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2008 GWMR

04 / 23 / 2008

Animas Environmental Services, LLC

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

April 23, 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: Groundwater Monitoring Report for the Benson-Montin-Greer Highway 537 Truck Receiving Station Llaves Pipeline 2007 Oil Spill, Rio Arriba County, New Mexico

Dear Sirs:

On behalf of Benson-Montin-Greer Drilling Corporation (BMG), Animas Environmental Services, LLC (AES) conducted groundwater sampling of monitoring wells at the BMG Highway 537 Truck Receiving Station 2007 Spill Location on March 27 and 28, 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 was reported in March 2007 and originated 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 Jicarrila 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 location of the release and flow route are shown on Figures 1 and 1a.

1.0 Site History

On March 7, 2007, Schmitz Ranch personnel observed oil leaking into the Los Ojitos Canyon Arroyo. BMG management was immediately contacted and dispatched BMG personnel to investigate. 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.

On March 9, 2007, BMG subcontractors began removing free-oil that had pooled in low areas and also oil floating on surface water within the arroyo and livestock pond. On March 31, 2007, with USEPA and New Mexico Oil Conservation Division (NMOCD) approval, BMG subcontractors burned excess free-oil within the arroyo. Vacuum removal of residual free-oil that was not burned off will continue. 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 NMOCD permitted facility, the Schmitz Ranch Landfarm. Additionally, subcontracted environmental cleanup crews directed by JEPO have removed free-oil from the portion of the arroyo on tribal lands by vacuuming and burning. 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 more detail in the SAP dated April 5, 2007, that 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 August 2007 sampling event show that benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations in all wells sampled were below laboratory detection limits. Total petroleum hydrocarbons (TPH) C_6-C_{36} results showed all wells were below laboratory detection limits, with the exception of MW-14 which had a diesel range organics (DRO) concentration of 1.4 mg/L. Note that two wells, MW-7 and MW-9, were not sampled during the August 2007 sampling event. Details of soil and groundwater sampling were presented within the AES' *Site Investigation Report for the Highway 537 Truck Receiving Station Llaves Oil Pipeline Spill,* dated September 14, 2007.

2.0 Groundwater Monitoring and Sampling

AES personnel conducted groundwater monitoring and sampling at the project area on March 27 and 28, 2008. Groundwater samples were laboratory analyzed for BTEX and TPH per EPA Methods 80201/8015 at Hall Environmental Analysis Laboratory (HEAL), Albuquerque, New Mexico.

2.1 Groundwater Measurements and Water Quality Data

During the March 2008 sampling event, groundwater measurements and water quality data were recorded for MW-1 through MW-4, MW-6, and MW-11. Water quality data for MW-5, MW-7, and MW-8 were not recorded because of low yields in these wells. Groundwater elevations were measured with a Keck water level with an accuracy to 0.01 foot and found to range from 7030.41 feet below ground surface (bgs) in MW-11 up to 7049.81 feet bgs in MW-2. Water quality measurements were made with a YSI Water Quality Meter. Temperature ranged from 10.38°C in MW-11 to 14.11°C in MW-6, and pH ranged from 7.07 to 7.78. Dissolved oxygen concentrations ranged between 0.86 mg/L in MW-3 and 5.78 mg/L in MW-11, oxidation reduction potential (ORP) ranged from 67.6 mV to 495.8 mV, and conductivity was between 2.340 mS and 10.14 mS. Depth to

groundwater measurements and water quality data were recorded onto Water Sample Collection Forms and are included as Appendix A.

2.2 Groundwater Analytical Results

Groundwater samples were collected from MW-1 through MW-8 and MW-11 for laboratory analysis. Wells MW-9 and MW-10 were found to be damaged and were not sampled. In each of the wells sampled, analytical results for BTEX showed that concentrations were below laboratory detection limits, and therefore well 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.

Groundwater measurement data are presented in Table 1, and the tabulated laboratory analytical results are included in Table 2. Laboratory analytical reports are attached as Appendix B.

3.0 Conclusions and Recommendations

Because of groundwater laboratory analytical results have shown non-detectable concentrations of BTEX and TPH in August 2007 and March 2008, 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,

EM for Chad Dawson
Chad Dawson
Field Geologist

Elizabeth McNally
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

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 042308

Animas Environmental Services, LLC

S:\ANIMAS 2000\2007 PROJECT'S\BENSON MONTIN GREER\HWY 537 RECEIVING STATION SPILL MARCH 2007\DRAWINGS\MARCH 2007 SPILL LOCATION.DWG

DRAWN BY	NCW	CHECKED BY	EM	09-12-07	REVISIONS
	09-12-07	APPROVED BY	EM	09-13-07	BY: Ross DATE: 04-25-08

LEGEND

- FLOOD PLAINS, WET AREAS
- OIL SPILL ROUTE
- 4 INCH PIPELINE
- WASHES AND ARROYOS
- DIRT ROADS
- HIGHWAY
- MW-9 — MONITORING WELL LOCATIONS (INSTALLED IN JULY 2007)

HIGHWAY 537

4" PIPELINE

MW-1

POINT OF PIPELINE RELEASE MARCH 2007 AND START OF CONTAMINATED SOIL EXCAVATION

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

END OF EXCAVATION

BMG HIGHWAY 537 TRUCK RECEIVING STATION

MW-9

MW-10

SCHMITZ RANCH
JICARILLA APACHE INDIAN RESERVATION

END OF SPILL AT VIGIL POND

MW-11

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

FIGURE 1A
TOPOGRAPHIC SITE LOCATION MAP

MAP ADAPTED FROM U.S.G.S. 7.5-MINUTE SERIES SCHMITZ RANCH QUADRANGLE (1963)

LLAVES PIPELINE TRUCK RECEIVING STATION

POINT OF RELEASE MARCH 2007

END OF SPILL ON JICARILLA LAND

R. 3 W. (BILLY RICE CANYON.

SCALE
200 100 0 200
50
(1 INCH = 200 FEET)

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

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-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-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-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-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-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-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-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-9	13-Aug-07		7063.00	7063.00	NS - WELL DRY				
MW-9	28-Mar-08		7063.00	7063.00	NS - WELL DAMAGED				
MW-10	10-Aug-07	5.95	7045.00	7039.05	7.17	2.727	2.17	21.07	-138.0

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-10	28-Mar-08	5.57	7045.00	7039.43	NS - WELL DAMAGED				
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

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)
Analytical Method		**8021B**	**8021B**	**8021B**	**8021B**	**8015B**	**8015B**
New Mexico WQCC		***10***	***750***	***750***	***620***	***NE***	***NE***
MW-1	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-1	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-2	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-2	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-3	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-3	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-4	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-4	27-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-5	13-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-5	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-6	13-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-6	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-7	13-Aug-07	NS - Bentonite Found in Well					
MW-7	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-8	13-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-8	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-9	13-Aug-07	NS - Well Dry					
MW-9	28-Mar-08	NS - Well Damaged					
MW-10	10-Aug-07	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050
MW-10	28-Mar-08	NS - Well Damaged					
MW-11	13-Aug-07	<1.0	<1.0	<1.0	<2.0	1.4	<0.050
MW-11	28-Mar-08	<1.0	<1.0	<1.0	<2.0	<1.0	<0.050

NOTE: NS = Not Sampled

DEPTH TO GROUNDWATER MEASUREMENT FORM

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

Project: Groundwater Monitoring
Site: Hwy 537 2006 and 2007 Spill
Location: Llaves, Rio Arriba County, New Mexico
Tech: Chad Dawson

Project No.: AES 070301
Date: 3-27-08
Time:
Form: 1 of 1

Well I.D.	Time	Depth to NAPL (ft.)	Depth to Water (ft.)	NAPL Thickness (ft.)	Notes / Observations
MW-1	1305		46.97'		
MW-2	1334		36.19'		
MW-3	1404		28.94'		
MW-4	1422		26.92'		
MW-5	0918		19.80		
MW-6	0921		21.61		
MW-7	0926		12.11		
MW-8	0930		11.44		
MW-9	0935		———		Well Damaged - Washed Out.
MW-~~10~~11	1032		11.59		
~~MW-11~~	1115		5.57		Well Damaged - Froze in Casing
MW-10					

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

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-1**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 36.97' **Time:** 1305 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 36.97' **Time:** 1310 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*

Project No.: AES 070302
Date: 3/27/08
Arrival Time: 1300
Air Temp: 60° F
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1313	13.48	3.419	5.62	7.78	122.3	NP	
1317	Sample Collected						

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-2**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 36.19' **Time:** 1334 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 36.19' **Time:** 1337 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*

Project No.: AES 070302
Date: 3/27/08
Arrival Time: 1330
Air Temp: 60° F
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1339	12.73	4.038	1.65	7.27	111.0	.25 gal	
1344	13.05	4.089	1.16	7.13	76.6	1 gal total	
1347	Samples Collected						

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Animas Environmental Services

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

Monitor Well No: MW-3

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 28.94' **Time:** 1404 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 28.94' **Time:** 1409 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*

Project No.: AES 070302
Date: 3/27/08
Arrival Time: 1402
Air Temp: 60°F
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1411	13.16	2.735	0.86	7.38	67.6	0.25gal	
1414	Samples Collected						

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-4**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 26.92' **Time:** 1422 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 26.92' **Time:** 1425 *(taken prior to purging well)*
Final D.T.W. (ft): **Time:** *(taken after sample collection)*

Project No.: AES 070302
Date: 3/27/08
Arrival Time: 1419
Air Temp: 60°F
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1426	12.40	2.340	1.89	7.46	76.1	0.25gal	
1430	Samples collected						

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-5

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 19.80 **Time:** 0918 *(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)*

Project No.: AES 070302
Date: 3-28-06
Arrival Time: 0915
Air Temp: 40°
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1017						Samples Collected - Low Yeild	

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-6**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 21.61 **Time:** 0921 *(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)*

Project No.: AES 070302
Date: 3-28-08
Arrival Time: 0920
Air Temp: 40
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1213	14.11	3.261	3.22	7.34	303.9		Samples collected @ 1155

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-7**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): ~12.11 **Time:** 0926 *(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)*

Project No.: AES 070302
Date: 3-28-08
Arrival Time: 0924
Air Temp: 40
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1230						Samples Collected	Low field

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-8

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

Site:	Highway 537 Station Spill	**Project No.:**	AES 070302
Location:	Rio Arriba County, New Mexico	**Date:**	3-28-08
Project:	Groundwater Monitoring	**Arrival Time:**	0928
Sampling Technician:	Chad Dawson	**Air Temp:**	40
Purge / No Purge:	No Purge	**T.O.C. Elev. (ft):**	
Well Diameter (in):	0.75	**Total Well Depth (ft):**	
Initial D.T.W. (ft):	11.44 **Time:**	0930	*(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

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1250						Samples Collected - Low Yeild	

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

BTEX per EPA Method 8021 (2 40mL Vials)

TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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 North side of well starting to wash out - 2 poles of Barbwire fence unburied.

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-9**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): _____ **Time:** _____ *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*

Project No.: AES 070302
Date: 3-28-08
Arrival Time: 0955
Air Temp: 40
T.O.C. Elev. (ft): _____
Total Well Depth (ft): _____

Water Quality Parameters - Recorded During Well Purging

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

NS Well Damaged

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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 Bottom of well exposed & Bent. Well vault twisted & Bent. Could not get Interface probe down well.

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-10**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): ~~5.57~~ **Time:** 1115 *(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)*

Project No.: AES 070302
Date: 5-28-08
Arrival Time: 1112
Air Temp: 40°
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

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

NS
Well Damaged

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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 Well casing was expanded due to water freezing inside. The Freezing Damaged the well, making it very loose, Freely moving, and could be spun in circle. No samples collected.

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-11**

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: No Purge
Well Diameter (in): 0.75
Initial D.T.W. (ft): 11.59 **Time:** 1032 *(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)*

Project No.: AES 070302
Date: 3-28-08
Arrival Time: 1030
Air Temp: 40°
T.O.C. Elev. (ft):
Total Well Depth (ft):

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1053	10.38	10.14	5.78	7.07	495.8		Samples Collected @ 1043

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

MONITORING WELL SAMPLING RECORD

Monitor Well No: _____

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

Site: Highway 537 Station Spill
Location: Rio Arriba County, New Mexico
Project: Groundwater Monitoring
Sampling Technician: Chad Dawson
Purge / No Purge: _____
Well Diameter (in): _____
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): _____ **Time:** _____ *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*

Project No.: AES 070302
Date: _____
Arrival Time: _____
Air Temp: _____
T.O.C. Elev. (ft): _____
Total Well Depth (ft): _____

Water Quality Parameters - Recorded During Well Purging

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

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

BTEX per EPA Method 8021 (2 40mL Vials)
TPH C_6-C_{36} per EPA Method 8015B (2 40mL Vials)

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

revised: 05/23/07

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, April 07, 2008

Lany Cupps
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

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

RE: BMG Highway 537 '07 Spill

Order No.: 0804002

Dear Lany Cupps:

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 4/1/2008 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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-1
Lab Order:	0804002	**Collection Date:**	3/27/2008 1:17:00 PM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 5:23:50 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 5:23:50 PM
Surr: DNOP	154	58-140	S	%REC	1	4/2/2008 5:23:50 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 8:26:46 PM
Surr: BFB	102	79.2-121		%REC	1	4/5/2008 8:26:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 8:26:46 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 8:26:46 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 8:26:46 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 8:26:46 PM
Surr: 4-Bromofluorobenzene	85.2	68.9-122		%REC	1	4/5/2008 8:26:46 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-2
Lab Order:	0804002	**Collection Date:**	3/27/2008 1:47:00 PM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 5:59:03 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 5:59:03 PM
Surr: DNOP	122	58-140		%REC	1	4/2/2008 5:59:03 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 8:56:53 PM
Surr: BFB	101	79.2-121		%REC	1	4/5/2008 8:56:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 8:56:53 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 8:56:53 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 8:56:53 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 8:56:53 PM
Surr: 4-Bromofluorobenzene	85.3	68.9-122		%REC	1	4/5/2008 8:56:53 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-3
Lab Order:	0804002	**Collection Date:**	3/27/2008 2:14:00 PM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 6:34:33 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 6:34:33 PM
Surr: DNOP	164	58-140	S	%REC	1	4/2/2008 6:34:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 9:29:37 PM
Surr: BFB	101	79.2-121		%REC	1	4/5/2008 9:29:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 9:29:37 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 9:29:37 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 9:29:37 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 9:29:37 PM
Surr: 4-Bromofluorobenzene	85.6	68.9-122		%REC	1	4/5/2008 9:29:37 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-4
Lab Order:	0804002	**Collection Date:**	3/27/2008 2:30:00 PM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 7:09:56 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 7:09:56 PM
Surr: DNOP	145	58-140	S	%REC	1	4/2/2008 7:09:56 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 9:59:37 PM
Surr: BFB	99.9	79.2-121		%REC	1	4/5/2008 9:59:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 9:59:37 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 9:59:37 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 9:59:37 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 9:59:37 PM
Surr: 4-Bromofluorobenzene	84.9	68.9-122		%REC	1	4/5/2008 9:59:37 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-5
Lab Order:	0804002	**Collection Date:**	3/28/2008 10:12:00 AM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-05	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						**Analyst: SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 7:45:08 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 7:45:08 PM
Surr: DNOP	163	58-140	S	%REC	1	4/2/2008 7:45:08 PM
EPA METHOD 8015B: GASOLINE RANGE						**Analyst: NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 10:29:51 PM
Surr: BFB	100	79.2-121		%REC	1	4/5/2008 10:29:51 PM
EPA METHOD 8021B: VOLATILES						**Analyst: NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 10:29:51 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 10:29:51 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 10:29:51 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 10:29:51 PM
Surr: 4-Bromofluorobenzene	84.5	68.9-122		%REC	1	4/5/2008 10:29:51 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-11
Lab Order:	0804002	**Collection Date:**	3/28/2008 10:43:00 AM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-06	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 8:20:22 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 8:20:22 PM
Surr: DNOP	121	58-140		%REC	1	4/2/2008 8:20:22 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 11:00:03 PM
Surr: BFB	108	79.2-121		%REC	1	4/5/2008 11:00:03 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 11:00:03 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 11:00:03 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 11:00:03 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 11:00:03 PM
Surr: 4-Bromofluorobenzene	92.1	68.9-122		%REC	1	4/5/2008 11:00:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-6
Lab Order:	0804002	**Collection Date:**	3/28/2008 11:55:00 AM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-07	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 8:55:36 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 8:55:36 PM
Surr: DNOP	141	58-140	S	%REC	1	4/2/2008 8:55:36 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/5/2008 11:30:11 PM
Surr: BFB	101	79.2-121		%REC	1	4/5/2008 11:30:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/5/2008 11:30:11 PM
Toluene	ND	1.0		µg/L	1	4/5/2008 11:30:11 PM
Ethylbenzene	ND	1.0		µg/L	1	4/5/2008 11:30:11 PM
Xylenes, Total	ND	2.0		µg/L	1	4/5/2008 11:30:11 PM
Surr: 4-Bromofluorobenzene	86.0	68.9-122		%REC	1	4/5/2008 11:30:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-7
Lab Order:	0804002	**Collection Date:**	3/28/2008 12:30:00 PM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-08	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 10:05:53 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 10:05:53 PM
Surr: DNOP	120	58-140		%REC	1	4/2/2008 10:05:53 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/6/2008 1:42:26 PM
Surr: BFB	103	79.2-121		%REC	1	4/6/2008 1:42:26 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/6/2008 1:42:26 PM
Toluene	ND	1.0		µg/L	1	4/6/2008 1:42:26 PM
Ethylbenzene	ND	1.0		µg/L	1	4/6/2008 1:42:26 PM
Xylenes, Total	ND	2.0		µg/L	1	4/6/2008 1:42:26 PM
Surr: 4-Bromofluorobenzene	85.7	68.9-122		%REC	1	4/6/2008 1:42:26 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-8
Lab Order:	0804002	**Collection Date:**	3/28/2008 12:50:00 PM
Project:	BMG Highway 537 '07 Spill	**Date Received:**	4/1/2008
Lab ID:	0804002-09	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/2/2008 10:40:53 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/2/2008 10:40:53 PM
Surr: DNOP	109	58-140		%REC	1	4/2/2008 10:40:53 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/6/2008 6:33:53 AM
Surr: BFB	101	79.2-121		%REC	1	4/6/2008 6:33:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	4/6/2008 6:33:53 AM
Toluene	ND	1.0		µg/L	1	4/6/2008 6:33:53 AM
Ethylbenzene	ND	1.0		µg/L	1	4/6/2008 6:33:53 AM
Xylenes, Total	ND	2.0		µg/L	1	4/6/2008 6:33:53 AM
Surr: 4-Bromofluorobenzene	85.4	68.9-122		%REC	1	4/6/2008 6:33:53 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: BMG Highway 537 '07 Spill **Work Order:** 0804002

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range									
Sample ID: MB-15517		*MBLK*			Batch ID: **15517**		Analysis Date:		4/1/2008 9:30:55 AM
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-15517		*LCS*			Batch ID: **15517**		Analysis Date:		4/1/2008 9:58:13 AM
Diesel Range Organics (DRO)	5.062	mg/L	1.0	101	74	157			
Sample ID: LCSD-15517		*LCSD*			Batch ID: **15517**		Analysis Date:		4/1/2008 10:24:28 AM
Diesel Range Organics (DRO)	4.488	mg/L	1.0	89.8	74	157	12.0	23	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: 0804002-06A MSD		*MSD*			Batch ID: **R27989**		Analysis Date:		4/6/2008 2:42:44 PM
Gasoline Range Organics (GRO)	0.5240	mg/L	0.050	105	80	115	1.74	8.39	
Sample ID: 5ML RB		*MBLK*			Batch ID: **R27989**		Analysis Date:		4/5/2008 1:24:07 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID: **R27989**		Analysis Date:		4/6/2008 1:00:32 AM
Gasoline Range Organics (GRO)	0.5170	mg/L	0.050	103	80	115			
Sample ID: 0804002-06A MS		*MS*			Batch ID: **R27989**		Analysis Date:		4/6/2008 2:12:36 PM
Gasoline Range Organics (GRO)	0.5332	mg/L	0.050	107	80	115			
Method: EPA Method 8021B: Volatiles									
Sample ID: 0804002-05A MSD		*MSD*			Batch ID: **R27989**		Analysis Date:		4/6/2008 4:42:59 PM
Benzene	19.55	µg/L	1.0	97.8	85.9	113	1.22	27	
Toluene	19.62	µg/L	1.0	98.1	86.4	113	1.74	19	
Ethylbenzene	20.00	µg/L	1.0	100	83.5	118	0.697	10	
Xylenes, Total	60.14	µg/L	2.0	100	83.4	122	1.32	13	
Sample ID: 5ML RB		*MBLK*			Batch ID: **R27989**		Analysis Date:		4/5/2008 1:24:07 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: **R27989**		Analysis Date:		4/6/2008 4:00:48 AM
Benzene	20.46	µg/L	1.0	102	85.9	113			
Toluene	20.80	µg/L	1.0	104	86.4	113			
Ethylbenzene	20.82	µg/L	1.0	104	83.5	118			
Xylenes, Total	63.01	µg/L	2.0	105	83.4	122			
Sample ID: 0804002-05A MS		*MS*			Batch ID: **R27989**		Analysis Date:		4/6/2008 4:12:56 PM
Benzene	19.79	µg/L	1.0	99.0	85.9	113			
Toluene	19.96	µg/L	1.0	99.8	86.4	113			
Ethylbenzene	20.14	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.93	µg/L	2.0	102	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: 4/1/2008

Work Order Number 0804002 | Received by: TLS

Checklist completed by: Jamie Shomin (Signature) 4/1/08 (Date) | Sample ID labels checked by: AS (Initials)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	5°	*<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 SVC

Address: 624 E. Comanche
Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#: lcupps@animasenvironmental.com

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

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: BMG Hwy 537 '07 Spill

Project #: 070302

Project Manager: L. Cupps

Sampler: Chad Dawson

On Ice: ☒ Yes ☐ No

Sample Temperature: 5°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0804002	BTEX + MTBE + TMB's (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_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BTEX 8021	ERO/DRO 8015			Air Bubbles (Y or N)
3/27/08	1317	MW-1	4-40mL VOA	HCl	1												X	X			
	1347	MW-2			2												X	X			
	1414	MW-3			3												X	X			
	1430	MW-4			4												X	X			
3/28/08	1012	MW-5			5												X	X			
	~~1053~~ 1043	MW-11			6												X	X			
	1155	MW-6			7												X	X			
	1230	MW-7			8												X	X			
	1250	MW-8			9												X	X			

Date:	Time:	Relinquished by:	Received by:
3-31-08	1400	Chad D	L. Cupps
3/31/08	1800	Sandra R. Cupps	Jaye SL 4/1/08 800

Remarks:
8021 - Just BTEX, NO MTBE
8015 - ERO/DRO C6-C36

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