

**3R – 448**

**2008 GWMR**

**10 / 30 / 2008**

# Animas Environmental Services, LLC

624 E. Comanche . Farmington, NM 87401 . TEL 505-564-2281 . FAX 505-324-2022 . www.animasenvironmental.com

October 30, 2008

Wayne Price  
Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

Dixon Sandoval  
Jicarilla Apache Nation  
Environmental Protection Office  
P.O. Box 507  
Dulce, NM 87528

**Re: Periodic Progress Report for the Benson-Montin-Greer Highway 537 Truck  
Receiving Station Llaves Pipeline 2007 Oil Spill, Rio Arriba County, New  
Mexico**

RECEIVED  
2008 NOV 3 PM 1 55

Dear Sirs:

Animas Environmental Services, LLC (AES), on behalf of Benson-Montin-Greer Drilling Corporation (BMG), conducted groundwater sampling of monitoring wells at the BMG Highway 537 Truck Receiving Station 2007 Spill Location on September 25, 2008. Work was conducted in accordance with a Sampling and Analysis Plan (SAP) submitted to the Jicarilla Apache Nation Environmental Protection Office (JEPO) and the U.S. Environmental Protection Agency (USEPA) on April 4, 2007.

The release originated in March 2007 on the Schmitz Ranch within the SW¼ NW¼ of Section 18, T25N, R3W (latitude and longitude recorded as N36° 23' 59.781" and W107° 11' 26.450"). Petroleum hydrocarbons flowed into the Los Ojitos Arroyo and then downstream to a livestock pond located on Jicarilla Apache Nation Land within the SE¼ SE¼ of Section 13, T25N, R4W (latitude and longitude recorded as N36° 23' 40.417" and W107° 11' 53.337"), Rio Arriba County, New Mexico. The locations of the release and flow route are shown on Figures 1 and 1a.

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## 1.0 Site History

On March 7, 2007, Schmitz Ranch personnel observed oil leaking into the Los Ojitos Canyon Arroyo. BMG personnel discovered that a small corrosion hole in the Llaves Pipeline, which runs parallel to the south side of Highway 537, was the source of the leaking oil, and the pipeline was removed from service until the pipeline was repaired and clean up action was completed.



Approximately 25,230 cubic yards of petroleum-contaminated soils were excavated from the origin of the oil pipeline leak toward the Los Ojitos Arroyo and within the arroyo during March and April 2007. The soils were then transported off-site to a New Mexico Oil Conservation Division (NMOCD) permitted facility, the Schmitz Ranch Landfarm. Confirmation samples were collected by AES personnel for soil confirmation during excavation activities and surface water at Vigil Pond on April 3, 2007. Excavation and clean up efforts are discussed in detail within the SAP prepared by AES and dated April 5, 2007, which was submitted to the JEPO and USEPA.

On July 16 and 17, 2007, AES installed 11 monitoring wells along the route of the release in order to define the lateral and vertical extent of near surface and subsurface soil contamination. Analytical results from groundwater samples collected during the March 2008 sampling event show that benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH) C<sub>6</sub>-C<sub>36</sub> concentrations in all wells sampled remained below laboratory detection limits. Note that two wells, MW-9 and MW-10, were not sampled during the March 2008 sampling event. Details of groundwater sampling were presented within the AES *Groundwater Monitoring Report*, dated April 23, 2008.

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## 2.0 Groundwater Monitoring and Sampling

AES personnel conducted groundwater monitoring and sampling at the project area on September 25, 2008. Groundwater samples were laboratory analyzed for BTEX and TPH per EPA Methods 8021/8015 at Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico.

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

During the September 2008 sampling event, groundwater measurements and water quality data were recorded for MW-1 through MW-10. Water quality data for MW-11 were not recorded because the well was destroyed. Groundwater elevations were measured with a Keck water level with an accuracy to 0.01 foot and found to range from 7,031.88 feet below ground surface (bgs) in MW-1 up to 7,052.36 feet bgs in MW-8. Groundwater elevations were noted to have decreased from the March 2008 sampling event.

Water quality measurements were made with an YSI Water Quality Meter, and temperature ranged from 14.35°C in MW-3 to 16.77°C in MW-8. pH ranged from 6.50 to 7.17, and dissolved oxygen concentrations ranged between 1.56 mg/L in MW-8 and 6.48 mg/L in MW-2. Oxidation reduction potential (ORP) measurements were between -5.8 mV to 60.1 mV, and conductivity readings were between 2.090 mS and 19.17 mS. Depth to groundwater measurements and water quality data are presented in Table 1. Water Sample Collection Forms are included as Appendix A.

## 2.2 Groundwater Analytical Results

Groundwater samples were collected from MW-1 through MW-10 for laboratory analysis on September 25, 2008. Well MW-11 was found to have been destroyed and therefore was not sampled. In each of the wells sampled, analytical results for BTEX showed that concentrations remained below laboratory detection limits, and therefore also below applicable New Mexico Water Quality Control Commission (WQCC) standards for BTEX. TPH concentrations were also below laboratory detection limits in each of the wells sampled.

Tabulated laboratory analytical results are included in Table 2, and Laboratory analytical reports are attached as Appendix B.

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## 3.0 Conclusions and Recommendations

Petroleum hydrocarbon impacts to groundwater have not been detected since the monitor wells were installed in July 2007. Groundwater laboratory analytical results continued to show non-detectable concentrations of BTEX and TPH in September 2008. AES has scheduled one more quarterly sampling event to be conducted in December 2008 or January 2009. If BTEX and TPH concentrations continue to be non-detect, AES recommends that the site be considered for no further action status.

If you have any questions about site conditions or this report, please feel free to contact Elizabeth McNally or Ross Kennemer at (505) 564-2281.

Sincerely,



Lany Cupps  
Project Manager

  
Elizabeth McNally, P.E.

Attachment:	Figure 1.	Site Plan
	Table 1.	Summary of Groundwater Measurement Data
	Table 2.	Summary of Groundwater Analytical Results
	Appendix A.	Water Sample Collection Forms
	Appendix B.	Laboratory Analytical Reports

*Mr. Wayne Price  
Mr. Dixon Sandoval  
October 30, 2008  
Page 4*

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

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

File: 2008\BMG\Hwy. 537 2007-2006 Spills\Reports\gc Letter Report 101608

**TABLE 1**  
**SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA**  
**BMG HWY 537 LLAVES PIPELINE 2007 OIL SPILL**  
**Rio Arriba County, New Mexico**

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	pH	Conductivity (mS)	DO (mg/L)	Temperature (C)	ORP (mV)
MW-1	10-Aug-07	47.38	7079.00	7031.62	7.36	1.998	3.62	16.61	-121.0
MW-1	27-Mar-08	36.97	7079.00	7042.03	7.78	3.419	5.62	13.48	122.3
MW-1	25-Sep-08	47.12	7079.00	7031.88	7.02	3.859	2.31	16.76	30.0
MW-2	10-Aug-07	36.53	7086.00	7049.47	7.44	2.216	2.34	17.09	-138.0
MW-2	27-Mar-08	36.19	7086.00	7049.81	7.13	4.089	1.16	13.05	76.6
MW-2	25-Sep-08	36.34	7086.00	7049.66	6.88	3.415	6.48	15.05	60.1
MW-3	10-Aug-07	29.35	7070.00	7040.65	7.57	1.797	2.41	16.91	-165.1
MW-3	27-Mar-08	28.94	7070.00	7041.06	7.38	2.735	0.86	13.16	67.6
MW-3	25-Sep-08	NM	7070.00	NM	6.74	2.776	2.61	14.35	50.1
MW-4	10-Aug-07	22.34	7068.00	7045.66	7.49	1.517	2.40	14.47	-164.6
MW-4	27-Mar-08	26.92	7068.00	7041.08	7.46	2.340	1.89	12.40	76.1
MW-4	25-Sep-08	27.21	7068.00	7040.79	6.89	2.434	3.70	14.76	43.1
MW-5	10-Aug-07	20.44	7058.00	7037.56	7.81	7.155	2.40	15.72	-122.0
MW-5	28-Mar-08	19.80	7058.00	7038.20		NM - LOW YIELD			
MW-5	25-Sep-08	20.26	7058.00	7037.74	6.97	19.17	1.62	16.26	9.9
MW-6	10-Aug-07	22.32	7060.00	7037.68	7.47	1.842	2.11	17.01	-138.7
MW-6	28-Mar-08	21.61	7060.00	7038.39	7.34	3.261	3.22	14.11	303.9
MW-6	25-Sep-08	22.45	7060.00	7037.55	6.76	3.092	2.92	16.55	32.4
MW-7	13-Aug-07	13.31	7065.00	7051.69		NS - BENTONITE FOUND IN WELL			
MW-7	28-Mar-08	12.11	7065.00	7052.89		NM - LOW YIELD			
MW-7	25-Sep-08	13.64	7065.00	7051.36	6.98	3.308	3.19	15.65	44.9

**TABLE 1**  
**SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA**  
**BMG HWY 537 LLAVES PIPELINE 2007 OIL SPILL**  
**Rio Arriba County, New Mexico**

Well ID	Date Sampled	Depth to Water (ft)	Surveyed TOC (ft)	GW Elev. (ft)	pH	Conductivity (mS)	DO (mg/L)	Temperature (C)	ORP (mV)
MW-8	13-Aug-07	13.39	7066.00	7052.61	7.33	1.550	3.02	15.97	-26.6
MW-8	28-Mar-08	11.44	7066.00	7054.56	NM - LOW YIELD				
MW-8	25-Sep-08	13.55	7066.00	7052.45	6.50	2.090	1.56	16.77	17.4
MW-9	13-Aug-07		7063.00	7063.00	NS - WELL DRY				
MW-9	28-Mar-08		7063.00	7063.00	NS - WELL DAMAGED				
MW-9	25-Sep-08	12.74	7063.00	7050.26	6.85	14.65	3.62	16.54	40.5
MW-10	10-Aug-07	5.95	7045.00	7039.05	7.17	2.727	2.17	21.07	-138.0
MW-10	28-Mar-08	5.57	7045.00	7039.43	NS - WELL DAMAGED				
MW-10	25-Sep-08	8.66	7045.00	7036.34	7.17	9.857	2.41	14.83	-5.8
MW-11	10-Aug-07	16.78	7042.00	7025.22	7.45	10.34	11.21	22.98	-135.7
MW-11	28-Mar-08	11.59	7042.00	7030.41	7.07	10.14	5.78	10.38	495.8
MW-11	28-Mar-08	11.59	7042.00	7030.41	NS - WELL DESTROYED				

**NOTE:** NS = NOT SAMPLED  
 NM = NOT MEASURED

**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**BMG HWY 537 LLAVES PIPELINE 2007 OIL SPILL**  
**Rio Arriba County, New Mexico**

Sample I.D.	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO	GRO
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)
<b>Analytical Method</b>		<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8021B</b>	<b>8015B</b>	<b>8015B</b>
<b>New Mexico WQCC</b>		<b>10</b>	<b>750</b>	<b>750</b>	<b>620</b>	<b>NE</b>	<b>NE</b>
<b>MW-1</b>	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-1</b>	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-1</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-2</b>	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-2</b>	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-2</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-3</b>	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-3</b>	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-3</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-4</b>	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-4</b>	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-4</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-5</b>	13-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-5</b>	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-5</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-6</b>	13-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-6</b>	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-6</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-7</b>	13-Aug-07	NS - Bentonite Found in Well					
<b>MW-7</b>	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-7</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-8</b>	13-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-8</b>	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-8</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-9</b>	13-Aug-07	NS - Well Dry					
<b>MW-9</b>	28-Mar-08	NS - Well Damaged					
<b>MW-9</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-10</b>	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-10</b>	28-Mar-08	NS - Well Damaged					
<b>MW-10</b>	25-Sep-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-11</b>	13-Aug-07	<1.0	<1.0	<1.0	<2.0	1.4	<0.050
<b>MW-11</b>	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
<b>MW-11</b>	25-Sep-08	NS - Well Destroyed					

**NOTE:** NS = Not Sampled









## Animas Environmental Services

**Monitor Well No: MW-4**

624 E. Comanche, Farmington NM 87401

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

**Site:** Highway 537 Station Spill

**Project No.: AES 070302**

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

Date: 9-25-08

**Project:** Groundwater Monitoring

Arrival Time: 1106

Sampling Technician: N. Willis

Air Temp: 68°F

**Purge / No Purge: Purge**

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

Well Diameter (in): 2

**Total Well Depth (ft):**

Initial D.T.W. (ft): 27.21

**Time:** 1110 (taken at initial gauging of all wells)

**Confirm D.T.W. (ft):** \_\_\_\_\_

**Time:** \_\_\_\_\_ (taken prior to purging well)

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

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

### Water Quality Parameters - Recorded During Well Purging

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

BTEX per EPA Method 8021 (2 40mL Vials w/ HCl)

TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B (2 40mL Vials w/ HCl)TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B ( 40mL Vials no poly)

### Disposal of Purged Water:

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

**Chain of Custody Record Complete:**

**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM

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

### Notes/Comments

## Animas Environmental Services

**Monitor Well No: MW-5**

624 E. Comanche, Farmington NM 87401

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

**Site:** Highway 537 Station Spill

**Project No.: AES 070302**

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

Date: 9-25-08

**Project:** Groundwater Monitoring

Arrival Time: 12 24

Sampling Technician: N. Willis

Air Temp: 71°F

**Purge / No Purge: No Purge**

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

**Well Diameter (in):** 0.75

**Total Well Depth (ft):**

Initial D.T.W. (ft): 70.26

Time: 1228 (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 20.50

**Time:** \_\_\_\_\_ (taken prior to purging well)

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

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

### Water Quality Parameters - Recorded During Well Purging

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

BTEX per EPA Method 8021 (2 40mL Vials w/ HCl)

TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B (2 40mL Vials w/ HCl)TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B ( 40mL Vials no poly)

### Disposal of Purged Water:

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

**Chain of Custody Record Complete:**

**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM

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

### Notes/Comments

## Animas Environmental Services

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

Project No.: AES 070302  
Date: 9-25-08  
Arrival Time: 1200  
Air Temp: 71°F  
O.C. Elev. (ft):  
Well Depth (ft):  
5 (taken at initial gauging of all wells)  
(taken prior to purging well)  
(taken after sample collection) -

### Water Quality Parameters - Recorded During Well Purging

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

BTEX per EPA Method 8021 (2 40mL Vials w/ HCl)

TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B (2 40mL Vials w/ HCl)TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B ( 40mL Vials no poly)

### Disposal of Purged Water:

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

**Chain of Custody Record Complete:**

**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM

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

### Notes/Comments



## Animas Environmental Services

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

Project No.: AES 070302  
Date: 9-25-08  
Arrival Time: 1312  
Air Temp: 74°F  
O.C. Elev. (ft):  
Well Depth (ft):  
(taken at initial gauging of all wells)  
(taken prior to purging well)  
(taken after sample collection) -

### Water Quality Parameters - Recorded During Well Purging

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

BTEX per EPA Method 8021 (2 40mL Vials w/ HCl)

TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B (2 40mL Vials w/ HCl)TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B ( 40mL Vials no poly)

### Disposal of Purged Water:

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

**Chain of Custody Record Complete:**

**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM

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

### Notes/Comments



## Animas Environmental Services

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

**Project No.: AES 070302**

Date: 9-25-08

Arrival Time: 1336

Air Temp: 73°F

T.O.C. Elev. (ft): \_\_\_\_\_

**Total Well Depth (ft):** \_\_\_\_\_

Initial D.T.W. (ft): 2.74 Time: 1341 (taken at initial gauging of all wells)

Confirm D.T.W. (ft): 13.1 Time: 13:11 (taken prior to purging well)

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

### Water Quality Parameters - Recorded During Well Purging

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

BTEX per EPA Method 8021 (2 40mL Vials w/ HCl)

TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B (2 40mL Vials w/ HCl)TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B ( 40mL Vials no poly)

### Disposal of Purged Water:

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

**Chain of Custody Record Complete:**

**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM

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

### Notes/Comments

## Animas Environmental Services

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

Project No.: AES 070302  
Date: 9-25-08  
Arrival Time: 1408  
Air Temp: 75°F  
T.O.C. Elev. (ft):  
Well Depth (ft):  
14 (taken at initial gauging of all wells)  
(taken prior to purging well)  
(taken after sample collection) -

### Water Quality Parameters - Recorded During Well Purging

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

**BTEX per EPA Method 8021 (2 40mL Vials w/ HCl)**

TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B (2 40mL Vials w/ HCl)TPH C<sub>6</sub>-C<sub>36</sub> per EPA Method 8015B ( 40mL Vials no poly)

### Disposal of Purged Water:

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

**Chain of Custody Record Complete:**

**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM

**Equipment Used During Sampling:**

Keck Water Level, YSI Water Quality Meter,  
and New Disposable Bailer

### Notes/Comments





## COVER LETTER

Wednesday, October 15, 2008

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

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

RE: BMG Highway 537 06'&07' Spill

Order No.: 0809663

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 11 sample(s) on 9/30/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

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

Sincerely,

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

Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

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



**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-01

**Client Sample ID:** MW-1  
**Collection Date:** 9/25/2008 3:16:00 PM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	123	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 6:38:52 PM
Surr: BFB	82.9	59.9-122		%REC	1	10/8/2008 6:38:52 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 6:38:52 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 6:38:52 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 6:38:52 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 6:38:52 PM
Surr: 4-Bromofluorobenzene	90.7	65.9-130		%REC	1	10/8/2008 6:38:52 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-02

**Client Sample ID:** MW-2  
**Collection Date:** 9/25/2008 10:26:00 AM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	126	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 7:09:22 PM
Surr: BFB	84.8	59.9-122		%REC	1	10/8/2008 7:09:22 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 7:09:22 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 7:09:22 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 7:09:22 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 7:09:22 PM
Surr: 4-Bromofluorobenzene	94.7	65.9-130		%REC	1	10/8/2008 7:09:22 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services **Client Sample ID:** MW-3  
**Lab Order:** 0809663 **Collection Date:** 9/25/2008 10:53:00 AM  
**Project:** BMG Highway 537 06'&07' Spill **Date Received:** 9/30/2008  
**Lab ID:** 0809663-03 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	121	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 7:39:52 PM
Surr: BFB	84.8	59.9-122		%REC	1	10/8/2008 7:39:52 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 7:39:52 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 7:39:52 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 7:39:52 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 7:39:52 PM
Surr: 4-Bromofluorobenzene	97.0	65.9-130		%REC	1	10/8/2008 7:39:52 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-04

**Client Sample ID:** MW-4  
**Collection Date:** 9/25/2008 11:18:00 AM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	125	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 8:10:14 PM
Surr: BFB	80.3	59.9-122		%REC	1	10/8/2008 8:10:14 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 8:10:14 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 8:10:14 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 8:10:14 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 8:10:14 PM
Surr: 4-Bromofluorobenzene	87.7	65.9-130		%REC	1	10/8/2008 8:10:14 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-05

**Client Sample ID:** MW-5  
**Collection Date:** 9/25/2008 12:37:00 PM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	129	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 8:40:47 PM
Surr: BFB	82.8	59.9-122		%REC	1	10/8/2008 8:40:47 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 8:40:47 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 8:40:47 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 8:40:47 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 8:40:47 PM
Surr: 4-Bromofluorobenzene	92.6	65.9-130		%REC	1	10/8/2008 8:40:47 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-06

**Client Sample ID:** MW-6  
**Collection Date:** 9/25/2008 12:15:00 PM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	126	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 11:12:35 PM
Surr: BFB	81.1	59.9-122		%REC	1	10/8/2008 11:12:35 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 11:12:35 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 11:12:35 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 11:12:35 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 11:12:35 PM
Surr: 4-Bromofluorobenzene	90.5	65.9-130		%REC	1	10/8/2008 11:12:35 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-07

**Client Sample ID:** MW-7  
**Collection Date:** 9/25/2008 1:02:00 PM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	117	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/8/2008 11:43:04 PM
Surr: BFB	84.9	59.9-122		%REC	1	10/8/2008 11:43:04 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 11:43:04 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 11:43:04 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 11:43:04 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 11:43:04 PM
Surr: 4-Bromofluorobenzene	94.4	65.9-130		%REC	1	10/8/2008 11:43:04 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-08

**Client Sample ID:** MW-8  
**Collection Date:** 9/25/2008 1:25:00 PM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	120	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/9/2008 12:13:27 AM
Surr: BFB	83.1	59.9-122		%REC	1	10/9/2008 12:13:27 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/9/2008 12:13:27 AM
Toluene	ND	1.0		µg/L	1	10/9/2008 12:13:27 AM
Ethylbenzene	ND	1.0		µg/L	1	10/9/2008 12:13:27 AM
Xylenes, Total	ND	2.0		µg/L	1	10/9/2008 12:13:27 AM
Surr: 4-Bromofluorobenzene	93.9	65.9-130		%REC	1	10/9/2008 12:13:27 AM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b>	MW-9
<b>Lab Order:</b>	0809663	<b>Collection Date:</b>	9/25/2008 1:52:00 PM
<b>Project:</b>	BMG Highway 537 06'&07' Spill	<b>Date Received:</b>	9/30/2008
<b>Lab ID:</b>	0809663-09	<b>Matrix:</b>	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	120	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/9/2008 12:43:54 AM
Surr: BFB	85.3	59.9-122		%REC	1	10/9/2008 12:43:54 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/9/2008 12:43:54 AM
Toluene	ND	1.0		µg/L	1	10/9/2008 12:43:54 AM
Ethylbenzene	ND	1.0		µg/L	1	10/9/2008 12:43:54 AM
Xylenes, Total	ND	2.0		µg/L	1	10/9/2008 12:43:54 AM
Surr: 4-Bromofluorobenzene	96.2	65.9-130		%REC	1	10/9/2008 12:43:54 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

<b>CLIENT:</b>	Animas Environmental Services	<b>Client Sample ID:</b>	MW-10
<b>Lab Order:</b>	0809663	<b>Collection Date:</b>	9/25/2008 2:25:00 PM
<b>Project:</b>	BMG Highway 537 06'&07' Spill	<b>Date Received:</b>	9/30/2008
<b>Lab ID:</b>	0809663-10	<b>Matrix:</b>	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/4/2008
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/4/2008
Surr: DNOP	118	58-140		%REC	1	10/4/2008
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/9/2008 1:14:20 AM
Surr: BFB	82.1	59.9-122		%REC	1	10/9/2008 1:14:20 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/9/2008 1:14:20 AM
Toluene	ND	1.0		µg/L	1	10/9/2008 1:14:20 AM
Ethylbenzene	ND	1.0		µg/L	1	10/9/2008 1:14:20 AM
Xylenes, Total	ND	2.0		µg/L	1	10/9/2008 1:14:20 AM
Surr: 4-Bromofluorobenzene	91.0	65.9-130		%REC	1	10/9/2008 1:14:20 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-08

**CLIENT:** Animas Environmental Services  
**Lab Order:** 0809663  
**Project:** BMG Highway 537 06'&07' Spill  
**Lab ID:** 0809663-11

**Client Sample ID:** Field Blank  
**Collection Date:** 9/24/2008 6:20:00 AM  
**Date Received:** 9/30/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DAM
Benzene	ND	1.0		µg/L	1	10/8/2008 12:31:28 PM
Toluene	ND	1.0		µg/L	1	10/8/2008 12:31:28 PM
Ethylbenzene	ND	1.0		µg/L	1	10/8/2008 12:31:28 PM
Xylenes, Total	ND	2.0		µg/L	1	10/8/2008 12:31:28 PM
Surr: 4-Bromofluorobenzene	90.9	65.9-130		%REC	1	10/8/2008 12:31:28 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Highway 537 06'&07' Spill

Work Order: 0809663

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8015B: Diesel Range</b>									
Sample ID: MB-17240		MBLK							
					Batch ID: 17240		Analysis Date:		10/2/2008
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-17240		LCS							
					Batch ID: 17240		Analysis Date:		10/2/2008
Diesel Range Organics (DRO)	5.738	mg/L	1.0	115	74	157			
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCSD-17240		LCSD							
					Batch ID: 17240		Analysis Date:		10/2/2008
Diesel Range Organics (DRO)	5.685	mg/L	1.0	114	74	157			
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						

<b>Method: EPA Method 8015B: Gasoline Range</b>									
Sample ID: 0809663-10A MSD		MSD							
					Batch ID: R30593		Analysis Date:		10/9/2008 5:17:17 AM
Gasoline Range Organics (GRO)	0.4438	mg/L	0.050	88.8	80	115	3.28	8.39	
Sample ID: B		MBLK							
					Batch ID: R30593		Analysis Date:		10/8/2008 12:01:03 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		LCS							
					Batch ID: R30593		Analysis Date:		10/9/2008 5:47:36 AM
Gasoline Range Organics (GRO)	0.4572	mg/L	0.050	91.4	80	115			
Sample ID: 2.5UG GRO LCS		LCS							
					Batch ID: R30593		Analysis Date:		10/9/2008 2:26:28 PM
Gasoline Range Organics (GRO)	0.5470	mg/L	0.050	109	80	115			
Sample ID: 0809663-10A MS		MS							
					Batch ID: R30593		Analysis Date:		10/9/2008 4:46:56 AM
Gasoline Range Organics (GRO)	0.4586	mg/L	0.050	91.7	80	115			

## Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: Animas Environmental Services  
 Project: BMG Highway 537 06'&07' Spill

Work Order: 0809663

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

Sample ID: 0809663-10A MSD

MSD

Batch ID: R30593

Analysis Date: 10/9/2008 5:17:17 AM

Benzene	6.136	µg/L	1.0	110	85.9	113	2.47	27	
Toluene	42.28	µg/L	1.0	106	86.4	113	1.61	19	
Ethylbenzene	8.404	µg/L	1.0	105	83.5	118	2.75	10	
Xylenes, Total	49.07	µg/L	2.0	107	83.4	122	3.40	13	

Sample ID: B

MBLK

Batch ID: R30593

Analysis Date: 10/8/2008 12:01:03 PM

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

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R30593

Analysis Date: 10/9/2008 6:17:58 AM

Benzene	20.21	µg/L	1.0	101	85.9	113			
Toluene	20.71	µg/L	1.0	104	86.4	113			
Ethylbenzene	20.63	µg/L	1.0	103	83.5	118			
Xylenes, Total	61.67	µg/L	2.0	103	83.4	122			

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R30593

Analysis Date: 10/9/2008 6:17:58 AM

Benzene	20.21	µg/L	1.0	101	85.9	113			
Toluene	20.71	µg/L	1.0	104	86.4	113			
Ethylbenzene	20.63	µg/L	1.0	103	83.5	118			
Xylenes, Total	61.67	µg/L	2.0	103	83.4	122			

Sample ID: 0809663-10A MS

MS

Batch ID: R30593

Analysis Date: 10/9/2008 4:46:56 AM

Benzene	5.986	µg/L	1.0	107	85.9	113			
Toluene	42.96	µg/L	1.0	107	86.4	113			
Ethylbenzene	8.638	µg/L	1.0	108	83.5	118			
Xylenes, Total	50.77	µg/L	2.0	110	83.4	122			

## Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL

Date Received:

9/30/2008

Work Order Number 0809663

Received by: AMF

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name Client drop-off

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"/>	
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 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"/>

Container/Temp Blank temperature?

4°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

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

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

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

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



Black	White	Black
White	Black	White
Black	White	Black

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

email or Fax#: (505) 324-2022	Project Manager:
QA/QC Package:	Ross Kennemer
<input checked="" type="checkbox"/> Standard	Sampler: N. Willis
<input type="checkbox"/> Level 4 (Full Validation)	
<input type="checkbox"/> Other	
<input type="checkbox"/> EDD (Type)	

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
12/5/08	1516	MW-1	5-40mL glass	4-Hcl 1-None	
	1026	MW-2			
	1053	MW-3			
	1118	MW-4			
	1237	MW-5			
	1215	MW-6			
	1302	MW-7			
	1325	MW-8			
	1352	MW-9			
12/5/08	1425	MW-10	5-40mL glass	4-Hcl 1-None	
1/24/08	0620	Trip Blanks	2-40mL glass	Hcl	

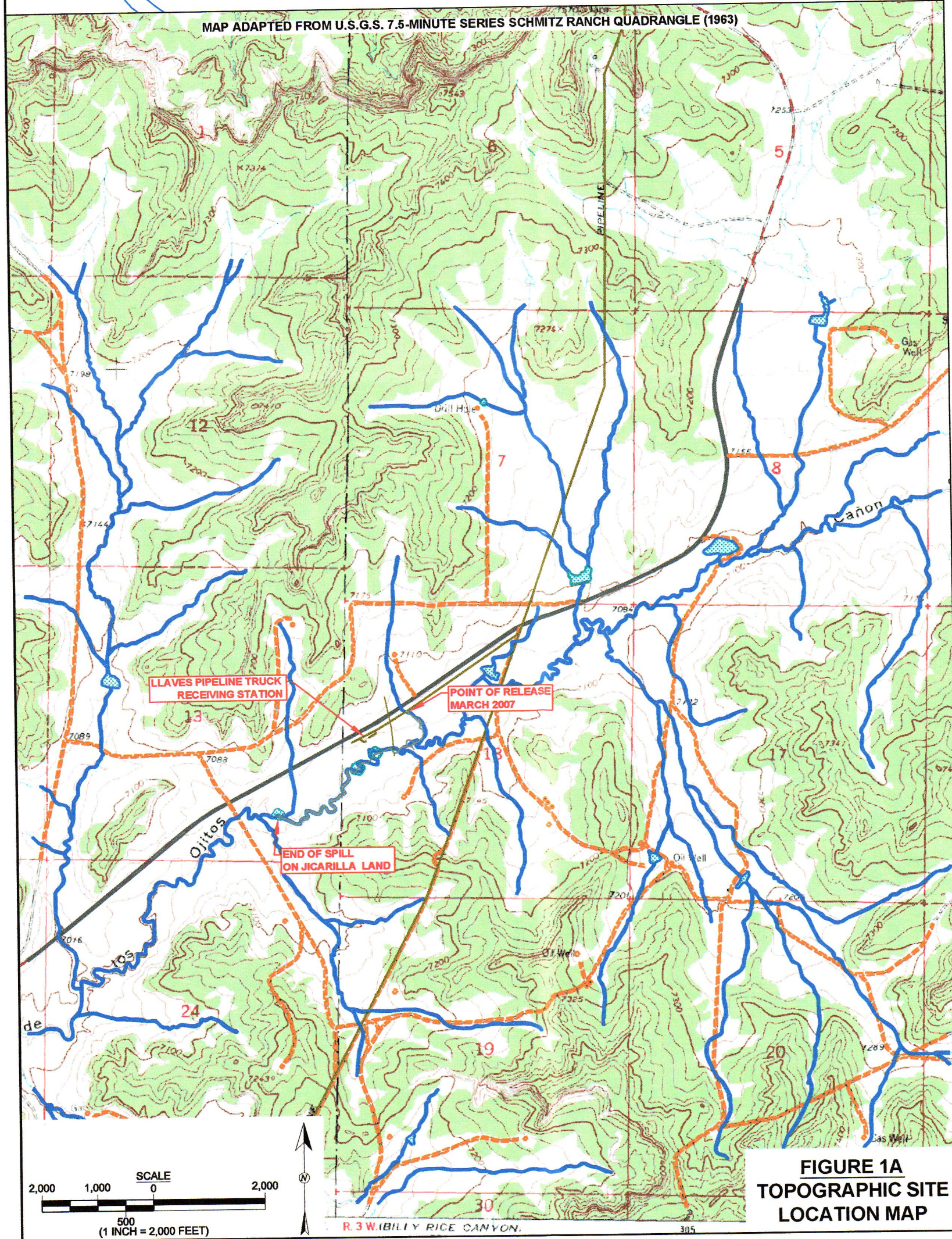
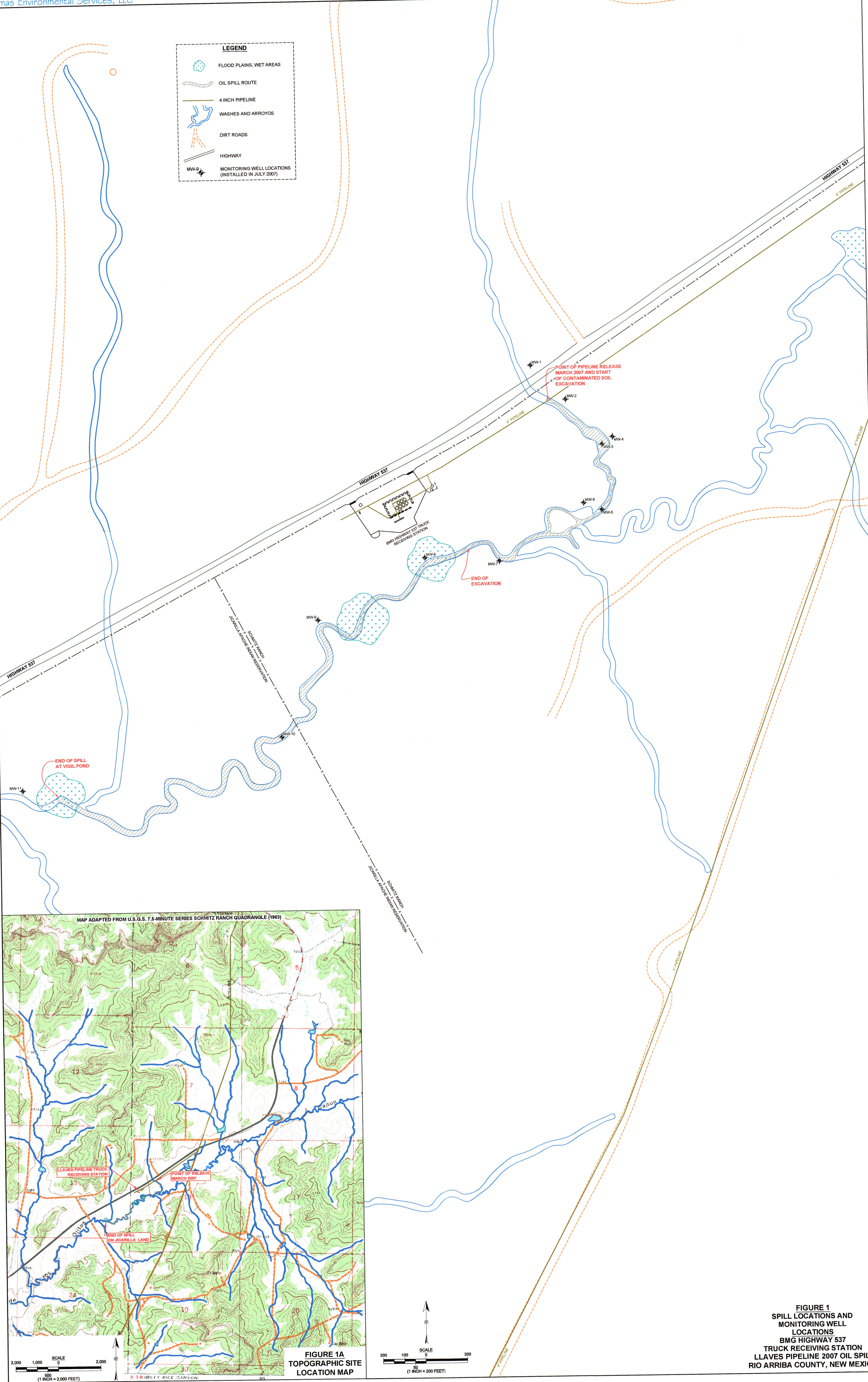
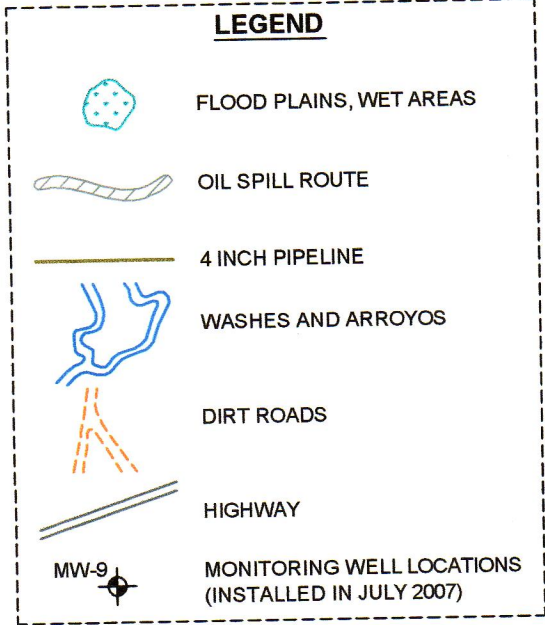
Date:	Time:	Relinquished by:	Received by:
1/30/08	0800	Nath Wini	R. Cupress
Date:	Time:	Relinquished by:	Received by:
1/30/08	0900	Landee R. Cupress	

Remarks: nmwacc standards

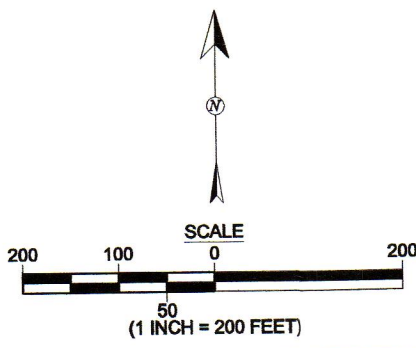
Shipped Via Greyhound

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.





**FIGURE 1A  
TOPOGRAPHIC SITE  
LOCATION MAP**



**FIGURE 1  
SPILL LOCATIONS AND  
MONITORING WELL  
LOCATIONS  
BMG HIGHWAY 537  
TRUCK RECEIVING STATION  
LLAVES PIPELINE 2007 OIL SPILL  
RIO ARriba COUNTY, NEW MEXICO**