# 3R - 438

# Q3 2013 GWMR

12/18/2013



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

ENTERPRISE PRODUCTS OPERATING LLC

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December 18, 2013

Return Receipt Requested 7010 0290 0002 7764 0531

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

Attn: Jim Griswold

Re: 3<sup>rd</sup> Quarter 2013 Groundwater Monitoring and Well Installation Report

Lateral 6C September 2011 Pipeline Release

NMOCD Order Number: 3RP-438-0 NE¼ SW¼, Section 26, T28N, R11W San Juan County, New Mexico

Dear Mr. Von Gonten:

Enterprise Field Services, LLC (Enterprise) is submitting the enclosed report entitled: 3<sup>rd</sup> Quarter 2013 Groundwater Monitoring and Well Installation Report, dated December 10, 2013. This report documents the results of the fifth consecutive quarterly groundwater monitoring event conducted at the above-referenced release site during September 2013, as well as the installation of four additional monitor wells to further delineate the lateral extent of the groundwater contaminant impact.

During this quarterly event, a total of seven monitor wells (MW-3 through MW-9) were monitored and sampled at the release site. Note that during this sampling event non-aqueous phase liquid (NAPL) was observed for the third consecutive quarter in MW-1 (0.48 feet) and for the second consecutive quarter in MW-2 (0.14 feet). Dissolved-phase benzene concentrations exceeding applicable Water Quality Control Commission (WQCC) Groundwater Quality Standards were present in two wells, including MW-3 (150 µg/L) and MW-4 (830 µg/L). Also, dissolved phase xylene concentrations were above the WQCC standard in MW-6 (1,200 µg/L). Dissolved-phase concentrations of toluene and ethylbenzene were below applicable WQCC standards. Total dissolved solids concentrations were measured for the first time and were consistent with concentrations observed at other locations along the Kutz Wash.

Enterprise will continue to monitor and sample site monitor wells on a quarterly basis and will conduct a "free product" bail down recovery test within MW-1 and MW-2 to better estimate free product thickness in the formation and recovery rates. Enterprise will also conduct an aquifer slug test to better determine groundwater characteristics. Results of the "free product" bail down and recovery test and aquifer slug test will be submitted in the next quarterly report. The next groundwater sampling event is tentatively scheduled for December 2013.

December 18, 2013 Mr. Glenn von Gonten Page 2

If you have any questions concerning the enclosed report, please do not hesitate to contact me at (713) 381-2286, or via email at: <a href="mailto:drsmith@eprod.com">drsmith@eprod.com</a>.

Sincerely,

David R. Smith, P.G.

Sr. Environmental Scientist

reg Miller, P.G.

Supervisor, Remediation

/dep

Enclosure – 3<sup>rd</sup> Quarter 2013 Groundwater Monitoring and Well Installation Report - Lateral 6C September 2011 Pipeline Release

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

ec: Mark Kelly, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM Heather Woods – Animas Environmental Services, Farmington, NM



December 10, 2013

David Smith
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Via email with delivery confirmation receipt: drsmith@eprod.com

RE: 3<sup>rd</sup> Quarter 2013 Groundwater Monitoring and Well Installation Report

**Enterprise Field Services, LLC** 

Lateral 6C September 2011 Pipeline Release

NMOCD Order Number: 3RP-438-0 NE% SW%, Section 26, T28N, R11W San Juan County, New Mexico

Dear Mr. Smith:

Animas Environmental Services, LLC (AES), on behalf of Enterprise Field Services, LLC (Enterprise), has prepared this 3<sup>rd</sup> Quarter 2013 Groundwater Monitoring Report for the Lateral 6C September 2011 Pipeline Release in accordance with New Mexico Oil Conservation Division (NMOCD) and New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) regulations. This report documents the fifth consecutive quarterly monitoring and sampling event for the subject release location and the third sampling event for 2013. Also, additional groundwater investigation work was completed on September 7, 2012, in accordance with a workplan previously prepared by AES and dated August 3, 2012. 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 and NMOCD Ranking

The release area is located on Federal land under jurisdiction of the Bureau of Land Management (BLM) within the NE¼ SW¼, Section 26, T28N, R11W, San Juan County, New Mexico. Latitude and longitude of the release were recorded as N36.63202 and W107.97400, 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 NMOCD release protocols, action levels were established per NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993) prior to the initial assessment. The release was given a ranking score of 40 based on the following factors:

- Depth to Groundwater: Known depth to groundwater is less than 20 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 location is within the floodplain of Kutz wash, which is less than 200 feet to the northeast. Kutz Wash flows north and ultimately discharges into the San Juan River. (20 points)

# 1.2 Initial Release Assessment and Investigation

A pipeline release was discovered on September 22, 2011, by Enterprise personnel during routine operations activities. The release was immediately reported to BLM, and a Form C-141 was submitted to NMOCD on September 29, 2011. The estimated quantity of the initial release of natural gas and condensate was 7 barrels.

#### 1.2.1 Initial Release Assessment

AES personnel met with Enterprise representatives at the release location on September 22, 2011. Following the repair on September 23, 2011, AES collected one soil sample from the base of the small repair excavation at 6 feet bgs. The sample was field screened for volatile organic compounds (VOCs) with a photo-ionization detector (PID) organic vapor meter (OVM). Based on the field screening reading of 3,974 parts per million (ppm) and the anticipated shallow depth of groundwater, AES and Enterprise determined that a limited investigation of the release extent would be appropriate prior to implementing further contaminant mitigation measures.

#### 1.2.2 Release Assessment - October 2011

On October 11, 2011, AES completed four test hole excavations around the original release location and at distances of up to 100 feet from the release point. AES recorded the encountered soil materials, collected field screening samples and soil samples for laboratory analysis from each test hole, and collected groundwater samples from two of the test holes. Soil concentrations for total benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) in sample TP-1 at 10 feet exceeded the applicable NMOCD action levels with 169 mg/kg total BTEX and 1,429 mg/kg TPH. Benzene, total BTEX, TPH-GRO, and TPH for diesel range organics (DRO) concentrations in sample TP-2 at 15 feet also exceeded the applicable NMOCD action levels with 45 mg/kg benzene, 513 mg/kg total BTEX, and 5,170 mg/kg TPH (GRO/DRO). Although some elevated OVM field screening values were recorded,

BTEX and TPH concentrations in the remaining soil samples were either below laboratory detection limits or below applicable NMOCD action levels.

Groundwater samples were collected for laboratory analysis from TP-2 and TP-4. During sample collection, a petroleum sheen was observed in TP-2. Dissolved phase benzene, toluene, and xylene concentrations were reported above the New Mexico Water Quality Control Commission (WQCC) standards in TP-2 with 9,800  $\mu$ g/L benzene, 15,000  $\mu$ g/L toluene, and 6,700  $\mu$ g/L xylene. Detailed laboratory results were summarized in the AES letter report entitled *Soil and Groundwater Sampling Results* and dated October 28, 2011.

Following receipt of laboratory analytical results on October 24, 2011, Enterprise notified NMOCD of the confirmed groundwater impact by submitting a Form C-141. Based on field screening and laboratory analytical results, AES recommended that Enterprise conduct further delineation of the soil and groundwater contamination in order to determine the most effective mitigation of the release.

#### 1.2.3 Site Investigation - November 2011

On November 30, 2011, AES completed an additional site investigation, which included the installation of eight soil borings and the collection of soil and groundwater samples. Soil samples showed that contaminant concentrations exceeded NMOCD action levels in borings SB-2, SB-7, and SB-8. The highest benzene and total BTEX concentrations were reported in SB-2, with 31 mg/kg benzene and 580 mg/kg total BTEX. The highest TPH concentration was also reported in SB-2 with 7,500 mg/kg.

Dissolved phase analytical results indicated groundwater was impacted above the WQCC standard in SB-2W (benzene, toluene, and xylene), SB-3W (benzene), and SB-7W (benzene and toluene). The highest concentrations for benzene, toluene, and xylenes were reported in SB-2W with 2,800  $\mu$ g/L benzene, 5,700  $\mu$ g/L toluene, and 4,000  $\mu$ g/L xylenes.

#### 1.2.4 Groundwater Investigation – September 2012

On August 20 through September 7, 2012, AES completed a groundwater investigation in order to further delineate the extent of the dissolved phase hydrocarbon contaminants associated with the Lateral 6C pipeline release. During the site investigation, AES personnel installed nine soil borings which were advanced to a total depth of 25 feet bgs and completed as monitor wells MW-1 through MW-9.

The local site lithology consists of alluvium and fluvial material from the adjacent Kutz Wash overlaying sandstone bedrock. Soil observed during the investigation was brown to tan, fine to medium grained, silty to clayey sand, with some gravel at depths greater than 20 feet bgs. Moisture level increased with depth from dry to moist in the upper 10 feet to moist to wet down to contact with bedrock. Bedrock material was grey, fine grained, firm to moderately hard, wet sandstone.

During the investigation, soil laboratory analytical results showed that petroleum hydrocarbon concentrations were not above NMOCD action levels in any of the soil borings. Laboratory analytical results showed groundwater contaminant concentrations above the WQCC standard of 10  $\mu$ g/L for benzene in MW-1 (2,200  $\mu$ g/L), MW-2 (270  $\mu$ g/L), MW-4 (18  $\mu$ g/L), and MW-8 (41  $\mu$ g/L). Additionally, dissolved phase toluene above the WQCC standard of 750  $\mu$ g/L was reported in MW-2 with 1,100  $\mu$ g/L, and xylene above the WQCC standard of 620  $\mu$ g/L was reported in MW-1 (650  $\mu$ g/L), MW-2 (1,800  $\mu$ g/L), and MW-6 (2,200  $\mu$ g/L).

#### 1.2.5 Groundwater Monitoring and Sampling – December 2012

Site monitor wells were monitored and sampled by AES on December 20, 2012. Laboratory results confirmed dissolved phase benzene concentrations above the WQCC standard of 10  $\mu$ g/L in two wells, including MW-1 (1,100  $\mu$ g/L) and MW-2 (26  $\mu$ g/L). Also, dissolved phase xylene concentrations were above the WQCC standard of 620  $\mu$ g/L in MW-6 with 1,200  $\mu$ g/L. Details of the groundwater sampling event were presented in the *Quarterly Groundwater Sampling Report* dated February 13, 2013.

### 1.2.6 Groundwater Monitoring and Sampling - March 2013

Site monitor wells were monitored and sampled by AES on March 20, 2013. Note that 0.42 feet of non-aqueous phase liquid (NAPL) or "free product" was observed for the first time in MW-1 during the March 2013 sampling event. Laboratory results confirmed dissolved phase benzene concentrations above the WQCC standard of 10  $\mu$ g/L in two wells, including MW-4 (290  $\mu$ g/L) and MW-8 (41  $\mu$ g/L). Dissolved phase xylene concentrations were above the WQCC standard of 620  $\mu$ g/L in MW-6 with 800  $\mu$ g/L. Details of the groundwater sampling event were presented in the *Quarterly Groundwater Sampling Report* dated May 13, 2013.

#### 1.2.7 Groundwater Monitoring and Sampling – June 2013

AES completed site monitoring and sampling on June 19, 2013. NAPL was observed for the second consecutive quarter in MW-1 (0.26 feet) and for the first time in MW-2 (0.44 feet). Laboratory results confirmed dissolved phase benzene concentrations above the WQCC standard of 10  $\mu$ g/L in three wells, including MW-3 (780  $\mu$ g/L), MW-4 (600  $\mu$ g/L), and MW-8 (21  $\mu$ g/L). Dissolved phase xylene concentrations were above the WQCC standard of 620  $\mu$ g /L in MW-6 with 1,100  $\mu$ g/L. Details of the groundwater sampling event were presented in the *Quarterly Groundwater Sampling Report* dated August 26, 2013.

# 2.0 Groundwater Monitoring and Sampling – September 2013

On September 17 and 18, 2013, groundwater monitoring and sampling were conducted by AES in MW-1 through MW-9. Work was completed in accordance with the workplan prepared by AES and dated August 3, 2012, 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 Groundwater Measurements and Water Quality

Prior to sample collection, depth to groundwater in each well was measured with a Keck Water Level Indicator, and water quality data was measured with a YSI Water Quality Meter. Water quality measurements were recorded and included pH, temperature, conductivity, dissolved oxygen (DO), and oxidation reduction potential (ORP). Depth to groundwater measurements and water quality data were recorded onto Water Sample Collection forms. During this sampling event, NAPL was observed for the third consecutive quarter in MW-1 (0.48 feet) and for the second consecutive quarter in MW-2 (0.14 feet). Groundwater elevations decreased by an average of 0.34 feet across the site, and depths to groundwater were observed to range from 15.08 feet below top of casing (TOC) in MW-8 to 19.22 feet below TOC in MW-5. The groundwater gradient was calculated to be approximately 0.008 foot/foot to the northwest. Groundwater gradient contours are included on Figure 3.

Following depth to water measurement, each well was purged with a peristaltic pump until recorded temperature, pH, conductivity, and DO measurements were stabilized. All data was recorded onto Water Sample Collection Forms. Groundwater temperature ranged from 17.06 °C in MW-3 to 20.30 °C in MW-7, and conductivity ranged from 4.530 mS in MW-7 to 9.841 mS in MW-3. DO concentrations were between 0.30 mg/L in MW-9 and 3.72 MW-5, and pH ranged from 6.99 in MW-3 to 7.44 in MW-7. Depth to groundwater measurements and water quality data are summarized in Table 1. Water Sample Collection forms are presented in Appendix A.

#### 2.2 Groundwater Laboratory Analyses

Groundwater samples were collected using low flow purging techniques with a peristaltic pump from a total of seven monitor wells and transferred into appropriate sample containers, labeled accordingly, and documented on Water Sample Collection Forms. Samples were shipped in insulated coolers containing ice at less than 6°C to Hall Environmental Analytical Laboratory (Hall) in Albuquerque, New Mexico. All groundwater analytical samples were analyzed for BTEX per USEPA Method 8260B and for total dissolved solids (TDS) per SM2540C Modified.

#### 2.2.1 Groundwater Analytical Results

Groundwater laboratory analytical results showed that dissolved phase benzene concentrations were above the WQCC standard of 10  $\mu g$  /L in MW-3 (150  $\mu g$ /L) and MW-4 (830  $\mu g$ /L). Dissolved phase xylene concentrations were above the WQCC standard of 620  $\mu g$  /L in MW-6 with 1,200  $\mu g$ /L. Dissolved phase toluene and ethylbenzene concentrations were below the WQCC standard of 750  $\mu g$ /L in all wells sampled. Total

dissolved solids were analyzed and ranged from 3,550 mg/L in MW-9 up to 4,670 mg/L in MW-3. Tabulated groundwater analytical results are presented in Table 2 and on Figure 4, and dissolved phase benzene and xylene contours are presented on Figures 5 and 6, respectively. Groundwater laboratory analytical reports are presented in Appendix B.

#### 3.0 Additional Monitor Well Installation

On October 16, 2013, AES installed four additional monitor wells (MW-10 through MW-13) in order to further delineate the lateral extent of the groundwater contaminant impact. Monitor well installation procedures were based upon protocols outlined in AES SOPs. Under current New Mexico Office of the State Engineer (NMOSE) regulations, monitor wells installed in the manner described herein do not require well permits. Soil borings were advanced with a DT 6620 track-mounted direct push rig, manufactured by Geoprobe®, and equipped with a 3.25-inch outer diameter (OD) core barrel. Direct push drilling was provided by Earth Worx, Belen, New Mexico. The locations of the monitor wells are presented on Figure 7.

# 3.1 Pre-Field Coordination and Job Safety Analysis

Prior to field work, the drilling contractor utilized the New Mexico One-Call system to identify and mark all underground utilities at the site. AES prepared and implemented a comprehensive site-specific Job Safety Analysis (JSA) addressing the activities associated with monitor installation. All onsite personnel were required to read and sign the JSA to acknowledge their understanding of the information contained within the JSA. The JSA was implemented and enforced on site by the Site Safety and Health Officer.

#### 3.2 Groundwater Monitor Well Installation

#### 3.2.1 Groundwater Monitor Well Installation

On October 16, 2013, AES installed four soil borings which were completed as 1-inch diameter monitor wells (MW-10 through MW-13). Groundwater monitor wells MW-10 through MW-12 were installed to a total depth of about 19 feet, and MW-13 was installed to a total depth of about 23 feet bgs.

#### 3.2.2 Soil Sample Collection

Soil samples from MW-10 through MW-13 were collected from continuously driven corebarrel samplers with a 2.25-inch diameter during advancement of the soil borings. At 4 foot intervals, a soil sample was collected from the core barrel sampler and transferred to appropriately labeled sample containers. The samples were split for field screening of VOCs with a PID-OVM. Based on field screening results, selected soil samples were submitted for laboratory analysis.

For each soil boring, a Soil Boring Log was completed and recorded sample identification, depth collected, and method of collection, as well as observations of soil moisture, color, grain size, contaminant presence, and overall stratigraphy. Soil Boring Logs are presented in Appendix C.

#### 3.2.3 Soil Field Screening and Laboratory Results

Samples were field screened for VOC vapors utilizing a PID-OVM, which was calibrated to 100 ppm with isobutylene gas, and field screening followed AES' SOP for heated headspace analysis of VOCs. Field screening results showed VOC concentrations of 0.0 ppm in MW-11 through MW-13 and VOC concentrations in MW-10 ranging from 0.2 ppm at 0 feet to 4 feet up to 786 ppm at 12 to 16 feet. Soil field screening results are presented in Table 3 and on Figure 7.

Laboratory analytical results reported benzene, total BTEX, and TPH concentrations below the laboratory detection limits, except for in MW-10 at 13.5 to 14 feet with 1.7 mg/kg benzene, 52 mg/kg total BTEX, and 541 mg/kg TPH (as GRO/DRO). Results are presented in Table 3 and on Figure 7. The laboratory analytical report is included in Appendix D.

#### 3.2.4 Soil Lithology

The local site lithology consists of stream alluvium and floodplain material which constitutes the wash of Kutz Canyon. Materials observed generally consisted of brown, fine- to medium-grained poorly graded sand, silty sand, and clayey sand. Moderate to heavy staining and odor was observed in MW-10 from a depth of approximately 12 feet to 14.5 feet bgs. No odor or staining or odor was observed in MW-11 through MW-13. Groundwater was encountered at a depth of approximately 14 feet bgs in MW-10 through MW-12 and at 18 feet bgs in MW-13.

#### 3.2.5 Groundwater Monitor Well Construction

Monitoring well construction consisted of 1.4-inch OD (0.75-inch ID) pre-packed screen (0.010-inch slot) and 1.0-inch blank riser casing. The screened interval extended 10 feet across the water table. The screen is factory packed with 20/40 Colorado silica sand. A bentonite seal was placed above the sand pack, and concrete grout with approximately 5 percent bentonite poured from the top of the bentonite plug up to within 0.5 feet of ground surface. An above grade locking steel protective casing, enclosed with a shroud of concrete, was installed on the well to prevent unauthorized access and damage. Monitor well schematics are presented on the Soil Boring Logs in Appendix C.

#### 3.2.6 Groundwater Monitor Well Development

On November 6, 2013, MW-10 through MW-13 were developed in order to remove fine grained sediments and to increase hydraulic conductivity through the well screen. Each well was developed by a combination of surging and pumping techniques in accordance with AES SOPs. Groundwater purged from the wells was contained in labeled and sealed 55-gallon drums and transported to Envirotech Landfarm for proper disposal.

Groundwater monitor well development forms are presented in Appendix E, and Bills of Lading (BOLs) for disposal of the monitor well development water are included in Appendix F.

# 4.0 Conclusion and Recommendations

A total of nine monitor wells (MW-1 through MW-9) were monitored and sampled at the Lateral 6C September 2011 pipeline release location by AES on September 17 and 18, 2013. Note that during this sampling event, NAPL was observed for the third consecutive quarter in MW-1 (0.48 feet) and for the second consecutive quarter in MW-2 (0.14 feet).

Groundwater continues to be impacted above the WQCC standard for benzene and xylenes. Laboratory results confirmed dissolved phase benzene concentrations above the WQCC standard of 10  $\mu$ g/L in two wells, including MW-3 (150  $\mu$ g/L) and MW-4 (830  $\mu$ g/L). Also, dissolved phase xylene concentrations were above the WQCC standard of 620  $\mu$ g/L in MW-6 with 1,200  $\mu$ g/L. Dissolved phase toluene and ethylbenzene concentrations were below WQCC standards in all sampled monitor wells. Low benzene concentrations and high xylene concentrations in MW-6 may be indicative of weathering or partially degraded petroleum hydrocarbons. Total dissolved solids concentrations are consistent with concentrations observed at other locations along the Kutz Wash.

Four additional monitor wells (MW-10 through MW-13) were installed on October 16, 2013, in order to further delineate the lateral extent of the groundwater contaminant impact. Soil laboratory analytical results reported benzene, total BTEX, and TPH concentrations below the laboratory detection limits in MW-11 through MW-13. Soil benzene concentration in MW-10 at 13.5 to 14 feet were below the NMOCD action levels of 10 mg/kg; however, total BTEX and TPH concentrations exceeded the NMOCD action levels of 50 mg/kg total BTEX and 100 mg/kg TPH (as GRO/DRO) with 52 mg/kg total BTEX and 541 mg/kg TPH. The monitor wells were developed on November 6, 2013. Groundwater sampling of MW-10 through MW-13 will be conducted during the next quarterly sampling event, tentatively scheduled for early December 2013.

#### AES recommends the following:

- Continued monitoring and sampling of site monitor wells on a quarterly basis;
- Conduct a "free product" bail down or recovery test within MW-1 and MW-2 to better estimate free product thickness in the formation and recovery rates; and
- Conduct an aquifer slug test within MW-2, MW-8, and MW-10 to better
  determine groundwater characteristics. The aquifer testing will be conducted in
  accordance with American Society for Testing and Materials Standard Test
  Method for Instantaneous Change in Head (Slug) Tests for Determining Hydraulic
  Properties of Aquifers, U.S. Environmental Protection Agency Environmental

Response Team Standard Operating Procedure (SOP) #2045 for conducting slug tests, and U.S. Geological Survey Open File Report 02-197 Documentation of Spreadsheets for Analysis of Aquifer Test and Slug Test Data. AES has tentatively scheduled aquifer testing for the week of November 25, 2013.

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

Sincerely,

Heather M. Woods, P.G.

Heather M Woods

**Project Manager** 

Elizabeth McNally, P.E.

#### Attachments:

**Tables** 

Table 1.	Summary of Groundwater Measurements and Water Quality Data
Table 2.	Summary of Groundwater Laboratory Analytical Results
Table 3.	Summary of Soil Field Screening and Laboratory Analytical Results
Figures	
Figure 1.	Topographic Site Location Map
Figure 2.	Aerial Site Map
Figure 3.	Groundwater Elevation Contours, September 2013
Figure 4.	Groundwater Contaminant Concentrations, September 2013
Figure 5.	Dissolved Benzene Concentration Contours, September 2013
Figure 6.	Dissolved Xylene Concentration Contours, September 2013
Figure 7.	Additional Monitor Well Locations and Results, October 2013

David Smith December 10, 2013 Page 10

# **Appendices**

Appendix A. Water Sample Collection Forms

Appendix B. Groundwater Analytical Reports (Hall 1309895)

Appendix C. Soil Boring Logs

Appendix D. Soil Analytical Reports (Hall 1310941)
Appendix E. Monitor Well Development Forms
Appendix F. Envirotech BOLs (44709 and 45088)

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# TABLE 1. SUMMARY OF GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA Enterprise Field Services, LLC Lateral 6C September 2011 Pipeline Release San Juan County, New Mexico

			Depth to	Depth to							
			NAPL	Water	NAPL		Corrected			Dissolved	Temp.
		Surveyed	(ft below	(ft below	Thickness	GW Elev.	GW Elev.		Conductivity	Oxygen	Temp.
Well ID	Date	TOC (ft)	тос)	тос)	(ft)	(ft amsl)	(ft)	рН	(mS)	(mg/L)	(ºC)
MW-1	07-Sep-12	5579.73		15.78		5563.95		7.02	5.616	1.72	17.31
MW-1	20-Dec-12	5579.73		15.69		5564.04		7.38	4.567	1.41	16.71
MW-1	20-Mar-13	5579.73	15.31	15.73	0.42	5564.00	5564.30	NA	NA	NA	NA
MW-1	19-Jun-13	5579.73	15.49	15.75	0.26	5563.98	5564.17	NA	NA	NA	NA
MW-1	17-Sep-13	5579.73	15.79	16.27	0.48	5563.46	5563.81	NA	NA	NA	NA
MW-2	07-Sep-12	5579.39		16.29		5563.10		7.31	4.234	1.03	16.67
MW-2	20-Dec-12	5579.39		16.22		5563.17		7.61	3.511	1.45	15.42
MW-2	20-Mar-13	5579.39		15.97		5563.42		7.50	6.788	1.06	14.88
MW-2	19-Jun-13	5579.39	15.96	16.40	0.44	5562.99	5563.31	NA	NA	NA	NA
MW-2	17-Sep-13	5579.39	16.40	16.54	0.14	5562.85	5562.95	NA	NA	NA	NA
MW-3	07-Sep-12	5579.52		15.98		5563.54		7.33	5.706	2.24	15.29
MW-3	20-Dec-12	5579.52		15.79		5563.73		7.13	4.496	2.30	13.84
MW-3	20-Mar-13	5579.52		15.50		5564.02		7.33	8.893	2.62	13.63
MW-3	19-Jun-13	5579.52		15.66		5563.86		6.08	8.451	2.65	15.30
MW-3	18-Sep-13	5579.52		15.96		5563.56		6.99	9.841	0.41	17.06
MW-4	07-Sep-12	5580.36		15.59		5564.77		7.30	5.564	1.46	15.77
MW-4	20-Dec-12	5580.36		15.51		5564.85		7.06	4.106	1.51	14.94
MW-4	20-Mar-13	5580.36		15.25		5565.11		7.23	7.897	1.17	14.00
MW-4	19-Jun-13	5580.36		15.41		5564.95		6.32	7.468	3.21	15.90
MW-4	18-Sep-13	5580.36		15.74		5564.62		7.11	8.425	0.49	18.42
MW-5	07-Sep-12	5583.53		19.35		5564.18		7.34	4.137	1.53	14.89
MW-5	20-Dec-12	5583.53		19.28		5564.25		7.00	3.438	2.65	13.74
MW-5	20-Mar-13	5583.53		19.10		5564.43		7.28	6.957	2.29	13.86
MW-5	19-Jun-13	5583.53		19.21		5564.32		7.22	6.377	1.15	15.68
MW-5	17-Sep-13	5583.53		19.55		5563.98		7.23	7.545	3.72	19.23

3rd Quarter 2013 Groundwater Monitoring and Well Installation Report December 10, 2013

# TABLE 1. SUMMARY OF GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA Enterprise Field Services, LLC Lateral 6C September 2011 Pipeline Release San Juan County, New Mexico

			Depth to	Depth to							
			NAPL	Water	NAPL		Corrected			Dissolved	Тетр.
		Surveyed	(ft below	(ft below	Thickness	GW Elev.	GW Elev.		Conductivity	Oxygen	Temp.
Well ID	Date	TOC (ft)	тос)	тос)	(ft)	(ft amsl)	(ft)	рН	(mS)	(mg/L)	(ºC)
MW-6	07-Sep-12	5582.22		18.55		5563.67		7.38	4.833	1.24	15.43
MW-6	20-Dec-12	5582.22		18.49		5563.73		7.46	3.932	1.09	14.08
MW-6	20-Mar-13	5582.22		18.27		5563.95		7.38	7.571	0.79	14.36
MW-6	19-Jun-13	5582.22		18.38		5563.84		5.46	6.836	5.35	16.86
MW-6	18-Sep-13	5582.22		18.74		5563.48		7.19	8.042	0.59	17.31
MW-7	07-Sep-12	5582.24		19.03		5563.21		7.59	4.542	1.38	15.24
MW-7	20-Dec-12	5582.24		18.97		5563.27		7.53	3.660	1.16	13.86
MW-7	20-Mar-13	5582.24		18.79		5563.45		7.45	7.512	1.45	14.40
MW-7	19-Jun-13	5582.24		18.87		5563.37		5.67	6.747	3.72	16.68
MW-7	17-Sep-13	5582.24		19.22		5563.02		7.44	4.530	2.90	20.30
MW-8	07-Sep-12	5577.81		14.96		5562.85		7.57	4.068	1.30	16.16
MW-8	20-Dec-12	5577.81		14.87		5562.94		7.56	3.339	0.97	15.25
MW-8	20-Mar-13	5577.81		14.63		5563.18		7.41	7.084	2.06	14.86
MW-8	19-Jun-13	5577.81		14.74		5563.07		5.68	6.235	4.21	16.43
MW-8	18-Sep-13	5577.81		15.08		5562.73		7.39	7.419	0.83	17.93
MW-9	07-Sep-12	5582.48		17.55		5564.93		7.45	4.583	1.48	15.61
MW-9	20-Dec-12	5582.48		17.47		5565.01		7.14	3.369	2.29	13.06
MW-9	20-Mar-13	5582.48		17.28		5565.20		7.30	6.700	2.56	13.70
MW-9	19-Jun-13	5582.48		17.42		5565.06		7.26	6.265	1.82	14.14
MW-9	17-Sep-13	5582.48		17.74		5564.74		7.12	7.500	0.30	16.20

Notes: NA - not analyzed

TABLE 2. SUMMARY OF GROUNDWATER LABORATORY ANALYTICALS RESULTS Enterprise Field Services, LLC Lateral 6C September 2011 Pipeline Release San Juan County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl- benzene	Xylenes	Total Dissolved Solids
		μg/L	μg/L	μg/L	μg/L	mg/L
Sa	mple Method		EPA N	lethod 8260		SM2540C
WQ	CC STANDARD	10	750	750	620	
MW-1	07-Sep-12	2,200	350	68	650	NA
MW-1	20-Dec-12	1,100	250	37	180	NA
MW-1	20-Mar-13	F	ree Product	Present (0.4	2 feet)	NA
MW-1	19-Jun-13	F	ree Product	Present (0.2	6 feet)	NA
MW-1	17-Sep-13	F	ree Product	Present (0.4	8 feet)	NA
24147	07.6 42	270	4 400		4.000	1 414
MW-2	07-Sep-12	270	1,100	66	1,800	NA
MW-2	20-Dec-12	26	49	5.1	250	NA
MW-2	20-Mar-13	<5.0	<5.0	<5.0	67	NA
MW-2	19-Jun-13			Present (0.4		NA
MW-2	17-Sep-13	F	ree Product	Present (0.1	4 feet)	NA NA
MW-3	07-Sep-12	<2.0	<2.0	<2.0	<4.0	NA
MW-3	20-Dec-12	<2.0	<2.0	<2.0	<4.0	NA
MW-3	20-Mar-13	<2.0	<2.0	<2.0	<4.0	NA
MW-3	19-Jun-13	780	130	2.5	15	NA
MW-3	18-Sep-13	150	28	<5.0	15	4,670
	T - = -			T		
MW-4	07-Sep-12	18	5.1	<2.0	<4.0	NA
MW-4	20-Dec-12	<2.0	<2.0	<2.0	<4.0	NA
MW-4	20-Mar-13	290	110	<2.0	15	NA
MW-4	19-Jun-13	600	45	<10	<20	NA
MW-4	18-Sep-13	830	39	<20	<30	4,030
MW-5	07-Sep-12	<2.0	<2.0	<2.0	<4.0	NA
MW-5	20-Dec-12	<2.0	<2.0	<2.0	<4.0	NA NA
MW-5	20-Mar-13	<2.0	<2.0	<2.0	<4.0	NA
MW-5	19-Jun-13	<1.0	<1.0	<1.0	<2.0	NA NA
MW-5	17-Sep-13	<1.0	<1.0	<1.0	<1.5	3,630
MW-6	07-Sep-12	<5.0	<5.0	260	2,200	NA
MW-6	20-Dec-12	<5.0	<5.0	180	1,200	NA
MW-6	20-Mar-13	<5.0	<5.0	120	800	NA
MW-6	19-Jun-13	9.6	6.2	150	1,100	NA
MW-6	18-Sep-13	<5.0	<5.0	180	1,200	3,750

TABLE 2. SUMMARY OF GROUNDWATER LABORATORY ANALYTICALS RESULTS Enterprise Field Services, LLC Lateral 6C September 2011 Pipeline Release San Juan County, New Mexico

Well ID	Date Sampled	Benzene	Toluene	Ethyl- benzene	Xylenes	Total Dissolved Solids
		μg/L	μg/L	μg/L	μg/L	mg/L
Sa	mple Method			SM2540C		
waa	CC STANDARD	10	750	750	620	
MW-7	07-Sep-12	<2.0	<2.0	<2.0	<4.0	NA
MW-7	20-Dec-12	<2.0	<2.0	<2.0	2.4	NA
MW-7	20-Mar-13	<2.0	<2.0	<2.0	<4.0	NA
MW-7	19-Jun-13	<1.0	<1.0	<1.0	<2.0	NA
MW-7	17-Sep-13	<1.0	<1.0	<1.0	<1.5	4,040
MW-8	07-Sep-12	41	40	3.8	320	NA
MW-8	20-Dec-12	<2.0	<2.0	<2.0	20	NA
MW-8	20-Mar-13	41	36	<2.0	89	NA
MW-8	19-Jun-13	21	12	<1.0	6.8	NA
MW-8	18-Sep-13	<1.0	<1.0	3.4	27	3,590
MW-9	07-Sep-12	<2.0	2.4	<2.0	<4.0	NA
MW-9	20-Dec-12	<2.0	<2.0	<2.0	<4.0	NA
MW-9	20-Mar-13	<2.0	<2.0	<2.0	<4.0	NA
MW-9	19-Jun-13	<1.0	<1.0	<1.0	<2.0	NA
MW-9	17-Sep-13	<1.0	<1.0	<1.0	<1.5	3,550

Notes: < Analyte not detected above listed method limit

μg/L Micrograms per liter (ppb)

NA Not analyzed

# TABLE 3. SUMMARY OF SOIL FIELD SCREENING AND LABORATORY ANALYTICAL RESULTS Enterprise Field Services, LLC Lateral 6C September 2011 Pipeline Release San Juan County, New Mexico

Well ID	Date Sampled	Depth (ft)	VOCs OVM	Benzene	Toluene	Ethyl- benzene	Xylenes	Total BTEX	TPH - GRO	TPH - DRO	TPH as GRO/DRO
	Sampled		ppm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	ample Metho	d			EP	A Method 82	60		EP	A Method 801	.5D
NM	IOCD Action L	evel	100	10	NE	NE	NE	50	NE	NE	100
		0 to 4	0.2	NA	NA	NA	NA	NA	NA	NA	NA
		4 to 8	1.7	NA	NA	NA	NA	NA	NA	NA	NA
MW-10	16-Oct-13	8 to 12	23.8	NA	NA	NA	NA	NA	NA	NA	NA
		12 to 16	786	NA	NA	NA	NA	NA	NA	NA	NA
		13.5 to 14	NA	1.7	20	2.5	28	52	530	11	541
		0 to 4	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		4 to 8	0.0	NA	NA	NA	NA	NA	NA	NA	NA
MW-11	16-Oct-13	8 to 12	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		12 to 16	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		13.5 to 14	NA	<0.047	<0.047	<0.047	<0.095	<0.236	<4.7	<10	<15
		0 to 4	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		4 to 8	0.0	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	16-Oct-13	8 to 12	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		12 to 16	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		13.5 to 14	NA	<0.046	<0.046	<0.046	<0.093	<0.231	<4.6	<10	<15
-		0 to 4	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		4 to 8	0.0	NA	NA	NA	NA	NA	NA	NA	NA
MW-13	16-Oct-13	8 to 12	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		12 to 16	0.0	NA	NA	NA	NA	NA	NA	NA	NA
		13.5 to 14	NA	<0.048	<0.048	<0.048	<0.097	<0.241	<4.8	<10	<15

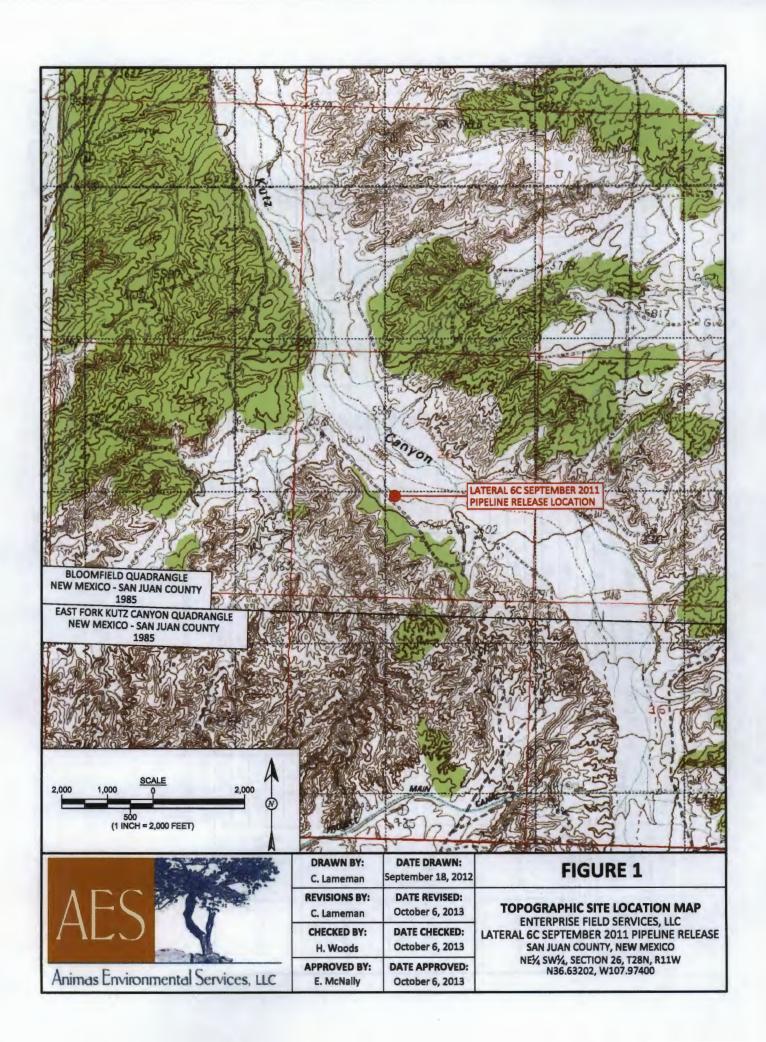
Notes:

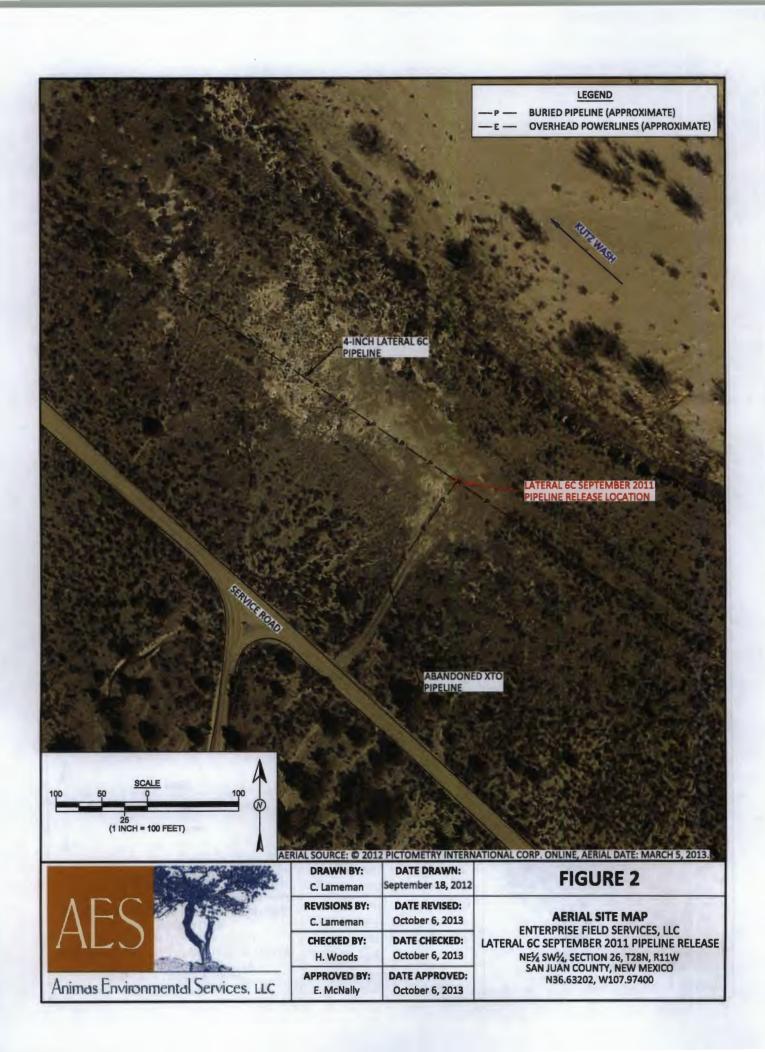
NA

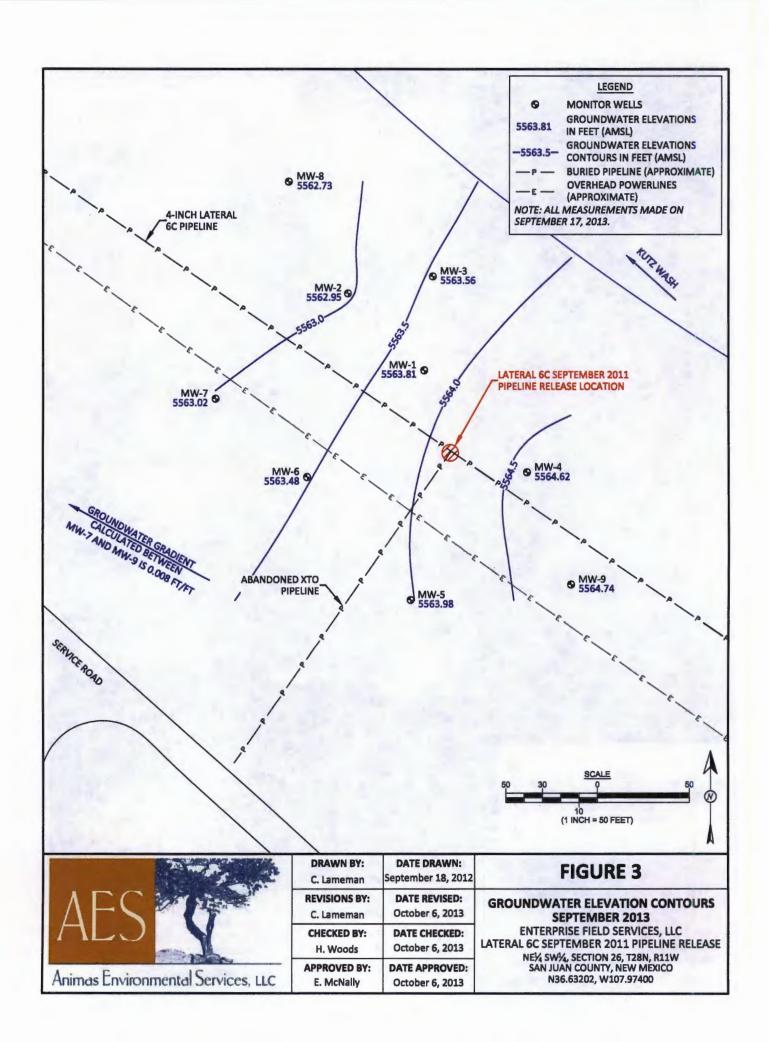
Not analyzed

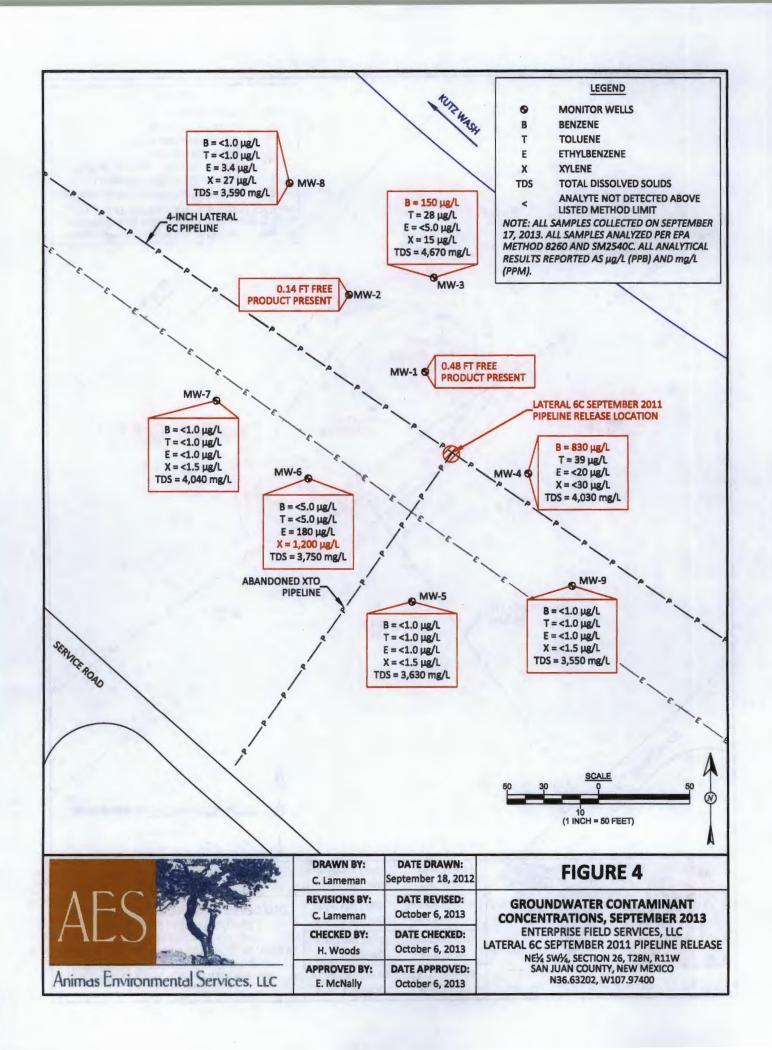
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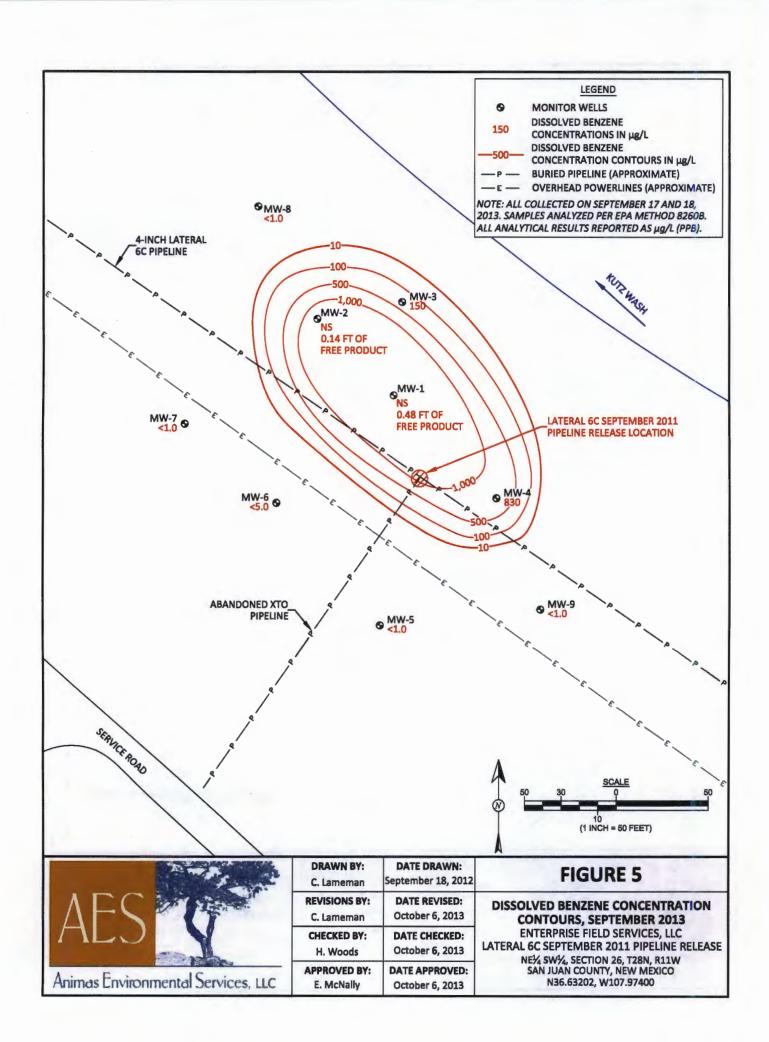
Analyte not detected above listed method limit

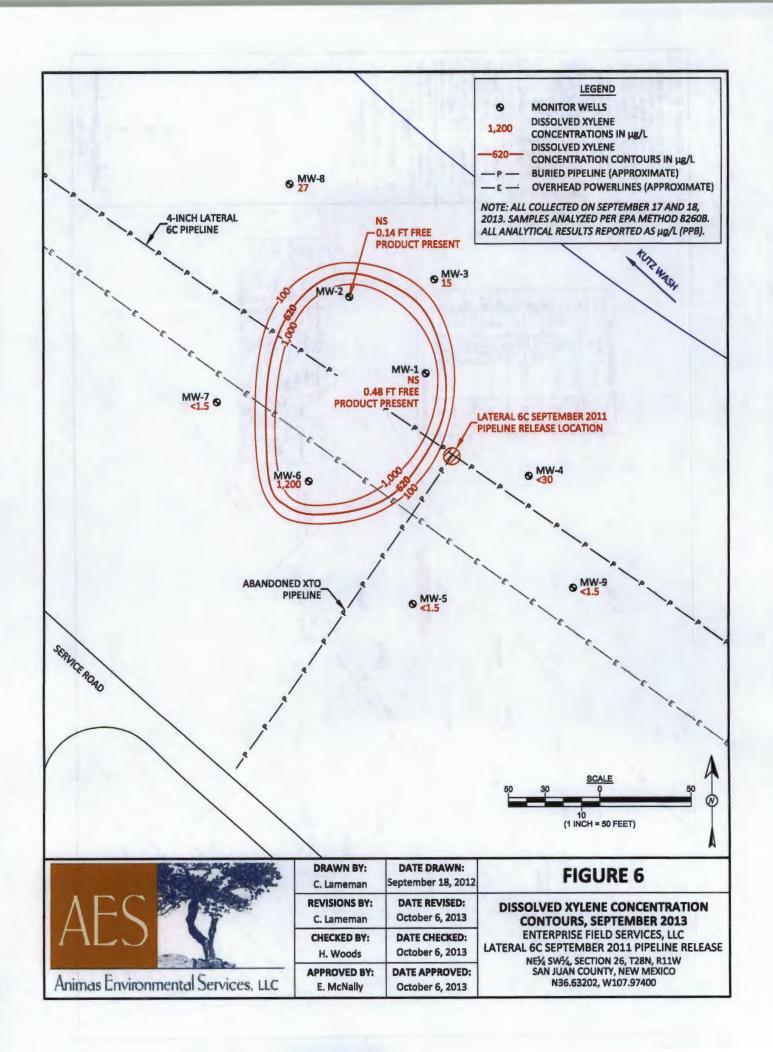


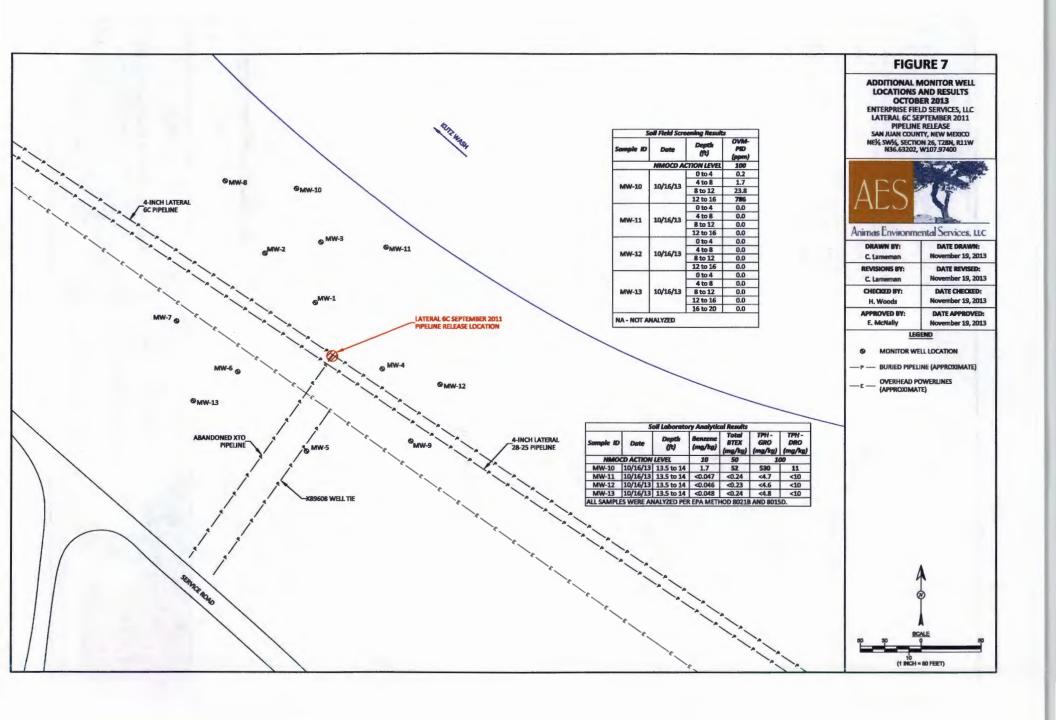












# DEPTH TO GROUNDWATER MEASUREMENT FORM

# Animas Environmental Services

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

		1.0 (500) 50: 1202: 0 (500) 52: 2022
Project:	Groundwater Sampling	Project No.: AES 110904
Site:	Enterprise Field Services, LLC	Date: 9-17-2013
Location:	Lateral 6C	Time: /033
Tech:	1.4more, L	Form:

Well I.D.	Depth to NAPL (ft.)	Depth to Water (ft.)	NAPL Thickness (ft.)	Notes / Observations
9				
5		17.74		
7		19.22		
		18.74		
& 8		15.08		
4		15.75		
<i>y</i> <i>3</i>		15.98		
,	15.79	16.27	.48	
2	16.40	16.54	.14	
			1	

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

MON	IITORING W	<b>VELL SAMPLI</b>	NG RECC	ORD	Animas Environmental Services					
Mon	itor Well No:	MW-	-1		6	24 E. Comanche, Farmir	ngton NM 87401			
				•	Tel. (505) 564-2281 Fax (505) 324-2022					
Site:	Groundwater	Sampling			Project No.: AES 1109	<u></u>				
		eld Services, LLC	· · · · · · · · · · · · · · · · · · ·		Date: 9.17.2013					
	Lateral 6C	ila del Vicco, EEG			Arrival Time: /// 0					
•	g Technician:	L. Lame	-, 10		•	Air Temp:	<u></u>			
· -	e / No Purge:		V/A		T.C	).C. Elev. (ft): 5579	9.73			
_	Diameter (in):		<i>,,</i> , , , , , , , , , , , , , , , , , ,	· 1		ell Depth (ft): 27	<del></del>			
	al D.T.W. (ft):		Time:	1110		(taken at initial gaugin				
	m D.T.W. (ft):	/ 4. /	Time:	-1170		(taken prior to purging				
Final D.T.W. (ft): Time:						(taken after sample co	·			
	- •	D.T.P.: 15.79		: 168	7 Thio	ckness: • 48 Tim				
					,	uring Well Purging				
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
<b>T!</b>	· .	-					Notes/Observations			
Time	(deg C)	(μS) (mS)	(mg/L)	рH	(mV)	(see reverse for calc.)	Notes/Observations			
				1						
							- Main trans			
			· · · · · · · · · · · · · · · · · · ·							
			,							
	Analytical Para	ameters (includ	e analysis ı	method a	nd num	ber and type of sample	containers)			
		X1	San	ples	λ.	IAPL				
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1						
					·····					
		n: 1 / D		V 1 /	4					
		Disposal of Purg		$\frac{\lambda}{\lambda}$	4		,			
Co	llected Sample	es Stored on Ice	in Cooler:		0/1					
	Chain of C	<b>Custody Record</b>	Complete:			NA				
		Analytical La	aboratory:	Hall Envi	ronmen	tal Analysis Laboratory,	Albuquerque, NM			
Fauin	ment Used Du	-	•			terface Level, YSI Water				
-4016			w Disposab							
N - 4 : / 2		and HE	r resposar							
Notes/Com	iments:	4 L				ν.Λ. Δι				
		No	San	nples		VA PL				
				<i>-</i>			Market and the second s			
revised: 0	8/10/09									

MON	ITORING V	VELL SAMPLI	NG RECO	ORD	Animas Environmental Services					
Mon	itor Well No:	MW-	-2		6	24 E. Comanche, Farmi	ngton NM 87401			
				-	1	Tel. (505) 564-2281 Fax	-			
	Groundwater					Project No.: AES 110904				
		eld Services, LLC			Date: 9.17.2013					
-	Lateral 6C	MANA			Arrival Time: // 0 4					
	ng Technician:				_		o° F			
_	ge / No Purge:		MPIES			D.C. Elev. (ft): 5579				
	Diameter (in):		-1			ell Depth (ft): 26				
	al D.T.W. (ft):		Time:	1100	<del>/</del>	_(taken at initial gaugin				
	m D.T.W. (ft): al D.T.W. (ft):		Time: Time:			(taken prior to purging	•			
		D.T.P.: 16.40		: 16.5	J This	_(taken after sample co ckness: Tim				
	IAFE FIESCHE				7		e:			
		Water Qualit	y Paramet	ers - Reco	orded Di	uring Well Purging				
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
Time	(deg C)	(μS) (mS)	(mg/L)	pН	(mV)	(see reverse for calc.)	Notes/Observations			
					<b></b>					
,	Analytical Para	ameters (includ	e analysis r	method a	nd num	ber and type of sample	containers)			
	***************************************	7	10 54	mples		MAPL				
		-	7/11	10 g 2		10/11				
		Disposal of Purg	ad Mater	M	Λ					
Co					4					
CO		es Stored on Ice			<u> </u>					
	Chain of C	Custody Record	•		MA					
			•			tal Analysis Laboratory,				
Equip	ment Used Du	-				terface Level, YSI Water	Quality Meter			
		a <del>nd Ne</del>	w Disposab	<del>le Bailer</del> .		2				
Notes/Com	ments:									
		No	Same	les						
			1		-					
revised: 08	8/10/09		·····							

MON	NITORING V	VELL SAMPL	ING REC	Animas Environmental Services						
Mor	nitor Well No:	MW	<b>'-3</b>		624 E. Comanche, Farmington NM 87401					
				_	Į.	Tel. (505) 564-2281 Fax (505) 324-2022				
Site	: Groundwate	r Sampling			Project No.: AES 110904					
	·	eld Services, LLC	2	Date: 9.17.2013 49-18.2013						
Project	Lateral 6C				-	Arrival Time: 1234 9	·18·2013 1350			
	ng Technician:				<b>-</b> -	Air Temp: 75° F	(SAMPL)			
Pure	ge / No Purge:	Ringe				).C. Elev. (ft): 557	9.52			
	Diameter (in):		****	-		ell Depth (ft): 25				
1	ial D.T.W. (ft):		_	11.0	2	(taken at initial gaugir	ng of all wells)			
	m D.T.W. (ft):		Time:			taken prior to purging				
	al D.T.W. (ft):		Time:	135	<del></del>	(taken after sample co	•			
17 1	NAPL Present:	D.1.P.:	D.I.W	• • • • • • • • • • • • • • • • • • • •		ckness: Tim	le:			
Water Quality Parameters - Recorded During Well Purging										
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
Time	(deg C)	(μS) (mS)	(mg/L)	рН	(mV)	(see reverse for calc.)	Notes/Observations			
1248	17.64	10.86	1.08	699	151.2	.5 gel,	Hzo clear slight			
1256	17.54	10:77	0.67	4.95	-156.6	1.0 gal.	1-bu cleve sheep			
1301	17.07	10.62	0.57	6.95	-159.0	1.5 gel.	Hos Clev Gren			
1307	18.04	10.33	0.50	6.95	159.3		the clear			
1313	17.51	10.35	0.48	6.97	-161.8	2.5 gol.	tro clear			
1320	17.19	10.10	0.44	6.98	-163.9	3.0 gel.	How clear.			
1327	17.00	10.01	0.43	6.99	-169.7	3.5 gal.	H20 Clarz			
1335	16.97	9.877	0.41		-173.6	4.0 3.0.	Ho Slightgray			
1341	16.89	9945	0.40		174.6	4.5 g.o.				
1350	17.06	9.841	6.41	<del> </del>	174.2		tro slist gray			
1300	17.09	(+0	0 11	10117	3 1 3					
							Some shein			
				<del>                                     </del>						
	Analytical Dan	amotors /includ	o analysis s	mothod s		per and type of sample	containers)			
	Analytical Par				ina numi	er and type of sample	containers			
		821	e0 BT	EX	······					
		SM 250	10 C	TOS						
		Disposal of Pur	ged Water:	Into s	55 ga	1. drum, delive	erect to land fain			
Co	llected Sampl	es Stored on Ice	in Cooler:	yes						
	Chain of C	Custody Record	Complete:	405						
		Analytical L	aboratory:	Hall Envi	ronment	al Analysis Laboratory,	Albuquerque, NM			
Equip	ment Used Du	ring Sampling:	Keck Wate	r Level or	Keck Int	erface Level, YSI Water	Quality Meter			
		an <del>d Ne</del>	w Disposal	le Bailer	W5-	700 sample	r Pung			
Notes/Com	lotes/Comments:									
9.92	9.92 1/20 column									
1.62	Hzo dolun									
5.0 a	allons to b			***************************************						
revised: ਹੈ।		IJ								

MON	NITORING V	VELL SAMPL	ING RECO	ORD	Animas Environmental Services						
Mon	nitor Well No:	MW	-4		624 E. Comanche, Farmington NM 87401						
				1	Tel. (505) 564-2281 Fax (505) 324-2022						
Site	Groundwater	Sampling		Project No.: AES 110904							
Location	Enterprise Fie	eld Services, LLC			-		2013 \$ 9-18-2013				
Project	Lateral 6C				Arrival Time: 1/16 9:18:2013						
Samplir	ng Technician:				-	Air Temp: 72° F	= (1214 Sample				
_	ge / No Purge:		ge	_	Т.О	).C. Elev. (ft): 558	0.32				
	Diameter (in):			-		ell Depth (ft): 24					
	ial D.T.W. (ft):		•			(taken at initial gaugir					
	m D.T.W. (ft):		Time:			(taken prior to purging	-				
	ial D.T.W. (ft): NAPL Present:		Time:	12/7		(taken after sample co	-				
	NAPL Present:	D.1.P.:		.:		kness: Tim	ie:				
9-18-2013 Water Quality Parameters - Recorded During Well Purging											
	Temp	Conductivity	DO		ORP	PURGED VOLUME					
Time	(deg C)	(μS) (mS)	(mg/L)	pН	(mV)	(see reverse for calc.)	Notes/Observations				
1130	18.25	8.641	2.63	7.19	-193.1	0.5 gal.	deur Her				
136	18.31	8.716	1.13	7.12	-204.5	110 gal.	dur HZO				
nyl	18.41	8.625	0.86	7.11	210.3	1.5 gal	clear Hzo				
1146	13.42	8.600	0.74	7.11	-213.7		Cleve HZO				
1151	18.24	8.57le	0.65	7.10	216.2		Clear HZD				
1157	18:57	8.524	5.59	7.11	-217.7	J 7	clifar Hzo				
1202	18.54	8532	0.55	7.10	-218.0	<i>J</i> ^	clew Itzo				
1209	(8.10	8,583	0.52	7.11	-223.2	4.0 gale	Lleur Hzo				
1214	18.42	7.425	0.49	7.11	-228.8	4.25 apl.	Clear HOO				
<del></del>		7. 1-			0.0.0	5	CIED III				
	Analytical Par	ameters (includ	o analysis i	mothod a	nd numl	ber and type of sample	containers)				
	Allalytical Pale				ino numi	ber and type or sample	containers				
	· · · · · · · · · · · · · · · · · · ·		260 B								
		SM 2	540 C	TDS							
		Disposal of Burn	rad Matar	<u>سا یہ </u>	GC =	1 1 1.1	10 to 10 10				
Co	llected Sample	es Stored on Ice	in Cooler	Var	25 90	1 Crum deliv	ered to Loudfarm				
CO				1							
	Chaill Of C	Custody Record			ronmant	tal Analysis Laboratory,	Albuquerque NM				
Fauin	ment Head Du	_	-			erface Level, YSI Water					
Lquip	ment oseu Du					XX Sympler Pum					
Notes/Com	ments:	anunte	A Manage	ne manuel	103/0	a supper runc					
7.1.	5 H70 C	ole			vell 1	had odor of	Has work				
1. U	1 4200	VILLAGE O			nitia		1 (3)				
Un	onll-in-	to be sun	ned !	<u>_</u>	701 170	Che in the cir	٠.				
revised: 0		vo per pure	744								

MONITORING WELL SAMPLING RECORD						Animas Environmental Services				
Monitor Well No: MW-5					624 E. Comanche, Farmington NM 87401					
1					,	Tel. (505) 564-2281 Fax (505) 324-2022				
Site: Groundwater Sampling						Project No.: AES 110904				
		eld Services, LLC	***************************************	•	Date: 9-/7					
	Lateral 6C			-	Arrival Time: 1242					
•	ng Technician:	L.L			•	Air Temp: \$76°				
	e / No Purge:			***************************************	т.с	).C. Elev. (ft): 5583				
Well	Diameter (in):	2		-	Total Well Depth (ft): 25.98					
Initi	al D.T.W. (ft):	19.55	Time:	1050	Activities and the second seco					
Confir	m D.T.W. (ft):	19.55		1243	(taken prior to purging well)					
	al D.T.W. (ft):		Time:	1359	(taken after sample collection)					
If N	NAPL Present:	D.T.P.:	_ D.T.W.	· <b>:</b> _	_ Thic	kness: Time	e:			
		Water Qualit	y Paramet	ers - Rec	orded Du	uring Well Purging				
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
Time	(deg C)	(μS) (mS)	(mg/L)	рН	(mV)	(see reverse for calc.)				
1300	21.27	7.3\$7	2.93	7.21	-682	.5 gul.	Her clear hus organic Hoatles			
1324	20.31	7.526	3.18	7.18	58.2	1.0 900.	clear H70			
1333	20.33	1.546	356		-59.1	1.5 gal.	clar 400			
1345	20.41	7.581	3.73		-58.5		Clev Hro			
1356	19.23	7.545		7.23			du tro			
1300	(1.0)	1.343	3.72	1.25	60.8	3.15	au ou			
				<del> </del>	<del> </del>					
			·····							
	Analytical Parameters (include analysis method and number and type of sample containers)									
				Tictiloa c	Tie Tie Tie	ber and type of sample				
		7260 BTE								
	Sm.	25400	TDS							
	Disposal of Purged Water: Into 55 gal drum delined to Etechanim									
Collected Samples Stored on Ice in Cooler:										
Chain of Custody Record Complete: Yes										
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:										
6.43 1 Well is extremely slow to pump.										
1.05	.	V-1. 17			- <del> </del>	Y				
7.15										
revised: 08/10/09										

MONITORING WELL SAMPLING RECORD						Animas Environmental Services				
Monitor Well No: MW-6						624 E. Comanche, Farmington NM 87401				
						Tel. (505) 564-2281 Fax (505) 324-2022				
Site:	Groundwater	Sampling		Project No.: AES 110904						
Location: Enterprise Field Services, LLC Date: 9-17-2013/-9.										
Project: Lateral 6C Arrival Time: 0823 (0947 Samul										
anniping reminerality (* * * * * * * * * * * * * * * * * * *										
_	e / No Purge:		<u>e</u>	T.O.C. Elev. (ft): 5582.22						
						Total Well Depth (ft): 25.37				
Initial D.T.W. (ft): 18.74 Time: 10.59  Confirm D.T.W. (ft): 13.74 Time: 0825						(taken at initial gauging of all wells) (taken prior to purging well) 9-18-2013				
	al D.T.W. (ft):		Time:	(taken after sample collection)						
	IAPL Present:		-	D.T.W.: Thickness: Time:						
0 12	1017	Water Quali	tv Paramet	ers - Rec		ring Well Purging				
9-18	-2013 Temp	Conductivity	DO		ORP	PURGED VOLUME				
T: a		-					j			
Time	(deg C)	(μS) (mS)	(mg/L)	pH	(mV)	(see reverse for cal				
0910	16.18	7.137	2.29	7.3	-316.6		Clean Hro sugen			
0917	16.15	7.558	1.16	720	351.0	1)	gray to odor			
0921	16.56	7.613	0.87	17.17	-354.0		gray tro dor			
0929	16.91	7.777	0.72	7.18	354.7	2.0 gel.	gray Hrs asu			
0934	17.03	7.775	0.67	7.20	-355.8	2.5 gel	gray tho "			
0941	17.24	7.85h	0.62	7.19	359.3	3.0 gal	gran H20 olar			
0947	17.3	8.042	0.59	17.9	- 357.5	3.25 gal.	gray Hzo Sheen			
						J	st Hzs odor			
	in the second se									
	Analytical Para	ameters (includ	e analysis	method a	nd numi	per and type of samp	ole containers)			
		-					-			
				- <del></del>						
Disposal of Purged Water: Int. 55 gul drum										
Collected Samples Stored on Ice in Cooler: \( \sqrt{\ell} \)										
Chain of Custody Record Complete: 195										
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 ws 700 Sangler Pans										
Notes/Comments:										
(0:103 Hz colans)										
1.08	H 20 V	d here	1			Walter Committee Com				
3.25	and to	be sured								
revised: 08/16/09										

MONITORING WELL SAMPLING RECORD						Animas Environmental Services				
Monitor Well No: MW-7					624 E. Comanche, Farmington NM 87401					
						Tel. (505) 564-2281 Fax (505) 324-2022				
Site: Groundwater Sampling						Project No.: AES 110904				
Location: Enterprise Field Services, LLC						Date: 9.17.	2013			
Project: Lateral 6C						Arrival Time: 1420	1643 Sayıla			
Sampling Technician: /, L.						Air Temp: 87° F				
Purg	e / No Purge:	Purge	_		т.о	T.O.C. Elev. (ft): 5582.24				
Well [	Diameter (in):				Fotal Well Depth (ft): 26.33					
Initial D.T.W. (ft): 15.22 Time: 10.53										
Confirm D.T.W. (ft): 19.22 Time: 1424										
Fin	al D.T.W. (ft):	19.24	Time:	1645	(taken after sample collection)					
If N	IAPL Present:	D.T.P.:	_ D.T.W	.:	Thickness: Time:					
Water Quality Parameters - Recorded During Well Purging										
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
Time	(deg C)	(μS) (mS)	(mg/L)	pН	(mV)	(see reverse for calc.)	Notes/Observations			
)444	19.89	8.597	2.90	7.45	-287.7	25 gal 2	Slight steen			
1508	20.08	8.560	3.26	7.43	-297.5	1.0 gal:	aray Hzo			
1519	20.31	8.542	4.5	<del> </del>	-293.2	1.5 gul	shien odor			
1644	22.22	2.512	7.01	7.47		_				
	<del> </del>	8.284	753	1		20 gili				
1606	21.14		7.53	7.64		2.5 300	gruy Heo Odor			
1427	19.87	4,598	9.63	7.59	-2881	3.0 gal	aren, grang			
1643	26.30	4.530	8.19	7.44	-294.4	3.5 gul.	yray Hro sleen			
							oder.			
					<u></u>					
	Analytical Par	ameters (includ	e analysis	method a	ind num	ber and type of sample	containers)			
		8260	BTEX							
		SM 2540		5						
		Disposal of Pure	ad Water	T.L C	T 0	10,000	1 to 1 and to			
<b>C</b> -					s gar.	drum delivered	2 (0 Long la N			
Co		es Stored on Ice		7						
	Chain of	Custody Record								
		Analytical L	aboratory:	Hall Envi	ironmen	tal Analysis Laboratory,	Albuquerque, NM			
Equip	ment Used D	uring Sampling:	Keck Wate	r Level o	r Keck Int	terface Level, YSI Water	Quality Meter			
		and Ne	w Disposal	de Bailer	(NS	700 Dump				
Notes/Con	nments:									
7.11	How colum	พฦ								
1.16	the volum	ve								
3,50	to be purs	ed								
revised: 0	- /)		<u> </u>							

MONITORING WELL SAMPLING RECORD					Animas Environmental Services					
Mon	itor Well No:	MW	-8		6	624 E. Comanche, Farmington NM 87401				
						Tel. (505) 564-2281 Fax (505) 324-2022				
Site:	Groundwater	r Sampling			Project No.: AES 110904					
		eld Services, LLC		***************************************	-	Date:	The state of the s			
	Lateral 6C				-	Arrival Time: 1002	(9-18-2013			
Samplin	g Technician:				•	Air Temp: 7/°F	1103 SAMPLE			
Purg	e / No Purge:	Purge	_	740	т.с	.C. Elev. (ft): 557				
Well [	Diameter (in):	2		•	Total We	II Depth (ft): 25.	26			
Initia	al D.T.W. (ft):	15.08	Time:	1050	9-17-2	otal Well Depth (ft): 25.26  9-17-7013 (taken at initial gauging of all wells)				
Confir	m D.T.W. (ft):	15.08	Time:	1006		9-82003 (taken prior to purging well)				
Fina	al D.T.W. (ft):		Time:	(taken after sample collection)						
If N	NAPL Present:	D.T.P.:	D.T.W		Thic	kness: Tim	e:			
9-18.	2013 ~	Water Qualit	ty Paramet	ers - Rec	orded Du	iring Well Purging				
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
Time	(deg C)	(μS) (mS)	(mg/L)	рH	(mV)	(see reverse for calc.)	Notes/Observations			
1023	17.44	7.380	1.63	7.57	-209,8		Hyo Claux			
1932	17.65	7.358	1.46		-2147	2.0 gal.	Hro clear			
1036	17.65	7.35 7	1.38	7.43	-218.7	7 ^	Hro deve			
1042	17.67	7.364	1.26	7.41	-224.1	3.0 gal.	Hro deve			
1048	1738	7.363	1.12	7.4/	-227.4	3.5 gal.	Hro clare			
1053	17.85	7.394	1.00	7.40	-231.5	4.0 gol.	Hzo close			
1057	17.92	7.404	097	7.40	-226.3	J	How der			
1103	17.93	7.419	0.83	7.39	-224.8	5.0 20.	Hzo claim			
	Analytical Par	ameters (includ	e analysis i	method a	nd numl	per and type of sample	containers)			
		8260 B	76 X							
	51	12540 C	TUS							
		Disposal of Purg	ed Water:	Into	55 ga	l. drum deliver	d to land far m			
Disposal of Purged Water: <u>Into 55 gal. drum, delivered to land fare M</u> Collected Samples Stored on Ice in Cooler: <u>Yes</u>										
Chain of Custody Record Complete: \\\ \frac{1}{16} \sqrt{2}										
		Analytical L	aboratory:	Hall Énvi	ronment	al Analysis Laboratory,	Albuquerque, NM			
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter										
and New Disposable Bailer WS 700 Pump										
Notes/Comments:										
10.18 Hzo culumn										
1.66	H20 V	olume								
5.0 c	gal to b	e parced	<b></b>		W. 4400					

MONITORING WELL SAMPLING RECORD						Animas Environmental Services				
Monitor Well No: MW-9					624 E. Comanche, Farmington NM 87401					
						Tel. (505) 564-2281 Fax (505) 324-2022				
Site:	Groundwate	er Sampling			Project No.: AES 110904					
Location:	Location: Enterprise Field Services, LLC  Date: 9-17-2013									
Project: Lateral 6C Arrival Time: 1/20 (1224 Somple										
		: lamone,	4	- -	Air Temp: 74° F					
_	e / No Purge			T.O.C. Elev. (ft): 5582.48						
Well Diameter (in): 2						Total Well Depth (ft): 26.26				
Initial D.T.W. (ft): 17.74 Time: 1047										
	m D.T.W. (ft)		Time:		(taken prior to purging well)					
	al D.T.W. (ft) IAPL Present		. Time: D.T.W.	(taken after sample collection)						
11 10	APL Present						e			
		Water Quali	ty Paramet	ers - Rec	orded Du	ring Well Purging				
	Temp	Conductivity	DO		ORP	PURGED VOLUME				
Time	(deg C)	(μS) (mS)	(mg/L)	рH	(mV)	(see reverse for calc.)				
1145	15.93	7.416	4.86	7.16	-15.5	15 gal	cleur Hzo			
1150	15.36	7.421	4.35	7.14	-19.2	1.0 50.	Has deal			
1153	15.85	6658	3.42	7.14	785	1.5 gal	H20 Clear			
1157	15.79	6.620	0.70	7.15	-18.3	2.0 gal.	tro decr.			
1201	16.07	7.465	0.69	7.15	-18.9	2.5 gal.	the clea			
1209	16.21	7.498	0.60	7.13	-22.4	3.0 gal.	Hru clear			
1216	16.15	7.497	0.50	7.13	-23.0		the dem			
1220	15.87	7.495	0.39	7.14	-24.8	4.0 gal.	Hro deal			
1224	16.20	7.500	0.30	7.12	27.9	4.25 gal	Hzo dem			
•										
μ	Analytical Pa	rameters (includ	e analysis i	method a	nd num	ber and type of sample	containers)			
		326	O BIE	X						
		SM 25		TIDS						
Disposal of Purged Water: Into 55 gal-drum, to Etech land farm										
Co	llected Samp	les Stored on Ice	in Cooler:	Yes	,					
Chain of Custody Record Complete: Yes										
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 WS 700 Sander w										
Notes/Comments:										
8.52										
4.25	ial.									
revised: 08										



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

October 01, 2013

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486, 1776

TEL: (505) 486-1776 FAX (505) 324-2022

RE: Enterprose Lateral 6C OrderNo.: 1309895

#### Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/19/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

#### Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Client Sample ID: MW-3

Enterprose Lateral 6C Project:

Collection Date: 9/18/2013 1:50:00 PM

Lab ID: 1309895-001

Matrix: AQUEOUS

Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	t: JMP
Benzene	150	5.0	μg/L	5	9/23/2013 2:06:30 PM	R1354
Toluene	28	5.0	μg/L	5	9/23/2013 2:06:30 PM	R1354
Ethylbenzene	ND	5.0	μg/L	5	9/23/2013 2:06:30 PM	R1354
Xylenes, Total	15	7.5	μg/L	5	9/23/2013 2:06:30 PM	R1354
Surr: 1,2-Dichloroethane-d4	92.7	70-130	%REC	5	9/23/2013 2:06:30 PM	R1354
Surr: 4-Bromofluorobenzene	98.0	70-130	%REC	5	9/23/2013 2:06:30 PM	R1354
Surr: Dibromofluoromethane	95.5	70-130	%REC	5	9/23/2013 2:06:30 PM	R1354
Surr: Toluene-d8	97.6	70-130	%REC	5	9/23/2013 2:06:30 PM	R1354
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analys	t: JML
Total Dissolved Solids	4670	20.0	* mg/L	1	9/23/2013 3:27:00 PM	9424

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery 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
  - Not Detected at the Reporting Limit Page 1 of 11 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Client Sample ID: MW-4

**Project:** Enterprose Lateral 6C

**Collection Date:** 9/18/2013 12:14:00 PM

Lab ID: 1309895-002

Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analy	st: JMP
Benzene	830	20	μg/L	20	9/20/2013 11:03:49 P	M R13514
Toluene	39	20	μg/L	20	9/20/2013 11:03:49 P	M R13514
Ethylbenzene	ND	20	μg/L	20	9/20/2013 11:03:49 P	M R13514
Xylenes, Total	ND	30	μg/L	20	9/20/2013 11:03:49 P	M R13514
Surr: 1,2-Dichloroethane-d4	91.0	70-130	%REC	20	9/20/2013 11:03:49 P	M R13514
Surr: 4-Bromofluorobenzene	91.8	70-130	%REC	20	9/20/2013 11:03:49 P	M R13514
Surr: Dibromofluoromethane	95.9	70-130	%REC	20	9/20/2013 11:03:49 P	M R13514
Surr: Toluene-d8	95.4	70-130	%REC	20	9/20/2013 11:03:49 P	M R13514
SM2540C MOD: TOTAL DISSOLVED S	OLIDS				Analys	st: JML
Total Dissolved Solids	4030	20.0	* mg/L	1	9/23/2013 3:27:00 PM	9424

Matrix: AQUEOUS

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

- 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
- S Spike Recovery 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

Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Project: Enterprose Lateral 6C

1309895-003 Lab ID:

Client Sample ID: MW-5

**Collection Date:** 9/17/2013 1:56:00 PM

Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	t: JMP
Benzene	ND	1.0	μg/L	1	9/20/2013 5:47:59 PM	R1351
Toluene	ND	1.0	μg/L	1	9/20/2013 5:47:59 PM	R1351
Ethylbenzene	ND	1.0	μg/L	1	9/20/2013 5:47:59 PM	R1351
Xylenes, Total	ND	1.5	μg/L	1	9/20/2013 5:47:59 PM	R1351
Surr: 1,2-Dichloroethane-d4	89.5	70-130	%REC	1	9/20/2013 5:47:59 PM	R1351
Surr: 4-Bromofluorobenzene	90.6	70-130	%REC	1	9/20/2013 5:47:59 PM	R1351
Surr: Dibromofluoromethane	91.6	70-130	%REC	1	9/20/2013 5:47:59 PM	R1351
Surr: Toluene-d8	96.2	70-130	%REC	1	9/20/2013 5:47:59 PM	R1351
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analys	t: <b>JML</b>
Total Dissolved Solids	3630	20.0	* mg/L	1	9/23/2013 3:27:00 PM	9424

Matrix: AQUEOUS

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Not Detected at the Reporting Limit Page 3 of 11 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Client Sample ID: MW-6

Project: Enterprose Lateral 6C **Collection Date:** 9/18/2013 9:47:00 AM

1309895-004 Lab ID:

Matrix: AQUEOUS

Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	st: JMP
Benzene	ND	5.0	μg/L	5	9/21/2013 12:29:23 Al	M R13514
Toluene	ND	5.0	μg/L	5	9/21/2013 12:29:23 Al	M R13514
Ethylbenzene	180	5.0	μg/L	5	9/21/2013 12:29:23 Al	M R13514
Xylenes, Total	1200	75	μg/L	50	9/21/2013 12:01:00 AI	M R13514
Surr: 1,2-Dichloroethane-d4	91.9	70-130	%REC	5	9/21/2013 12:29:23 Al	M R13514
Surr: 4-Bromofluorobenzene	85.1	70-130	%REC	5	9/21/2013 12:29:23 Al	M R13514
Surr: Dibromofluoromethane	98.3	70-130	%REC	5	9/21/2013 12:29:23 AI	M R13514
Surr: Toluene-d8	92.4	70-130	%REC	5	9/21/2013 12:29:23 Al	M R13514
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analys	st: JML
Total Dissolved Solids	3750	20.0	* mg/L	1	9/23/2013 3:27:00 PM	9424

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
  - Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Client Sample ID: MW-7

Enterprose Lateral 6C

Collection Date: 9/17/2013 4:43:00 PM

1309895-005 Lab ID:

Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst	: ЈМР
Benzene	ND	1.0		μg/L	1	9/20/2013 7:13:18 PM	R13514
Toluene	ND	1.0		μg/L	1	9/20/2013 7:13:18 PM	R13514
Ethylbenzene	ND	1.0		μg/L	1	9/20/2013 7:13:18 PM	R13514
Xylenes, Total	ND	1.5		μg/L	1	9/20/2013 7:13:18 PM	R13514
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	1	9/20/2013 7:13:18 PM	R13514
Surr: 4-Bromofluorobenzene	88.6	70-130		%REC	1	9/20/2013 7:13:18 PM	R13514
Surr: Dibromofluoromethane	94.0	70-130		%REC	1	9/20/2013 7:13:18 PM	R13514
Surr: Toluene-d8	96.5	70-130		%REC	1	9/20/2013 7:13:18 PM	R13514
SM2540C MOD: TOTAL DISSOLVED	SOLIDS					Analyst	: JML
Total Dissolved Solids	4040	20.0	*	mg/L	1	9/23/2013 3:27:00 PM	9424

Matrix: AQUEOUS

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Not Detected at the Reporting Limit Page 5 of 11 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

#### Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Client Sample ID: MW-8

Project: Enterprose Lateral 6C 1309895-006 Lab ID: Matrix: AQUEOUS Collection Date: 9/18/2013 11:08:00 AM Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analysi	: JMP
Benzene	ND	1.0	μg/L	1	9/20/2013 7:41:41 PM	R13514
Toluene	ND	1.0	μg/L	1	9/20/2013 7:41:41 PM	R13514
Ethylbenzene	3.4	1.0	μg/L	1	9/20/2013 7:41:41 PM	R13514
Xylenes, Total	27	1.5	μg/L	1	9/20/2013 7:41:41 PM	R13514
Surr: 1,2-Dichloroethane-d4	91.5	70-130	%REC	1	9/20/2013 7:41:41 PM	R13514
Surr: 4-Bromofluorobenzene	91.0	70-130	%REC	1	9/20/2013 7:41:41 PM	R13514
Surr: Dibromofluoromethane	97.6	70-130	%REC	1	9/20/2013 7:41:41 PM	R13514
Surr: Toluene-d8	95.4	70-130	%REC	1	9/20/2013 7:41:41 PM	R13514
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analyst	: JML
Total Dissolved Solids	3590	20.0	* mg/L	1	9/23/2013 3:27:00 PM	9424

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

- 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
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Enterprose Lateral 6C

Lab ID: 1309895-007

Client Sample ID: MW-9

Collection Date: 9/17/2013 12:24:00 PM

Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Anaiys	t: JMP
Benzene	ND	1.0	μg/L	1	9/20/2013 9:37:49 PM	R13514
Toluene	ND	1.0	μg/L	1	9/20/2013 9:37:49 PM	R13514
Ethylbenzene	ND	1.0	μg/L	1	9/20/2013 9:37:49 PM	R13514
Xylenes, Total	ND	1.5	μg/L	1	9/20/2013 9:37:49 PM	R13514
Surr: 1,2-Dichloroethane-d4	94.0	70-130	%REC	1	9/20/2013 9:37:49 PM	R13514
Surr: 4-Bromofluorobenzene	89.9	70-130	%REC	1	9/20/2013 9:37:49 PM	R13514
Surr: Dibromofluoromethane	97.1	70-130	%REC	1	9/20/2013 9:37:49 PM	R13514
Surr: Toluene-d8	96.0	70-130	%REC	1	9/20/2013 9:37:49 PM	R13514
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analys	t: JML
Total Dissolved Solids	3550	20.0	* mg/L	1	9/23/2013 3:27:00 PM	9424

Matrix: AQUEOUS

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

- 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
- S Spike Recovery 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 Page
  - P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1309895

Date Reported: 10/1/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services Client Sample ID: TRIP BLANK

Project: Enterprose Lateral 6C Collection Date:

1309895-008 Lab ID: Matrix: TRIP BLANK Received Date: 9/19/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: JMP
Benzene	ND	1.0	μg/L	1	9/20/2013 5:19:29 PM	R13514
Toluene	ND	1.0	µg/L	1	9/20/2013 5:19:29 PM	R13514
Ethylbenzene	ND	1.0	µg/L	1	9/20/2013 5:19:29 PM	R13514
Xylenes, Total	ND	1.5	μg/L	1	9/20/2013 5:19:29 PM	R13514
Surr: 1,2-Dichloroethane-d4	91.0	70-130	%REC	1	9/20/2013 5:19:29 PM	R13514
Surr: 4-Bromofluorobenzene	93.1	70-130	%REC	1	9/20/2013 5:19:29 PM	R13514
Surr: Dibromofluoromethane	96.8	70-130	%REC	1	9/20/2013 5:19:29 PM	R13514
Surr: Toluene-d8	95.0	70-130	%REC	1	9/20/2013 5:19:29 PM	R13514

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

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

- Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit RL

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1309895

01-Oct-13

Client: Animas Environmental Services

Project: Enterprose Lateral 6C

Sample ID 5mL rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	1D: <b>R1</b>	3514	F	RunNo: 1	3514				
Prep Date:	Analysis D	ate: 9/	20/2013	S	SeqNo: 3	84574	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	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID 100ng Ics	SampT	ype: LC	s	Tes	tCode: E	PA Method	8260B: VOL	ATILES			
Client ID: LCSW	Batch	ID: <b>R1</b>	3514	F							
Prep Date:	Analysis D	ate: 9/	20/2013	5	SeqNo: 3	84576	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	70	130				
Toluene	21	1.0	20.00	0	107	82.2	124				
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.6	70	130				
Surr: 4-Bromofluorobenzene	9.5		10.00		95.4	70	130				
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130				
Surr: Toluene-d8	9.6		10.00		96.5	70	130				

Sample ID 1309895-003ams	SampT	ype: <b>M</b> \$	3	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: MW-5	Batch	ID: <b>R1</b>	3514	F	RunNo: 1	3514				
Prep Date:	Analysis D	ate: 9/	20/2013	5	SeqNo: 3	84580	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	67.9	137	1		
Toluene	22	1.0	20.00	0	109	77	127			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.5	70	130			
Surr: Toluene-d8	9.7		10.00		96.9	70	130			

Sample ID	1309895-003amsd	SampT	ype: MS	D	Test	Code: E	PA Method	8260B: VOL	ATILES		
Client ID:	MW-5	Batch	ID: <b>R1</b>	3514	R	tunNo: 1	3514				
Prep Date:		Analysis D	ate: 9/	20/2013	S	eqNo: 3	84581	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		21	1.0	20.00	0	103	67.9	137	0.544	20	
Foluene		21	1.0	20.00	0	103	77	127	5.96	20	

#### 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
- S Spike Recovery 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

Page 9 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1309895

01-Oct-13

Client:

Animas Environmental Services

Project:

Enterprose Lateral 6C

Sample ID 1309895-003amsd	SampT	ype: MS	SD	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: MW-5	Batch	ID: <b>R1</b>	3514	F	RunNo: 1	3514				
Prep Date:	Analysis D	ate: 9/	/20/2013	S	SeqNo: 3	84581	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		97.3	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		94.7	70	130	0	0	

Sample ID 5mL rb	SampT	ype: Mi	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R1	3544	F	RunNo: 1	3544				
Prep Date:	Analysis D	ate: 9/	23/2013	\$	SeqNo: 3	85231	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	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.3	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID 100ng ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	ID: R1	3544	F	RunNo: 1	3544				
Prep Date:	Analysis D	ate: 9/	23/2013	\$	SeqNo: 3	85233	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	22	1.0	20.00	0	110	82.2	124			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.8	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

#### 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
- S Spike Recovery 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

Page 10 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1309895

01-Oct-13

**Client:** 

Animas Environmental Services

Project:

Enterprose Lateral 6C

Sample ID MB-9424

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

**PBW** 

Batch ID: 9424

SampType: LCS

Analysis Date: 9/23/2013

**PQL** 

RunNo: 13539

Prep Date: 9/22/2013

Analysis Date: 9/23/2013

SPK value SPK Ref Val

SPK value SPK Ref Val

SeqNo: 385062

Units: mg/L

HighLimit

**RPDLimit** 

%RPD

Qual

Analyte Total Dissolved Solids

ND 20.0

Sample ID LCS-9424 Client ID: LCSW

Prep Date: 9/22/2013

Batch ID: 9424

TestCode: SM2640C MOD: Total Dissolved Solids RunNo: 13539

%REC LowLimit

Units: mg/L

Qual

Analyte

Result **PQL**  SeqNo: 385063

LowLimit HighLimit

%RPD **RPDLimit** 

**Total Dissolved Solids** 

20.0 1010

1000

%REC 101

80 120

Sample ID 1309946-002AMS

**BatchQC** 

Sample ID 1309946-002AMSD

9/22/2013

9/22/2013

SampType: MS

Batch ID: 9424

1000

TestCode: SM2540C MOD: Total Dissolved Solids RunNo: 13539

Units: mg/L

120

Analyte

**PQL** SPK value SPK Ref Val

Analysis Date: 9/23/2013

20.0

20.0

Analysis Date: 9/23/2013

SeqNo: 385084 %REC LowLimit

102

HighLimit

%RPD

**RPDLimit** Qual

Total Dissolved Solids

Client ID:

Prep Date:

SampType: MSD

1190

1160

TestCode: SM2640C MOD: Total Dissolved Solids

Client ID:

**BatchQC** Batch ID: 9424

169.0

RunNo: 13539 SeqNo: 385085

Units: mg/L

HighLimit

**RPDLimit** Qual

Page 11 of 11

Analyte Total Dissolved Solids

Prep Date:

Result

PQL

SPK value SPK Ref Val

1000

169.0

%REC 99.0

80

LowLimit

80

120

2.47

%RPD

5

#### **Qualifiers:**

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded Η
- ND
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Not Detected at the Reporting Limit



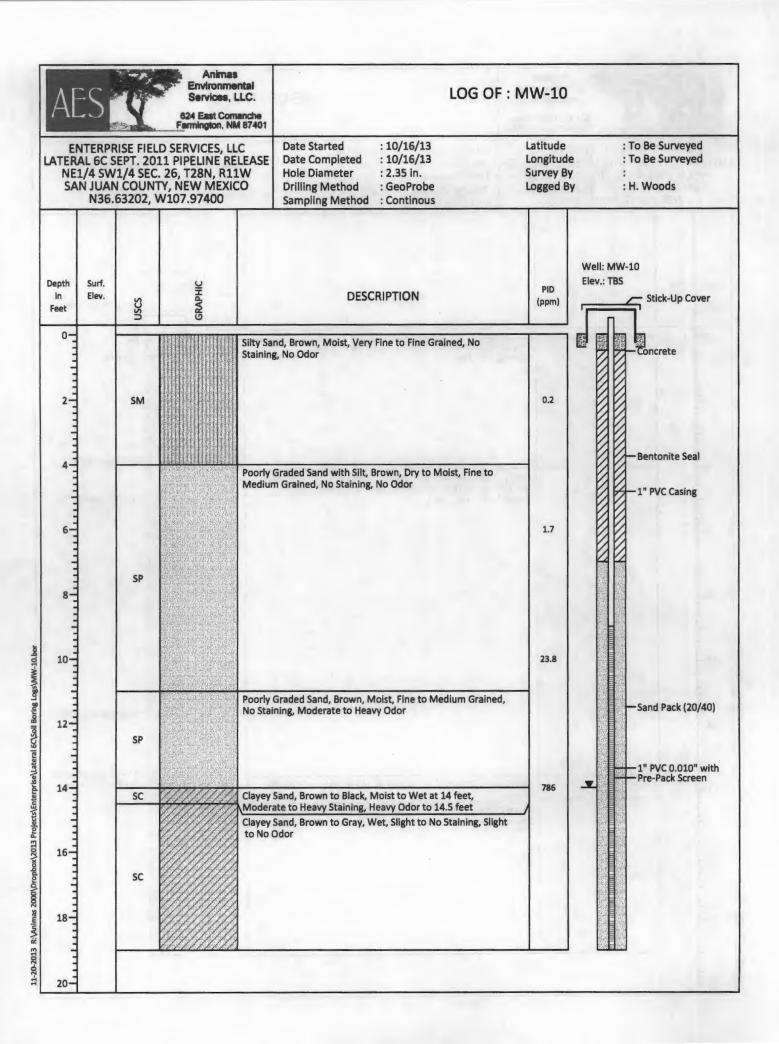
Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

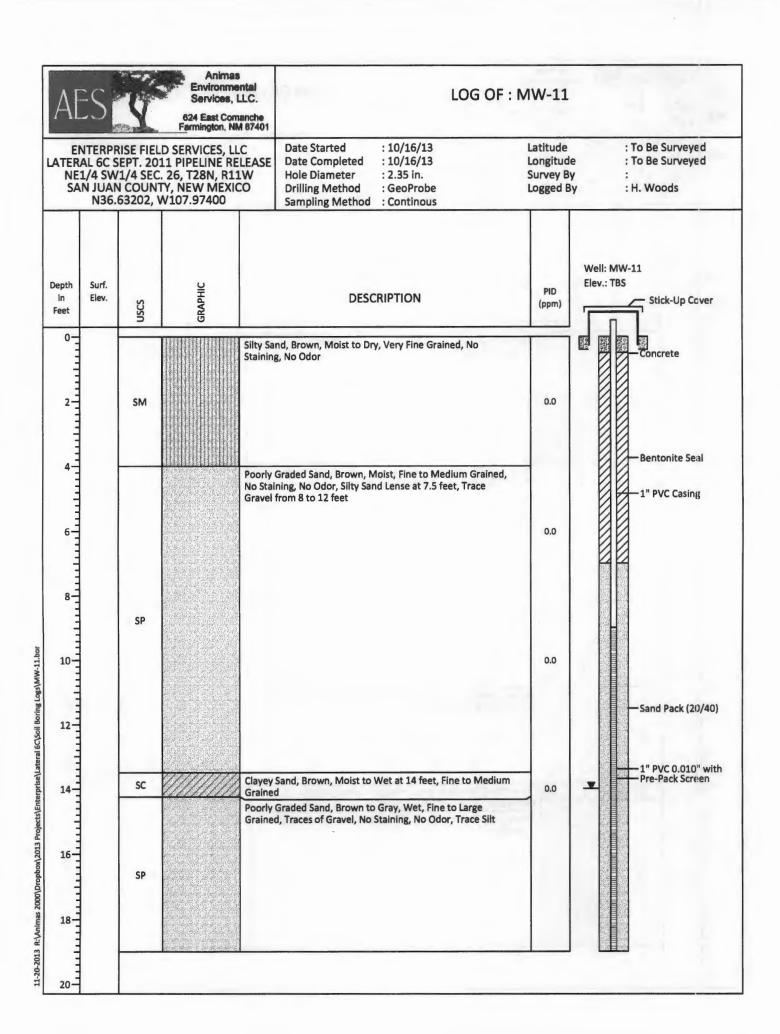
TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

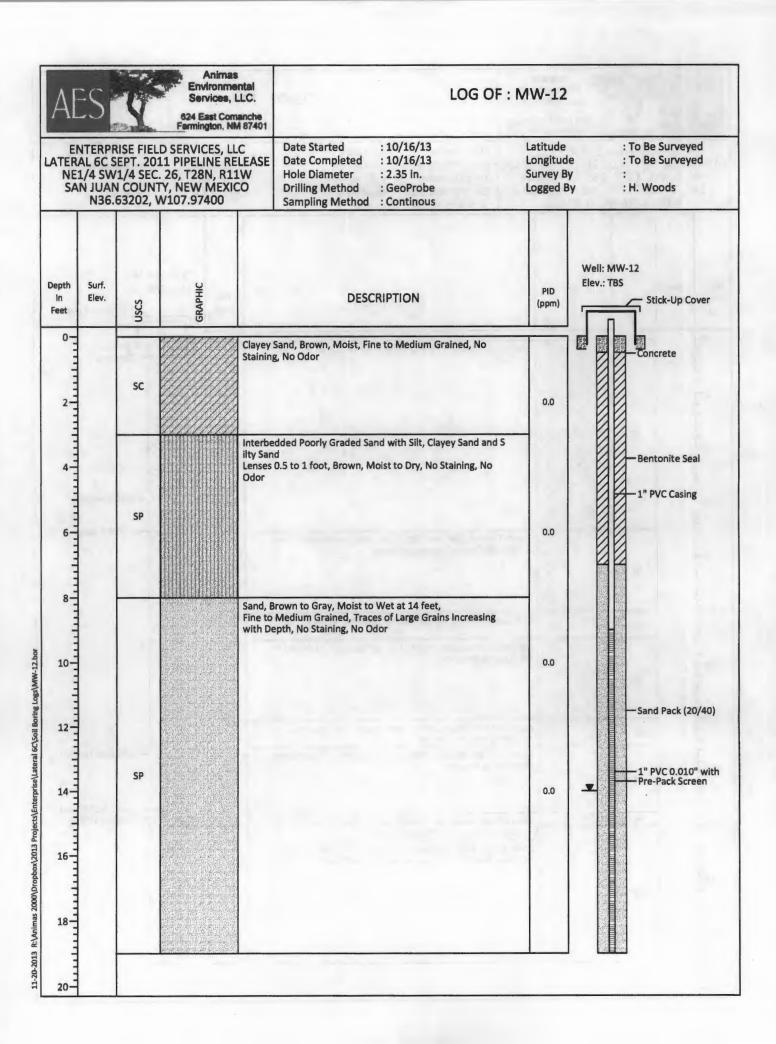
# Sample Log-In Check List

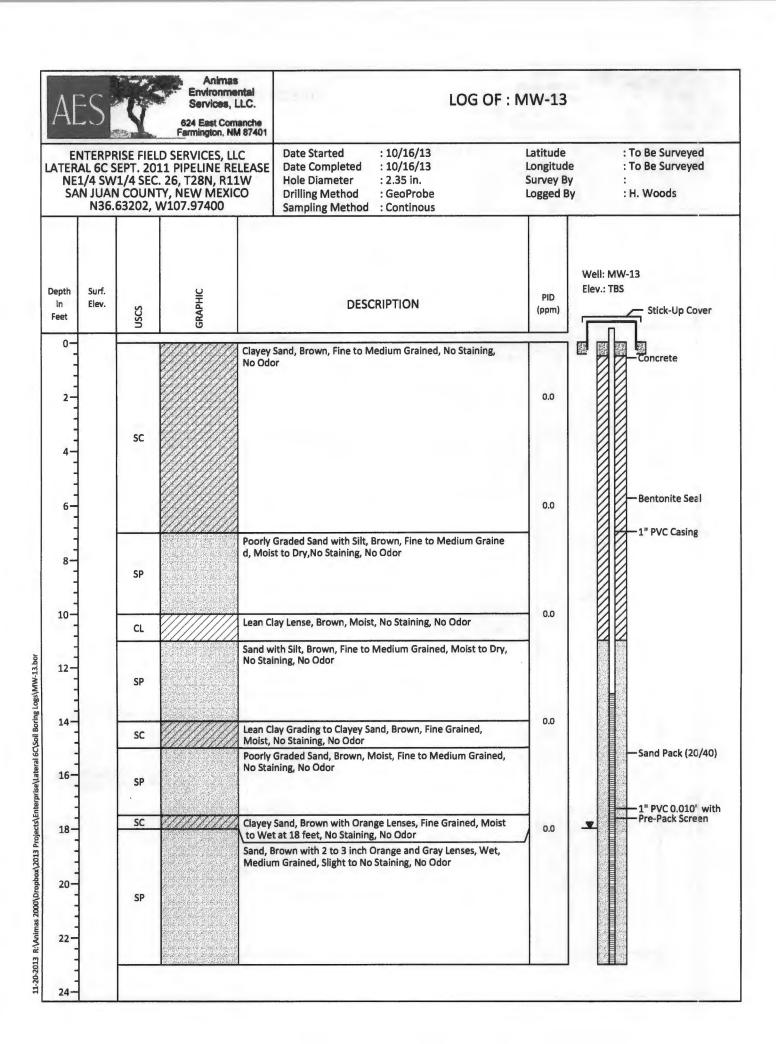
Client Name: Animas Environmental Work Order Number	r: 1309 <b>8</b> 95		RcptNo:	1
Received by/date:	3			
Logged By: Ashley Gallegos 9/19/2013 10:00:00 A	м	A		
Completed By: Ashley Gallegos y 9/19/2013 3:58:56 PM	1	*		
Reviewed By: Q 4/20		. 0		
Chain of Custody				
Custody seals intact on sample bottles?	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° C to 6.0°C	Yes 🗹	No 🗆	NA $\square$	
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 🗹	# 4	
	-		# of preserved bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗀	for pH: (<2 o	r >12 unless noted)
13, Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	
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 🗌	Checked by:	
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗆	na 🗹	
Person Notified: Date:				7
By Whom: Via:	l ∏eMail ∏	Phone Fax	☐ In Person	
Regarding:				
Client Instructions:		, district		
17. Additional remarks:				
18. <u>Cooler Information</u>				
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By		
1 1.0 Good Yes				

5	5		VICTORy						Ì	HALL		ENVIKONMENIAL		Ž	1	_ _	1	
Client:	Animas	s Enviro	Animas Environmental Services	Standarc	□ Rush				A	ANAL		S	3	Ö	Z	LABORATOR	RY	
				Project Name:	.:				Š	w.ha	lenvir	www.hallenvironmental.com	ıtal.c	Ē				
Mailing Address:	ress:	624 E C	624 E Comanche	Enterprise Lateral 6C	teral 6C		4	4901 Hawkins NE	wkins	Ä	Albu	Albuquerque, NM 87109	Je, N	M 87	109			
		Farming	37401	Project #:				Tel. 505	505-345-3975	3975	Fax		-345	505-345-4107				
Phone #:	505-564-2281	-2281					ļ			ď	Analysis		Rednest					
Email or Fax#:	##			Project Manager:	ger:		20.1			0								
QA/QC Package:	age:						ŀ Ac			0.006	9							
□ Standard			☐ Level 4 (Full Validation) Ross Kennemer	Ross Kennen	ner		93.			Aq	21)	0.						
Accreditation:	Ë			ımpler:	Layina Lamone	ne				- etə	ISA.				-			
□ NE! AP		□ Other						'n	as	8/s	- S				88	`		
☐ EDD (Type)	pe)			The second secon				079	3-00	udi/	988				108			
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		senic - EP	SS MS - S	ılfide A450 linity	dioactivity - A	D beviosa	noinA voje - snoise -	s - stinity - S	EX - 805	3 Aq∃ - Ho	(3T8 808	V 2540C T	
								ST			iO				41		(IC	
9-18-2013	1350	Hro	MW-3	1-500 ml. Plastic 3 - 40 ml VOA	Non / HCI	-001										×	×	
9-18-2013	1214	120	MW-4	1-500 mL Plastic 3 - 40 ml VOA	Non / HCI	-002									_	×	×	
1-17-2013	1356	Hzo	MW-5	1-500 mL Plastic 3 - 40 ml VOA	Non / HCI	-003									••	(   x	×	
	5460	Hzo	MW-6	1-500 mL Plastic 3 - 40 ml VOA	Non / HCI	h00 -									2 22	×	×	
	1643	62H	MW-7	1-500 mL Plastic 3 - 40 ml VOA	Non / HCI	-05									,	×	×	
	1603	4,0	MW-8	1-500 mL Plastic 3 - 40 ml VOA		-000										×	×	
<del></del>	1224	Hz0	WW-9	1-500 mL Plastic 3 - 40 ml VOA	l	1-00-										×	×	
			Trip Blank	1-500 mL Plastic 3 - 40 ml VOA		800-										×		
																_		
									$\vdash$	_		-	<u> </u>		<u> </u>	╁		
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1/18/13	707	18.5	me	Mathe	North	701 S/81/				Ď	5							
	Time:	Refinduished by	,	Received by: /		Date Time												
श्रीह	Ter	3	Chrotin blooder	<del>- </del>	\ \ -	malkillis 1000												
40	Accarv. San	nates submitte	submitted to Hell Environmental may be subcontracted to	tracted to other ab	credited laboratori	es. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the	a possibility	. Amy su	b-contra	cted day	a will be	clearty n	otated	on the	Spalving	n report		











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

OrderNo.: 1310941

October 24, 2013

Ross Kennemer Animas Environmental 624 East Comanche Farmington, NM 87401

TEL: (505) 486-1776 FAX (505) 324-2022

RE: Enterprise Lateral 6C

#### Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 4 sample(s) on 10/18/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

# **Analytical Report** Lab Order 1310941

Date Reported: 10/24/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Enterprise Lateral 6C Project:

Lab ID: 1310941-001 Client Sample ID: MW-9@13.5'-14'

Collection Date: 10/16/2013 10:58:00 AM

Received Date: 10/18/2013 10:00:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	11	10	mg/Kg	1	10/23/2013 9:47:58 AM	9947
Surr: DNOP	99.0	66-131	%REC	1	10/23/2013 9:47:58 AM	9947
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	RAA
Benzene	1.7	0.97	mg/Kg	20	10/23/2013 3:44:19 AM	9929
Toluene	20	0.97	mg/Kg	20	10/23/2013 3:44:19 AM	9929
Ethylbenzene	2.5	0.97	mg/Kg	20	10/23/2013 3:44:19 AM	9929
Xylenes, Total	28	1.9	mg/Kg	20	10/23/2013 3:44:19 AM	9929
Surr: 1,2-Dichloroethane-d4	97.2	70-130	%REC	20	10/23/2013 3:44:19 AM	9929
Surr: 4-Bromofluorobenzene	98.2	70-130	%REC	20	10/23/2013 3:44:19 AM	9929
Surr: Dibromofluoromethane	96.9	70-130	%REC	- 20	10/23/2013 3:44:19 AM	9929
Surr: Toluene-d8	97.2	70-130	%REC	20	10/23/2013 3:44:19 AM	9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	RAA
Gasoline Range Organics (GRO)	530	97	mg/Kg	20	10/23/2013 3:44:19 AM	9929
Surr: BFB	98.2	70-130	%REC	20	10/23/2013 3:44:19 AM	9929

Matrix: SOIL

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
  - Not Detected at the Reporting Limit Page 1 of 8 Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

P

### **Analytical Report** Lab Order 1310941

Date Reported: 10/24/2013

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Enterprise Lateral 6C Project:

Lab ID: 1310941-002

11 1400 Client Sample ID: MW-10@13.5'-14'

Collection Date: 10/16/2013 10:34:00 AM

Received Date: 10/18/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS				Analy	st: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/23/2013 10:53:53	AM 9947
Surr: DNOP	101	66-131	%REC	1	10/23/2013 10:53:53	AM 9947
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analy	st: RAA
Benzene	ND	0.047	mg/Kg	1	10/23/2013 4:12:53 A	M 9929
Toluene	ND	0.047	mg/Kg	1	10/23/2013 4:12:53 A	M 9929
Ethylbenzene	ND	0.047	mg/Kg	1	10/23/2013 4:12:53 A	M 9929
Xylenes, Total	ND	0.095	mg/Kg	1	10/23/2013 4:12:53 A	M 9929
Surr: 1,2-Dichloroethane-d4	100	70-130	%REC	1	10/23/2013 4:12:53 A	M 9929
Surr: 4-Bromofluorobenzene	94.4	70-130	%REC	1	10/23/2013 4:12:53 A	M 9929
Surr: Dibromofluoromethane	106	70-130	%REC	1	10/23/2013 4:12:53 A	M 9929
Surr: Toluene-d8	0.88	70-130	%REC	1	10/23/2013 4:12:53 A	M 9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analy	st: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/23/2013 4:12:53 A	M 9929
Surr: BFB	94.4	70-130	%REC	1	10/23/2013 4:12:53 A	M 9929

Matrix: SOIL

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

- 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
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

- Not Detected at the Reporting Limit Page 2 of 8 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# **Analytical Report** Lab Order 1310941

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/24/2013

**CLIENT:** Animas Environmental

Client Sample ID: MW-1/@13.5'-14'

Project: Enterprise Lateral 6C Collection Date: 10/16/2013 10:00:00 AM

Lab ID: 1310941-003

Matrix: SOIL

Received Date: 10/18/2013 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D; DIESEL RAN	IGE ORGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/23/2013 11:15:54 AM	9947
Surr: DNOP	94.5	66-131	%REC	1	10/23/2013 11:15:54 AM	9947
<b>EPA METHOD 8260B: VOLATILES</b>	SHORT LIST				Analyst:	RAA
Benzene	ND	0.046	mg/Kg	1	10/23/2013 4:41:27 AM	9929
Toluene	ND	0.046	mg/Kg	1	10/23/2013 4:41:27 AM	9929
Ethylbenzene	ND	0.046	mg/Kg	1	10/23/2013 4:41:27 AM	9929
Xylenes, Total	ND	0.093	mg/Kg ·	1	10/23/2013 4:41:27 AM	9929
Surr: 1,2-Dichloroethane-d4	99.0	70-130	%REC	1	10/23/2013 4:41:27 AM	9929
Surr: 4-Bromofluorobenzene	92.8	70-130	%REC	1	10/23/2013 4:41:27 AM	9929
Surr: Dibromofluoromethane	107	70-130	%REC	1	10/23/2013 4:41:27 AM	9929
Surr: Toluene-d8	89.2	70-130	%REC	1	10/23/2013 4:41:27 AM	9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	10/23/2013 4:41:27 AM	9929
Surr: BFB	92.8	70-130	%REC	1	10/23/2013 4:41:27 AM	9929

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

- 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
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

- Not Detected at the Reporting Limit Page 3 of 8 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1310941

Date Reported: 10/24/2013

# Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: MW-12@17.5'-18' **CLIENT:** Animas Environmental

Collection Date: 10/16/2013 11:25:00 AM Project: Enterprise Lateral 6C

Lab ID: 1310941-004 Matrix: SOIL Received Date: 10/18/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS				Analy	st: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/23/2013 11:37:55	AM 9947
Surr: DNOP	102	66-131	%REC	1	10/23/2013 11:37:55	AM 9947
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analy	st: RAA
Benzene	ND	0.048	mg/Kg	1	10/23/2013 5:10:00 A	M 9929
Toluene	ND	0.048	mg/Kg	1	10/23/2013 5:10:00 A	M 9929
Ethylbenzene	ND	0.048	mg/Kg	1	10/23/2013 5:10:00 A	M 9929
Xylenes, Total	ND	0.097	mg/Kg	1	10/23/2013 5:10:00 A	M 9929
Surr: 1,2-Dichloroethane-d4	93.2	70-130	%REC	1	10/23/2013 5:10:00 A	M 9929
Surr: 4-Bromofluorobenzene	95.6	70-130	%REC	1	10/23/2013 5:10:00 A	M 9929
Surr: Dibromofluoromethane	102	70-130	%REC	1	10/23/2013 5:10:00 A	M 9929
Surr: Toluene-d8	84.2	70-130	%REC	1	10/23/2013 5:10:00 A	M 9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analy	st: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/23/2013 5:10:00 A	M 9929
Surr: BFB	95.6	70-130	%REC	1	10/23/2013 5:10:00 #	M 9929

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit

Not Detected at the Reporting Limit Page 4 of 8 Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

P

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1310941

24-Oct-13

Client:

Animas Environmental

Project:	Enterpris	e Lateral 6C									
Sample ID	MB-9947	SampTyp	e: <b>M</b> E	BLK	Tes	Code: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID:	PBS	Batch ID	): 99	47	F	RunNo: 1	4241				
Prep Date:	10/22/2013	Analysis Date	e: 10	0/22/2013	S	SeqNo: 4	08483	Units: mg/h	<b>(</b> g		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range ( Surr: DNOP	Organics (DRO)	ND 9.5	10	10.00		95.2	66	131			
Sample ID	LCS-9947	SampType	e: LC	s	Tes	Code: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID:	LCSS	Batch ID	): 99	47	R	tunNo: 1	4241				
Prep Date:	10/22/2013	Analysis Date	: 10	0/22/2013	S	eqNo: 4	08493	Units: mg/h	<b>(</b> g		
Analyte		Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	48	10	50.00	0	95.2	77.1	128			
Surr: DNOP		4.5		5.000		89.6	66	131			
Sample ID	1310941-001AMS	SampType	e: MS	3	Test	Code: E	PA Method	8015D: Dies	el Range C	Organics	
Client ID:	MW-9@13.5'-14'	Batch ID	): 99	47	R	unNo: 1	4266				
Prep Date:	10/22/2013	Analysis Date	: 10	0/23/2013	S	eqNo: 4	09569	Units: mg/h	(g		
Analyte		Result F	QL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	Organics (DRO)	56	10	50.00	10.73	91.5	61.3	138			
Surr: DNOP		4.8		5.000		96.8	66	131			
Sample ID	1310941-001AMSE	SampType	e: MS	SD	Test	Code: El	PA Method	8015D: Dies	el Range (	Organics	
Client ID:	MW-9@13.5'-14'	Batch ID	): 994	47	R	unNo: 1	4266				
Prep Date:	10/22/2013	Analysis Date	: 10	0/23/2013	S	eqNo: 4	09570	Units: mg/k	(g		
Analyte		Result F	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	Organics (DRO)	59	9.9	49.70	10.73	96.3	61.3	138	3.72	20	-
Surr: DNOP		4.7		4.970		95.4	66	131	0	0	

# Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 5 of 8

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1310941

24-Oct-13

Client:	Animas Environmental
Project:	Enterprise Lateral 6C

Sample ID mb-9929	Samp1	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: PBS	Batch	n ID: 99	29	F	RunNo: 1	4255				
Prep Date: 10/21/2013	Analysis D	ate: 10	)/22/2013	5	SeqNo: 4	09097	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.47		0.5000		94.7	70	130			

Sample ID Ics-9929 b	Tes	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch	ID: R1	4255	F	tunNo: 1	4255				
Prep Date:	Analysis D	ate: 10	0/22/2013	8	SeqNo: 4	09098	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.4	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.48		0.5000		95.2	70	130			

Sample ID mb-9929	SampT	ype: ME	3LK	Test	List					
Client ID: PBS	Batch	n ID: 992	29	R	RunNo: 14	4255				
Prep Date: 10/21/2013	Analysis D	ate: 10	0/22/2013	S	SeqNo: 40	09512	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.47		0.5000		94.7	70	130			

Sample ID LCS-9929	SampT	ype: LC	S	Tes	Code: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: LCSS	Batch	ID: 99	29	R	tunNo: 1	4255				
Prep Date: 10/21/2013	Analysis D	ate: 10	/22/2013	S	SeqNo: 4	09534	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quat
Benzene	1.1	0.050	1.000	0	109	70	130			
Toluene	1.0	0.050	1.000	0	99.8	69.9	139			

#### 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
- S Spike Recovery 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

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# Hall Environmental Analysis Laboratory, Inc.

WO#:

1310941

24-Oct-13

Client:

Animas Environmental

Project:

Enterprise Lateral 6C

Sample ID LCS-9929	SampT	ype: LC	s	Tes	tCode: El	PA Method	8260B; Vola	tiles Short	List	
Client ID: LCSS	Batch	1D: 99	29	F	RunNo: 1	4255				
Prep Date: 10/21/2013	Analysis D	ate: 10	0/22/2013	8	SeqNo: 4	09534	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.4	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.48		0.5000		95.2	70	130			

#### 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
- S Spike Recovery 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

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# Hall Environmental Analysis Laboratory, Inc.

WO#: 1310941

24-Oct-13

Client:

Animas Environmental
Enterprise Lateral 6C

Project: Enterpri	se Lateral 6C			
Sample ID mb-9929	SampType: MBLK	TestCode: EPA Method	8015D Mod: Gasoline Range	
Client ID: PBS	Batch ID: 9929	RunNo: 14255		
Prep Date: 10/21/2013	Analysis Date: 10/22/2013	SeqNo: 409104	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qua	al
Gasoline Range Organics (GRO)	ND 5.0			
Surr: BFB	510 500.0	102 70	130	
Sample ID Ics-9929 g	SampType: LCS	TestCode: EPA Method	8015D Mod: Gasoline Range	
Client ID: LCSS	Batch ID: R14255	RunNo: 14255		
Prep Date:	Analysis Date: 10/22/2013	SeqNo: 409105	Units: %REC	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qua	al
Surr: BFB	450 500.0	90.2 70	130	
Sample ID mb-9929	SampType: MBLK	TestCode: EPA Method	8015D Mod: Gasoline Range	
Sample ID mb-9929 Client ID: PBS	SampType: MBLK Batch ID: 9929	TestCode: EPA Method RunNo: 14255	8015D Mod: Gasoline Range	
			8015D Mod: Gasoline Range Units: mg/Kg	
Client ID: PBS	Batch ID: 9929 Analysis Date: 10/22/2013	RunNo: 14255	•	al
Client ID: PBS Prep Date: 10/21/2013	Batch ID: 9929 Analysis Date: 10/22/2013	RunNo: 14255 SeqNo: 409535 SPK Ref Val %REC LowLimit	Units: <b>mg/Kg</b> HighLimit %RPD RPDLimit Qua	al
Client ID: PBS Prep Date: 10/21/2013 Analyte	Batch ID: 9929  Analysis Date: 10/22/2013  Result PQL SPK value	RunNo: <b>14255</b> SeqNo: <b>409535</b>	Units: mg/Kg	31
Client ID: PBS Prep Date: 10/21/2013 Analyte Gasoline Range Organics (GRO)	Batch ID: 9929 Analysis Date: 10/22/2013 Result PQL SPK value ND 5.0	RunNo: <b>14255</b> SeqNo: <b>409535</b> SPK Ref Val %REC LowLimit 102 70	Units: <b>mg/Kg</b> HighLimit %RPD RPDLimit Qua	al
Client ID: PBS Prep Date: 10/21/2013 Analyte Gasoline Range Organics (GRO) Surr: BFB	Batch ID: 9929  Analysis Date: 10/22/2013  Result PQL SPK value  ND 5.0  510 500.0	RunNo: <b>14255</b> SeqNo: <b>409535</b> SPK Ref Val %REC LowLimit 102 70	Units: <b>mg/Kg</b> HighLimit %RPD RPDLimit Qua	al
Client ID: PBS Prep Date: 10/21/2013 Analyte Gasoline Range Organics (GRO) Surr: BFB  Sample ID LCS-9929	Batch ID: 9929  Analysis Date: 10/22/2013  Result PQL SPK value  ND 5.0  510 500.0  SampType: LCS	RunNo: 14255 SeqNo: 409535 SPK Ref Val	Units: <b>mg/Kg</b> HighLimit %RPD RPDLimit Qua	31
Client ID: PBS Prep Date: 10/21/2013 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID LCS-9929 Client ID: LCSS	Batch ID: 9929  Analysis Date: 10/22/2013  Result PQL SPK value  ND 5.0  510 500.0  SampType: LCS  Batch ID: 9929  Analysis Date: 10/22/2013	RunNo: 14255 SeqNo: 409535 SPK Ref Val %REC LowLimit 102 70 TestCode: EPA Method RunNo: 14255	Units: mg/Kg HighLimit %RPD RPDLimit Qua 130 8015D Mod: Gasoline Range	
Client ID: PBS Prep Date: 10/21/2013 Analyte Gasoline Range Organics (GRO) Surr: BFB  Sample ID LCS-9929 Client ID: LCSS Prep Date: 10/21/2013	Batch ID: 9929  Analysis Date: 10/22/2013  Result PQL SPK value  ND 5.0  510 500.0  SampType: LCS  Batch ID: 9929  Analysis Date: 10/22/2013	RunNo: 14255 SeqNo: 409535  SPK Ref Val %REC LowLimit  102 70  TestCode: EPA Method RunNo: 14255 SeqNo: 409536	Units: mg/Kg HighLimit %RPD RPDLimit Qua 130  8015D Mod: Gasoline Range Units: mg/Kg	

## 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
- S Spike Recovery 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

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11un Environmeniai Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmenial.com

# Sample Log-In Check List

Client Name: Animas Environmental Work On	der Number: 1310941		RcptNo:	1
Received by/date: / 015	13			
Logged By: Lindsay Mangin 10/18/2013	3 10:00:00 AM	July Ally		
	3 2:48:01 PM	Antiellas		
Reviewed By:	1/12	000		
Chain of Custody	311	7,000		
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			
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA 🗆	
5. Were all samples received at a temperature of >0° 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 🗹	# of preserved	
40	🖪		bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗆	for pH: (<2 or	>12 unless noted)
13, Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	-
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 🗆	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: eMall	Phone 🔲 Fax	In Person	
Regarding:	and the second of the second			
Client Instructions:				
17. Additional remarks:				
18. Cooler Information  Cooler No Temp C Condition Seal Intact 5  1 1.0 Good Yes	Seal No Seal Date	Signed By		

ວັ	lain-	of-Cu	Chain-of-Custody Record	Turn-Around Time:	ime:					•				ć	ATMENIACIONES : 140			
Client: $A_{m{b}}$	1,1110	Envin	Animas Environmental Service	A Standard	□ Rush		IL		- 4	Ž	֡֝֝֓֞֓֓֞֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֝֡֓֓֓֓֓֓֓֡֝֡֓֓֡֝֡֡֝֡	<b>SIS</b>		5 19	ANALYSIS LABORATORY		K	
				Project Name:						W	www.hallenvironmental.com	vironr	nenta	8		   	 	
Mailing Address: 624	ddress:	624 1	E. Comanche	Enterprise Lateral LOC	ateral loc			1901	-lawki	ns NE	A	endane	rque,	Σ	4901 Hawkins NE - Albuquerque, NM 87109			
Farm	भुष्य	η. Λ.		Project #:				Tel. 5	Tel. 505-345-3975	5-397		Fax	505-345-4107	45-4	107			
Phone #: 505- 564-228	505	- 564.	-228								Anal	Analysis	Request	est			:	
email or Fax#.	ax#:			Project Manager:	jer:							(°C						
QA/QC Package:	ckage:										(8	S'*	B,8			······································		
以 Standard	Ē		☐ Level 4 (Full Validation)	K. Kenneme	mer					- wh	WIS	0dʻ	2 PC					
Accreditation □ NELAP	tion	□ Other		Sampler: Hw	78/								808 / 9		(\	W.L	,	(17)
□ EDD (Type)	Type)_			Salible roof	el afulte de							-			ΟΛ-			, <sub>//</sub>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		<b>2</b> M + X∃T8	TM + XJT8 82108 H9T	oriteM) H9T	EDB (Metho	PAH's (8310 RCRA 8 Me	O,4) anoinA	obseq 1808	8260B (VO	-ime2) 0728			9이시나나의 기호
0/16/13	1058	501	MW-9@13.5-14'	1-402		- M)[	ኦ	×						•				
0/16/13	1034	1.0%	MW-10@ 13.5-14'	1-402	(	-002	X	Х										
	2001	S		1-402	{	-003	Х	X										Н
10/16/13 1125	125	1,08	MW-12@17.5-18'	1-402	\	100-	X	X										
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0110	7	Heather	the M. Woods	/ Mets	Joeks	147 MAY												
Date: Time:		Relinquish	********	Received by:	h	Date Time										•		
11 211	1		moles submitted to Hall Environmental may be subcontracted	outracted is Ather ac	101		noscibili	A A	100	) Par	(Ilian raha)	s of par	atata	5	oglylour o		╽.	1

# DEPTH TO GROUNDWATER MEASUREMENT FORM

# **Animas Environmental Services**

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

				Tel. (505) 564-2281 Fax (505) 324-2022
roject:	Groundwater N	Monitor Well D	evelopment	Project No.:
Site:	Enterprise			Date: 11/06/13
Location:	Lateral 6C			Time: 0950
Tech:	Lavina Lamone			Form:
Well I.D.	Depth to NAPL (ft.)	Depth to Water (ft.)	NAPL Thickness (ft.)	Notes / Observations
PMW10	the en	15.08	-0-	20.84 TDW 1" well
PMW 11		15.30	-6-	20.84 TDW 1" WOLL
PMW12	•	15.68		21.19 TOW I'well
PMWIT	}	20.00	-	24.84 TOW 1" Well
Pmun				15.45 often 5 gal. purged to dear
				water of ten Well has been ago, take
				4 times. Pedastitic pump rangen-
				1.75 hr. Hz middly @ 1-3 g.l.
				3.4 1.te fam 4.6 dear.
				-
PMW-11				15.64 DTW P 1230. Purged 4.5 Hz0
				Her crear & 65 pured. Aggitated well 5x to assured all or months
				attob well. Rump ran for 20405
PMW-1Z				15.73 a 1230 upon arrived to development
				15.68 @ initial quage
				dark brown sediments 2-3 and.
				brown Hzo 3-4 gal. Lite Tan
				5-5.5 gul. dear.
				Aggitaded entire time. I gal.  dark brown sediments 2-3 gal.  brown Hzo 3-4 gal. Lite Tan.  5-5.5 gal. clear.  15.85 & 1425 after purge 5.5 gal.

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

#### Animas Environmental Services **GROUNDWATER MONITORING WELL** 624 E. Comanche, Farmington NM 87401 **DEVELOPMENT FORM** Tel. (505) 564-2281 Fax (505) 324-2022 Project No.: Project: Enterprise Date: 11/06/13 Lateral 6C Site: Time: 0750 Location: Form: Tech: Lavina Lamone **Purged Volume** Well Depth to NAPL Depth to Method / Notes / Observations Water (ft.) (gal.) ID (ft.) Hzo muddy First 2 gals. Lt tane 3 gals. Aggitated Well. Chare 4.5 gal. PMW-10 15.08 5 gal. **Purged Volume** Well Depth to NAPL Depth to Method / Notes / Observations Water (ft.) (gal.) ID (ft.) Her muldy First 3 gal. last 3 gals. aggitulist 5x. Clean & 6.5 gal. 1230 PWW 11 6.5 1564 Depth to NAPL Depth to **Purged Volume** Well Method / Notes / Observations Water (ft.) (gal.) (ft.) Hzo aggitated entire time while bery pumped First 5al. Sedinut Dork Somm Hzo. 1425 MW-12 15.85 5.5 **Purged Volume** Depth to NAPL Depth to Well Method / Notes / Observations (gal.) Water (ft.) (ft.) +120 dark Browne 1-2 gal. Aggitated 0900 PMW13 entire 3 gals of pumping. Clear @ 4.0 gd. 4,0 gd. 20.10 **Purged Volume** Depth to Well Depth to NAPL Method / Notes / Observations Water (ft.) ID (gal.) (ft.) Depth to NAPL Depth to **Purged Volume** Well Method / Notes / Observations ID Water (ft.) (gal.) (ft.) **Purged Volume** Well Depth to NAPL Depth to Method / Notes / Observations Water (ft.) (gal.) ID (ft.) **Purged Volume** Depth to NAPL Depth to Well Method / Notes / Observations ID (ft.) Water (ft.) (gal.) Depth to NAPL Depth to **Purged Volume** Well Method / Notes / Observations Water (ft.) (gal.) ID (ft.) **Purged Volume** Well Depth to NAPL Depth to Method / Notes / Observations Water (ft.) (gal.) ID (ft.)

Puged Water Storage, Transport, and Disposal Information: 55 gallon drum transported to Envirotech Landfarm

for disposal.

# envirotech

# Bill of Lading

DATE 9-18-13 JOB# 97057-0590 MANIFEST # 44709

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

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	DRIVER SIGNATURE	L'are	•								
CMPA	TIME	143									
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TRANSPORTING COMPANY	COMPANY	AES.							NOTES:		
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<b> </b>	GRID								10	Koll	seival & plac
ION OF SHIPMEN	MATERIAL	B1.50.4							V	Sam	Certification of above receival & placement
COMPLETE DESCRIPTION OF SHIPMENT	Z	BF1.FI							LANDFARM	EMPLOYEE:	Certific
COMI	POINT OF ORIGIN	Enterprise							22	CAGA CHLORIDE TEST (	PAINT FILTER TEST
LOAD		/							RESULTS:	C007	

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load. MAME LANGETT LANDAINE TRANSPORTER CO. ALVINAS LANGINGE D

Signatures required prior to distribution of the legal document. COMPANY CONTACT RUSS COMPEMEN

PHONE

SIGNATURE DATE

White - Company Records, Yellow - Billing, Pink - Customer

# Ju envirotech

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

# Bill of Lading

MANIFEST #

45088

9920 - 72017 # 80L

TRANSPORTING COMPANY	COMPANY TRK# TIME DRIVER SIGNATURE	S Cherry SS C. D. S.							NOTES:		
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<b>L</b>	GRID									1	above receival & placement
ION OF SHIPMENT	MATERIAL	cont									Certification of above rece
COMPLETE DESCRIPTION OF	DESTINATION	RF							LANDFARM	EMPLOYEE:	Certific
COMP	POINT OF ORIGIN	141 (0)	T						•••	CHLORIDE TEST	PAINT FILTER TEST
LOAD	ġ Ż	4							RESULTS:	1380	+

mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. ALTIMAS Environmental Savies. NAME LAVINA LAMOTAL

Signatures required prior to distribution of the legal document. COMPANY CONTACT HEATHER WEDDS

PHONE 405 - 564-228

DATE "/ 6/2013 SIGNATURE 2

White - Company Records, Yellow - Billing, Pink - Customer