

3R - 437

GWMR

06 / 21 / 2013



ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

3R-437

June 21, 2013

Return Receipt Requested
7012 1010 0003 7361 4864

Mr. Glen von Gonten
New Mexico Energy, Minerals & Natural Resources
Department - Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Confirmation Groundwater Sampling Report
Smyers LS #1 December 2011 Pipeline Release
SW ¼ SW ¼, Sec 2, T31N, R11W
San Juan County, New Mexico**

Dear Mr. Von Gonten:

Enterprise Field Services, LLC (Enterprise) is submitting the enclosed report entitled: *Confirmation Groundwater Sampling Report, Smyers LS #1 December 2011 Pipeline Release*, dated June 12, 2013. This report documents the results of the May 2013 confirmation sampling event at the release site.

During the confirmation sampling event, six temporary wells were installed by hand driving a HydroPunch screen, and groundwater samples were collected from each of the temporary wells. Laboratory analytical results reported dissolved phase benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations below WQCC standards in each of the samples.

No further actions are proposed for this location. If you have any questions concerning the enclosed report, please do not hesitate to contact me at (713) 381-2286, or via email at: drsmith@eprod.com.

Sincerely,

David R. Smith, P.G.
Sr. Environmental Scientist

Rodney M. Sartor, REM
Sr. Manager, Environmental

/dep

Enclosure – *Confirmation Groundwater Sampling Report, Smyers LS #1 December 2011 Pipeline Release*

cc: Brandon Powell, New Mexico Oil Conservation Division, Aztec, NM
Jim Griswold, New Mexico Oil Conservation Division, Santa Fe, NM

ec: Sherrie Landon, Bureau of Land Management, Farmington, NM
Aaron Dailey, Enterprise Field Services, LLC, Farmington, NM
Animas Environmental Services, LLC, Farmington, NM

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2013 JUN 21 PM 2:54



Animas Environmental Services, LLC

www.animasenvironmental.com

June 12, 2013

David Smith

Via email with delivery confirmation receipt

drsmith@eprod.com

Enterprise Products Operating, LLC

1100 Louisiana

Houston, Texas 77002

624 E. Comanche
Farmington, NM 87401
505-564-2281

Durango, Colorado
970-403-3084

**RE: Smyers LS #1 December 2011 Pipeline Release
Confirmation Groundwater Sampling Report
SW¼ SW¼, Section 2, T31N, R11W
San Juan County, New Mexico**

Dear Mr. Smith:

On May 16, 2013, Animas Environmental Services, LLC (AES) completed confirmation groundwater sampling to evaluate the extent of natural attenuation of residual petroleum hydrocarbons associated with a release of natural gas condensate, which occurred along the Enterprise Field Services, LLC (Enterprise) 3-inch diameter Smyers LS #1 pipeline in December 2011. AES completed a groundwater investigation at the site in June 2012, and details of the investigation are included in the report entitled *Groundwater Investigation Report for Enterprise Products Company Smyers LS #1 Pipeline Release* dated September 2012. A work plan was also prepared, entitled *Groundwater Remediation and Confirmation Sampling Work Plan* dated September 2012 detailing the proposed application of a bio-remedial solution and subsequent confirmation sampling.

1.0 Release Location

1.1 Release Location and Ranking

The release location is approximately 7 miles northeast of Aztec, New Mexico, on Federal land under jurisdiction of the Bureau of Land Management (BLM) within the SW¼ SW¼, Section 2, T31N, R11W, San Juan County, New Mexico. Approximate latitude and longitude of the release was recorded as N36.9234 and W107.96485, respectively. A topographic site location map is included as Figure 1, and an aerial map showing the release location is included as Figure 2.

In accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) and prior to the initial assessment, the release location was assigned a

ranking score to establish action levels. The release was given a ranking score of 40 based on the following factors:

- **Depth to Groundwater:** Known depth to groundwater is approximately 3 feet below ground surface (bgs). (20 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** The release is located within an ephemeral stream known as Kiffen Wash, which discharges into the Animas River approximately 2.4 miles southeast of the release location. (20 points)

1.2 Previous Site Activities

1.2.1 Initial Release Assessment - December 2011 and January 2012

A release was reported at the location on December 26, 2011, and the cause of the release was attributed to two ruptures in the pipeline due to freezing.

On December 28, 2011, an initial release assessment was completed by AES personnel. Using a hand auger, four soil borings were each advanced to a total depth of 3 feet below ground surface (bgs), at which point groundwater was encountered. Soil samples were field screened, and confirmation soil and water samples were collected for laboratory analysis. Soil laboratory results confirmed that soil had been impacted above NMOCD action levels for benzene, total benzene, toluene, ethyl-benzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH). The highest concentrations were recorded in SB-4 with 98 mg/kg benzene, 1,800 mg/kg total BTEX, and 15,140 mg/kg TPH. The groundwater samples had reported concentrations of BTEX below applicable New Mexico Water Quality Control Commission (WQCC) standards. Based on laboratory results remedial excavation was scheduled.

On January 12 and 13, 2012, approximately 142 cubic yards of petroleum hydrocarbon contaminated soil were excavated and transported off-site for disposal by an Enterprise contractor. The final excavation dimensions measured approximately 21 feet by 29 feet by 3 feet deep. Prior to the excavation being backfilled, AES collected confirmation soil and groundwater samples, the results of which confirmed that all hydrocarbon contaminated soil had been excavated, but that groundwater had been impacted by the release. Details of the initial release assessment were submitted in the *Smyers LS #1 Release Report* prepared by AES and dated March 9, 2012. Based on laboratory analytical results, AES recommended further assessment of groundwater dissolved phase contaminant impacts using a HydroPunch to install temporary wells.

1.2.2 Groundwater Investigation – June 2012

On June 20, 2012, AES completed a groundwater investigation in order to delineate the full extent of petroleum hydrocarbon impacts on groundwater resulting from the release. The investigation included the installation of nine temporary wells using a HydroPunch sampling tool and the collection of groundwater samples.

Groundwater was encountered at depths ranging from about 4.0 feet bgs in TW-6 to 6.4 feet bgs in TW-4. Groundwater laboratory analytical results showed that dissolved phase benzene concentrations were above the WQCC standard of 10 µg/L in TW-2 (92 µg/L), TW-7 (44 µg/L), and TW-8 (150 µg/L). TW-8 exceeded the WQCC standard for toluene with 920 µg/L and for ethylbenzene with 1,200 µg/L. Dissolved phase xylene concentrations were above the WQCC standard of 620 µg/L in TW-2 (1,600 µg/L) and in TW-8 (11,000 µg/L). All other dissolved phase BTEX concentrations were below WQCC standards or below laboratory detection limits.

Dissolved phase GRO concentrations were reported in TW-1 (0.065 mg/L), TW-2 (8.2 mg/L), TW-7 (0.74 mg/L), and TW-8 (77 mg/L), and DRO was reported in TW-7 with a concentration of 1.2 mg/L. All other samples were below laboratory detection limits for TPH (as GRO/DRO). Details of the groundwater investigation were included in the report entitled *Groundwater Investigation Report for Enterprise Products Company Smyers LS #1 Pipeline Release* prepared by AES and submitted on September 14, 2012.

2.0 Confirmation Soil Sampling

2.1 Confirmation Groundwater Sampling

On May 16, 2013, Heather Woods and Lavina Lamone of AES installed six additional temporary wells (HP-1 through HP-6) by hand driving the HydroPunch screen with a fencepost driver, and screens were driven to depths ranging from approximately 3 to 4 feet bgs. The internal slotted screen of the HydroPunch was set across the top of the shallow groundwater table at depths ranging from 1.4 to 3.5 feet bgs and left in place to allow groundwater to infiltrate and reach equilibrium.

Groundwater samples were collected from each of the temporary wells with a 1 inch bailer. Following collection of each groundwater sample, depth to groundwater was measured with a water level indicator. Additionally, water quality parameters (pH, temperature, electrical conductivity, and oxygen reduction potential) were recorded for each temporary well, with the exception of HP-3 through HP-5. Depth to water and water quality parameters were not recorded for HP-3 through HP-5 due to low yield from these wells.

2.2.1 Field Measurements

Water quality measurements were recorded, and temperature readings ranged from 18.45°C in HP-1 to 19.31°C in HP-6. Conductivity readings were between 6.452 mS in HP-2 and 9.744 mS in HP-1, and pH ranged from 6.40 in HP-1 to 7.27 in HP-6. Dissolved oxygen ranged from 3.01 mg/L in HP-2 to 3.48 mg/L in HP-1. Water quality measurements are tabulated in Table 1.

2.2.2 Laboratory Analyses

The samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. The samples were maintained on ice until delivery to the analytical laboratory, Hall, in Albuquerque, New Mexico. The groundwater samples were laboratory analyzed for:

- BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B.

2.2.3 Laboratory Analytical Results

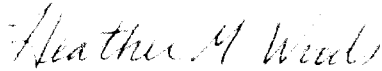
Laboratory analytical results for dissolved phase BTEX were below the WQCC standards in the six temporary wells (HP-1 through HP-6), with BTEX concentrations below the laboratory detection limits in all of the samples, except for HP-3 and HP-6. Concentrations above the laboratory detection limits were reported in HP-3 (2.8 µg/L toluene) and in HP-6 (2.1 µg/L toluene, 26 µg/L ethylbenzene, and 22 µg/L xylenes). Laboratory analytical results are included in Table 2 and on Figure 3. Laboratory analytical reports are included in the Appendix.

3.0 Conclusions and Recommendations

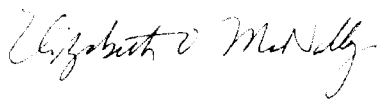
AES conducted shallow groundwater sampling at the December 2011 release locations to confirm natural attenuation of residual petroleum hydrocarbons on May 16, 2013. Based on field observations and laboratory analytical results for the groundwater samples, dissolved phase BTEX concentrations were confirmed to be below WQCC standards. No further work is recommended at the Smyers LS #1 release area.

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

Sincerely,



Heather M. Woods, P.G.
Project Manager



Elizabeth McNally, P.E.

Attachments:

- Table 1. Summary of Groundwater Measurements and Water Quality Data
- Table 2. Summary of Groundwater Analytical Results
- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Location Map
- Figure 3. Confirmation Groundwater Sample Locations and Results, May 2013
- Laboratory Analytical Report (Hall 1305731)

CC: Glenn von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

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

Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

Sherrie Landon
Environmental Protection Specialist
Via email with delivery confirmation receipt
slandon@blm.gov
Bureau of Land Management
6251 College Blvd., Suite A
Farmington, New Mexico 87402

Aaron Dailey
Via electronic copy
Enterprise Field Services, LLC
614 Reilly Avenue
Farmington, NM 87401

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Confirmation Sampling Report 061213.docx

TABLE 1
SUMMARY OF GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Enterprise Products Company Smyers LS #1 Confirmation Groundwater Sampling
San Juan County, New Mexico

<i>Well ID</i>	<i>Date</i>	<i>Depth to Water (ft below TOC)</i>	<i>pH</i>	<i>Conductivity (mS)</i>	<i>Dissolved Oxygen (mg/L)</i>	<i>Temp. (°C)</i>	<i>Purge Volume (gallons)</i>
HP-1	16-May-13	1.54	6.40	9.744	3.48	18.45	0.1
HP-2	16-May-13	3.52	7.25	6.452	3.01	18.84	0.1
HP-3	16-May-13	2.32	NM - INSUFFICIENT WATER				
HP-4	16-May-13	2.35	NM - INSUFFICIENT WATER				
HP-5	16-May-13	2.95	NM - INSUFFICIENT WATER				
HP-6	16-May-13	2.59	7.27	8.021	3.02	19.31	0.1

NOTES: NM = NOT MEASURED

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Enterprise Products Company Smyers LS #1 Confirmation Groundwater Sampling
San Juan County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes
		µg/L	µg/L	µg/L	µg/L
Sample Method		EPA Method 8021/8260			
WQCC STANDARD		10	750	750	620
HP-1	16-May-13	<2.0	<2.0	<2.0	<4.0
HP-2	16-May-13	<10	<10	<10	<20
HP-3	16-May-13	<2.0	2.8	<2.0	<4.0
HP-4	16-May-13	<2.0	<2.0	<2.0	<4.0
HP-5	16-May-13	<2.0	<2.0	<2.0	<4.0
HP-6	16-May-13	<2.0	2.1	26	22

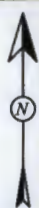
Notes:

<	Analyte not detected above listed method limit
NE	Not established
µg/L	Micrograms per liter (ppb)

CEDAR HILL QUADRANGLE
NEW MEXICO - SAN JUAN COUNTY
1985

SMYERS LS #1
RELEASE LOCATION

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



AES



Animas Environmental Services, LLC

DRAWN BY:
C. Lameman

DATE DRAWN:
July 12, 2012

REVISIONS BY:
C. Lameman

DATE REVISED:
May 17, 2013

CHECKED BY:
T. Ross

DATE CHECKED:
May 17, 2013

APPROVED BY:
E. McNally

DATE APPROVED:
May 17, 2013

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
ENTERPRISE FIELD SERVICES, LLC
SMYERS LS #1 DECEMBER 2011 PIPELINE RELEASE
SW¼ SW¼, SEC. 2, T31N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.9234, W107.96485



DRAWN BY: C. Lameman	DATE DRAWN: July 12, 2012
REVISIONS BY: C. Lameman	DATE REVISED: May 17, 2013
CHECKED BY: T. Ross	DATE CHECKED: May 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: May 17, 2013

FIGURE 2
AERIAL SITE MAP ENTERPRISE FIELD SERVICES, LLC SMYERS LS #1 DECEMBER 2011 PIPELINE RELEASE SW $\frac{1}{4}$ SW $\frac{1}{4}$, SEC. 2, T31N, R11W SAN JUAN COUNTY, NEW MEXICO N36.9234, W107.96485

FIGURE 3

**HYDROPUNCH GROUNDWATER
SAMPLING LOCATIONS AND RESULTS
MAY 2013**

ENTERPRISE FIELD SERVICES, LLC
SMYERS LS #1 DECEMBER 2011
PIPELINE RELEASE
SW¼ SW¼, SEC. 2, T31N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.9234, W107.96485

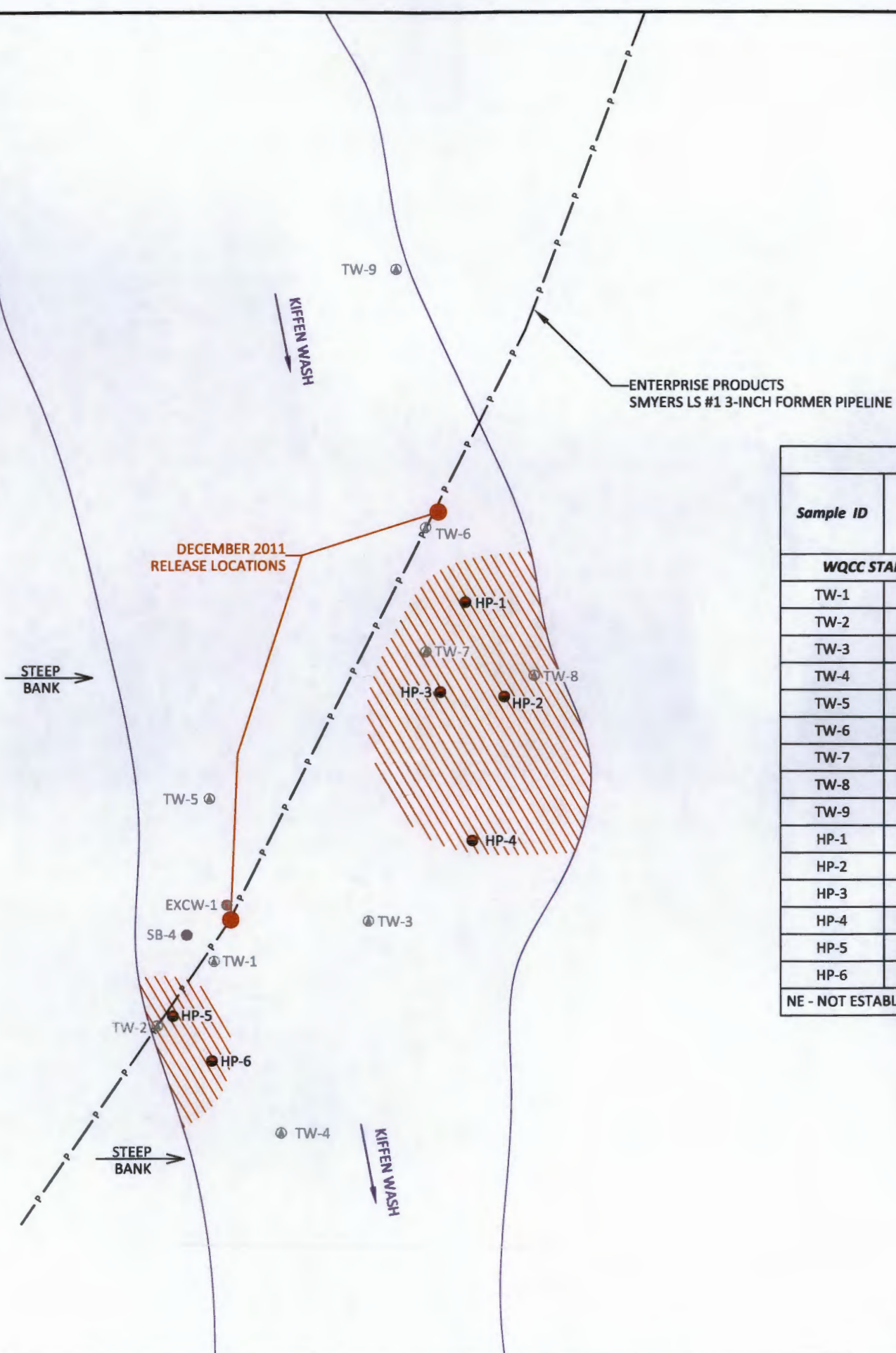
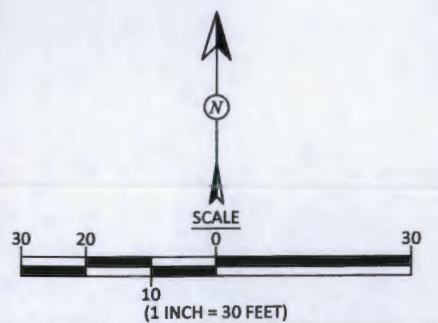


Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: July 12, 2012
REVISIONS BY: C. Lameman	DATE REVISED: May 17, 2013
CHECKED BY: T. Ross	DATE CHECKED: May 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: June 12, 2013

LEGEND

- HYDROPUNCH LOCATIONS
MAY 2013
- Ⓢ HYDROPUNCH SAMPLE LOCATIONS
JUNE 2012
- EXCAVATION WATER SAMPLE
JANUARY 13, 2012
- SOIL BORING SAMPLE
DECEMBER 28, 2011
- ▨ INFERRED DISSOLVED PHASE
PLUME ABOVE WQCC STANDARDS



Groundwater Laboratory Analytical Results							
Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	TPH- GRO (mg/L)	TPH- DRO (mg/L)
WQCC STANDARD		10	750	750	620	NE	NE
TW-1	6/20/12	<1.0	<1.0	<1.0	<2.0	0.065	<1.0
TW-2	6/20/12	92	280	280	1,600	8.2	<1.0
TW-3	6/20/12	<2.0	2.3	<2.0	<4.0	<0.10	<1.0
TW-4	6/20/12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
TW-5	6/20/12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
TW-6	6/20/12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
TW-7	6/20/12	44	<5.0	97	<10	0.74	1.2
TW-8	6/20/12	150	920	1,200	11,000	77	<10
TW-9	6/20/12	<2.0	<2.0	<2.0	<4.0	<0.10	<1.0
HP-1	5/16/13	<2.0	<2.0	<2.0	<4.0	NA	NA
HP-2	5/16/13	<10	<10	<10	<20	NA	NA
HP-3	5/16/13	<2.0	2.8	<2.0	<4.0	NA	NA
HP-4	5/16/13	<2.0	<2.0	<2.0	<4.0	NA	NA
HP-5	5/16/13	<2.0	<2.0	<2.0	<4.0	NA	NA
HP-6	5/16/13	<2.0	2.1	26	22	NA	NA

NE - NOT ESTABLISHED, NA - NOT ANALYZED



*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

June 07, 2013

Tami Ross
Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 793-2072
FAX (505) 324-2022

RE: Enterprise Smyers LS #1

OrderNo.: 1305731

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/17/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued May 23, 2013.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1305731

Date Reported: 6/7/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** HP-1**Project:** Enterprise Smyers LS #1**Collection Date:** 5/16/2013 10:42:00 AM**Lab ID:** 1305731-001**Matrix:** AQUEOUS**Received Date:** 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: DAM
Benzene	ND	2.0		µg/L	2	5/21/2013 10:52:31 AM	R10781
Toluene	ND	2.0		µg/L	2	5/21/2013 10:52:31 AM	R10781
Ethylbenzene	ND	2.0		µg/L	2	5/21/2013 10:52:31 AM	R10781
Xylenes, Total	ND	4.0		µg/L	2	5/21/2013 10:52:31 AM	R10781
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 10:52:31 AM	R10781
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 10:52:31 AM	R10781
Surr: 4-Bromofluorobenzene	104	69.4-129		%REC	2	5/21/2013 10:52:31 AM	R10781

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical Report

Lab Order 1305731

Date Reported: 6/7/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** HP-2**Project:** Enterprise Smyers LS #1**Collection Date:** 5/16/2013 10:56:00 AM**Lab ID:** 1305731-002**Matrix:** AQUEOUS**Received Date:** 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	10		µg/L	10	5/20/2013 11:39:00 PM	R10751
Toluene	ND	10		µg/L	10	5/20/2013 11:39:00 PM	R10751
Ethylbenzene	ND	10		µg/L	10	5/20/2013 11:39:00 PM	R10751
Xylenes, Total	ND	20		µg/L	10	5/20/2013 11:39:00 PM	R10751
1,2,4-Trimethylbenzene	ND	10		µg/L	10	5/20/2013 11:39:00 PM	R10751
1,3,5-Trimethylbenzene	ND	10		µg/L	10	5/20/2013 11:39:00 PM	R10751
Surr: 4-Bromofluorobenzene	97.7	69.4-129		%REC	10	5/20/2013 11:39:00 PM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical ReportLab Order **1305731**Date Reported: **6/7/2013****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** HP-3**Project:** Enterprise Smyers LS #1**Collection Date:** 5/16/2013 11:16:00 AM**Lab ID:** 1305731-003**Matrix:** AQUEOUS**Received Date:** 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	2.0		µg/L	2	5/21/2013 12:09:03 AM	R10751
Toluene	2.8	2.0		µg/L	2	5/21/2013 12:09:03 AM	R10751
Ethylbenzene	ND	2.0		µg/L	2	5/21/2013 12:09:03 AM	R10751
Xylenes, Total	ND	4.0		µg/L	2	5/21/2013 12:09:03 AM	R10751
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 12:09:03 AM	R10751
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 12:09:03 AM	R10751
Surr: 4-Bromofluorobenzene	95.6	69.4-129		%REC	2	5/21/2013 12:09:03 AM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical Report

Lab Order 1305731

Date Reported: 6/7/2013

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Animas Environmental Services**Client Sample ID:** HP-4**Project:** Enterprise Smyers LS #1**Collection Date:** 5/16/2013 11:27:00 AM**Lab ID:** 1305731-004**Matrix:** AQUEOUS**Received Date:** 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	2.0		µg/L	2	5/21/2013 12:39:18 AM	R10751
Toluene	ND	2.0		µg/L	2	5/21/2013 12:39:18 AM	R10751
Ethylbenzene	ND	2.0		µg/L	2	5/21/2013 12:39:18 AM	R10751
Xylenes, Total	ND	4.0		µg/L	2	5/21/2013 12:39:18 AM	R10751
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 12:39:18 AM	R10751
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 12:39:18 AM	R10751
Surr: 4-Bromofluorobenzene	95.4	69.4-129		%REC	2	5/21/2013 12:39:18 AM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305731

Date Reported: 6/7/2013

CLIENT: Animas Environmental Services

Client Sample ID: HP-5

Project: Enterprise Smyers LS #1

Collection Date: 5/16/2013 2:42:00 PM

Lab ID: 1305731-005

Matrix: AQUEOUS

Received Date: 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	2.0		µg/L	2	5/21/2013 1:09:42 AM	R10751
Toluene	ND	2.0		µg/L	2	5/21/2013 1:09:42 AM	R10751
Ethylbenzene	ND	2.0		µg/L	2	5/21/2013 1:09:42 AM	R10751
Xylenes, Total	ND	4.0		µg/L	2	5/21/2013 1:09:42 AM	R10751
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 1:09:42 AM	R10751
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	5/21/2013 1:09:42 AM	R10751
Surr: 4-Bromofluorobenzene	98.0	69.4-129		%REC	2	5/21/2013 1:09:42 AM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2 for VOA and TOC only.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: HP-6

Project: Enterprise Smyers LS #1

Collection Date: 5/16/2013 12:40:00 PM

Lab ID: 1305731-006

Matrix: AQUEOUS

Received Date: 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: DAM
Benzene	ND	2.0		µg/L	2	5/21/2013 11:21:16 AM	R10781
Toluene	2.1	2.0		µg/L	2	5/21/2013 11:21:16 AM	R10781
Ethylbenzene	26	2.0		µg/L	2	5/21/2013 11:21:16 AM	R10781
Xylenes, Total	22	4.0		µg/L	2	5/21/2013 11:21:16 AM	R10781
1,2,4-Trimethylbenzene	110	2.0		µg/L	2	5/21/2013 11:21:16 AM	R10781
1,3,5-Trimethylbenzene	11	2.0		µg/L	2	5/21/2013 11:21:16 AM	R10781
Surr: 4-Bromofluorobenzene	145	69.4-129	S	%REC	2	5/21/2013 11:21:16 AM	R10781

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical ReportLab Order **1305731**Date Reported: **6/7/2013****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** Trip Blank**Project:** Enterprise Smyers LS #1**Collection Date:****Lab ID:** 1305731-007**Matrix:** AQUEOUS**Received Date:** 5/17/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	5/21/2013 2:10:10 AM	R10751
Toluene	ND	1.0		µg/L	1	5/21/2013 2:10:10 AM	R10751
Ethylbenzene	ND	1.0		µg/L	1	5/21/2013 2:10:10 AM	R10751
Xylenes, Total	ND	2.0		µg/L	1	5/21/2013 2:10:10 AM	R10751
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/21/2013 2:10:10 AM	R10751
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/21/2013 2:10:10 AM	R10751
Surr: 4-Bromofluorobenzene	95.5	69.4-129		%REC	1	5/21/2013 2:10:10 AM	R10751

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1305731

07-Jun-13

Client: Animas Environmental Services

Project: Enterprise Smyers LS #1

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R10751	RunNo:	10751					
Prep Date:		Analysis Date:	5/20/2013	SeqNo:	303952	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		98.5	69.4	129			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R10751	RunNo:	10751					
Prep Date:		Analysis Date:	5/20/2013	SeqNo:	303953	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	63	2.0	60.00	0	106	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	103	80	120			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	106	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	69.4	129			

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R10781	RunNo:	10781					
Prep Date:		Analysis Date:	5/21/2013	SeqNo:	304872	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		98.5	69.4	129			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R10781	RunNo:	10781					
Prep Date:		Analysis Date:	5/21/2013	SeqNo:	304875	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	80	120			
Toluene	21	1.0	20.00	0	104	80	120			

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 | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2 for VOA and TOC only. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1305731

07-Jun-13

Client: Animas Environmental Services

Project: Enterprise Smyers LS #1

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R10781	RunNo:	10781					
Prep Date:		Analysis Date:	5/21/2013	SeqNo:	304875	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	62	2.0	60.00	0	104	80	120			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	101	80	120			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		98.6	69.4	129			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1305731

RcptNo: 1

Received by/date: AG 05/17/13

Logged By: Anne Thorne 5/17/2013 10:03:00 AM

Completed By: Anne Thorne 5/17/2013

Reviewed By: IO 05/17/2013

Anne Thorne

Anne Thorne

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

