3R – 449

Q1 2011GWMR

02 / 07 / 2011

Animas Environmental Services, LLC

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

February 7, 2011

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

RE: 1st Quarter 2011 Groundwater Monitoring Report for Williams Four Corners, LLC, Sammons #2 Pipeline December 2009 Release, Flora Vista, San Juan County, New Mexico

Dear Mr. von Gonten:

Animas Environmental Services, LLC (AES), on behalf of Williams Four Corners, LLC, has prepared this *1st Quarter Groundwater Monitoring Report* for the Sammons #2 Pipeline December 2009 Release in accordance with New Mexico Oil Conservation Division (NMOCD) and New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) regulations. The subject site is located near Flora Vista, San Juan County, New Mexico.

A first quarterly groundwater monitoring and sampling event was completed January 25, 2011, in accordance with a workplan previously prepared by AES and dated January 25, 2010. This is the fourth sampling event for the subject workplan. The workplan was submitted to the NMOCD for review prior to implementing the proposed scope of work.

1.0 Site Information

1.1 Site Location

The general project area is located in a rural area approximately 0.1 mile east of County Road 3000 on private property owned by Ms. Helen Clark. The spill location is located approximately 140 feet southeast of a wetland area that is adjacent to the Animas River. The project area is described legally as within the SE¼ NE¼ Section 32, T30N, R12W, in Flora Vista, San Juan County, New Mexico. Longitude and latitude were recorded as being N36°46'18.240" and W108°06'54.540". A topographic site location map is included as Figure 1, and a Site Vicinity Map is presented as Figure 2.

1.2 Spill History

On December 3, 2009, trenching operations during routine pipeline replacement activities uncovered petroleum hydrocarbon contaminated soils. Williams was in the process of replacing an in-service 2-inch diameter natural gas pipeline with a new 4-inch diameter natural gas pipeline. The pipeline connects the Sammons 2 well locations, which are owned by Conoco Phillips. The volume of natural gas condensate released into the surrounding environment and the length of time that the 2-inch diameter pipeline was leaking are unknown.

Initial remedial activities were completed between December 7 and 17, 2009, and included excavation of approximately 1,884 cubic yards of petroleum contaminated soil (PCS) and removal of 1,122 barrels (bbls) of petroleum contaminated groundwater. Petroleum contaminated soil and groundwater were transported to Industrial Ecosystems, Inc. (IEI) on Crouch Mesa, San Juan County, for disposal. Soil excavation and removal activities were documented in the *Remedial Activities Report for Sammons #2 Pipeline 2009 Spill*, prepared by AES and dated January 11, 2010.

Six 1-inch diameter groundwater monitoring wells were installed and sampled at the site in April 2010. Analytical results from groundwater samples collected during the sampling event showed benzene concentrations exceeded the New Mexico Water Quality Control Commission (WQCC) standard of 10 µg/L in one well, MW-1 (11 µg/L). The remaining wells had benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations either below laboratory detection limits or well below applicable WQCC standards.

Diesel and motor oil range organics were below laboratory detection limits for all wells sampled. Low level gasoline range organics (GRO) were detected in MW-2, MW-4, MW-5, and MW-6. Based on the laboratory results, AES recommended continued quarterly groundwater monitoring at the site for at least a year.

Groundwater investigation details are included within the *Site Investigation Report* prepared by AES and dated May 5, 2010. Subsequent quarterly groundwater monitoring events were conducted in July and October 2010, with quarterly monitoring reports submitted in August and November 2010.

2.0 Groundwater Monitoring and Sampling January 2011

On January 25, 2011, groundwater monitoring and sampling activities were conducted by AES. Work was completed in accordance with the workplan prepared by AES and dated January 25, 2010, and also in accordance with U.S. Environmental Protection Agency

(USEPA) Environmental Response Team's Standard Operating Procedures (SOPs), and applicable American Society of Testing and Materials (ASTM) standards.

2.1 Notification

AES notified Aaron Dailey of Williams and Nick Clark, land owner, via telephone before initiating sampling activities.

2.2 Groundwater Monitor Well Monitoring and Sampling

AES personnel completed groundwater monitoring and sampling of the wells on January 25, 2011. Groundwater samples were collected with new disposable bailers from a total of six monitor wells and transferred into appropriate sample containers, labeled accordingly, and documented on Water Sample Collection Forms.

Prior to sample collection, water quality measurements were recorded and included depth to groundwater, pH, temperature, conductivity, dissolved oxygen (DO), and oxidation reduction potential (ORP). Depth to groundwater was measured with a Keck Water Level Indicator, and water quality data was measured with a YSI Water Quality Meter. Samples were shipped in insulated coolers containing ice at less than 6°C via Greyhound bus to Hall Environmental Analytical Laboratory (Hall) in Albuquerque, New Mexico.

2.2.1 Laboratory Analyses - Groundwater

All groundwater analytical samples were analyzed for the following parameters:

- BTEX – EPA Method 8021
- TPH (C_6-C_{36}) GRO, DRO, and MRO – EPA Method 8015 Modified

2.2.2 Measurement Data

Depths to groundwater varied across the site and were observed to exist at 1.32 feet below top of casing (TOC) in MW-5 to 3.21 feet below TOC in MW-1. The groundwater gradient was calculated to be approximately 0.01 ft/ft to the northwest, which is consistent with previous site data. Note that the site is considered to be groundwater under the direct influence (GUDI) of the Animas River.

Following depth to water measurement, each well was purged with a disposable bailer until recorded temperature, pH, conductivity, and dissolved oxygen (DO) measurements were stabilized. All data was recorded onto Water Sample Collection Forms. Groundwater temperature ranged from 4.55°C to 6.88°C, and conductivity ranged from 1.438 mS to 3.357 mS. Although DO was recorded during field activities, it should be noted that due to the use of bailers, the accuracy of dissolved oxygen measurements is

limited. DO ranged from 1.7 mg/L to 6.51 mg/L, and pH ranged from 7.4 to 7.63. Depth to groundwater measurements and water quality data are summarized in Table 1, and groundwater elevation contours are presented in Figure 3. Water Sample Collection forms are presented in Appendix A.

2.2.3 Groundwater Analytical Results

Analytical results from groundwater samples collected during the January 2011 sampling event showed that BTEX concentrations were below laboratory detection limits in monitoring wells MW-1, MW-3, MW-5, and MW-6. Dissolved phase benzene concentrations were detected in MW-2 at 2.6 µg/L and in MW-4 at 2.5 µg/L, both of which are well below the New Mexico WQCC regulatory limit of 10 µg/L for benzene concentrations in groundwater.

Dissolved phase diesel and motor oil range organics concentrations were below laboratory detection limits for all wells sampled. WQCC standards have not been established for TPH. The laboratory analytical results for groundwater samples collected during the January 2011 sampling event have been tabulated and are presented in Table 2 and on Figure 4. Groundwater analytical laboratory reports are presented in Appendix A.

3.0 Conclusion and Recommendations

AES personnel conducted groundwater monitoring and sampling at the location of the Sammons #2 Pipeline December 2009 Release in January 2011. Depths to groundwater varied across the site and were observed to exist at about 1.32 to 2.31 feet bgs from the top of the well casing, and groundwater gradient was calculated to be approximately 0.01 ft/ft to the northwest, which is consistent with previous site data.

Groundwater analytical results showed that contaminants of concern (BTEX and TPH) were below laboratory detection limits in all monitoring wells sampled, except for benzene in MW-2 (2.6 µg/L) and MW-4 (2.5 µg/L). Benzene concentrations were well below the WQCC standard for benzene concentrations in groundwater.

NMOCD requires demonstration of remediation of the soil and groundwater after a petroleum release has occurred. AES demonstrated successful remediation of the effected soils during the contaminant source excavation activities in December 2009. These activities have been documented in the *Remedial Activities Report for Sammons #2 Pipeline 2009 Spill*, prepared by AES and dated January 11, 2010. Further, groundwater natural attenuation has been demonstrated at the site based on the past three quarters

of groundwater sampling. All groundwater analytical results showed concentrations of contaminants of concern were below laboratory detection limits or well below WQCC regulatory standards. Dissolved phase benzene concentrations in MW-2 have remained below the WQCC standard for benzene for three consecutive quarters. Remaining wells, MW-1, MW-3, MW-4, MW-5, and MW-6 have remained below applicable standards for four consecutive quarters.

Based on the presented information, AES recommends four additional quarterly monitoring and sampling events for MW-1, MW-3, MW-4, MW-5, and MW-6. This will ensure compliance with WQCC standards for eight consecutive quarters of groundwater contaminant concentrations below standards. Additionally, MW-2 should be sampled for an additional five quarters to ensure compliance with WQCC standards.

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

Sincerely,

Tami C. Ross, CHMM
Project Manager

Elizabeth McNally, P.E.
New Mexico Registration #15799

Attachments:

Tables
Table 1. Groundwater Measurement and Water Quality Data
Table 2. Groundwater Analytical Results

Figures
Figure 1. Topographic Site Location Map
Figure 2. Site Plan
Figure 3. Groundwater Elevations, January 2011
Figure 4. Groundwater Analytical Results, January 2011

Appendix A
Water Sample Collection Forms
Groundwater Analytical Laboratory Reports

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

Mr. Aaron Dailey
Williams Four Corners, LLC
188 CR 4900
Bloomfield, NM 87413

Mr. Nick Clark
719 Otten Street
Aztec, NM 87410

Files:2011/Williams/Sammons#2/Groundwater/Reports/1st Qutr Investigation Report 020311

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Williams Four Corners #2 Pipeline December 2009 Release
Flora Vista, San Juan County, New Mexico

Well ID	*Date Sampled*	*Depth to Water (ft)*	*Surveyed TOC (ft)*	*GW Elev. (ft)*	*Temperature (C)*	*Conductivity (mS)*	*DO (mg/L)*	*pH*	*ORP (mV)*
MW-1	20-Apr-10	2.43	5427.26	5424.83	10.19	4.392	0.43	7.05	35.1
MW-1	20-Jul-10	2.05	5427.26	5425.21	14.75	1.108	1.76	7.14	-89.7
MW-1	28-Oct-10	1.95	5427.26	5425.31	11.84	3.797	0.67	7.03	-71.0
MW-1	25-Jan-11	3.21	5427.26	5424.05	6.45	3.357	2.77	7.40	-13.8
MW-2	20-Apr-10	1.11	5424.98	5423.87	10.37	1.670	0.20	7.39	-132.7
MW-2	20-Jul-10	0.91	5424.98	5424.07	19.09	0.930	1.84	7.26	-99.3
MW-2	28-Oct-10	0.92	5424.98	5424.06	11.52	0.719	0.22	7.45	-103.5
MW-2	25-Jan-11	1.74	5424.98	5423.24	4.55	1.621	2.20	7.59	-66.8
MW-3	20-Apr-10	1.77	5425.44	5423.67	9.73	2.005	0.24	7.21	-69.0
MW-3	20-Jul-10	1.56	5425.44	5423.88	17.89	0.842	1.52	7.22	-85.6
MW-3	28-Oct-10	1.66	5425.44	5423.78	12.61	0.670	0.18	7.43	-108.4
MW-3	25-Jan-11	2.36	5425.44	5423.08	6.13	1.438	1.70	7.63	-63.5
MW-4	20-Apr-10	1.59	5424.38	5422.79	9.60	2.174	0.22	7.29	-88.4
MW-4	20-Jul-10	1.44	5424.38	5422.94	16.39	1.061	1.29	7.17	-87.7
MW-4	28-Oct-10	1.39	5424.38	5422.99	14.48	1.026	0.22	7.28	-111.1
MW-4	25-Jan-11	1.84	5424.38	5422.54	6.88	1.465	2.55	7.52	-56.2
MW-5	20-Apr-10	1.00	5424.17	5423.17	9.88	3.140	0.21	7.37	-102.6
MW-5	20-Jul-10	0.86	5424.17	5423.31	20.50	1.440	1.03	6.98	-93.5
MW-5	28-Oct-10	0.75	5424.17	5423.42	15.62	1.650	0.30	7.09	-91.7
MW-5	25-Jan-11	1.32	5424.17	5422.85	6.15	1.707	2.94	7.49	-53.3
MW-6	20-Apr-10	1.04	5424.91	5423.87	11.09	2.277	0.22	7.28	-113.6
MW-6	20-Jul-10	0.89	5424.91	5424.02	21.57	1.399	1.06	6.93	-82.3
MW-6	28-Oct-10	0.68	5424.91	5424.23	11.93	1.482	0.21	7.12	-89.6

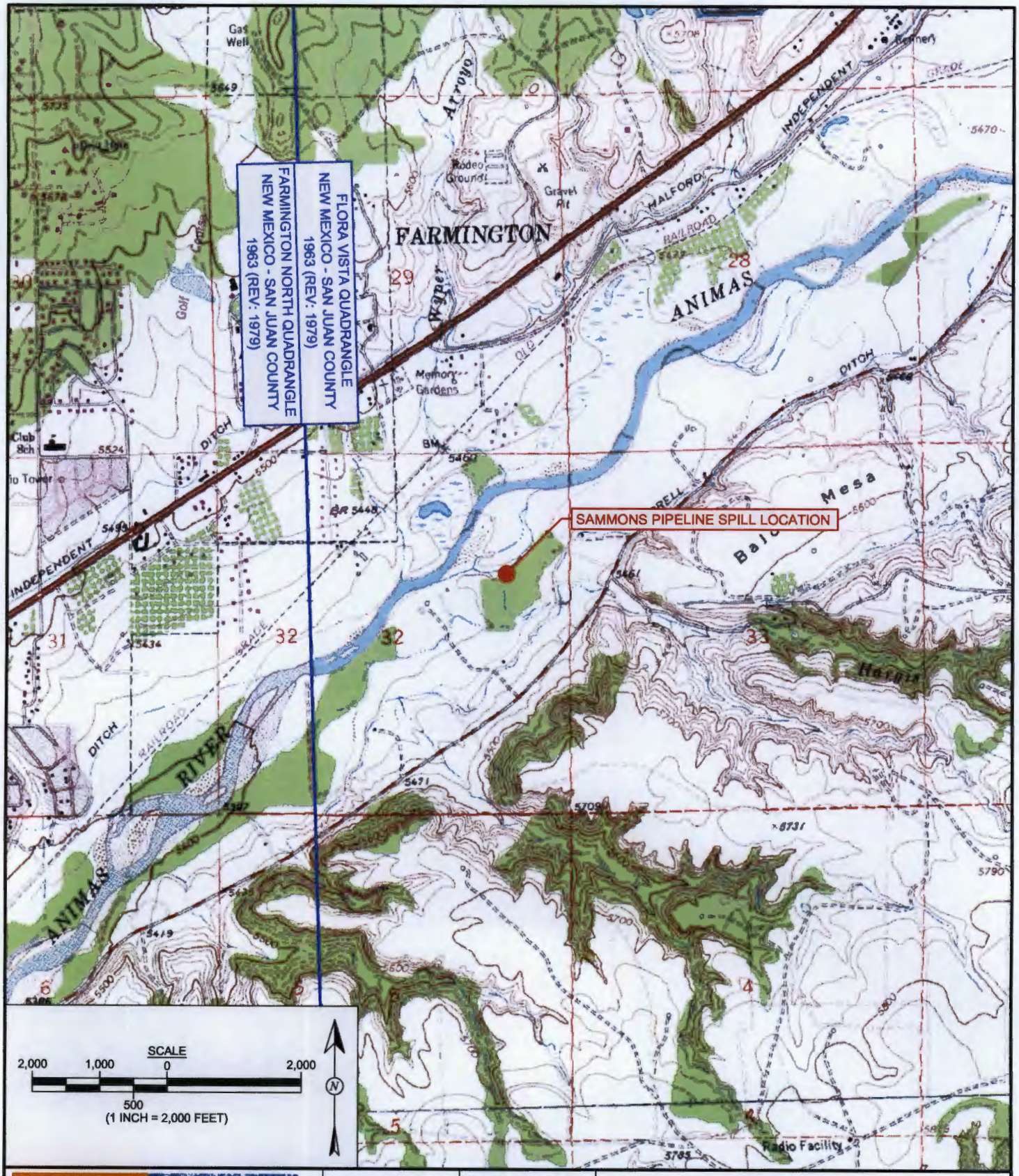
TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENT AND WATER QUALITY DATA
Williams Four Corners #2 Pipeline December 2009 Release
Flora Vista, San Juan County, New Mexico

Well ID	*Date Sampled*	*Depth to Water (ft)*	*Surveyed TOC (ft)*	*GW Elev. (ft)*	*Temperature (C)*	*Conductivity (mS)*	*DO (mg/L)*	*pH*	*ORP (mV)*
MW-6	25-Jan-11	1.51	5424.91	5423.40	4.67	1.726	6.51	7.47	-30.9

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Williams Four Corners #2 Pipeline December 2009 Release
Flora Vista, San Juan County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	GRO (C6-C10)	DRO (C10-C22)	MRO (C22-C32)
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)
Analytical Method		8260B	8260B	8260B	8260B	8015	8015	8015
WQCC Standard		10	10	10	10	NE	NE	NE
MW-1	20-Apr-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-1	20-Jul-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-1	28-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-1	25-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	20-Apr-10	11	<1.0	2.4	22	1.1	<1.0	<5.0
MW-2	20-Jul-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-2	28-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-2	25-Jan-11	2.6	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	20-Apr-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-3	20-Jul-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-3	28-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-3	25-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	20-Apr-10	9.9	<1.0	<1.0	<1.5	0.074	<1.0	<5.0
MW-4	20-Jul-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-4	28-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-4	25-Jan-11	2.5	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	20-Apr-10	9.7	<1.0	<1.0	<1.5	0.055	<1.0	<5.0
MW-5	20-Jul-10	<1.0	<1.0	<1.0	<1.5	<0.050	<1.0	<5.0
MW-5	28-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-5	25-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	20-Apr-10	4.6	<1.0	11	47	3.2	<1.0	<5.0
MW-6	20-Jul-10	<1.0	<1.0	<1.0	<1.5	0.079	<1.0	<5.0
MW-6	28-Oct-10	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
MW-6	25-Jan-11	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0
Field Blank	22-Apr-10	<1.0	<1.0	<1.0	<1.5	NA	NA	NA

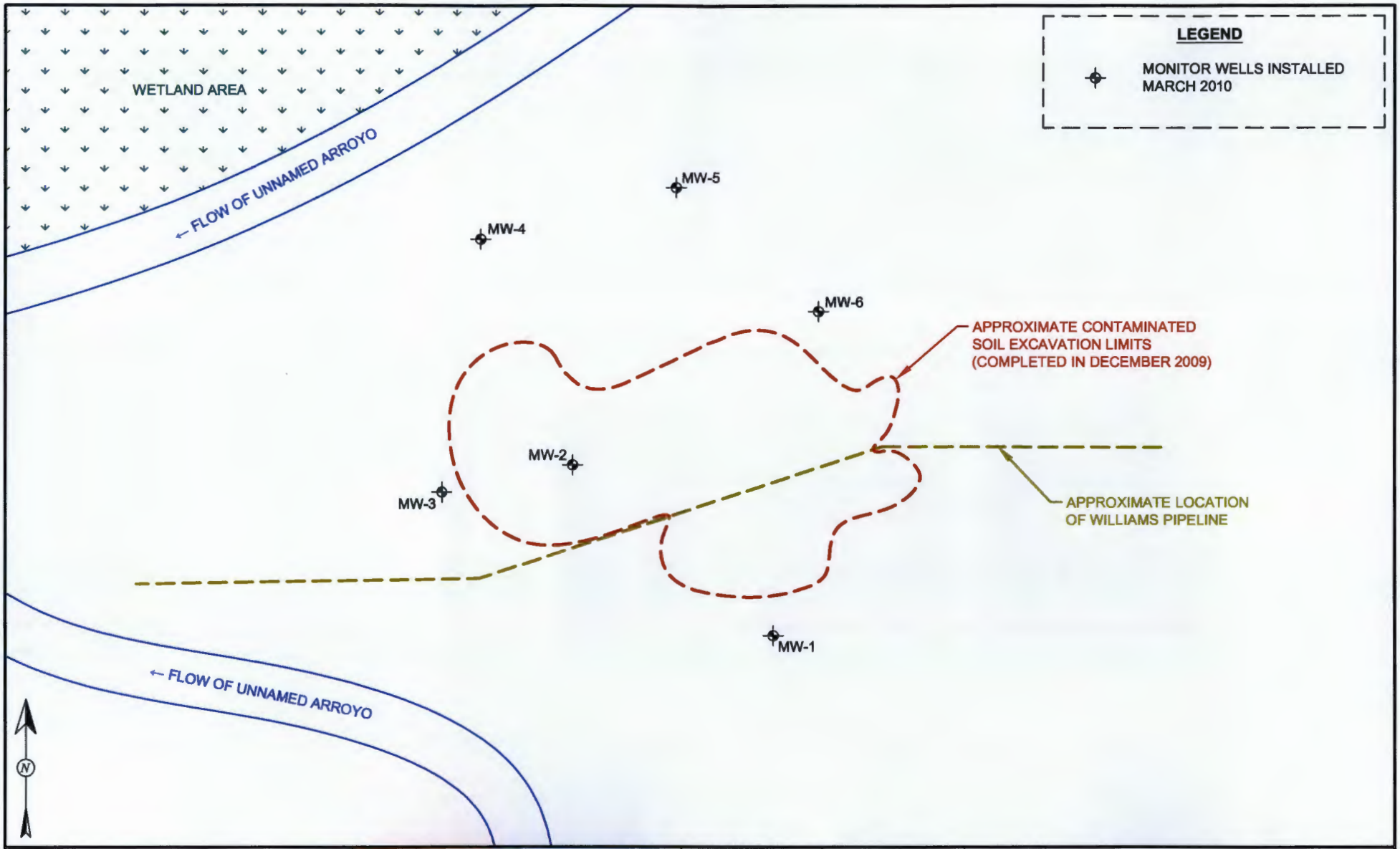
Notes: **< - Analyte below laboratory detection limit**
NA - Not Analyzed
NE - Not Established



DRAWN BY: C. Lameman	**DATE DRAWN:** December 29, 2009	**FIGURE 1**	
REVISIONS BY: C. Lameman	**DATE REVISED:** January 26, 2011	**TOPOGRAPHIC SITE LOCATION MAP**	
CHECKED BY: T. Ross	**DATE CHECKED:** February 3, 2011	WILLIAMS FOUR CORNERS, LLC SAMMONS #2 PIPELINE DECEMBER 2009 RELEASE FARMINGTON, SAN JUAN COUNTY, NEW MEXICO N36°45'18.240" , W108°06'54.540"	
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2011		

AES
Animas Environmental Services, LLC

S:\ANIMAS 2000\2011 PROJECTS\WILLIAMS FOUR CORNERS LLC\SAMMONS #2 GW INVESTIGATION 2011\MAPS AND DRAWINGS\FIGURE 1 TOPOGRAHIC LOCATION MAP

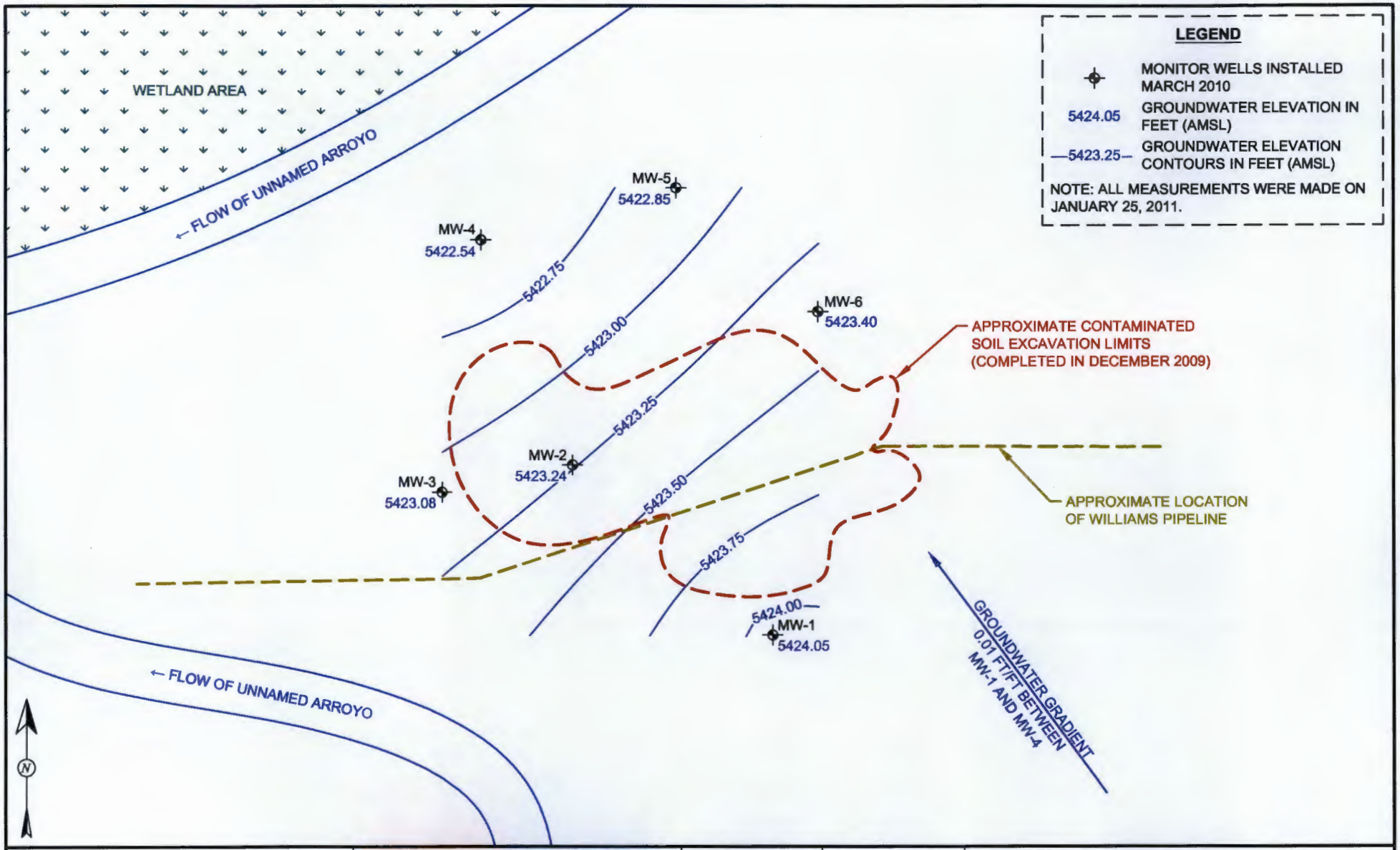


SCALE
50 30 0 50
10
(1 INCH = 50 FEET)

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** April 13, 2010	**FIGURE 2**
REVISIONS BY: C. Lameman	**DATE REVISED:** January 26, 2011	**GENERAL SITE PLAN**
CHECKED BY: T. Ross	**DATE CHECKED:** February 3, 2011	WILLIAMS FOUR CORNERS, LLC SAMMONS #2 PIPELINE DECEMBER 2009 RELEASE FARMINGTON, SAN JUAN COUNTY, NEW MEXICO N36°46'18.240" , W108°06'54.540"
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2011	

S:\ANIMAS 2000\2011 PROJECTS\WILLIAMS FOUR CORNERS LLC\SAMMONS #2 GW INVESTIGATION 2011\MAPS AND DRAWINGS\FIGURE 2 SITE PLAN



Animas Environmental Services, LLC

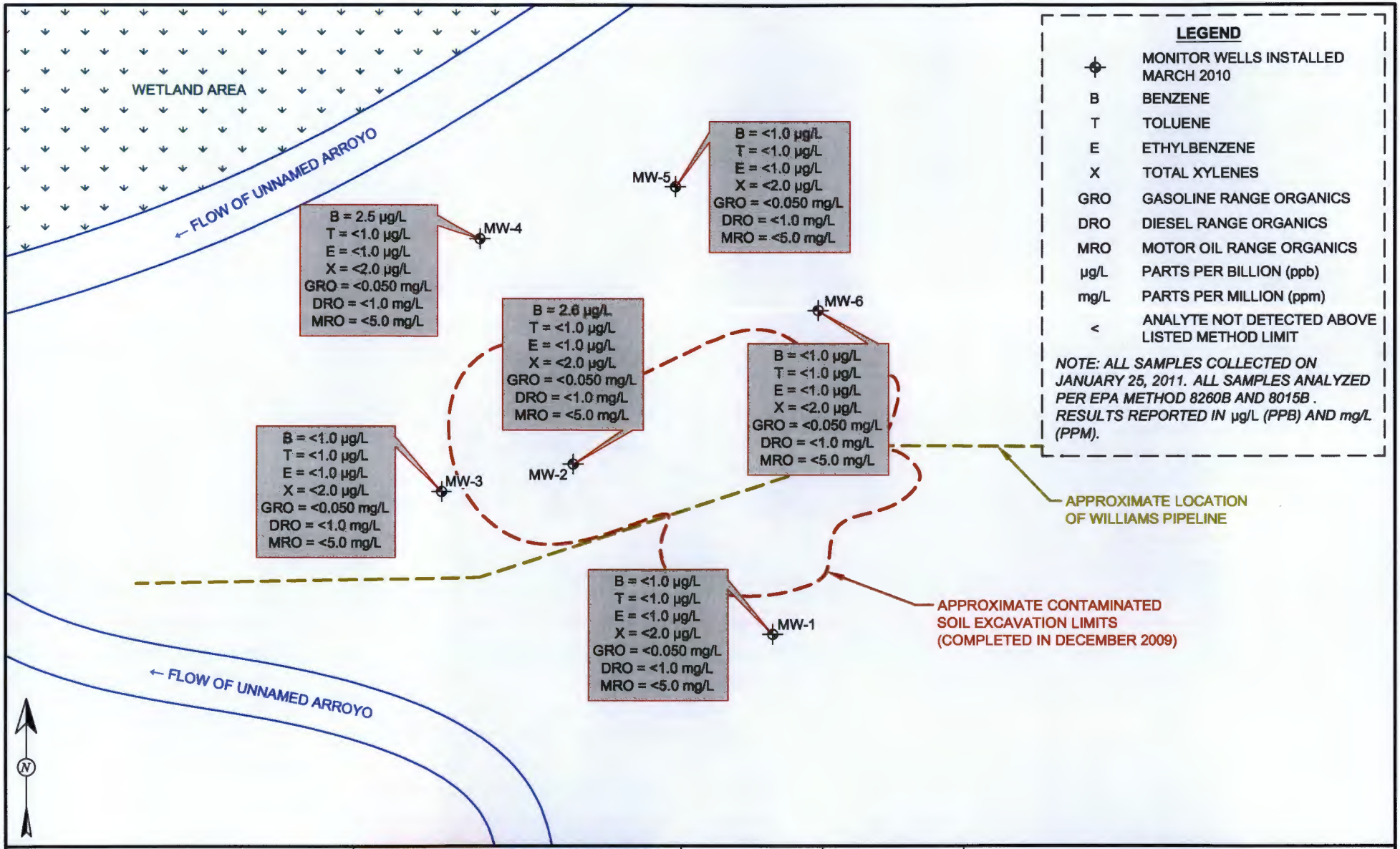
DRAWN BY: C. Lameman	**DATE DRAWN:** April 13, 2010
REVISIONS BY: C. Lameman	**DATE REVISED:** January 26, 2011
CHECKED BY: T. Ross	**DATE CHECKED:** February 3, 2011
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2011

FIGURE 3

GROUNDWATER ELEVATION CONTOURS JANUARY 2011

WILLIAMS FOUR CORNERS, LLC
SAMMONS #2 PIPELINE DECEMBER 2009 RELEASE
FARMINGTON, SAN JUAN COUNTY, NEW MEXICO
N36°46'18.240" , W108°06'54.540"

S:\ANIMAS 2000\2011 PROJECTS\WILLIAMS FOUR CORNERS LLC\SAMMONS #2 GW INVESTIGATION 2011\MAPS AND DRAWINGS\FIGURE 3 GROUNDWATER ELEVATION CONTOUR



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(1 INCH = 50 FEET)

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** April 13, 2010	**FIGURE 4**
REVISIONS BY: C. Lameman	**DATE REVISED:** February 3, 2011	**GROUNDWATER ANALYTICAL RESULTS JANUARY 2011**
CHECKED BY: T. Ross	**DATE CHECKED:** February 3, 2011	WILLIAMS FOUR CORNERS, LLC SAMMONS #2 PIPELINE DECEMBER 2009 RELEASE FARMINGTON, SAN JUAN COUNTY, NEW MEXICO N36°46'18.240" , W108°06'54.540"
APPROVED BY: E. McNally	**DATE APPROVED:** February 4, 2011	

S:\ANIMAS 2000\2011 PROJECTS\WILLIAMS FOUR CORNERS LLC\SAMMONS #2 GW INVESTIGATION 2011\MAPS AND DRAWINGS\FIGURE 4 GROUNDWATER ANALYTICAL RESULTS

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: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Tech: N. Willis

Project No.: AES 091204
Date: 1-25-11
Time: 1102
Form: 1 of 1

Well I.D.	Time	Depth to NAPL (ft.)	Depth to Water (ft.)	NAPL Thickness (ft.)	Notes / Observations
MW-1	1306		3.21		
MW-2	1337		1.74		
MW-3	1410		2.36		
MW-4	1105		1.84		
MW-5	1146		1.32		
MW-6	1227		1.51		

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: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 1
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 3.21 **Time:** 1306 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 091204
Date: 1-25-11
Arrival Time: 1304
Air Temp: 35°F
T.O.C. Elev. (ft): 5427.26
Total Well Depth (ft): 5.9

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
1312	6.23	4,370	3.49	7.31	5.4	1/16 gal.	
1315	6.52	3.951	4.27	7.36	-6.8	0.25	
1318	6.44	3.681	3.88	7.38	-11.3	0.25	
1321	6.45	3.357	2.77	7.40	-13.8	0.25	
1326							Samples Collected

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

Full VOCs per EPA Method 8260B (3 - 40 mL Vials w/ HCl preserve)

MRO, DRO, GRO per EPA Method 8015 (2 - 40 mL Vials w/ HCL perserve, 1 - 40 mL unpreserved)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-2

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

Site: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 1
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 1.74 **Time:** 1337 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 091204
Date: 1-25-11
Arrival Time: 1334
Air Temp: 35°F
T.O.C. Elev. (ft): 5424.98
Total Well Depth (ft): 5.96

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
1341	4.89	1.778	3.61	7.59	-56.2	1/16 gal.	
1344	4.57	1.632	2.19	7.58	-57.9	0.25	
1347	4.54	1.622	2.38	7.58	-62.0	0.25	
1350	4.48	1.619	2.09	7.59	-64.1	0.25	
1353	4.55	1.621	2.20	7.59	-66.8	0.25	
1358							Samples Collected

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

Full VOCs per EPA Method 8260B (3 - 40 mL Vials w/ HCl preserve)

MRO, DRO, GRO per EPA Method 8015 (2 - 40 mL Vials w/ HCL perserve, 1 - 40 mL unpreserved)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-3

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

Site: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 1
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 2.36 **Time:** 1410 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: D.T.P.: _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 091204
Date: 1-25-11
Arrival Time: 1408
Air Temp: 35°F
T.O.C. Elev. (ft): 5425.44
Total Well Depth (ft): 5.9

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
1413	5.61	1.369	3.30	7.72	-61.5	1/16 gal.	
1416	6.03	1.389	2.12	7.68	-62.1	0.25	
1419	6.11	1.411	1.82	7.65	-65.4	0.25	
1422	6.14	1.429	2.17	7.65	-63.3	0.25	
1425	6.13	1.438	1.70	7.63	-63.5	0.25	
1430							Samples Collected

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

Full VOCs per EPA Method 8260B (3 - 40 mL Vials w/ HCl preserve)

MRO, DRO, GRO per EPA Method 8015 (2 - 40 mL Vials w/ HCL perserve, 1 - 40 mL unpreserved)

Disposal of Purged Water: _____

Collected Samples Stored on Ice in Cooler: _____

Chain of Custody Record Complete: _____

Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM

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

Notes/Comments:

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-4

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

Site: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 1

Project No.: AES 091204
Date: 1-25-11
Arrival Time: 1102
Air Temp: 30°F
T.O.C. Elev. (ft): 5424.38
Total Well Depth (ft): 5.84

Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 1.84 **Time:** 1105 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Water Quality Parameters - Recorded During Well Purging

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (see reverse for calc.)	Notes/Observations
1114	7.31	1.742	5.01	7.46	-35.0	1/16 gal.	
1120	6.97	1.487	3.92	7.49	-43.9	0.25	
1123	6.99	1.471	3.96	7.49	-45.4	0.25	
1126	6.97	1.468	3.89	7.50	-51.1	0.25	
1129	6.88	1.465	2.55	7.52	-56.3	0.25	
1134							Samples Collected

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

Full VOCs per EPA Method 8260B (3 - 40 mL Vials w/ HCl preserve)

MRO, DRO, GRO per EPA Method 8015 (2 - 40 mL Vials w/ HCL perserve, 1 - 40 mL unpreserved)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-5

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

Site: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 1
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 1.32 **Time:** 1146 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 091204
Date: 1-25-11
Arrival Time: 1143
Air Temp: 35°F
T.O.C. Elev. (ft): 5424.17
Total Well Depth (ft): 5.91

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
1151	6.83	1.947	4.04	7.48	-63.2	1/16 gal.	
1156	6.04	1.763	3.47	7.47	-55.1	0.25	
1159	5.96	1.734	3.25	7.48	-52.7	0.25	
1202	6.02	1.722	3.11	7.50	-53.3	0.25	
1205	6.15	1.707	2.94	7.49	-53.2	0.25	
1210	—	—				—	Samples Collected

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

Full VOCs per EPA Method 8260B (3 - 40 mL Vials w/ HCl preserve)

MRO, DRO, GRO per EPA Method 8015 (2 - 40 mL Vials w/ HCL perserve, 1 - 40 mL unpreserved)

Disposal of Purged Water: _____

Collected Samples Stored on Ice in Cooler: _____

Chain of Custody Record Complete: _____

Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM

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

Notes/Comments:

MONITORING WELL SAMPLING RECORD

Monitor Well No: MW-6

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

Site: Williams Sammons #2 Pipeline Spill
Location: Flora Vista, San Juan County, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: N. Willis
Purge / No Purge: Purge
Well Diameter (in): 1
Initial D.T.W. (ft): _____ **Time:** _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 1.51 **Time:** 1227 *(taken prior to purging well)*
Final D.T.W. (ft): _____ **Time:** _____ *(taken after sample collection)*
If NAPL Present: **D.T.P.:** _____ **D.T.W.:** _____ **Thickness:** _____ **Time:** _____

Project No.: AES 091204
Date: 1-25-10
Arrival Time: ~~1226~~ 1226
Air Temp: 38°F
T.O.C. Elev. (ft): 5424.91
Total Well Depth (ft): 6.3

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
1229	5.98	1.731	3.11	7.48	-37.6	1/16 gal	
1237	4.68	1.769	3.47	7.49	-35.9	0.25	
1240	4.75	1.746	6.16	7.47	-34.0	0.25	
1243	4.66	1.730	6.52	7.46	-31.0	0.25	
1246	4.68	1.732	6.84	7.46	-33.0	0.25	
1249	4.67	1.726	6.51	7.47	-30.9	0.25	
1254	—	—	—	—	—	—	Samples Collected

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

Full VOCs per EPA Method 8260B (3 - 40 mL Vials w/ HCl preserve)

MRO, DRO, GRO per EPA Method 8015 (2 - 40 mL Vials w/ HCL perserve, 1 - 40 mL unpreserved)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, February 03, 2011

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

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

RE: Williams Sammons #2 Pipeline Spill

Order No.: 1101819

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 1/26/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *03-Feb-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-1
Lab Order:	1101819	**Collection Date:**	1/25/2011 1:26:00 PM
Project:	Williams Sammons #2 Pipeline Spill	**Date Received:**	1/26/2011
Lab ID:	1101819-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/28/2011 9:10:23 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/28/2011 9:10:23 PM
Surr: DNOP	131	86.9-151		%REC	1	1/28/2011 9:10:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/1/2011 6:36:01 PM
Surr: BFB	93.1	79.4-132		%REC	1	2/1/2011 6:36:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	2/1/2011 6:36:01 PM
Toluene	ND	1.0		µg/L	1	2/1/2011 6:36:01 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2011 6:36:01 PM
Xylenes, Total	ND	2.0		µg/L	1	2/1/2011 6:36:01 PM
Surr: 4-Bromofluorobenzene	107	81.3-151		%REC	1	2/1/2011 6:36:01 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *03-Feb-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-2
Lab Order:	1101819	**Collection Date:**	1/25/2011 1:58:00 PM
Project:	Williams Sammons #2 Pipeline Spill	**Date Received:**	1/26/2011
Lab ID:	1101819-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/28/2011 9:44:01 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/28/2011 9:44:01 PM
Surr: DNOP	127	86.9-151		%REC	1	1/28/2011 9:44:01 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/1/2011 7:06:12 PM
Surr: BFB	90.5	79.4-132		%REC	1	2/1/2011 7:06:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	2.6	1.0		µg/L	1	2/1/2011 7:06:12 PM
Toluene	ND	1.0		µg/L	1	2/1/2011 7:06:12 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2011 7:06:12 PM
Xylenes, Total	ND	2.0		µg/L	1	2/1/2011 7:06:12 PM
Surr: 4-Bromofluorobenzene	101	81.3-151		%REC	1	2/1/2011 7:06:12 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *03-Feb-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-3
Lab Order:	1101819	**Collection Date:**	1/25/2011 2:30:00 PM
Project:	Williams Sammons #2 Pipeline Spill	**Date Received:**	1/26/2011
Lab ID:	1101819-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/28/2011 10:17:36 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/28/2011 10:17:36 PM
Surr: DNOP	132	86.9-151		%REC	1	1/28/2011 10:17:36 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/1/2011 7:36:38 PM
Surr: BFB	92.3	79.4-132		%REC	1	2/1/2011 7:36:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	2/1/2011 7:36:38 PM
Toluene	ND	1.0		µg/L	1	2/1/2011 7:36:38 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2011 7:36:38 PM
Xylenes, Total	ND	2.0		µg/L	1	2/1/2011 7:36:38 PM
Surr: 4-Bromofluorobenzene	106	81.3-151		%REC	1	2/1/2011 7:36:38 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *03-Feb-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-4
Lab Order:	1101819	**Collection Date:**	1/25/2011 11:34:00 AM
Project:	Williams Sammons #2 Pipeline Spill	**Date Received:**	1/26/2011
Lab ID:	1101819-05	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/28/2011 10:50:55 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/28/2011 10:50:55 PM
Surr: DNOP	126	86.9-151		%REC	1	1/28/2011 10:50:55 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/1/2011 8:06:44 PM
Surr: BFB	92.8	79.4-132		%REC	1	2/1/2011 8:06:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	2.5	1.0		µg/L	1	2/1/2011 8:06:44 PM
Toluene	ND	1.0		µg/L	1	2/1/2011 8:06:44 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2011 8:06:44 PM
Xylenes, Total	ND	2.0		µg/L	1	2/1/2011 8:06:44 PM
Surr: 4-Bromofluorobenzene	107	81.3-151		%REC	1	2/1/2011 8:06:44 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *03-Feb-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-5
Lab Order:	1101819	**Collection Date:**	1/25/2011 12:10:00 PM
Project:	Williams Sammons #2 Pipeline Spill	**Date Received:**	1/26/2011
Lab ID:	1101819-06	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/28/2011 11:24:16 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/28/2011 11:24:16 PM
Surr: DNOP	135	86.9-151		%REC	1	1/28/2011 11:24:16 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/1/2011 10:36:44 PM
Surr: BFB	91.3	79.4-132		%REC	1	2/1/2011 10:36:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	2/1/2011 10:36:44 PM
Toluene	ND	1.0		µg/L	1	2/1/2011 10:36:44 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2011 10:36:44 PM
Xylenes, Total	ND	2.0		µg/L	1	2/1/2011 10:36:44 PM
Surr: 4-Bromofluorobenzene	107	81.3-151		%REC	1	2/1/2011 10:36:44 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *03-Feb-11*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MW-6
Lab Order:	1101819	**Collection Date:**	1/25/2011 12:54:00 PM
Project:	Williams Sammons #2 Pipeline Spill	**Date Received:**	1/26/2011
Lab ID:	1101819-07	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/29/2011 12:30:41 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/29/2011 12:30:41 AM
Surr: DNOP	128	86.9-151		%REC	1	1/29/2011 12:30:41 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/1/2011 11:06:52 PM
Surr: BFB	95.3	79.4-132		%REC	1	2/1/2011 11:06:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	2/1/2011 11:06:52 PM
Toluene	ND	1.0		µg/L	1	2/1/2011 11:06:52 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2011 11:06:52 PM
Xylenes, Total	ND	2.0		µg/L	1	2/1/2011 11:06:52 PM
Surr: 4-Bromofluorobenzene	113	81.3-151		%REC	1	2/1/2011 11:06:52 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: Williams Sammons #2 Pipeline Spill **Work Order:** 1101819

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range											
Sample ID: MB-25444		*MBLK*				Batch ID:	**25444**	Analysis Date:		1/28/2011 6:55:43 PM	
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-25444		*LCS*				Batch ID:	**25444**	Analysis Date:		1/28/2011 7:29:35 PM	
Diesel Range Organics (DRO)	6.221	mg/L	1.0	5	0	124	74	157			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: B		*MBLK*				Batch ID:	**R43461**	Analysis Date:		2/1/2011 12:56:10 PM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		*LCS*				Batch ID:	**R43461**	Analysis Date:		2/1/2011 11:55:58 AM	
Gasoline Range Organics (GRO)	0.5512	mg/L	0.050	0.5	0	110	83.7	124			
Method: EPA Method 8021B: Volatiles											
Sample ID: 1101819-02A MSD		*MSD*				Batch ID:	**R43461**	Analysis Date:		2/2/2011 4:07:04 AM	
Benzene	20.52	µg/L	1.0	20	0	103	87.7	108	1.26	13.8	
Toluene	20.61	µg/L	1.0	20	0	103	84.2	115	0.0485	17.1	
Ethylbenzene	20.36	µg/L	1.0	20	0	102	81.3	115	0.848	15.3	
Xylenes, Total	61.50	µg/L	2.0	60	0	102	83	118	0.832	13	
Sample ID: B		*MBLK*				Batch ID:	**R43461**	Analysis Date:		2/1/2011 12:56:10 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:	**R43461**	Analysis Date:		2/1/2011 12:26:06 PM	
Benzene	21.80	µg/L	1.0	20	0	109	84.7	118			
Toluene	22.38	µg/L	1.0	20	0	112	82	123			
Ethylbenzene	22.22	µg/L	1.0	20	0	111	83	118			
Xylenes, Total	66.86	µg/L	2.0	60	0	111	85.4	119			
Sample ID: 1101819-02A MS		*MS*				Batch ID:	**R43461**	Analysis Date:		2/2/2011 3:36:53 AM	
Benzene	20.78	µg/L	1.0	20	0	104	87.7	108			
Toluene	20.60	µg/L	1.0	20	0	103	84.2	115			
Ethylbenzene	20.19	µg/L	1.0	20	0	101	81.3	115			
Xylenes, Total	62.01	µg/L	2.0	60	0	103	83	118			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 1/26/2011

Work Order Number 1101819 | Received by: MMG

Sample ID labels checked by: [signature] Initials

Checklist completed by: [signature] Signature 1/26/11 Date

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**3.4°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E Comanche
Farmington NM 87401

Phone #: 505-564-2281

email or Fax#: 505-324-2022

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
Williams Sammons #2 Pipeline Spill

Project #:
AES 091204

Project Manager:

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.4°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1108119	BTEX + [redacted] (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
		H_2O	~~Trip Blanks~~	glass 2-40mL	HCl	1	X											
1-25-11	1326		MW-1	glass 6-40mL	1-NON 5-HCl	2	X	X										
	1358		MW-2			3	X	X										
	1430		MW-3			4	X	X										
	1134		MW-4			5	X	X										
	1210		MW-5			6	X	X										
1-25-11	1254		MW-6			7	X	X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
1-25-11	1545			1/26/11	9:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Did not Rec TB /AT 1/26/11 HEAL

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.