470: MERCURY</b>						
Mercury	ND	0.00020		mg/L	1	7/21/2011 2:52:09 PM
<b>EPA 6010B: TOTAL RECOVERABLE METALS</b>						
Arsenic	ND	0.020		mg/L	1	7/21/2011 8:23:47 AM
Barium	0.074	0.020		mg/L	1	7/22/2011 1:39:23 PM
Cadmium	ND	0.0020		mg/L	1	7/21/2011 8:23:47 AM
Chromium	ND	0.0060		mg/L	1	7/21/2011 8:23:47 AM
Lead	ND	0.0050		mg/L	1	7/21/2011 8:23:47 AM
Selenium	ND	0.050		mg/L	1	7/21/2011 8:23:47 AM
Silver	ND	0.0050		mg/L	1	7/21/2011 8:23:47 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	670	200		mg/L	1	7/22/2011 5:08:00 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: 27-Jul-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1107740  
**Project:** BMG Landfarm/Pond Sampling  
**Lab ID:** 1107740-03

**Client Sample ID:** MW-4  
**Collection Date:** 7/15/2011 1:33:00 PM  
**Date Received:** 7/19/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	7/21/2011 7:10:42 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	7/21/2011 7:10:42 PM
Surr: DNOP	119	97.7-132		%REC	1	7/21/2011 7:10:42 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	0.10		mg/L	2	7/20/2011 6:37:54 PM
Surr: BFB	76.2	65.4-141		%REC	2	7/20/2011 6:37:54 PM
<b>EPA METHOD 8021B: VOLATILES</b>						
Benzene	ND	2.0		µg/L	2	7/20/2011 6:37:54 PM
Toluene	ND	2.0		µg/L	2	7/20/2011 6:37:54 PM
Ethylbenzene	ND	2.0		µg/L	2	7/20/2011 6:37:54 PM
Xylenes, Total	ND	4.0		µg/L	2	7/20/2011 6:37:54 PM
Surr: 4-Bromofluorobenzene	83.6	89.6-125	S	%REC	2	7/20/2011 6:37:54 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	15	2.5		mg/L	5	7/21/2011 10:00:33 AM
<b>EPA METHOD 7470: MERCURY</b>						
Mercury	ND	0.00020		mg/L	1	7/21/2011 2:54:02 PM
<b>EPA 6010B: TOTAL RECOVERABLE METALS</b>						
Arsenic	ND	0.020		mg/L	1	7/21/2011 8:27:49 AM
Barium	0.093	0.020		mg/L	1	7/22/2011 1:41:24 PM
Cadmium	ND	0.0020		mg/L	1	7/21/2011 8:27:49 AM
Chromium	0.0097	0.0060		mg/L	1	7/21/2011 8:27:49 AM
Lead	ND	0.0050		mg/L	1	7/21/2011 8:27:49 AM
Selenium	ND	0.050		mg/L	1	7/21/2011 8:27:49 AM
Silver	ND	0.0050		mg/L	1	7/21/2011 8:27:49 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	830	200		mg/L	1	7/22/2011 5:08:00 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: 27-Jul-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services					<b>Client Sample ID:</b> Interstitial Well
<b>Lab Order:</b>	1107740					<b>Collection Date:</b> 7/15/2011 1:00:00 PM
<b>Project:</b>	BMG Landfarm/Pond Sampling					<b>Date Received:</b> 7/19/2011
<b>Lab ID:</b>	1107740-04					<b>Matrix:</b> AQUEOUS
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	13	3.0		mg/L	1	7/21/2011 7:45:27 PM
Motor Oil Range Organics (MRO)	ND	15		mg/L	1	7/21/2011 7:45:27 PM
Surr: DNOP	98.6	97.7-132		%REC	1	7/21/2011 7:45:27 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	0.64	0.10		mg/L	2	7/20/2011 7:08:00 PM
Surr: BFB	87.1	65.4-141		%REC	2	7/20/2011 7:08:00 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	2.0		µg/L	2	7/20/2011 7:08:00 PM
Toluene	ND	2.0		µg/L	2	7/20/2011 7:08:00 PM
Ethylbenzene	ND	2.0		µg/L	2	7/20/2011 7:08:00 PM
Xylenes, Total	ND	4.0		µg/L	2	7/20/2011 7:08:00 PM
Surr: 4-Bromofluorobenzene	83.6	89.6-125	S	%REC	2	7/20/2011 7:08:00 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SRM
Chloride	140000	5000		mg/L	10000	7/22/2011 1:16:58 PM
<b>EPA METHOD 7470: MERCURY</b>						Analyst: MBR
Mercury	ND	0.00020		mg/L	1	7/21/2011 2:59:32 PM
<b>EPA 6010B: TOTAL RECOVERABLE METALS</b>						Analyst: ELS
Arsenic	0.31	0.20		mg/L	10	7/21/2011 8:56:07 AM
Barium	89	2.0		mg/L	100	7/22/2011 1:43:27 PM
Cadmium	0.047	0.020		mg/L	10	7/21/2011 8:56:07 AM
Chromium	ND	0.060		mg/L	10	7/21/2011 8:56:07 AM
Lead	ND	0.050		mg/L	10	7/21/2011 8:56:07 AM
Selenium	ND	0.50		mg/L	10	7/21/2011 8:56:07 AM
Silver	ND	0.050		mg/L	10	7/21/2011 8:56:07 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	193000	1000		mg/L	1	7/22/2011 5:08:00 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: 27-Jul-11  
Analytical Report

CLIENT: Animas Environmental Services  
Lab Order: 1107740  
Project: BMG Landfarm/Pond Sampling  
Lab ID: 1107740-05

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 7/19/2011  
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Analyst: RAA
<b>EPA METHOD 8015B: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	7/20/2011 7:38:07 PM	
Surrogate: BFB	79.2	65.4-141		%REC	1	7/20/2011 7:38:07 PM	
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	1.0		µg/L	1	7/20/2011 7:38:07 PM	
Toluene	ND	1.0		µg/L	1	7/20/2011 7:38:07 PM	
Ethylbenzene	ND	1.0		µg/L	1	7/20/2011 7:38:07 PM	
Xylenes, Total	ND	2.0		µg/L	1	7/20/2011 7:38:07 PM	
Surrogate: 4-Bromofluorobenzene	83.8	89.6-125	S	%REC	1	7/20/2011 7:38:07 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

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm/Pond Sampling Work Order: 1107740

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 300.0: Anions</b>											
Sample ID: MB		MBLK									
Chloride	ND	mg/L	0.50								
Sample ID: MB		MBLK									
Chloride	ND	mg/L	0.50								
Sample ID: MB		MBLK									
Chloride	ND	mg/L	0.50								
Sample ID: MB		MBLK									
Chloride	ND	mg/L	0.50								
Sample ID: MB		MBLK									
Chloride	ND	mg/L	0.50								
Sample ID: LCS		LCS									
Chloride	4.950	mg/L	0.50	5	0	99.0	90	110			
Sample ID: LCS		LCS									
Chloride	5.003	mg/L	0.50	5	0	100	90	110			
Sample ID: LCS		LCS									
Chloride	4.648	mg/L	0.50	5	0	93.0	90	110			
Sample ID: LCS		LCS									
Chloride	5.031	mg/L	0.50	5	0	101	90	110			
Sample ID: LCS		LCS									
Chloride	4.679	mg/L	0.50	5	0	93.6	90	110			
<b>Method: EPA Method 8015B: Diesel Range</b>											
Sample ID: MB-27693		MBLK									
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-27693		LCS									
Diesel Range Organics (DRO)	6.487	mg/L	1.0	5	0	130	74	157			
Sample ID: LCSD-27693		LCSD									
Diesel Range Organics (DRO)	6.564	mg/L	1.0	5	0	131	74	157	1.18	23	
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: 1107740-02A MSD		MSD									
Gasoline Range Organics (GRO)	1.042	mg/L	0.10	1	0	104	75.4	121	2.09	10.5	
Sample ID: 5ML-RB		MBLK									
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		LCS									
Gasoline Range Organics (GRO)	0.5376	mg/L	0.050	0.5	0	108	81.8	120			
Sample ID: 1107740-02A MS		MS									
Gasoline Range Organics (GRO)	1.021	mg/L	0.10	1	0	102	75.4	121			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm/Pond Sampling Work Order: 1107740

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: 1107740-01A MSD		MSD					Batch ID: R46659		Analysis Date:	7/20/2011 4:34:36 PM	
Benzene	40.00	µg/L	2.0	40	0	100	92.7	114	0.0800	14	
Toluene	40.12	µg/L	2.0	40	0	100	94.6	116	1.49	16.2	
Ethylbenzene	38.06	µg/L	2.0	40	0	95.2	94.3	114	1.35	12.6	
Xylenes, Total	116.7	µg/L	4.0	120	0	97.3	95.7	116	0.584	11.9	
Sample ID: 5ML-RB		MBLK					Batch ID: R46659		Analysis Date:	7/20/2011 9:45:07 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: R46659		Analysis Date:	7/20/2011 12:15:41 PM	
Benzene	20.89	µg/L	1.0	20	0	104	80	120			
Toluene	21.20	µg/L	1.0	20	0	106	80	120			
Ethylbenzene	19.66	µg/L	1.0	20	0	98.3	80	120			
Xylenes, Total	60.91	µg/L	2.0	60	0	102	80	120			
Sample ID: 1107740-01A MS		MS					Batch ID: R46659		Analysis Date:	7/20/2011 4:04:41 PM	
Benzene	40.03	µg/L	2.0	40	0	100	92.7	114			
Toluene	39.53	µg/L	2.0	40	0	98.8	94.6	116			
Ethylbenzene	37.55	µg/L	2.0	40	0	93.9	94.3	114			S
Xylenes, Total	116.1	µg/L	4.0	120	0	96.7	95.7	116			
<b>Method: EPA Method 7470: Mercury</b>											
Sample ID: MB-27699		MBLK					Batch ID: 27699		Analysis Date:	7/21/2011 2:38:03 PM	
Mercury	ND	mg/L	0.00020								
Sample ID: LCS-27699		LCS					Batch ID: 27699		Analysis Date:	7/21/2011 2:39:48 PM	
Mercury	0.004873	mg/L	0.00020	0.005	0	97.5	80	120			
<b>Method: EPA 6010B: Total Recoverable Metals</b>											
Sample ID: MB-27683		MBLK					Batch ID: 27683		Analysis Date:	7/21/2011 7:24:04 AM	
Arsenic	ND	mg/L	0.020								
Barium	ND	mg/L	0.020								
Cadmium	ND	mg/L	0.0020								
Chromium	ND	mg/L	0.0060								
Lead	ND	mg/L	0.0050								
Selenium	ND	mg/L	0.050								
Silver	ND	mg/L	0.0050								
Sample ID: LCS-27683		LCS					Batch ID: 27683		Analysis Date:	7/21/2011 7:26:11 AM	
Arsenic	0.5225	mg/L	0.020	0.5	0	104	80	120			
Barium	0.4948	mg/L	0.020	0.5	0	99.0	80	120			
Cadmium	0.4885	mg/L	0.0020	0.5	0	97.7	80	120			
Chromium	0.5178	mg/L	0.0060	0.5	0	104	80	120			
Lead	0.4830	mg/L	0.0050	0.5	0	96.6	80	120			
Selenium	0.5014	mg/L	0.050	0.5	0	100	80	120			
Silver	0.1015	mg/L	0.0050	0.1	0	102	80	120			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm/Pond Sampling

Work Order: 1107740

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: SM2540C MOD: Total Dissolved Solids</b>											
Sample ID: MB-27692		MBLK					Batch ID:	27692	Analysis Date:	7/22/2011 5:08:00 PM	
Total Dissolved Solids	ND	mg/L	20.0				Batch ID:	27692	Analysis Date:	7/22/2011 5:08:00 PM	
Sample ID: LCS-27692		LCS									
Total Dissolved Solids	1023	mg/L	20.0	1000	6	102	80	120			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL

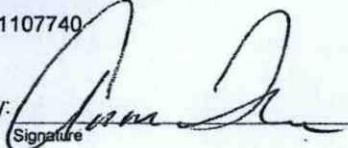
Date Received:

7/19/2011

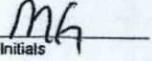
Work Order Number 1107740

Received by: MMG

Checklist completed by:

Signature

Sample ID labels checked by:

Initials

07/19/11 Date

Matrix:

Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Not Shipped <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Water - Preservation labels on bottle and cap match?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	<2 >12 unless noted below.
Container/Temp Blank temperature?	1.0°	<6° C Acceptable		
		If given sufficient time to cool.		

COMMENTS:

-----

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Corrective Action \_\_\_\_\_

\_\_\_\_\_

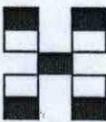
\_\_\_\_\_

## **Chain-of-Custody Record**

Client: ANIMAS ENVIRONMENTAL  
SERVICES

Address: 624 E. COMANCHE  
FARMINGTON, NM 87401  
Phone #: 505-564-2281

QA/QC Package:	<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)
	<input type="checkbox"/> Other _____	
	<input type="checkbox"/> EDD (Type) _____	



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

Chain-of-Custody Record			Turn-Around Time:															
<b>ANIMAS ENVIRONMENTAL SERVICES</b> Address: 624 E. COMANCHE TARMINGTON, NM 87401 ne #: 505-564-2281 ail or Fax#: 505-324-2022			<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush															
Project Name: <b>BMG LAND FARM/POND SAMPLING</b>																		
Project #: <b>AES 040605</b>																		
Project Manager: <b>R. KENNEMER</b>																		
Sampler: <b>D. WILLIS</b> On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
Sample Temperature: <b>1.0</b>																		
Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + PBBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
11/11	1402	MW-1	2-500mL PL. 6-40mL GL.	1-HNO <sub>3</sub>	1107740	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	
	1441	MW-3																
	1333	MW-4																
	1300	INTERSTITIAL WELL TRIP BLANK	2-40mL GL.	HCl	-5	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X	
11	0830	Relinquished by: <i>Noti Willis</i>	Received by: <i>Debrah Watson</i>	Remarks: <i>H2O</i>														
11	1630	Relinquished by: <i>Debrah Watson</i>	Received by: <i>Michelle Cope 7/9/11 9:30</i>															

If necessary, samples submitted to Hall Environmental may be subcontracted to other analytical laboratories.

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 noted on the analytical report.



## COVER LETTER

Friday, August 12, 2011

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

RE: BMG Landfarm And Pond

Order No.: 1108037

Dear Debbie Watson:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 8/1/2011 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](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,



Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901  
AZ license # AZ0682



# Hall Environmental Analysis Laboratory, Inc.

Date: 12-Aug-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services		<b>Client Sample ID:</b> MW-2			
<b>Lab Order:</b>	1108037		<b>Collection Date:</b> 7/28/2011 10:55:00 AM			
<b>Project:</b>	BMG Landfarm And Pond		<b>Date Received:</b> 8/1/2011			
<b>Lab ID:</b>	1108037-01		<b>Matrix:</b> AQUEOUS			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/4/2011 5:24:07 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/4/2011 5:24:07 AM
Surr: DNOP	94.1	81.1-147		%REC	1	8/4/2011 5:24:07 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/5/2011 3:18:46 AM
Surr: BFB	93.0	65.4-141		%REC	1	8/5/2011 3:18:46 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/5/2011 3:18:46 AM
Toluene	ND	1.0		µg/L	1	8/5/2011 3:18:46 AM
Ethylbenzene	ND	1.0		µg/L	1	8/5/2011 3:18:46 AM
Xylenes, Total	ND	2.0		µg/L	1	8/5/2011 3:18:46 AM
Surr: 4-Bromofluorobenzene	87.3	89.6-125	S	%REC	1	8/5/2011 3:18:46 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LJB
Chloride	29	10		mg/L	20	8/2/2011 6:22:13 PM
<b>EPA METHOD 7470: MERCURY</b>						Analyst: ELS
Mercury	ND	0.00020		mg/L	1	8/3/2011 1:21:57 PM
<b>EPA 6010B: TOTAL RECOVERABLE METALS</b>						Analyst: RAGS
Arsenic	ND	0.020		mg/L	1	8/5/2011 3:49:17 PM
Barium	0.47	0.020		mg/L	1	8/5/2011 3:49:17 PM
Cadmium	ND	0.0020		mg/L	1	8/5/2011 3:49:17 PM
Chromium	0.034	0.0060		mg/L	1	8/5/2011 3:49:17 PM
Lead	0.0090	0.0050		mg/L	1	8/5/2011 3:49:17 PM
Selenium	ND	0.050		mg/L	1	8/5/2011 3:49:17 PM
Silver	ND	0.0050		mg/L	1	8/5/2011 3:49:17 PM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	615	100		mg/L	1	8/4/2011 3:17:00 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: 12-Aug-11  
Analytical Report

CLIENT: Animas Environmental Services  
Lab Order: 1108037  
Project: BMG Landfarm And Pond  
Lab ID: 1108037-02

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 8/1/2011  
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Analyst: RAA
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	1.0		µg/L	1	8/4/2011 9:18:30 PM	
Toluene	ND	1.0		µg/L	1	8/4/2011 9:18:30 PM	
Ethylbenzene	ND	1.0		µg/L	1	8/4/2011 9:18:30 PM	
Xylenes, Total	ND	2.0		µg/L	1	8/4/2011 9:18:30 PM	
Surr: 4-Bromofluorobenzene	88.4	89.6-125	S	%REC	1	8/4/2011 9:18:30 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

## QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services  
**Project:** BMG Landfarm And Pond **Work Order:** 1108037

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 300.0: Anions</b>											
Sample ID: MB		MBLK					Batch ID: R46925	Analysis Date: 8/2/2011 12:52:18 PM			
Chloride	ND	mg/L	0.50								
Sample ID: LCS		LCS					Batch ID: R46925	Analysis Date: 8/2/2011 1:09:42 PM			
Chloride	4.767	mg/L	0.50	5	0	95.3	90	110			
<b>Method: EPA Method 8015B: Diesel Range</b>											
Sample ID: MB-27883		MBLK					Batch ID: 27883	Analysis Date: 8/4/2011 2:32:22 AM			
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-27883		LCS					Batch ID: 27883	Analysis Date: 8/4/2011 3:06:44 AM			
Diesel Range Organics (DRO)	4.709	mg/L	1.0	5	0	94.2	74	157			
Sample ID: LCSD-27883		LCSD					Batch ID: 27883	Analysis Date: 8/4/2011 3:41:06 AM			
Diesel Range Organics (DRO)	4.828	mg/L	1.0	5	0	96.6	74	157	2.50	23	
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: 5ML-RB		MBLK					Batch ID: R47026	Analysis Date: 8/4/2011 9:34:25 AM			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		LCS					Batch ID: R47026	Analysis Date: 8/4/2011 11:34:52 AM			
Gasoline Range Organics (GRO)	0.5554	mg/L	0.050	0.5	0	111	92.1	117			
<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: 5ML-RB		MBLK					Batch ID: R47026	Analysis Date: 8/4/2011 9:34:25 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: R47026	Analysis Date: 8/4/2011 12:04:57 PM			
Benzene	20.01	µg/L	1.0	20	0	100	80	120			
Toluene	20.09	µg/L	1.0	20	0	100	80	120			
Ethylbenzene	19.92	µg/L	1.0	20	0	99.6	80	120			
Xylenes, Total	59.89	µg/L	2.0	60	0	99.8	80	120			
<b>Method: EPA Method 7470: Mercury</b>											
Sample ID: MB-27870		MBLK					Batch ID: 27870	Analysis Date: 8/3/2011 11:40:11 AM			
Mercury	ND	mg/L	0.00020								
Sample ID: LCS-27870		LCS					Batch ID: 27870	Analysis Date: 8/3/2011 11:41:58 AM			
Mercury	0.004967	mg/L	0.00020	0.005	3E-05	98.8	80	120			

## Qualifiers:

E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
NC Non-Chlorinated  
R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm And Pond

Work Order: 1108037

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA 6010B: Total Recoverable Metals

Sample ID: MB-27894	MBLK			Batch ID: 27894			Analysis Date: 8/5/2011 3:44:21 PM			
Arsenic	ND	mg/L	0.020							
Barium	ND	mg/L	0.020							
Cadmium	ND	mg/L	0.0020							
Chromium	ND	mg/L	0.0060							
Lead	ND	mg/L	0.0050							
Selenium	ND	mg/L	0.050							
Silver	ND	mg/L	0.0050							

Sample ID: LCS-27894

	LCS			Batch ID: 27894			Analysis Date: 8/5/2011 3:46:57 PM			
Arsenic	0.5019	mg/L	0.020	0.5	0	100	80	120		
Barium	0.4833	mg/L	0.020	0.5	0	96.7	80	120		
Cadmium	0.4885	mg/L	0.0020	0.5	0	97.7	80	120		
Chromium	0.4856	mg/L	0.0060	0.5	0	97.1	80	120		
Lead	0.4724	mg/L	0.0050	0.5	0	94.5	80	120		
Selenium	0.4633	mg/L	0.050	0.5	0	92.7	80	120		
Silver	0.1009	mg/L	0.0050	0.1	0	101	80	120		

Method: SM2540C MOD: Total Dissolved Solids

Sample ID: MB-27875	MBLK			Batch ID: 27875			Analysis Date: 8/4/2011 3:17:00 PM			
Total Dissolved Solids	ND	mg/L	20.0							
Sample ID: LCS-27875	LCS			Batch ID: 27875			Analysis Date: 8/4/2011 3:17:00 PM			
Total Dissolved Solids	1035	mg/L	20.0	1000	11	102	80	120		

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## **Chain-of-Custody Record**

Client: Animas Environmental Services LLC

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 Landfarm & Pond

**Project #:**

AES 040605

### **Project Manager:**

D. Watson

Sampler: N. Willis

On Ice:  Yes  No

Sample Temperature: 4.1

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

Received by:

---

Date Time

### Remarks

Date: Time:

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

 Signed by

~~11/30/11~~

Remarks:  
Metals: Arsenic, Barium, Cadmium, Chromium,  
Lead, Mercury, Selenium, Silver



## COVER LETTER

Thursday, September 01, 2011

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

RE: BMG Landfarm & Pond

Order No.: 1108122

Dear Debbie Watson:

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 8/1/2011 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](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

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

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901  
AZ license # AZ0682

**Hall Environmental Analysis Laboratory, Inc.**Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-01

**Client Sample ID:** Treatment Zone Composite  
**Collection Date:** 7/28/2011 2:01:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	3800	200		mg/Kg	20	8/8/2011 10:39:39 PM
Motor Oil Range Organics (MRO)	3300	1000		mg/Kg	20	8/8/2011 10:39:39 PM
Surr: DNOP	0	73.4-123	S	%REC	20	8/8/2011 10:39:39 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	8/3/2011 12:13:25 PM
Surr: BFB	98.2	75.2-136		%REC	20	8/3/2011 12:13:25 PM
<b>EPA METHOD 8021B: VOLATILES</b>						
Benzene	ND	1.0		mg/Kg	20	8/3/2011 12:13:25 PM
Toluene	ND	1.0		mg/Kg	20	8/3/2011 12:13:25 PM
Ethylbenzene	ND	1.0		mg/Kg	20	8/3/2011 12:13:25 PM
Xylenes, Total	ND	2.0		mg/Kg	20	8/3/2011 12:13:25 PM
Surr: 4-Bromofluorobenzene	98.0	90.3-115		%REC	20	8/3/2011 12:13:25 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	8.8	7.5		mg/Kg	5	8/8/2011 5:32:12 PM

**Qualifiers:**

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-02

**Client Sample ID:** Cell #1 Vadose Zone  
**Collection Date:** 7/28/2011 1:08:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8082: PCB'S</b>						
Aroclor 1016	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Aroclor 1221	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Aroclor 1232	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Aroclor 1242	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Aroclor 1248	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Aroclor 1254	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Aroclor 1260	ND	0.020		mg/Kg	1	8/9/2011 2:37:45 PM
Surr: Decachlorobiphenyl	80.0	20.2-86.8		%REC	1	8/9/2011 2:37:45 PM
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	34	9.7		mg/Kg	1	8/5/2011 1:32:15 AM
Motor Oil Range Organics (MRO)	60	48		mg/Kg	1	8/5/2011 1:32:15 AM
Surr: DNOP	82.1	73.4-123		%REC	1	8/5/2011 1:32:15 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2011 1:11:07 PM
Surr: BFB	95.3	75.2-136		%REC	1	8/3/2011 1:11:07 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Fluoride	2.9	1.5		mg/Kg	5	8/8/2011 6:07:01 PM
Chloride	15	7.5		mg/Kg	5	8/8/2011 6:07:01 PM
Nitrogen, Nitrate (As N)	3.3	1.5		mg/Kg	5	8/8/2011 6:07:01 PM
Sulfate	7.9	7.5		mg/Kg	5	8/8/2011 6:07:01 PM
<b>EPA METHOD 7471: MERCURY</b>						
Mercury	ND	0.033		mg/Kg	1	8/9/2011 11:17:26 AM
<b>EPA METHOD 6010B: SOIL METALS</b>						
Arsenic	ND	25		mg/Kg	10	8/10/2011 9:08:19 AM
Barium	150	1.0		mg/Kg	10	8/11/2011 12:06:00 PM
Cadmium	ND	1.0		mg/Kg	10	8/10/2011 9:08:19 AM
Calcium	5600	250		mg/Kg	10	8/10/2011 9:08:19 AM
Chromium	16	3.0		mg/Kg	10	8/10/2011 9:08:19 AM
Copper	12	3.0		mg/Kg	10	8/10/2011 9:08:19 AM
Iron	19000	500		mg/Kg	500	8/8/2011 8:35:13 AM
Lead	9.1	2.5		mg/Kg	10	8/10/2011 9:08:19 AM
Magnesium	3500	250		mg/Kg	10	8/10/2011 9:08:19 AM
Manganese	410	1.0		mg/Kg	10	8/11/2011 12:06:00 PM
Potassium	2400	500		mg/Kg	10	8/10/2011 9:08:19 AM
Selenium	ND	25		mg/Kg	10	8/10/2011 9:08:19 AM

#### Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-02

**Client Sample ID:** Cell #1 Vadose Zone  
**Collection Date:** 7/28/2011 1:08:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 6010B: SOIL METALS</b>						
Silver	ND	2.5		mg/Kg	10	8/10/2011 9:08:19 AM
Sodium	ND	250		mg/Kg	10	8/10/2011 9:08:19 AM
Uranium	ND	50		mg/Kg	10	8/10/2011 9:08:19 AM
Zinc	55	25		mg/Kg	10	8/26/2011 7:12:26 AM
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						
						Analyst: JDC
Acenaphthene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Acenaphthylene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Anthracene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Benz(a)anthracene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	8/9/2011 5:40:56 PM
2-Chlorophenol	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Chrysene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	8/9/2011 5:40:56 PM
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	8/9/2011 5:40:56 PM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/9/2011 5:40:56 PM
2,4-Dinitrophenol	ND	0.40		mg/Kg	1	8/9/2011 5:40:56 PM
Fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Fluorene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
2-Methylphenol	ND	0.50		mg/Kg	1	8/9/2011 5:40:56 PM
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Naphthalene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
2-Nitrophenol	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
4-Nitrophenol	ND	0.25		mg/Kg	1	8/9/2011 5:40:56 PM
Pentachlorophenol	ND	0.40		mg/Kg	1	8/9/2011 5:40:56 PM
Phenanthrene	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Phenol	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/9/2011 5:40:56 PM
Surr: 2,4,6-Tribromophenol	89.0	29.4-125		%REC	1	8/9/2011 5:40:56 PM
Surr: 2-Fluorobiphenyl	90.6	21-131		%REC	1	8/9/2011 5:40:56 PM
Surr: 2-Fluorophenol	80.5	25.7-110		%REC	1	8/9/2011 5:40:56 PM
Surr: 4-Terphenyl-d14	91.2	36.2-172		%REC	1	8/9/2011 5:40:56 PM

## Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-02

**Client Sample ID:** Cell #1 Vadose Zone  
**Collection Date:** 7/28/2011 1:08:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						
Surr. Nitrobenzene-d5	93.8	23.2-122	%REC		1	8/9/2011 5:40:56 PM
Surr. Phenol-d5	80.7	25.2-114	%REC		1	8/9/2011 5:40:56 PM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Toluene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Ethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Naphthalene	ND	0.10	mg/Kg		1	8/9/2011 2:46:21 AM
1-Methylnaphthalene	ND	0.20	mg/Kg		1	8/9/2011 2:46:21 AM
2-Methylnaphthalene	ND	0.20	mg/Kg		1	8/9/2011 2:46:21 AM
Acetone	ND	0.75	mg/Kg		1	8/9/2011 2:46:21 AM
Bromobenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Bromodichloromethane	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Bromoform	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Bromomethane	ND	0.15	mg/Kg		1	8/9/2011 2:46:21 AM
2-Butanone	ND	0.50	mg/Kg		1	8/9/2011 2:46:21 AM
Carbon disulfide	ND	0.50	mg/Kg		1	8/9/2011 2:46:21 AM
Carbon tetrachloride	ND	0.10	mg/Kg		1	8/9/2011 2:46:21 AM
Chlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Chloroethane	ND	0.10	mg/Kg		1	8/9/2011 2:46:21 AM
Chloroform	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Chloromethane	ND	0.25	mg/Kg		1	8/9/2011 2:46:21 AM
2-Chlorotoluene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
4-Chlorotoluene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
cis-1,2-DCE	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg		1	8/9/2011 2:46:21 AM
Dibromochloromethane	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Dibromomethane	ND	0.10	mg/Kg		1	8/9/2011 2:46:21 AM
1,2-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,3-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,4-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
Dichlorodifluoromethane	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM
1,1-Dichloroethane	ND	0.10	mg/Kg		1	8/9/2011 2:46:21 AM
1,1-Dichloroethene	ND	0.050	mg/Kg		1	8/9/2011 2:46:21 AM

#### Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

CLIENT: Animas Environmental Services  
Lab Order: 1108122  
Project: BMG Landfarm & Pond  
Lab ID: 1108122-02

Client Sample ID: Cell #1 Vadose Zone  
Collection Date: 7/28/2011 1:08:00 PM  
Date Received: 8/1/2011  
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						
1,2-Dichloropropane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,3-Dichloropropane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
2,2-Dichloropropane	ND	0.10		mg/Kg	1	8/9/2011 2:46:21 AM
1,1-Dichloropropene	ND	0.10		mg/Kg	1	8/9/2011 2:46:21 AM
Hexachlorobutadiene	ND	0.10		mg/Kg	1	8/9/2011 2:46:21 AM
2-Hexanone	ND	0.50		mg/Kg	1	8/9/2011 2:46:21 AM
Isopropylbenzene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
4-Isopropyltoluene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	8/9/2011 2:46:21 AM
Methylene chloride	ND	0.15		mg/Kg	1	8/9/2011 2:46:21 AM
n-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
n-Propylbenzene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
sec-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
Styrene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
tert-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
trans-1,2-DCE	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	8/9/2011 2:46:21 AM
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
Trichlorofluoromethane	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	8/9/2011 2:46:21 AM
Vinyl chloride	ND	0.050		mg/Kg	1	8/9/2011 2:46:21 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/9/2011 2:46:21 AM
Surr: 1,2-Dichloroethane-d4	86.2	70-130		%REC	1	8/9/2011 2:46:21 AM
Surr: 4-Bromofluorobenzene	90.1	70-130		%REC	1	8/9/2011 2:46:21 AM
Surr: Dibromofluoromethane	87.4	63.1-128		%REC	1	8/9/2011 2:46:21 AM
Surr: Toluene-d8	92.8	70-130		%REC	1	8/9/2011 2:46:21 AM

**SM4500-H+B: PH** Analyst: KS  
pH 8.32 0.100 pH Units 1 8/4/2011 1:52:00 PM

## Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11

Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-03

**Client Sample ID:** Cell #2 Vadose Zone

**Collection Date:** 7/28/2011 12:38:00 PM

**Date Received:** 8/1/2011

**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8082: PCB'S</b>						
Aroclor 1016	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Aroclor 1221	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Aroclor 1232	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Aroclor 1242	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Aroclor 1248	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Aroclor 1254	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Aroclor 1260	ND	0.020		mg/Kg	1	8/9/2011 4:54:06 PM
Surr: Decachlorobiphenyl	52.0	20.2-86.8		%REC	1	8/9/2011 4:54:06 PM
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	21	10		mg/Kg	1	8/5/2011 2:06:33 AM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	8/5/2011 2:06:33 AM
Surr: DNOP	87.7	73.4-123		%REC	1	8/5/2011 2:06:33 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2011 1:40:04 PM
Surr: BFB	95.5	75.2-136		%REC	1	8/3/2011 1:40:04 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Fluoride	ND	1.5		mg/Kg	5	8/8/2011 6:41:51 PM
Chloride	ND	7.5		mg/Kg	5	8/8/2011 6:41:51 PM
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	8/8/2011 6:41:51 PM
Sulfate	9.9	7.5		mg/Kg	5	8/8/2011 6:41:51 PM
<b>EPA METHOD 7471: MERCURY</b>						
Mercury	ND	0.033		mg/Kg	1	8/9/2011 11:19:13 AM
<b>EPA METHOD 6010B: SOIL METALS</b>						
Arsenic	ND	13		mg/Kg	5	8/8/2011 8:39:53 AM
Barium	110	0.50		mg/Kg	5	8/8/2011 8:39:53 AM
Cadmium	ND	0.50		mg/Kg	5	8/8/2011 8:39:53 AM
Calcium	8900	250		mg/Kg	10	8/10/2011 9:10:24 AM
Chromium	7.6	1.5		mg/Kg	5	8/8/2011 8:39:53 AM
Copper	6.4	1.5		mg/Kg	5	8/8/2011 8:39:53 AM
Iron	12000	500		mg/Kg	500	8/8/2011 8:41:57 AM
Lead	5.4	1.3		mg/Kg	5	8/8/2011 8:39:53 AM
Magnesium	1800	250		mg/Kg	10	8/10/2011 9:10:24 AM
Manganese	280	50		mg/Kg	500	8/8/2011 8:41:57 AM
Potassium	820	500		mg/Kg	10	8/10/2011 9:10:24 AM
Selenium	ND	13		mg/Kg	5	8/8/2011 8:39:53 AM

**Qualifiers:**

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11

Analytical Report

CLIENT: Animas Environmental Services  
 Lab Order: 1108122  
 Project: BMG Landfarm & Pond  
 Lab ID: 1108122-03

Client Sample ID: Cell #2 Vadose Zone  
 Collection Date: 7/28/2011 12:38:00 PM  
 Date Received: 8/1/2011  
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 6010B: SOIL METALS</b>						
Silver	ND	1.3	mg/Kg	5	8/8/2011 8:39:53 AM	Analyst: ELS
Sodium	ND	250	mg/Kg	10	8/10/2011 9:10:24 AM	
Uranium	ND	25	mg/Kg	5	8/8/2011 8:39:53 AM	
Zinc	28	13	mg/Kg	5	8/8/2011 8:39:53 AM	
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						
Acenaphthene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	Analyst: JDC
Acenaphthylene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Anthracene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Benz(a)anthracene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Benzo(a)pyrene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Benzo(g,h,i)perylene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	8/9/2011 7:10:19 PM	
2-Chlorophenol	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Chrysene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	8/9/2011 7:10:19 PM	
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	8/9/2011 7:10:19 PM	
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	8/9/2011 7:10:19 PM	
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	8/9/2011 7:10:19 PM	
Fluoranthene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Fluorene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
2-Methylnaphthalene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
2-Methylphenol	ND	0.50	mg/Kg	1	8/9/2011 7:10:19 PM	
3+4-Methylphenol	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Naphthalene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
2-Nitrophenol	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
4-Nitrophenol	ND	0.25	mg/Kg	1	8/9/2011 7:10:19 PM	
Pentachlorophenol	ND	0.40	mg/Kg	1	8/9/2011 7:10:19 PM	
Phenanthrene	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Phenol	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	8/9/2011 7:10:19 PM	
Surr: 2,4,6-Tribromophenol	94.0	29.4-125	%REC	1	8/9/2011 7:10:19 PM	
Surr: 2-Fluorobiphenyl	100	21-131	%REC	1	8/9/2011 7:10:19 PM	
Surr: 2-Fluorophenol	89.8	25.7-110	%REC	1	8/9/2011 7:10:19 PM	
Surr: 4-Terphenyl-d14	93.3	36.2-172	%REC	1	8/9/2011 7:10:19 PM	

Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-03

**Client Sample ID:** Cell #2 Vadose Zone  
**Collection Date:** 7/28/2011 12:38:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						
Surr: Nitrobenzene-d5	101	23.2-122	%REC		1	8/9/2011 7:10:19 PM
Surr: Phenol-d5	89.4	25.2-114	%REC		1	8/9/2011 7:10:19 PM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Toluene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Ethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Naphthalene	ND	0.10	mg/Kg		1	8/9/2011 3:14:29 AM
1-Methylnaphthalene	ND	0.20	mg/Kg		1	8/9/2011 3:14:29 AM
2-Methylnaphthalene	ND	0.20	mg/Kg		1	8/9/2011 3:14:29 AM
Acetone	ND	0.75	mg/Kg		1	8/9/2011 3:14:29 AM
Bromobenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Bromodichloromethane	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Bromoform	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Bromomethane	ND	0.15	mg/Kg		1	8/9/2011 3:14:29 AM
2-Butanone	ND	0.50	mg/Kg		1	8/9/2011 3:14:29 AM
Carbon disulfide	ND	0.50	mg/Kg		1	8/9/2011 3:14:29 AM
Carbon tetrachloride	ND	0.10	mg/Kg		1	8/9/2011 3:14:29 AM
Chlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Chloroethane	ND	0.10	mg/Kg		1	8/9/2011 3:14:29 AM
Chloroform	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Chloromethane	ND	0.25	mg/Kg		1	8/9/2011 3:14:29 AM
2-Chlorotoluene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
4-Chlorotoluene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
cis-1,2-DCE	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg		1	8/9/2011 3:14:29 AM
Dibromochloromethane	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Dibromomethane	ND	0.10	mg/Kg		1	8/9/2011 3:14:29 AM
1,2-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,3-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,4-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
Dichlorodifluoromethane	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM
1,1-Dichloroethane	ND	0.10	mg/Kg		1	8/9/2011 3:14:29 AM
1,1-Dichloroethene	ND	0.050	mg/Kg		1	8/9/2011 3:14:29 AM

#### Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

CLIENT: Animas Environmental Services  
Lab Order: 1108122  
Project: BMG Landfarm & Pond  
Lab ID: 1108122-03

Client Sample ID: Cell #2 Vadose Zone  
Collection Date: 7/28/2011 12:38:00 PM  
Date Received: 8/1/2011  
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Analyst: MMS
<b>EPA METHOD 8260B: VOLATILES</b>							
1,2-Dichloropropane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	8/9/2011 3:14:29 AM	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	8/9/2011 3:14:29 AM	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	8/9/2011 3:14:29 AM	
2-Hexanone	ND	0.50		mg/Kg	1	8/9/2011 3:14:29 AM	
Isopropylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	8/9/2011 3:14:29 AM	
Methylene chloride	ND	0.15		mg/Kg	1	8/9/2011 3:14:29 AM	
n-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
n-Propylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
sec-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
Styrene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
tert-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
trans-1,2-DCE	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	8/9/2011 3:14:29 AM	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	8/9/2011 3:14:29 AM	
Vinyl chloride	ND	0.050		mg/Kg	1	8/9/2011 3:14:29 AM	
Xylenes, Total	ND	0.10		mg/Kg	1	8/9/2011 3:14:29 AM	
Surr: 1,2-Dichloroethane-d4	85.6	70-130		%REC	1	8/9/2011 3:14:29 AM	
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	1	8/9/2011 3:14:29 AM	
Surr: Dibromofluoromethane	87.8	63.1-128		%REC	1	8/9/2011 3:14:29 AM	
Surr: Toluene-d8	92.4	70-130		%REC	1	8/9/2011 3:14:29 AM	
<b>SM4500-H+B: PH</b>							
pH	8.63	0.100		pH Units	1	8/4/2011 1:52:00 PM	Analyst: KS

## Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b> Cell #3 Vadose Zone			
<b>Lab Order:</b>	1108122	<b>Collection Date:</b> 7/28/2011 12:12:00 PM			
<b>Project:</b>	BMG Landfarm & Pond	<b>Date Received:</b> 8/1/2011			
<b>Lab ID:</b>	1108122-04	<b>Matrix:</b> SOIL			

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8082: PCB'S</b>						
Aroclor 1016	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Aroclor 1221	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Aroclor 1232	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Aroclor 1242	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Aroclor 1248	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Aroclor 1254	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Aroclor 1260	ND	0.020		mg/Kg	1	8/9/2011 6:24:32 PM
Surr: Decachlorobiphenyl	70.0	20.2-86.8		%REC	1	8/9/2011 6:24:32 PM
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/5/2011 2:40:38 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/5/2011 2:40:38 AM
Surr: DNOP	80.1	73.4-123		%REC	1	8/5/2011 2:40:38 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2011 2:09:00 PM
Surr: BFB	95.8	75.2-136		%REC	1	8/3/2011 2:09:00 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Fluoride	3.1	0.30		mg/Kg	1	8/8/2011 7:16:41 PM
Chloride	6.3	1.5		mg/Kg	1	8/8/2011 7:16:41 PM
Nitrogen, Nitrate (As N)	0.39	0.30		mg/Kg	1	8/8/2011 7:16:41 PM
Sulfate	350	30		mg/Kg	20	8/8/2011 7:34:05 PM
<b>EPA METHOD 7471: MERCURY</b>						
Mercury	ND	0.033		mg/Kg	1	8/9/2011 11:21:01 AM
<b>EPA METHOD 6010B: SOIL METALS</b>						
Arsenic	ND	13		mg/Kg	5	8/8/2011 8:44:17 AM
Barium	97	0.50		mg/Kg	5	8/8/2011 8:44:17 AM
Cadmium	ND	0.50		mg/Kg	5	8/8/2011 8:44:17 AM
Calcium	8000	250		mg/Kg	10	8/10/2011 9:12:27 AM
Chromium	15	1.5		mg/Kg	5	8/8/2011 8:44:17 AM
Copper	11	1.5		mg/Kg	5	8/8/2011 8:44:17 AM
Iron	19000	500		mg/Kg	500	8/8/2011 8:57:26 AM
Lead	6.4	1.3		mg/Kg	5	8/8/2011 8:44:17 AM
Magnesium	3100	250		mg/Kg	10	8/10/2011 9:12:27 AM
Manganese	340	50		mg/Kg	500	8/8/2011 8:57:26 AM
Potassium	2100	500		mg/Kg	10	8/10/2011 9:12:27 AM
Selenium	ND	13		mg/Kg	5	8/8/2011 8:44:17 AM

#### Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-04

**Client Sample ID:** Cell #3 Vadose Zone  
**Collection Date:** 7/28/2011 12:12:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 6010B: SOIL METALS</b>						
Silver	ND	1.3		mg/Kg	5	8/8/2011 8:44:17 AM
Sodium	ND	250		mg/Kg	10	8/10/2011 9:12:27 AM
Uranium	ND	25		mg/Kg	5	8/8/2011 8:44:17 AM
Zinc	48	13		mg/Kg	5	8/8/2011 8:44:17 AM
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						
						Analyst: JDC
Acenaphthene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Acenaphthylene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Anthracene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Benz(a)anthracene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	8/9/2011 7:40:00 PM
2-Chlorophenol	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Chrysene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	8/9/2011 7:40:00 PM
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	8/9/2011 7:40:00 PM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/9/2011 7:40:00 PM
2,4-Dinitrophenol	ND	0.40		mg/Kg	1	8/9/2011 7:40:00 PM
Fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Fluorene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
2-Methylphenol	ND	0.50		mg/Kg	1	8/9/2011 7:40:00 PM
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Naphthalene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
2-Nitrophenol	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
4-Nitrophenol	ND	0.25		mg/Kg	1	8/9/2011 7:40:00 PM
Pentachlorophenol	ND	0.40		mg/Kg	1	8/9/2011 7:40:00 PM
Phenanthrene	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Phenol	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/9/2011 7:40:00 PM
Surr: 2,4,6-Tribromophenol	37.6	29.4-125		%REC	1	8/9/2011 7:40:00 PM
Surr: 2-Fluorobiphenyl	37.9	21-131		%REC	1	8/9/2011 7:40:00 PM
Surr: 2-Fluorophenol	35.1	25.7-110		%REC	1	8/9/2011 7:40:00 PM
Surr: 4-Terphenyl-d14	39.6	36.2-172		%REC	1	8/9/2011 7:40:00 PM

## Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services      **Client Sample ID:** Cell #3 Vadose Zone  
**Lab Order:** 1108122      **Collection Date:** 7/28/2011 12:12:00 PM  
**Project:** BMG Landfarm & Pond      **Date Received:** 8/1/2011  
**Lab ID:** 1108122-04      **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						
Surr: Nitrobenzene-d5	37.0	23.2-122	%REC	1	8/9/2011 7:40:00 PM	
Surr: Phenol-d5	31.6	25.2-114	%REC	1	8/9/2011 7:40:00 PM	
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Toluene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Ethylbenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Naphthalene	ND	0.10	mg/Kg	1	8/9/2011 3:42:35 AM	
1-Methylnaphthalene	ND	0.20	mg/Kg	1	8/9/2011 3:42:35 AM	
2-Methylnaphthalene	ND	0.20	mg/Kg	1	8/9/2011 3:42:35 AM	
Acetone	ND	0.75	mg/Kg	1	8/9/2011 3:42:35 AM	
Bromobenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Bromodichloromethane	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Bromoform	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Bromomethane	ND	0.15	mg/Kg	1	8/9/2011 3:42:35 AM	
2-Butanone	ND	0.50	mg/Kg	1	8/9/2011 3:42:35 AM	
Carbon disulfide	ND	0.50	mg/Kg	1	8/9/2011 3:42:35 AM	
Carbon tetrachloride	ND	0.10	mg/Kg	1	8/9/2011 3:42:35 AM	
Chlorobenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Chloroethane	ND	0.10	mg/Kg	1	8/9/2011 3:42:35 AM	
Chloroform	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Chloromethane	ND	0.25	mg/Kg	1	8/9/2011 3:42:35 AM	
2-Chlorotoluene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
4-Chlorotoluene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
cis-1,2-DCE	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	8/9/2011 3:42:35 AM	
Dibromochloromethane	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Dibromomethane	ND	0.10	mg/Kg	1	8/9/2011 3:42:35 AM	
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	
1,1-Dichloroethane	ND	0.10	mg/Kg	1	8/9/2011 3:42:35 AM	
1,1-Dichloroethene	ND	0.050	mg/Kg	1	8/9/2011 3:42:35 AM	

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-04

**Client Sample ID:** Cell #3 Vadose Zone  
**Collection Date:** 7/28/2011 12:12:00 PM  
**Date Received:** 8/1/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Analyst: MMS
<b>EPA METHOD 8260B: VOLATILES</b>							
1,2-Dichloropropane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	8/9/2011 3:42:35 AM	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	8/9/2011 3:42:35 AM	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	8/9/2011 3:42:35 AM	
2-Hexanone	ND	0.50		mg/Kg	1	8/9/2011 3:42:35 AM	
Isopropylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	8/9/2011 3:42:35 AM	
Methylene chloride	ND	0.15		mg/Kg	1	8/9/2011 3:42:35 AM	
n-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
n-Propylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
sec-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
Styrene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
tert-Butylbenzene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
trans-1,2-DCE	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	8/9/2011 3:42:35 AM	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	8/9/2011 3:42:35 AM	
Vinyl chloride	ND	0.050		mg/Kg	1	8/9/2011 3:42:35 AM	
Xylenes, Total	ND	0.10		mg/Kg	1	8/9/2011 3:42:35 AM	
Surr: 1,2-Dichloroethane-d4	86.7	70-130		%REC	1	8/9/2011 3:42:35 AM	
Surr: 4-Bromofluorobenzene	91.5	70-130		%REC	1	8/9/2011 3:42:35 AM	
Surr: Dibromofluoromethane	85.8	63.1-128		%REC	1	8/9/2011 3:42:35 AM	
Surr: Toluene-d8	89.7	70-130		%REC	1	8/9/2011 3:42:35 AM	

**SM4500-H+B: PH** Analyst: KS  
pH 8.04 0.100 pH Units 1 8/4/2011 1:52:00 PM

## Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b>	Cell #4 Vadose Zone
<b>Lab Order:</b>	1108122	<b>Collection Date:</b>	7/28/2011 11:35:00 AM
<b>Project:</b>	BMG Landfarm & Pond	<b>Date Received:</b>	8/1/2011
<b>Lab ID:</b>	1108122-05	<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8082: PCB'S</b>						
Aroclor 1016	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Aroclor 1221	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Aroclor 1232	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Aroclor 1242	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Aroclor 1248	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Aroclor 1254	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Aroclor 1260	ND	0.020		mg/Kg	1	8/9/2011 7:09:55 PM
Surr: Decachlorobiphenyl	62.8	20.2-86.8		%REC	1	8/9/2011 7:09:55 PM
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/5/2011 3:14:44 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/5/2011 3:14:44 AM
Surr: DNOP	80.0	73.4-123		%REC	1	8/5/2011 3:14:44 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2011 2:37:56 PM
Surr: BFB	95.8	75.2-136		%REC	1	8/3/2011 2:37:56 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Fluoride	5.3	1.5		mg/Kg	5	8/8/2011 8:26:19 PM
Chloride	ND	7.5		mg/Kg	5	8/8/2011 8:26:19 PM
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	8/8/2011 8:26:19 PM
Sulfate	10	7.5		mg/Kg	5	8/8/2011 8:26:19 PM
<b>EPA METHOD 7471: MERCURY</b>						
Mercury	ND	0.033		mg/Kg	1	8/9/2011 11:22:49 AM
<b>EPA METHOD 6010B: SOIL METALS</b>						
Arsenic	ND	13		mg/Kg	5	8/8/2011 8:59:49 AM
Barium	92	0.50		mg/Kg	5	8/8/2011 8:59:49 AM
Cadmium	ND	0.50		mg/Kg	5	8/8/2011 8:59:49 AM
Calcium	7000	250		mg/Kg	10	8/10/2011 9:14:33 AM
Chromium	15	1.5		mg/Kg	5	8/8/2011 8:59:49 AM
Copper	12	1.5		mg/Kg	5	8/8/2011 8:59:49 AM
Iron	18000	500		mg/Kg	500	8/8/2011 9:01:55 AM
Lead	6.0	1.3		mg/Kg	5	8/8/2011 8:59:49 AM
Magnesium	2300	250		mg/Kg	10	8/10/2011 9:14:33 AM
Manganese	240	0.50		mg/Kg	5	8/8/2011 8:59:49 AM
Potassium	1500	500		mg/Kg	10	8/10/2011 9:14:33 AM
Selenium	ND	13		mg/Kg	5	8/8/2011 8:59:49 AM

#### Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b>	Cell #4 Vadose Zone
<b>Lab Order:</b>	1108122	<b>Collection Date:</b>	7/28/2011 11:35:00 AM
<b>Project:</b>	BMG Landfarm & Pond	<b>Date Received:</b>	8/1/2011
<b>Lab ID:</b>	1108122-05	<b>Matrix:</b>	SOIL

<b>Analyses</b>	<b>Result</b>	<b>PQL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Analyst:</b>
<b>EPA METHOD 6010B: SOIL METALS</b>							
Silver	ND	1.3		mg/Kg	5	8/8/2011 8:59:49 AM	
Sodium	ND	250		mg/Kg	10	8/10/2011 9:14:33 AM	
Uranium	ND	25		mg/Kg	5	8/8/2011 8:59:49 AM	
Zinc	41	13		mg/Kg	5	8/8/2011 8:59:49 AM	
<b>EPA METHOD 8270C: SEMIVOLATILES</b>							
Acenaphthene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Acenaphthylene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Anthracene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Benz(a)anthracene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	8/9/2011 8:09:41 PM	
2-Chlorophenol	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Chrysene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	8/9/2011 8:09:41 PM	
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	8/9/2011 8:09:41 PM	
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/9/2011 8:09:41 PM	
2,4-Dinitrophenol	ND	0.40		mg/Kg	1	8/9/2011 8:09:41 PM	
Fluoranthene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Fluorene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
2-Methylphenol	ND	0.50		mg/Kg	1	8/9/2011 8:09:41 PM	
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Naphthalene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
2-Nitrophenol	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
4-Nitrophenol	ND	0.25		mg/Kg	1	8/9/2011 8:09:41 PM	
Pentachlorophenol	ND	0.40		mg/Kg	1	8/9/2011 8:09:41 PM	
Phenanthrene	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Phenol	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/9/2011 8:09:41 PM	
Surr: 2,4,6-Tribromophenol	63.1	29.4-125		%REC	1	8/9/2011 8:09:41 PM	
Surr: 2-Fluorobiphenyl	59.8	21-131		%REC	1	8/9/2011 8:09:41 PM	
Surr: 2-Fluorophenol	50.1	25.7-110		%REC	1	8/9/2011 8:09:41 PM	
Surr: 4-Terphenyl-d14	67.9	36.2-172		%REC	1	8/9/2011 8:09:41 PM	

#### Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b>	Cell #4 Vadose Zone
<b>Lab Order:</b>	1108122	<b>Collection Date:</b>	7/28/2011 11:35:00 AM
<b>Project:</b>	BMG Landfarm & Pond	<b>Date Received:</b>	8/1/2011
<b>Lab ID:</b>	1108122-05	<b>Matrix:</b>	SOIL

<b>Analyses</b>	<b>Result</b>	<b>PQL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>EPA METHOD 8270C: SEMIVOLATILES</b>						<b>Analyst: JDC</b>
Surr: Nitrobenzene-d5	53.5	23.2-122	%REC		1	8/9/2011 8:09:41 PM
Surr: Phenol-d5	50.8	25.2-114	%REC		1	8/9/2011 8:09:41 PM
<b>EPA METHOD 8260B: VOLATILES</b>						<b>Analyst: MMS</b>
Benzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Toluene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Ethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Naphthalene	ND	0.10	mg/Kg		1	8/9/2011 4:10:44 AM
1-Methylnaphthalene	ND	0.20	mg/Kg		1	8/9/2011 4:10:44 AM
2-Methylnaphthalene	ND	0.20	mg/Kg		1	8/9/2011 4:10:44 AM
Acetone	ND	0.75	mg/Kg		1	8/9/2011 4:10:44 AM
Bromobenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Bromodichloromethane	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Bromoform	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Bromomethane	ND	0.15	mg/Kg		1	8/9/2011 4:10:44 AM
2-Butanone	ND	0.50	mg/Kg		1	8/9/2011 4:10:44 AM
Carbon disulfide	ND	0.50	mg/Kg		1	8/9/2011 4:10:44 AM
Carbon tetrachloride	ND	0.10	mg/Kg		1	8/9/2011 4:10:44 AM
Chlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Chloroethane	ND	0.10	mg/Kg		1	8/9/2011 4:10:44 AM
Chloroform	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Chloromethane	ND	0.25	mg/Kg		1	8/9/2011 4:10:44 AM
2-Chlorotoluene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
4-Chlorotoluene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
cis-1,2-DCE	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg		1	8/9/2011 4:10:44 AM
Dibromochloromethane	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Dibromomethane	ND	0.10	mg/Kg		1	8/9/2011 4:10:44 AM
1,2-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,3-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,4-Dichlorobenzene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
Dichlorodifluoromethane	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM
1,1-Dichloroethane	ND	0.10	mg/Kg		1	8/9/2011 4:10:44 AM
1,1-Dichloroethene	ND	0.050	mg/Kg		1	8/9/2011 4:10:44 AM

## Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

CLIENT: Animas Environmental Services  
Lab Order: 1108122  
Project: BMG Landfarm & Pond  
Lab ID: 1108122-05

Client Sample ID: Cell #4 Vadose Zone  
Collection Date: 7/28/2011 11:35:00 AM  
Date Received: 8/1/2011  
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						
1,2-Dichloropropane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	Analyst: MMS
1,3-Dichloropropane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
2,2-Dichloropropane	ND	0.10	mg/Kg	1	8/9/2011 4:10:44 AM	
1,1-Dichloropropene	ND	0.10	mg/Kg	1	8/9/2011 4:10:44 AM	
Hexachlorobutadiene	ND	0.10	mg/Kg	1	8/9/2011 4:10:44 AM	
2-Hexanone	ND	0.50	mg/Kg	1	8/9/2011 4:10:44 AM	
Isopropylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
4-Isopropyltoluene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	8/9/2011 4:10:44 AM	
Methylene chloride	ND	0.15	mg/Kg	1	8/9/2011 4:10:44 AM	
n-Butylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
n-Propylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
sec-Butylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
Styrene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
tert-Butylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
trans-1,2-DCE	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	8/9/2011 4:10:44 AM	
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
Trichlorofluoromethane	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
1,2,3-Trichloropropene	ND	0.10	mg/Kg	1	8/9/2011 4:10:44 AM	
Vinyl chloride	ND	0.050	mg/Kg	1	8/9/2011 4:10:44 AM	
Xylenes, Total	ND	0.10	mg/Kg	1	8/9/2011 4:10:44 AM	
Surr: 1,2-Dichloroethane-d4	82.8	70-130	%REC	1	8/9/2011 4:10:44 AM	
Surr: 4-Bromofluorobenzene	89.1	70-130	%REC	1	8/9/2011 4:10:44 AM	
Surr: Dibromofluoromethane	83.5	63.1-128	%REC	1	8/9/2011 4:10:44 AM	
Surr: Toluene-d8	91.8	70-130	%REC	1	8/9/2011 4:10:44 AM	

SM4500-H+B: PH					Analyst: KS
pH	8.39	0.100	pH Units	1	8/4/2011 1:52:00 PM

## Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

**CLIENT:** Animas Environmental Services  
**Lab Order:** 1108122  
**Project:** BMG Landfarm & Pond  
**Lab ID:** 1108122-06

**Client Sample ID:** Methanol Blank  
**Collection Date:**  
**Date Received:** 8/1/2011  
**Matrix:** MEOH

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2011 3:06:52 PM
Surr: BFB	96.1	75.2-136		%REC	1	8/3/2011 3:06:52 PM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Toluene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Naphthalene	ND	0.10		mg/Kg	1	8/9/2011 4:38:51 AM
1-Methylnaphthalene	ND	0.20		mg/Kg	1	8/9/2011 4:38:51 AM
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/9/2011 4:38:51 AM
Acetone	ND	0.75		mg/Kg	1	8/9/2011 4:38:51 AM
Bromobenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Bromodichloromethane	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Bromoform	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Bromomethane	ND	0.15		mg/Kg	1	8/9/2011 4:38:51 AM
2-Butanone	ND	0.50		mg/Kg	1	8/9/2011 4:38:51 AM
Carbon disulfide	ND	0.50		mg/Kg	1	8/9/2011 4:38:51 AM
Carbon tetrachloride	ND	0.10		mg/Kg	1	8/9/2011 4:38:51 AM
Chlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Chloroethane	ND	0.10		mg/Kg	1	8/9/2011 4:38:51 AM
Chloroform	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Chloromethane	ND	0.25		mg/Kg	1	8/9/2011 4:38:51 AM
2-Chlorotoluene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
4-Chlorotoluene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
cis-1,2-DCE	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	8/9/2011 4:38:51 AM
Dibromochloromethane	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Dibromomethane	ND	0.10		mg/Kg	1	8/9/2011 4:38:51 AM
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM
1,1-Dichloroethane	ND	0.10		mg/Kg	1	8/9/2011 4:38:51 AM
1,1-Dichloroethene	ND	0.050		mg/Kg	1	8/9/2011 4:38:51 AM

#### Qualifiers:

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

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Sep-11  
Analytical Report

CLIENT: Animas Environmental Services  
Lab Order: 1108122  
Project: BMG Landfarm & Pond  
Lab ID: 1108122-06

Client Sample ID: Methanol Blank  
Collection Date:  
Date Received: 8/1/2011  
Matrix: MEOH

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						
1,2-Dichloropropane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	Analyst: MMS
1,3-Dichloropropane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
2,2-Dichloropropane	ND	0.10	mg/Kg	1	8/9/2011 4:38:51 AM	
1,1-Dichloropropene	ND	0.10	mg/Kg	1	8/9/2011 4:38:51 AM	
Hexachlorobutadiene	ND	0.10	mg/Kg	1	8/9/2011 4:38:51 AM	
2-Hexanone	ND	0.50	mg/Kg	1	8/9/2011 4:38:51 AM	
Isopropylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
4-Isopropyltoluene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	8/9/2011 4:38:51 AM	
Methylene chloride	ND	0.15	mg/Kg	1	8/9/2011 4:38:51 AM	
n-Butylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
n-Propylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
sec-Butylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
Styrene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
tert-Butylbenzene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
trans-1,2-DCE	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	8/9/2011 4:38:51 AM	
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
Trichlorofluoromethane	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
1,2,3-Trichloropropene	ND	0.10	mg/Kg	1	8/9/2011 4:38:51 AM	
Vinyl chloride	ND	0.050	mg/Kg	1	8/9/2011 4:38:51 AM	
Xylenes, Total	ND	0.10	mg/Kg	1	8/9/2011 4:38:51 AM	
Surr: 1,2-Dichloroethane-d4	86.5	70-130	%REC	1	8/9/2011 4:38:51 AM	
Surr: 4-Bromofluorobenzene	90.0	70-130	%REC	1	8/9/2011 4:38:51 AM	
Surr: Dibromofluoromethane	84.5	63.1-128	%REC	1	8/9/2011 4:38:51 AM	
Surr: Toluene-d8	93.3	70-130	%REC	1	8/9/2011 4:38:51 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

# Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com  
 504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB      **Batch #:** 110804062  
**Address:** 4901 HAWKINS NE SUITE D      **Project Name:** 1108122  
 ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

## Analytical Results Report

Sample Number	110804062-001	Sampling Date	7/28/2011	Date/Time Received	8/4/2011	1:40 PM
Client Sample ID	1108122-02C / CELL #1 VADOSE ZONE			Sampling Time	1:08 PM	
Matrix	Soil	Sample Location				
Comments						
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method
Conductivity	98.3	mS/M		8/16/2011	CRW	ASTM G57A
Cyanide	ND	mg/Kg	0.3	8/11/2011	CRW	EPA 335.4
%moisture	16.8	Percent		8/11/2011	CRW	%moisture
Sample Number	110804062-002	Sampling Date	7/28/2011	Date/Time Received	8/4/2011	1:40 PM
Client Sample ID	1108122-03C / CELL #2 VADOSE ZONE			Sampling Time	12:38 PM	
Matrix	Soil	Sample Location				
Comments						
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method
Conductivity	83.1	mS/M		8/16/2011	CRW	ASTM G57A
Cyanide	ND	mg/Kg	0.3	8/11/2011	CRW	EPA 335.4
%moisture	21.2	Percent		8/11/2011	CRW	%moisture
Sample Number	110804062-003	Sampling Date	7/28/2011	Date/Time Received	8/4/2011	1:40 PM
Client Sample ID	1108122-04C / CELL #3 VADOSE ZONE			Sampling Time	12:12 PM	
Matrix	Soil	Sample Location				
Comments						
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method
Conductivity	273	mS/M		8/16/2011	CRW	ASTM G57A
Cyanide	ND	mg/Kg	0.3	8/11/2011	CRW	EPA 335.4
%moisture	16.4	Percent		8/11/2011	CRW	%moisture

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Wednesday, August 17, 2011

# Anatek Labs, Inc.

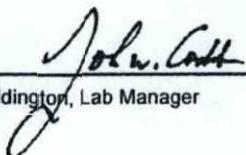
1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com  
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB      **Batch #:** 110804062  
**Address:** 4901 HAWKINS NE SUITE D      **Project Name:** 1108122  
                  ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

## Analytical Results Report

Sample Number	110804062-004	Sampling Date	7/28/2011	Date/Time Received	8/4/2011	1:40 PM
Client Sample ID	1108122-05C / CELL #4 VADOSE ZONE			Sampling Time	11:35 AM	
Matrix	Soil	Sample Location				
Comments						
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method
Conductivity	97.2	mS/M		8/16/2011	CRW	ASTM G57A
Cyanide	ND	mg/Kg	0.3	8/11/2011	CRW	EPA 335.4
%moisture	7.5	Percent		8/11/2011	CRW	%moisture

Authorized Signature



John Coddington, Lab Manager

MCL      EPA's Maximum Contaminant Level  
ND      Not Detected  
PQL      Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Wednesday, August 17, 2011

## ANALYTICAL RESULTS

Project: 1108122  
 Pace Project No.: 3051428

Sample: 1108122-02D Cell #1      Lab ID: 3051428001      Collected: 07/28/11 13:08      Received: 08/04/11 10:00      Matrix: Solid  
 Vadose Zon

PWS: Site ID: Sample Type:

**Results reported on a "dry-weight" basis**

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1m	<b>0.962 ± 0.192 (0.169)</b>	pCi/g	08/30/11 14:19	13982-63-3	
Radium-228	EPA 901.1m	<b>1.39 ± 0.326 (0.256)</b>	pCi/g	08/30/11 14:19	15262-20-1	

Sample: 1108122-03D Cell #2      Lab ID: 3051428002      Collected: 07/28/11 12:38      Received: 08/04/11 10:00      Matrix: Solid  
 Vadose Zon

PWS: Site ID: Sample Type:

**Results reported on a "dry-weight" basis**

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1m	<b>0.728 ± 0.139 (0.160)</b>	pCi/g	08/30/11 15:21	13982-63-3	
Radium-228	EPA 901.1m	<b>1.06 ± 0.243 (0.197)</b>	pCi/g	08/30/11 15:21	15262-20-1	

Sample: 1108122-04D Cell #3      Lab ID: 3051428003      Collected: 07/28/11 12:12      Received: 08/04/11 10:00      Matrix: Solid  
 Vadose Zon

PWS: Site ID: Sample Type:

**Results reported on a "dry-weight" basis**

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1m	<b>1.06 ± 0.200 (0.148)</b>	pCi/g	08/30/11 16:23	13982-63-3	
Radium-228	EPA 901.1m	<b>1.23 ± 0.255 (0.264)</b>	pCi/g	08/30/11 16:23	15262-20-1	

Sample: 1108122-05D Cell #4      Lab ID: 3051428004      Collected: 07/28/11 11:35      Received: 08/04/11 10:00      Matrix: Solid  
 Vadose Zon

PWS: Site ID: Sample Type:

**Results reported on a "dry-weight" basis**

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1m	<b>1.26 ± 0.225 (0.193)</b>	pCi/g	08/31/11 08:13	13982-63-3	
Radium-228	EPA 901.1m	<b>1.33 ± 0.275 (0.203)</b>	pCi/g	08/31/11 08:13	15262-20-1	

Date: 09/01/2011 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 1108122  
Pace Project No.: 3051428

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QC Batch: RADC/9145 Analysis Method: EPA 901.1m  
QC Batch Method: EPA 901.1m Analysis Description: 901.1 Gamma Spec  
Associated Lab Samples: 3051428001, 3051428002, 3051428003, 3051428004

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METHOD BLANK: 328770 Matrix: Solid  
Associated Lab Samples: 3051428001, 3051428002, 3051428003, 3051428004

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-226	0.113 ± 0.103 (0.164)	pCi/g	08/31/11 09:15	
Radium-228	0.0150 ± 0.0230 (0.265)	pCi/g	08/31/11 09:15	

Date: 09/01/2011 02:21 PM

### REPORT OF LABORATORY ANALYSIS

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## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 300.0: Anions</b>											
Sample ID: MB-27943		MBLK					Batch ID:	27943	Analysis Date:	8/8/2011 4:57:21 PM	
Fluoride	ND	mg/Kg	0.30								
Chloride	ND	mg/Kg	1.5								
Nitrogen, Nitrate (As N)	ND	mg/Kg	0.30								
Sulfate	ND	mg/Kg	1.5								
Sample ID: LCS-27943		LCS					Batch ID:	27943	Analysis Date:	8/8/2011 5:14:46 PM	
Fluoride	1.603	mg/Kg	0.30	1.5	0	107	90	110			
Chloride	14.69	mg/Kg	1.5	15	0	97.9	90	110			
Nitrogen, Nitrate (As N)	7.669	mg/Kg	0.30	7.5	0	102	90	110			
Sulfate	30.27	mg/Kg	1.5	30	0	101	90	110			
<b>Method: EPA Method 8015B: Diesel Range Organics</b>											
Sample ID: MB-27881		MBLK					Batch ID:	27881	Analysis Date:	8/4/2011 11:50:00 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-27881		LCS					Batch ID:	27881	Analysis Date:	8/5/2011 12:24:05 AM	
Diesel Range Organics (DRO)	43.72	mg/Kg	10	50	0	87.4	66.7	119			
Sample ID: LCSD-27881		LCSD					Batch ID:	27881	Analysis Date:	8/5/2011 12:58:09 AM	
Diesel Range Organics (DRO)	43.16	mg/Kg	10	50	0	86.3	66.7	119	1.28	18.9	
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: 1108122-02A MSD		MSD					Batch ID:	R46966	Analysis Date:	8/3/2011 9:50:40 PM	
Gasoline Range Organics (GRO)	29.88	mg/Kg	5.0	27.14	0	110	57.7	165	2.65	15.5	
Sample ID: 5ML-RB		MBLK					Batch ID:	R46966	Analysis Date:	8/3/2011 8:51:02 AM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: MB-27886		MBLK					Batch ID:	27886	Analysis Date:	8/5/2011 10:09:14 AM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: 2.5UG GRO LCS		LCS					Batch ID:	R46966	Analysis Date:	8/3/2011 10:46:44 AM	
Gasoline Range Organics (GRO)	28.32	mg/Kg	5.0	25	0	113	88.8	124			
Sample ID: LCS-27886		LCS					Batch ID:	27886	Analysis Date:	8/5/2011 12:03:29 PM	
Gasoline Range Organics (GRO)	30.64	mg/Kg	5.0	25	0	123	86.4	132			
Sample ID: 1108122-02A MS		MS					Batch ID:	R46966	Analysis Date:	8/3/2011 9:21:54 PM	
Gasoline Range Organics (GRO)	30.69	mg/Kg	5.0	27.14	0	113	57.7	165			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: 5ML-RB	<i>MBLK</i>								Batch ID:	R46966	Analysis Date:
Benzene	ND	mg/Kg	0.050								8/3/2011 8:51:02 AM
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: MB-27886	<i>MBLK</i>								Batch ID:	27886	Analysis Date:
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10								8/5/2011 10:09:14 AM
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: 100NG BTEX LCS	<i>LCS</i>								Batch ID:	R46966	Analysis Date:
Benzene	0.9808	mg/Kg	0.050	1	0	98.1	83.3	107			
Toluene	1.009	mg/Kg	0.050	1	0	101	74.3	115			
Ethylbenzene	0.9976	mg/Kg	0.050	1	0	99.8	80.9	122			
Xylenes, Total	3.048	mg/Kg	0.10	3	0	102	85.2	123			
Sample ID: LCS-27886	<i>LCS</i>								Batch ID:	27886	Analysis Date:
Methyl tert-butyl ether (MTBE)	0.7885	mg/Kg	0.10	1	0	78.8	65.5	229			
Benzene	0.9503	mg/Kg	0.050	1	0	95.0	83.3	107			
Toluene	0.9900	mg/Kg	0.050	1	0	99.0	74.3	115			
Ethylbenzene	1.011	mg/Kg	0.050	1	0	101	80.9	122			
Xylenes, Total	3.050	mg/Kg	0.10	3	0	102	85.2	123			

<b>Method: EPA Method 8082: PCB's</b>											
Sample ID: 1108122-02AMSD	<i>MSD</i>								Batch ID:	27919	Analysis Date:
Aroclor 1260	0.08788	mg/Kg	0.020	0.125	0	70.5	45	117	6.87	20	
Sample ID: MB-27919	<i>MBLK</i>								Batch ID:	27919	Analysis Date:
Aroclor 1016	ND	mg/Kg	0.020								
Aroclor 1221	ND	mg/Kg	0.020								
Aroclor 1232	ND	mg/Kg	0.020								
Aroclor 1242	ND	mg/Kg	0.020								
Aroclor 1248	ND	mg/Kg	0.020								
Aroclor 1254	ND	mg/Kg	0.020								
Aroclor 1260	ND	mg/Kg	0.020								
Sample ID: LCS-27919	<i>LCS</i>								Batch ID:	27919	Analysis Date:
Aroclor 1260	0.09690	mg/Kg	0.020	0.125	0	77.5	21.4	118			
Sample ID: 1108122-02AMS	<i>MS</i>								Batch ID:	27919	Analysis Date:
Aroclor 1260	0.09414	mg/Kg	0.020	0.124	0	75.8	45	117			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8260B: VOLATILES</b>											
Sample ID: mb-27886		MBLK					Batch ID:	27886	Analysis Date:	8/8/2011 6:17:38 PM	
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050								
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050								
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050								
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050								
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050								
Naphthalene	ND	mg/Kg	0.10								
1-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylnaphthalene	ND	mg/Kg	0.20								
Acetone	ND	mg/Kg	0.75								
Bromobenzene	ND	mg/Kg	0.050								
Bromodichloromethane	ND	mg/Kg	0.050								
Bromoform	ND	mg/Kg	0.050								
Bromomethane	ND	mg/Kg	0.15								
2-Butanone	ND	mg/Kg	0.50								
Carbon disulfide	ND	mg/Kg	0.50								
Carbon tetrachloride	ND	mg/Kg	0.10								
Chlorobenzene	ND	mg/Kg	0.050								
Chloroethane	ND	mg/Kg	0.10								
Chloroform	ND	mg/Kg	0.050								
Chloromethane	ND	mg/Kg	0.25								
2-Chlorotoluene	ND	mg/Kg	0.050								
4-Chlorotoluene	ND	mg/Kg	0.050								
cis-1,2-DCE	ND	mg/Kg	0.050								
cis-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.10								
Dibromochloromethane	ND	mg/Kg	0.050								
Dibromomethane	ND	mg/Kg	0.10								
1,2-Dichlorobenzene	ND	mg/Kg	0.050								
1,3-Dichlorobenzene	ND	mg/Kg	0.050								
1,4-Dichlorobenzene	ND	mg/Kg	0.050								
Dichlorodifluoromethane	ND	mg/Kg	0.050								
1,1-Dichloroethane	ND	mg/Kg	0.10								
1,1-Dichloroethene	ND	mg/Kg	0.050								
1,2-Dichloropropane	ND	mg/Kg	0.050								
1,3-Dichloropropane	ND	mg/Kg	0.050								
2,2-Dichloropropane	ND	mg/Kg	0.10								
1,1-Dichloropropene	ND	mg/Kg	0.10								
Hexachlorobutadiene	ND	mg/Kg	0.10								
2-Hexanone	ND	mg/Kg	0.50								
Isopropylbenzene	ND	mg/Kg	0.050								
4-Isopropyltoluene	ND	mg/Kg	0.050								

## Qualifiers:

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit

- H Holding times for preparation or analysis exceeded
- NC Non-Chlorinated
- R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8260B: VOLATILES</b>											
Sample ID: mb-27886		MBLK					Batch ID:	27886	Analysis Date:	8/8/2011 6:17:38 PM	
4-Methyl-2-pentanone	ND	mg/Kg	0.50								
Methylene chloride	ND	mg/Kg	0.15								
n-Butylbenzene	ND	mg/Kg	0.050								
n-Propylbenzene	ND	mg/Kg	0.050								
sec-Butylbenzene	ND	mg/Kg	0.050								
Styrene	ND	mg/Kg	0.050								
tert-Butylbenzene	ND	mg/Kg	0.050								
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050								
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050								
Tetrachloroethene (PCE)	ND	mg/Kg	0.050								
trans-1,2-DCE	ND	mg/Kg	0.050								
trans-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10								
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050								
1,1,1-Trichloroethane	ND	mg/Kg	0.050								
1,1,2-Trichloroethane	ND	mg/Kg	0.050								
Trichloroethene (TCE)	ND	mg/Kg	0.050								
Trichlorofluoromethane	ND	mg/Kg	0.050								
1,2,3-Trichloropropane	ND	mg/Kg	0.10								
Vinyl chloride	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: Ics-27886		LCS					Batch ID:	27886	Analysis Date:	8/8/2011 6:46:06 PM	
Benzene	0.8777	mg/Kg	0.050	1	0	87.8	70.7	123			
Toluene	0.9248	mg/Kg	0.050	1	0	92.5	80	120			
Chlorobenzene	0.9290	mg/Kg	0.050	1	0	92.9	70	130			
1,1-Dichloroethene	0.8232	mg/Kg	0.050	1	0	82.3	63.1	148			
Trichloroethene (TCE)	0.8422	mg/Kg	0.050	1	0	84.2	63.2	114			

## Qualifiers:

E Estimated value

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

NC Non-Chlorinated

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8270C: Semivolatiles</b>											
Sample ID: 1108122-02Amsd		MSD				Batch ID:	27900		Analysis Date:	8/9/2011 6:40:26 PM	
Acenaphthene	1.413	mg/Kg	0.20	1.671	0	84.6	34.9	118	1.83	30	
4-Chloro-3-methylphenol	2.434	mg/Kg	0.50	3.332	0	73.1	28.8	126	2.49	30	
2-Chlorophenol	2.309	mg/Kg	0.20	3.332	0	69.3	26.7	115	2.66	30	
4-Nitrophenol	3.278	mg/Kg	0.25	3.332	0	98.4	16	171	22.7	30	
Pentachlorophenol	2.468	mg/Kg	0.40	3.332	0.0668	72.0	26.8	134	3.04	30	
Phenol	2.233	mg/Kg	0.20	3.332	0	67.0	29.6	115	3.52	30	
Sample ID: mb-27900		MLBK				Batch ID:	27900		Analysis Date:	8/9/2011 4:41:43 PM	
Acenaphthene	ND	mg/Kg	0.20								
Acenaphthylene	ND	mg/Kg	0.20								
Anthracene	ND	mg/Kg	0.20								
Benz(a)anthracene	ND	mg/Kg	0.20								
Benzo(a)pyrene	ND	mg/Kg	0.20								
Benzo(b)fluoranthene	ND	mg/Kg	0.20								
Benzo(g,h,i)perylene	ND	mg/Kg	0.20								
Benzo(k)fluoranthene	ND	mg/Kg	0.20								
4-Chloro-3-methylphenol	ND	mg/Kg	0.50								
2-Chlorophenol	ND	mg/Kg	0.20								
Chrysene	ND	mg/Kg	0.20								
Dibenz(a,h)anthracene	ND	mg/Kg	0.20								
2,4-Dichlorophenol	ND	mg/Kg	0.40								
2,4-Dimethylphenol	ND	mg/Kg	0.30								
4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.50								
2,4-Dinitrophenol	ND	mg/Kg	0.40								
Fluoranthene	ND	mg/Kg	0.20								
Fluorene	ND	mg/Kg	0.20								
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.20								
2-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylphenol	ND	mg/Kg	0.50								
3+4-Methylphenol	ND	mg/Kg	0.20								
Naphthalene	ND	mg/Kg	0.20								
2-Nitrophenol	ND	mg/Kg	0.20								
4-Nitrophenol	ND	mg/Kg	0.25								
Pentachlorophenol	ND	mg/Kg	0.40								
Phenanthrene	ND	mg/Kg	0.20								
Phenol	ND	mg/Kg	0.20								
2,4,5-Trichlorophenol	ND	mg/Kg	0.20								
2,4,6-Trichlorophenol	ND	mg/Kg	0.20								
Sample ID: Ics-27900		LCS				Batch ID:	27900		Analysis Date:	8/9/2011 5:11:20 PM	
Acenaphthene	1.356	mg/Kg	0.20	1.67	0	81.2	31.3	107			
4-Chloro-3-methylphenol	2.326	mg/Kg	0.50	3.33	0	69.8	33.1	110			
2-Chlorophenol	2.441	mg/Kg	0.20	3.33	0	73.3	31.6	99.2			
4-Nitrophenol	2.841	mg/Kg	0.25	3.33	0	85.3	18.3	117			
Pentachlorophenol	1.873	mg/Kg	0.40	3.33	0	56.2	16.5	111			
Phenol	2.267	mg/Kg	0.20	3.33	0	68.1	31.6	98.9			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8270C: Semivolatiles

Sample ID: 1108122-02Ams	MS					Batch ID:	27900	Analysis Date:	8/9/2011 6:10:40 PM	
Acenaphthene	1.439	mg/Kg	0.20	1.666	0	86.4	34.9	118		
4-Chloro-3-methylphenol	2.374	mg/Kg	0.50	3.322	0	71.5	28.8	126		
2-Chlorophenol	2.371	mg/Kg	0.20	3.322	0	71.4	26.7	115		
4-Nitrophenol	4.118	mg/Kg	0.25	3.322	0	124	16	171		E
Pentachlorophenol	2.544	mg/Kg	0.40	3.322	0.0668	74.6	26.8	134		
Phenol	2.156	mg/Kg	0.20	3.322	0	64.9	29.6	115		

Method: EPA Method 7471: Mercury

Sample ID: MB-27939	MBLK					Batch ID:	27939	Analysis Date:	8/9/2011 11:08:40 AM	
Mercury	ND	mg/Kg	0.033							
Sample ID: LCS-27939	LCS					Batch ID:	27939	Analysis Date:	8/9/2011 11:10:23 AM	
Mercury	0.1642	mg/Kg	0.033	0.167	0.0012	97.8	80	120		

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 6010B: Soil Metals

Sample ID: MB-27895 MBLK Batch ID: 27895 Analysis Date: 8/5/2011 9:55:28 AM

Arsenic	ND	mg/Kg	2.5
Barium	ND	mg/Kg	0.10
Cadmium	ND	mg/Kg	0.10
Chromium	ND	mg/Kg	0.30
Copper	ND	mg/Kg	0.30
Iron	ND	mg/Kg	1.0
Lead	ND	mg/Kg	0.25
Manganese	ND	mg/Kg	0.10
Selenium	ND	mg/Kg	2.5
Silver	ND	mg/Kg	0.25
Uranium	ND	mg/Kg	5.0
Zinc	ND	mg/Kg	2.5

Sample ID: MB-27929 MBLK Batch ID: 27929 Analysis Date: 8/8/2011 7:53:11 AM

Arsenic	ND	mg/Kg	2.5
Barium	ND	mg/Kg	0.10
Cadmium	ND	mg/Kg	0.10
Calcium	ND	mg/Kg	25
Chromium	ND	mg/Kg	0.30
Copper	ND	mg/Kg	0.30
Iron	ND	mg/Kg	1.0
Lead	ND	mg/Kg	0.25
Magnesium	ND	mg/Kg	25
Manganese	ND	mg/Kg	0.10
Potassium	ND	mg/Kg	50
Selenium	ND	mg/Kg	2.5
Silver	ND	mg/Kg	0.25
Sodium	ND	mg/Kg	25
Uranium	ND	mg/Kg	5.0
Zinc	ND	mg/Kg	2.5

Sample ID: LCS-27895 LCS Batch ID: 27895 Analysis Date: 8/5/2011 9:58:08 AM

Arsenic	28.16	mg/Kg	2.5	25	0	113	80	120
Barium	26.67	mg/Kg	0.10	25	0.0306	107	80	120
Cadmium	26.59	mg/Kg	0.10	25	0	106	80	120
Chromium	26.67	mg/Kg	0.30	25	0	107	80	120
Copper	24.77	mg/Kg	0.30	25	0	99.1	80	120
Iron	26.66	mg/Kg	1.0	25	0	107	80	120
Lead	26.79	mg/Kg	0.25	25	0	107	80	120
Manganese	26.43	mg/Kg	0.10	25	0.0254	106	80	120
Selenium	28.74	mg/Kg	2.5	25	0	115	80	120
Silver	5.190	mg/Kg	0.25	5	0	104	80	120
Uranium	25.66	mg/Kg	5.0	25	0	103	80	120
Zinc	30.31	mg/Kg	2.5	25	0.8961	118	80	120

Sample ID: LCS-27929 LCS Batch ID: 27929 Analysis Date: 8/8/2011 7:55:49 AM

Arsenic	24.99	mg/Kg	2.5	25	0	99.9	80	120
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## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Landfarm & Pond

Work Order: 1108122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 6010B: Soil Metals</b>											
Sample ID: LCS-27929	LCS					Batch ID:	27929	Analysis Date:	8/8/2011 7:55:49 AM		
Barium	25.06	mg/Kg	0.10	25	0	100	80	120			
Cadmium	25.31	mg/Kg	0.10	25	0	101	80	120			
Calcium	2545	mg/Kg	25	2500	0	102	80	120			
Chromium	25.70	mg/Kg	0.30	25	0	103	80	120			
Copper	26.55	mg/Kg	0.30	25	0	106	80	120			
Iron	25.65	mg/Kg	1.0	25	0	103	80	120			
Lead	24.90	mg/Kg	0.25	25	0	99.6	80	120			
Magnesium	2570	mg/Kg	25	2500	0	103	80	120			
Manganese	24.42	mg/Kg	0.10	25	0	97.7	80	120			
Potassium	2485	mg/Kg	50	2500	0	99.4	80	120			
Selenium	24.83	mg/Kg	2.5	25	0	99.3	80	120			
Silver	5.113	mg/Kg	0.25	5	0	102	80	120			
Sodium	2543	mg/Kg	25	2500	0	102	80	120			
Uranium	26.10	mg/Kg	5.0	25	0	104	80	120			
Zinc	25.49	mg/Kg	2.5	25	0	102	80	120			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL

Date Received:

8/1/2011

Work Order Number 1108122

Received by: LNM

Checklist completed by:

Signature

Date 08/01/11

Initials

Sample ID labels checked by:

Matrix:

Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Not Shipped <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Water - VOA vials have zero headspace?	No VOA vials submitted <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Number of preserved bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	<2 >12 unless noted below.
Container/Temp Blank temperature?	2.9°	<6° C Acceptable If given sufficient time to cool.		

COMMENTS:

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Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

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Corrective Action \_\_\_\_\_

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# Chain-of-Custody Record

Client: **Animas Environmental Services, LLC**  
 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 Landfarm & Pond**  
 Project #: **AES 040605**

Project Manager: **D. Watson**

Sampler: **N. Willis**  
 On Ice:  Yes       No

Sample Temperature: **2.9**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

	BTEX + MTBE + TPH (Gas only) TPH Method 8015B (Gas/Diesel)	TPH (Method 448.1) Cyanide	EDB (Method 504.1)	8310 (PNA or PAH) Phenols GOT/TOBT/THT/MTBE PCBs	8260B (VOA)/VOCs including Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8270 (Semi-VOA)	300.0 Chlorides	pH, Spec. Gravity	Reductivity Redox	PCBs	pH, Spec. Conduct (Cations/Anions Air Bubbles (Y or N) see below)
	X	X	X	X	X	X	X	X	X	X	X	X	
7-28-11 1401 soil	1-MeOH/tet 3-toglass	MeOH	1/28/12	-1	X	X	X	X	X	X	X	X	
7-28-11 1308	Treatment Zone Composite	1-MeOH/tet	1/28/12	-2	X	X	X	X	X	X	X	X	
7-28-11 1238	Cell #1 Vadose Zone	—	1/28/12	-3	X	X	X	X	X	X	X	X	
7-28-11 1212	Cell #2 Vadose Zone	—	1/28/12	-4	X	X	X	X	X	X	X	X	
7-28-11 1135	Cell #3 Vadose Zone	—	1/28/12	-5	X	X	X	X	X	X	X	X	
	Cell #4 Vadose Zone	—	1/28/12	-6									
	MeOH trap blank	1-MeOH/tet	MeOH										

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7-28-11	1401	soil	Treatment Zone Composite	1-MeOH/tet	MeOH	1/28/12
7-28-11	1308		Cell #1 Vadose Zone	3-toglass	—	
7-28-11	1238		Cell #2 Vadose Zone	—	—	
7-28-11	1212		Cell #3 Vadose Zone	—	—	
7-28-11	1135		Cell #4 Vadose Zone	—	—	

MeOH trap blank      1-MeOH/tet      MeOH

Date:	Time:	Relinquished by:	Received by:	Date	Time
8-1-11	0815	Natty Winn	Debrah Watson	8-1-11	0815
Date:	Time:	Relinquished by:	Received by:	Date	Time
8-1-11	1411	Debrah Watson	Christie Woelker	8-1-11	1411

Remarks:  
 Metals (6020/6010/7471): As, Ba, Cd, Cr, Pb, total Hg, Se, Ag, U, Cu, Fe, Mn, Zn, Mg, Na, K.  
 cations/anions: F, NO<sub>3</sub>, as N, SO<sub>4</sub>, Ca  
 PATTs: benzo-a pyrene, phenols

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 noted on the analytical report.

Please call w/ Questions.

8/1/11 1710 (christie, 120010..)

(8/1/11 8/2/11 800)