



ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

March 22, 2019

Hand Delivered

Received By:

M. Cory Smith
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Proposed Public Notice and Participation for Stage 1 Abatement Plan

Enterprise Field Services, LLC – K-31 Pipeline Release (12/2/2011)

Rio Arriba Co., New Mexico

OCD AP: 129

OCD RP: 3R-440

Dear Mr. Smith:

In response to the New Mexico (NM) Energy, Minerals and Natural Resource Department (EMNRD) Oil Conservation Division (OCD) letter dated January 22, 2019, and in compliance with the requirements of NM Administrative Code (NMAC) 19.15.30.15 (for public notice and participation with regards to the Stage 1 Abatement Plan), Please find attached, the Stage 1 Abatement Plan prepared by Ensolum, LLC (Ensolum) dated March 21, 2019. The Abatement Plan includes both the proposed language for public notices, as well as a list of landowners located within a one-mile radius of the Site.

Also, within the Stage 1 Abatement Plan, Enterprise proposes the following courses of action for the above-referenced location (hereinafter the "Site"):

- The installation of four soil borings to be completed as groundwater monitor wells.
- The implementation of additional Site-specific aquifer testing (bail-down or slug testing).

Enterprise appreciates the OCD's continued assistance and guidance with this project. Should you have any questions, comments or concerns, or require additional information, please feel free to contact me any time at 713-381-8780, or at gemiller@eprod.com.

Sincerely,

Gregory E. Miller, P.G.
Supervisor, Environmental

Rodney M. Sartor
Sr. Director, Environmental

cc: Mr. Nick Jaramillo – NM State Land Office, Santa Fe, NM (landowner)

ec: Mr. Cory Smith – NMOCD, Aztec, NM
Ms. Vanessa Fields – NMOCD, Aztec, NM
Mr. Jim Griswold – NMOCD, Santa Fe, NM
Mr. Brad Billings – NMOCD, Santa Fe, NM
Mr. Marc E. Gentry – Ensolum, Houston, TX
Ms. Liz Scaggs – Ensolum, Dallas, TX



**LATERAL K-31 PIPELINE RELEASE (12/02/2011)
STAGE 1 ABATEMENT PLAN**

Property:
Lateral K-31 Pipeline Release (12/02/2011)
SW 1/4 S16, T25N R6W
Rio Arriba County, New Mexico

Abatement Plan No. 129
New Mexico EMNRD OCD RP No. 3R-440

March 21, 2019
Ensolum Job No: 05B1226002

Prepared for:
Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attn: Mr. Gregory E. Miller, P.G.

A handwritten signature in blue ink, appearing to read "Marc E. Gentry", written over a horizontal line.

Marc E. Gentry, P.G.
Principal



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1 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared a Stage 1 Abatement Plan for the Enterprise Field Services, LLC (Enterprise) Lateral K-31 (2011) pipeline release site located southwest (SW) 1/4 of Section 16, Township 25 North, Range 6 West, in Rio Arriba County, New Mexico (36.393827 ° N, 107.475065 ° W), hereinafter referred to as the “Site”.

Based on correspondence from the New Mexico Energy Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD), dated January 22, 2019, Enterprise is required to submit a Stage 1 Abatement Plan no later than March 22, 2019. The Stage 1 Abatement Plan is intended to define site conditions such that an effective abatement option can be selected. Stage 2 is implementation of the remedial option. This Stage 1 Abatement Plan details the site description and background, historic site investigation and remediation activities and the geologic and hydrogeologic characteristics. Additionally, the Stage 1 Abatement Plan proposes additional delineation, monitoring activities, and remediation activities and provides a proposed schedule to complete delineation activities in accordance with New Mexico Administrative Code (NMAC) 19.15.30. Subsequent to the successful completion and the agency approval of the proposed delineation activities, a Stage 2 Abatement Plan will be developed to address the remediation of constituents of concern (COCs) remaining at the Site in excess of the applicable New Mexico EMNRD closure criteria.

1.1 Standard of Care and Limitations

Ensolum’s services will be performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services to be performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information to be used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client and regulatory agency, as detailed in our discussions.

Findings, conclusions, and recommendations resulting from these services will be based upon information derived from public information resources and it should be noted that this information is subject to change over time. Ensolum’s findings are based solely upon data available to Ensolum at the time of these services.

This report has been prepared for the exclusive use of Enterprise Products Operating LLC (Enterprise), and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise and Ensolum. Any unauthorized distribution or reuse is at the client’s sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Stage 1 Abatement Plan and Ensolum’s Agreement with the client. The limitation of liability defined in the agreement is the aggregate limit of Ensolum’s liability to the client.



2 SITE DESCRIPTION AND BACKGROUND

The Lateral K-51 pipeline release Site is located on land managed by the State of New Mexico. The Site is surrounded by rangeland and oil and gas production and gathering facilities, including the natural gas gathering pipeline that traverses the area from approximately north to south.

On December 2, 2011, a pipeline release of natural gas and associated pipeline liquids was discovered at the Site and was subsequently repaired. Site assessments conducted by Animas Environmental Services, LLC (AES) during December 2011 and June 2012 identified concentrations of COCs in soils and groundwater above the New Mexico EMNRD-OCD closure criteria and the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs)*.

During September 2012, AES advanced nine (9) additional soil borings/monitoring wells (MW-1 through MW-9) to further evaluate the extent of dissolved phase COCs in groundwater. Based on laboratory analytical results, COCs were not identified in soil above the New Mexico EMNRD OCD *RALs* at these soil boring/monitoring well boring locations. However, COCs were identified in groundwater above the WQCC *GQSs*. Groundwater monitoring events were conducted by AES during December 2012, June 2013, September 2013, and December 2013 and were subsequently collected by Apex TITAN, Inc. (Apex) in June 2017 and January 2018. Based on the laboratory analytical results, COC concentrations were identified in groundwater above the WQCC standards.

A **Topographic Map** is provided as **Figure 1 of Appendix A**, which was reproduced from a portion of a United States Geological Survey (USGS) 7.5-minute series topographic map. A **Site Vicinity Map**, created from an aerial photograph, is provided as **Figure 2**, and a **Site Map**, which indicates the locations of the monitoring wells and recent soil borings in relation to pertinent structures and general Site boundaries, is provided as **Figure 3A of Appendix A**.

3 SITE CHARACTERIZATION

3.1 Regional Geology

The site is located within the San Juan Basin which is the major structural feature in the northwest corner of New Mexico. The San Juan Basin is classified as an arid region, as most of the area receives less than 10 inches of precipitation per year. Mean annual precipitation in the mountainous regions along the basin margin may be as much as 30 inches a year. Surface water is relatively scarce, with the exception of the San Juan River and its tributaries.

Based upon reference information from the New Mexico Bureau of Geology and Mineral Resources publication on the background geology of the San Juan Basin (Decision-Makers Field Conference 2002) “most of the aquifers in the San Juan Basin exist under confined or semi-confined hydrologic conditions. In Mesozoic rocks of the region, the confined sandstone aquifers are interbedded with shales that behave as aquitards. The Triassic mudrock sequence is the aquitard for the Permian Limestone. Groundwater in the alluvium along streams and in the shallow Tertiary sandstone aquifers is generally unconfined and is open to the atmosphere through pores in the overlying permeable rocks.”



The major aquifer underlying the Site vicinity is listed as the Colorado Plateaus Aquifer, which is made up of four smaller aquifers – Uinta-Anima, Mesa Verde, Dakota-Glen, and Coconino-De Chelly. The Uinta-Animas is the shallowest of these aquifers and is present in the San Juan Basin. The general composition of the aquifers is moderately to well-consolidated sedimentary rocks of an age ranging from Permian to Tertiary. Each aquifer is separated from the others by an impermeable confining unit. Two of the confining units are completely impermeable and cover the entire area of the aquifers. The other two confining units are less extensive and are thinner. These units allow water to flow between the principal aquifers.

According to the New Mexico Bureau of Geology and Mineral Resource (Geologic Map of New Mexico 2003), the Site is located within the lower Eocene San Jose Formation which was deposited along high energy, low-sinuosity streams and on extensive muddy floodplains. The Eocene age San Jose geologic formation contains a mixture of clastic sedimentary rocks varying from siltstone to conglomerate, dominated by rocks containing sand-sized particles.

3.2 Local Geology and Hydrogeology

Boring logs have been completed during historic site investigation activities. The boring logs recorded sample identification, depth collected, and method of collection, as well as observations of soil moisture, color, grain size, contaminant presence, and overall stratigraphy. The lithology encountered at the Site during boring activities were composed of Quaternary alluvial deposits derived from erosion of the parent San Jose sandstones and siltstones which comprise the canyon walls. Based on the data collected during the completion of the soil borings, the alluvia generally consist of dark grey sand and brown to dark grey sandy clays from the ground surface to at least 26 feet below grade surface (bgs).

The lithology observed during the advancement of soil boring MW-1 at the Site included a dark grey sand from the surface to approximately five (5) feet bgs. The sand stratum was underlain by a dark grey sandy clay from five (5) feet bgs to 15 feet bgs. The sand clay stratum was underlain by black sand from 15 feet bgs to 20 feet bgs. A brown sandy clay was encountered from 20 feet bgs to 25 feet bgs and a brown sand was encountered from 25 feet bgs to the terminus depth of 26 feet bgs. The lithologies observed in the remaining soil borings at the Site were similar to that of soil boring MW-1. Detailed lithologic descriptions are presented on the monitoring well soil boring logs included in **Appendix C**.

The initial groundwater-bearing unit at the Site was encountered at a depth of 16 feet bgs during supplemental investigation activities. The groundwater flow direction (gradient) at the Site is generally toward the north/northwest and averages approximately 0.005 feet per foot (ft/ft) across the Site.

Based on Domenico and Schwartz (1990) a default hydraulic conductivity value for the impacted sand unit at the site would be, on average 2×10^{-6} m/sec which is equivalent to 0.57 feet per day (ft/day). Additional site-specific aquifer characterization is proposed in this Stage 1 Abatement Plan Proposal.

3.3 Proposed Cleanup Goals

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Initial Site activities were performed in accordance with the New Mexico ENMRD OCD *Guidelines for Remediation of*



Mr. Gregory E. Miller, Enterprise Field Services, LLC
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Leaks, Spills and Releases, in addition to the New Mexico EMNRD OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.29 *Release Notification*. This guidance established investigation and abatement action requirements for sites subject to reporting and/or corrective action prior to the update of the rule finalized August 14, 2018. Groundwater remediation activities at the Site will be performed in accordance with NMAC 19.15.30 *Remediation*.

Ensolum, LLC (Ensolum) utilized information provided by Enterprise, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD Imaging database to determine the appropriate closure criteria for the Site.

- Two (2) water wells were identified less than a mile of the Site on the OSE Water Rights Reporting System (WRRS) database. Nine (9) monitoring wells (SJ 04070 POD 1 through SJ 04070 POD 9) were located approximately 50 feet south of the Site, however these monitoring wells were plugged and abandoned. There are currently nine (9) monitoring wells at the Site. Based on groundwater monitoring wells located at the Site, the depth to the groundwater unit is less than 50 feet below grade surface (bgs).
- The Site is located approximately 1,554 feet southeast of Largo Canyon Wash.
- The Site is not located within 200 feet of a lakebed, sinkhole or playa lake.
- The Site is not located within 300 feet from a permanent residence, school, hospital, institution or church.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include: milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total BTEX, 100 mg/kg for TPH GRO/DRO/MRO and 600 mg/kg for chlorides.

In addition, cleanup/delineation goals for groundwater at the Site include: 10 micrograms per liter



(µg/L) for benzene, 750 µg/L for toluene, 750 µg/L for ethylbenzene, and 620 µg /L for total xylenes.

4 SUMMARY OF SITE ASSESSMENT ACTIVITIES

On December 2, 2011, a pipeline release of natural gas and associated pipeline liquids was discovered at the Site and was subsequently repaired. An initial site assessment was conducted by AES on December 8, 2011, which included the collection of soil samples from four (4) test holes (TP-1 through TP-4) completed near the release area a groundwater sample from an existing monitoring well located south of the release location and associated with another operator's release site. Based on laboratory analytical results, COCs were identified in soils from two of the test holes (TP-3 and TP-4) at concentrations above the New Mexico EMNRD-OCD RALs. The groundwater sample did not exhibit COC concentrations above WQCC GQs.

During June 2012, AES advanced twelve (12) soil borings (SB-1 through SB-12) at the Site to further delineate the extent of hydrocarbon affected soil and potentially impacted groundwater. Based on laboratory analytical results of soil and groundwater samples collected from the soil borings, COC concentrations were identified in soil above the New Mexico EMNRD-OCD RALs and in groundwater above the WQCC GQs (*Site Investigation Report, dated May 16, 2012 – AES*).

During September 2012, AES performed groundwater investigation activities and advanced nine (9) additional soil borings to further evaluate the extent of dissolved phase COCs in groundwater. Subsequent to advancement, the soil borings were completed as groundwater monitoring wells (MW-1 through MW-9). Based on laboratory analytical results, COCs were not identified in soil above the New Mexico EMNRD OCD RALs at these monitoring well/soil boring locations. However, COCs were identified in groundwater above the WQCC GQs (*Groundwater Investigation Report, dated November 28, 2012 – AES*).

Groundwater monitoring events were conducted by AES during December 2012, June 2013, September 2013, and December 2013, and were subsequently collected by Apex TITAN, Inc. (Apex). Based on the laboratory analytical results, COC concentrations were identified in groundwater above WQCC standards.

The proposed activities identified herein are based on a work plan submitted to the New Mexico EMNRD OCD provided by Apex to Enterprise (*Supplemental Environmental Site Investigation Workplan, dated August 17, 2017 - Apex*). The proposed activities included the installation of two (2) monitoring wells, the reinstallation of MW-2, which has not been located, and groundwater monitoring activities.

Soil laboratory results that includes data from previous site investigations are provided in **Table 1 (Appendix B)**. Groundwater analytical results are summarized in **Table 2 (Appendix B)**. Groundwater measurements (including historical data) are presented with top of casing (TOC) elevations in **Table 3 (Appendix B)**. June 2018 and January 2019 groundwater gradient maps provided as **Figure 4A** and **Figure 4B (Appendix A)**. Please note that the historic soil analytical data tables reference the Remediation Action Levels provided in the now obsolete New Mexico EMNRD OCD *Guidelines for Remediation of Leaks, Spills and Releases*.

5 PROPOSED DELINEATION ACTIVITIES

5.1 Health and Safety Plan

Ensolum will develop a site-specific Health and Safety Plan (HSP) for the performance of the proposed scope of services described in this work plan. For the purposes of this HSP, it is assumed that the constituents of concern include petroleum hydrocarbons. For the purposes of this proposed plan, it is assumed that the scope of services can be conducted under modified Level D personal protective equipment (PPE), which will include a hard hat, steel-toed boots, protective eyewear, and gloves. Should the need arise to upgrade PPE (e.g. respiratory protection), the client will be notified, and the HSP will be modified accordingly. Although it is not anticipated at this time, it should be noted that a PPE upgrade will constitute a change in scope of work, requiring a change order.

Ensolum will clear utilities through the New Mexico One Call System and will coordinate with the utility companies and Enterprise to evaluate the line locations in order to select the actual soil boring locations.

5.2 Soil Boring Installation

Subsequent to “daylighting” the known subsurface utilities and clearing the initial five (5) feet of each proposed drilling location utilizing a hydro-excavator, three (3) soil borings will be advanced utilizing a hollow stem auger drilling rig. The soil borings will be advanced to a maximum total depth of approximately 20 feet below grade surface (bgs), five feet below the initial water table, or auger refusal, whichever is shallower. The proposed total depth of the soil borings/monitoring wells will not be exceeded without verbal approval from Enterprise.

Non-disposable sampling and drilling equipment will be decontaminated using an Alconox[®] wash and potable water rinse prior to commencement of the project and between the advancement of each soil boring.

Soil samples will be collected continuously using core barrels or split spoon samplers to document lithology, color, relative moisture content, and visual or olfactory evidence of impairment. In addition, the samples will be scanned with a photoionization detector (PID) to evaluate the presence of volatile organic compounds (VOCs).

Soil boring cuttings will be stored in labeled drums until appropriate disposal measures have been determined.

5.3 Soil Sampling Program

A minimum of two (2) soil samples from each monitoring well boring will be submitted for laboratory analysis from some combination of the following intervals:

- The depth interval exhibiting the highest concentration of VOCs based on PID evidence;
- An interval exhibiting visual/olfactory evidence of impairment;
- The capillary fringe zone;
- From a change in lithology; or,
- From the bottom of the boring.



The soil samples will be collected in laboratory prepared glassware, labeled/sealed using laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples will be relinquished to the courier for Heal Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.4 Soil Laboratory Analytical Program

Selected soil samples will be analyzed for TPH GRO/DRO/MRO utilizing EPA Method SW-846 8015, BTEX using EPA Method SW-846 8021 or 8260, and Chlorides using EPA Method 300.0.

A summary of the analytes, sample type, number of samples, and EPA-approved methods is presented in the following table:

Analytes	Sample Type	No. of Samples	Method
TPH GRO/DRO/MRO	Soil	4	SW-846 8015
BTEX	Soil	4	SW-846 8021/8260
Chlorides	Soil	4	Method 300.0

5.5 Monitoring Well Installation

Subsequent to advancement, the soil borings will be completed as monitoring wells. The monitoring wells will be completed as follows:

- Installation of 10 to 15 feet of 2-inch diameter, machine slotted (0.010 inch) schedule 40 polyvinyl chloride (PVC) well screen assembly with a threaded bottom plug;
- Installation of schedule 40 PVC riser pipe to surface;
- Addition of graded silica sand for annular sand pack around the well screen from the bottom of the well to two feet above the top of the screen;
- Placement of two (2) feet of hydrated bentonite above the sand;
- Addition of cement/bentonite slurry to the surface; and
- Installation of an above-grade steel riser with an integrated padlock hasp.

The monitoring wells will be developed by surging and removing groundwater until the fluid appears relatively free of fine-grained sediment. Additionally, one (1) or more slug tests will also be attempted at the Site to obtain site specific aquifer characteristics.

5.6 Groundwater Gradient Determination

Following installation, the monitoring wells will be geospatially surveyed to determine the top of casing (TOC) and ground surface elevation for each monitoring well. The TOC elevations will allow the calculation of the groundwater elevations at each well. This information will facilitate the creation of groundwater potentiometric surface maps, which will identify groundwater flow direction and gradient. The relative ground elevations will facilitate the creation of lithologic and/or hydrogeologic cross-sections, if deemed necessary.

5.7 Groundwater Sampling Program

A groundwater monitoring event will be performed at the Site following the installation and development of the monitoring wells. During the groundwater sampling event, Ensolum will collect one (1) groundwater sample from each on-Site monitoring well.

Prior to sampling, fluid levels in each of the monitoring wells will be gauged utilizing an interface probe capable of detecting non-aqueous phase liquid (NAPL).

Groundwater samples will be collected utilizing low-flow sampling or bailer-purge sampling methods. Low-flow refers to the velocity with which groundwater enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system, to the extent practical, taking into account established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (L/min) are maintained during sampling activities, using dedicated or decontaminated sampling equipment.

The pump intake is placed within the screened interval such that the groundwater recovered is drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

The groundwater samples will be collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are taken every three to five minutes while purging. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for three successive readings.

If a disposable bailer is utilized to sample the monitoring well, the monitoring well will be purged until effectively dry and once groundwater recovers to static or near static levels, a groundwater sample will be collected.

Samples will be collected in laboratory supplied containers, labels/sealed using the laboratory supplied custody seals, and placed on ice in a cooler. The samples will be relinquished to the courier for HEAL of Albuquerque, New Mexico under proper chain-of-custody procedures.

5.8 Groundwater Laboratory Analytical Program

The groundwater samples collected from the monitoring wells will be analyzed for BTEX utilizing EPA Method SW-846 8021/8260.

A summary of the analytes, sample type, estimated number of samples per event, and EPA-approved methods are presented below:

Analytes	Sample Type	No. of Samples	Method
BTEX	Water	26	SW-846 8021/8260

5.9 Stage 2 Abatement Plan Proposal

Based on the data generated from the delineation activities and subsequent groundwater sampling event, Ensolum will complete a Stage 2 Abatement Plan Proposal. The plan will include an evaluation of the cumulative laboratory analytical data to determine the description and justification for a preferred abatement option at the Site. In addition, the Stage 2 Abatement Plan Proposal will include a modification to the groundwater monitoring program, Site maintenance activities, a proposed schedule for duration of abatement activities, and public notification proposal designed to satisfy the requirements of Subsections A through C of 19.15.30.15 NMAC.

5.10 Quality Assurance

Sampling and analytical techniques have been identified in the text above and conforms with the references identified in Subsection B of 20.6.2.3107 NMAC and with 20.6.4.14 NMAC of the water quality standards for interstate and intrastate surface waters in New Mexico.

6 PROPOSED SCHEDULE

The additional delineation activities are proposed to be completed before the end of May 2019. The availability of drilling and hydro excavation contractors, weather conditions and public notice will dictate the drilling schedule.

Enterprise will provide Public Notice within 15 days of notice from NMOCD that this Abatement Plan is administratively complete as required per NMAC 19.15.30.15. Enterprise will provide written notice of the Stage 1 Abatement Plan to the following parties:

- Surface owners of record within 1 mile of the perimeter of the identified impacted area as currently delineated in the Stage 1 Abatement Plan. The list of Landowners is provided in **Table A (Appendix D)**.
- The County Commission of Rio Arriba County, New Mexico.
- The Office of Natural Resources Trustee for the State of New Mexico.

Please note the release was not identified to be within one (1) mile of any city limits or tribal boundaries.

Enterprise understands that the NM EMNRD OCD may request additional notification to persons or entities that have requested such, as well as other local, state, or federal governmental agencies upon approval of the Stage 1 Abatement Plan.

Once approval is received, Enterprise will publish the NM EMNRD OCD approved notice in the Rio Grande Sun, a newspaper circulated in Rio Arriba County, New Mexico, and in the Albuquerque Journal, a newspaper of general circulation across the state of New Mexico. The newspaper publications will run for a cycle of one (1) business day.

Enterprise will issue the public notice via the newspapers and certified mailings within 15 days after the NM EMNRD OCD has provided determination that the Stage 1 Abatement Plan is administratively complete. Proposed verbiage for the public notice and a list of landowners within a one-mile radius are provided in **Appendix D**.



Mr. Gregory E. Miller, Enterprise Field Services, LLC
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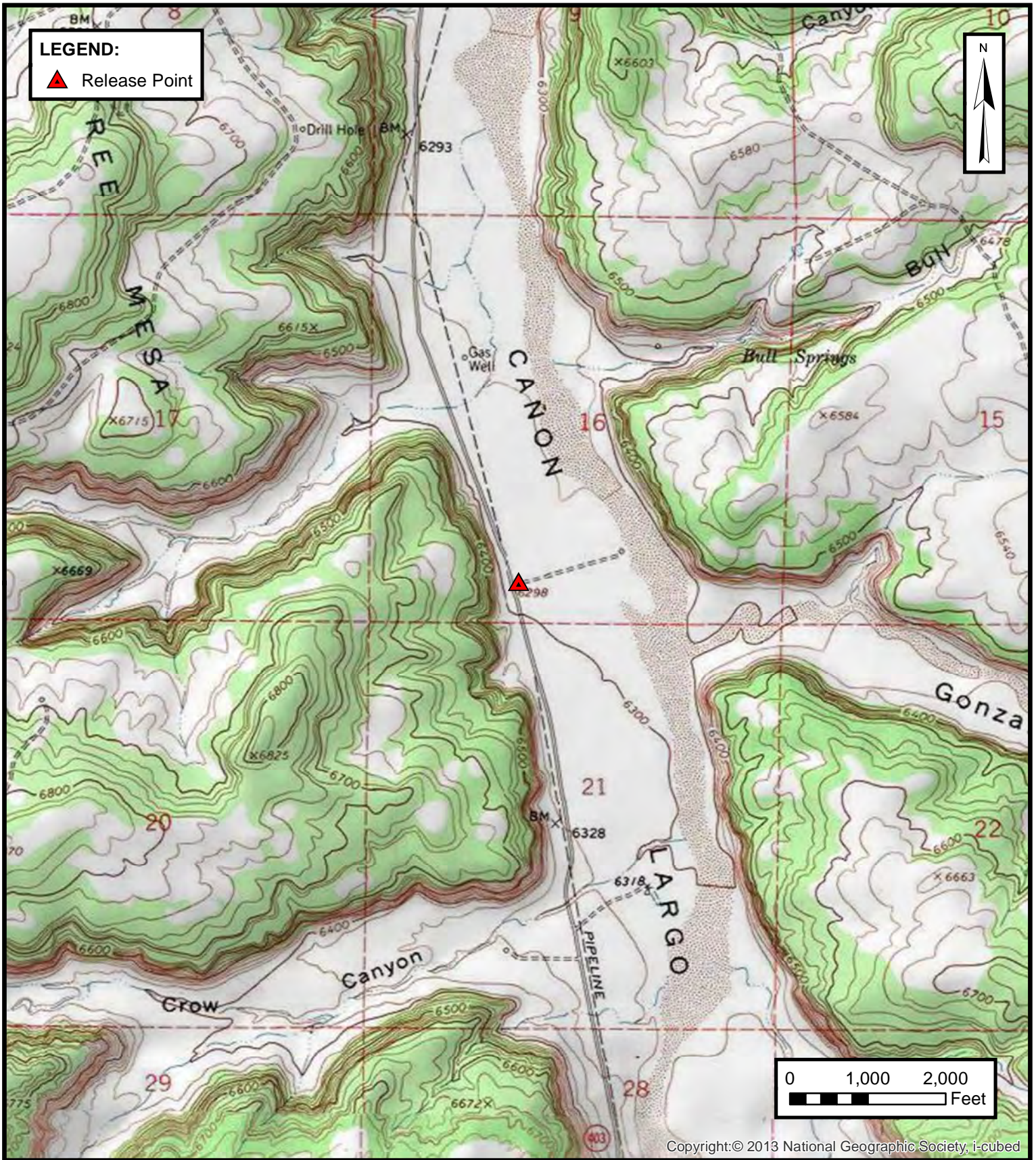
If no public comments are received within 30 days of posting public notice, Ensolum will proceed with permitting and scheduling supplemental site investigation activities. Prior to any field work, Ensolum and/or Enterprise will provide the NM EMNRD OCD with 48-hour notification.





APPENDIX A

Figures



TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 04B1226024

FIGURE
1

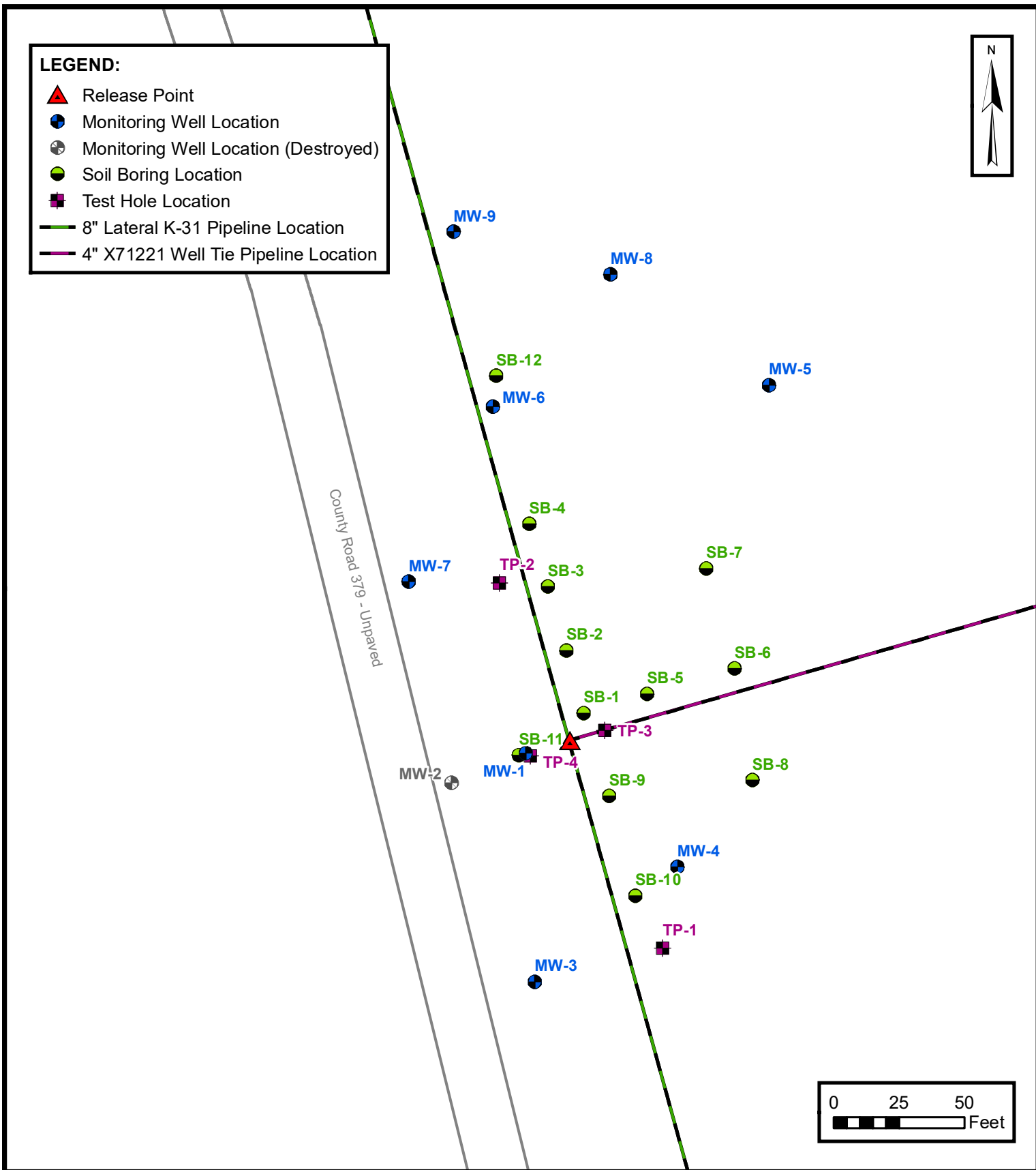


SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 04B1226024

FIGURE
2

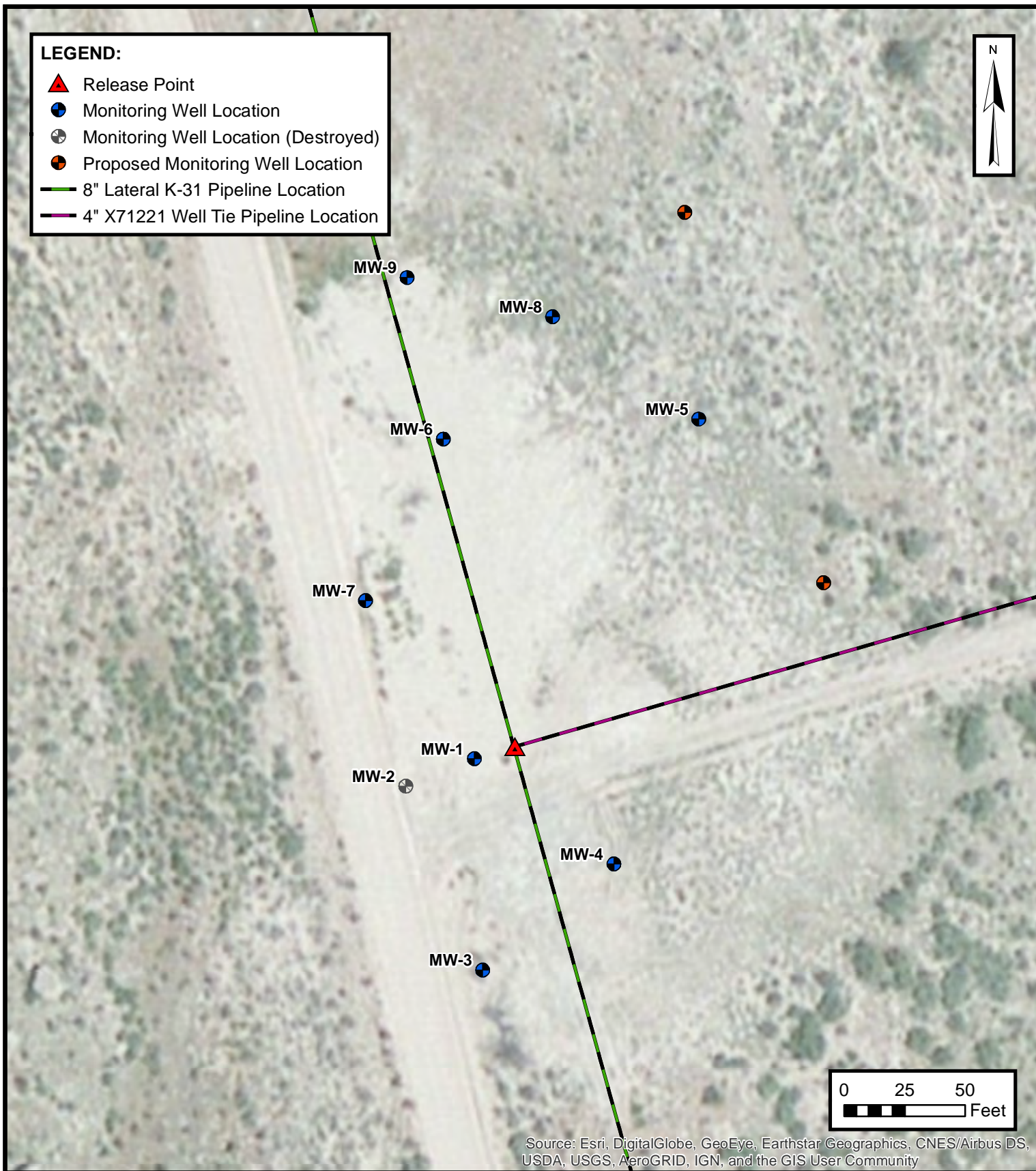


SITE MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

FIGURE
3A

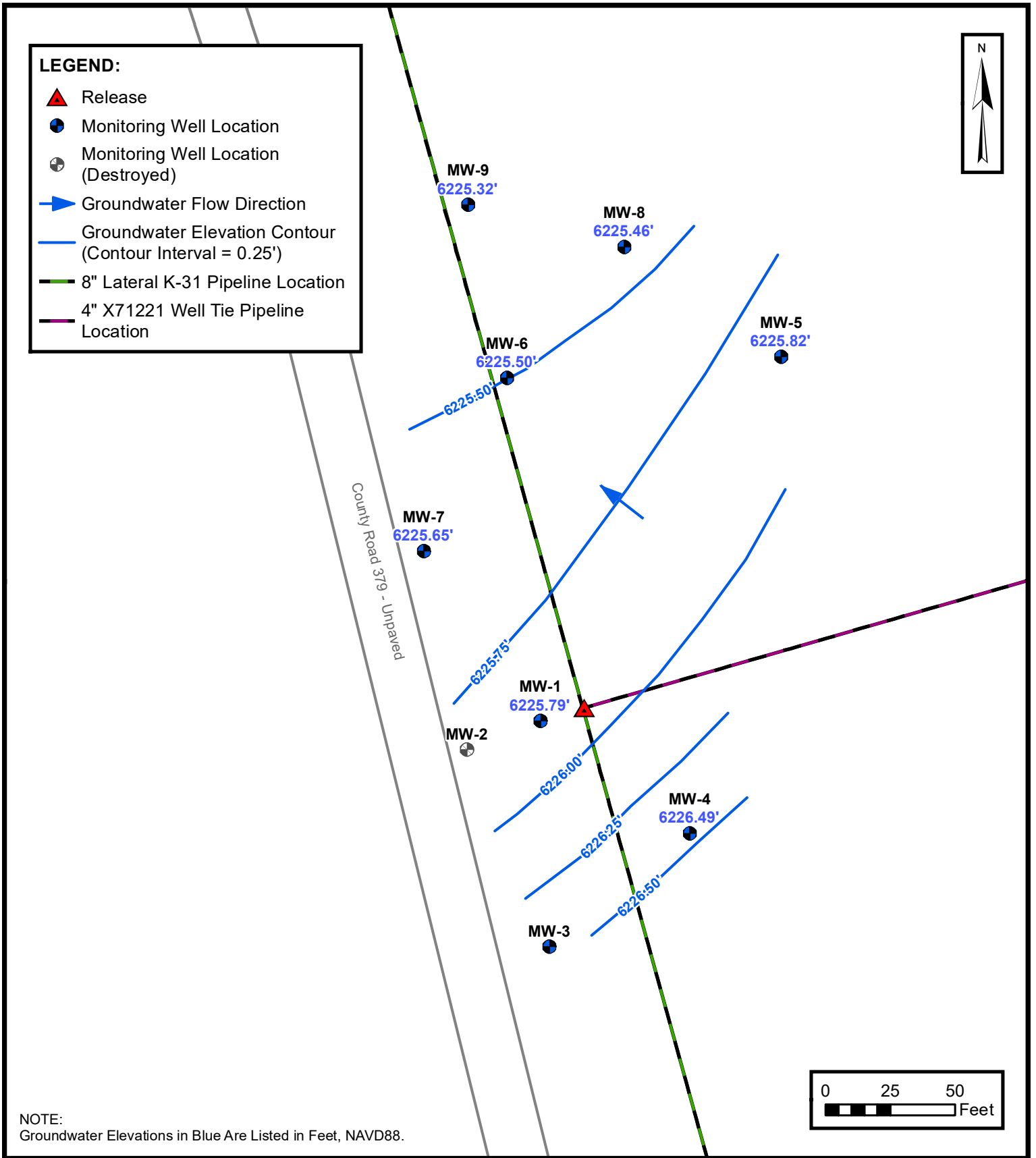


PROPOSED MONITORING WELL LOCATION MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

**FIGURE
3B**

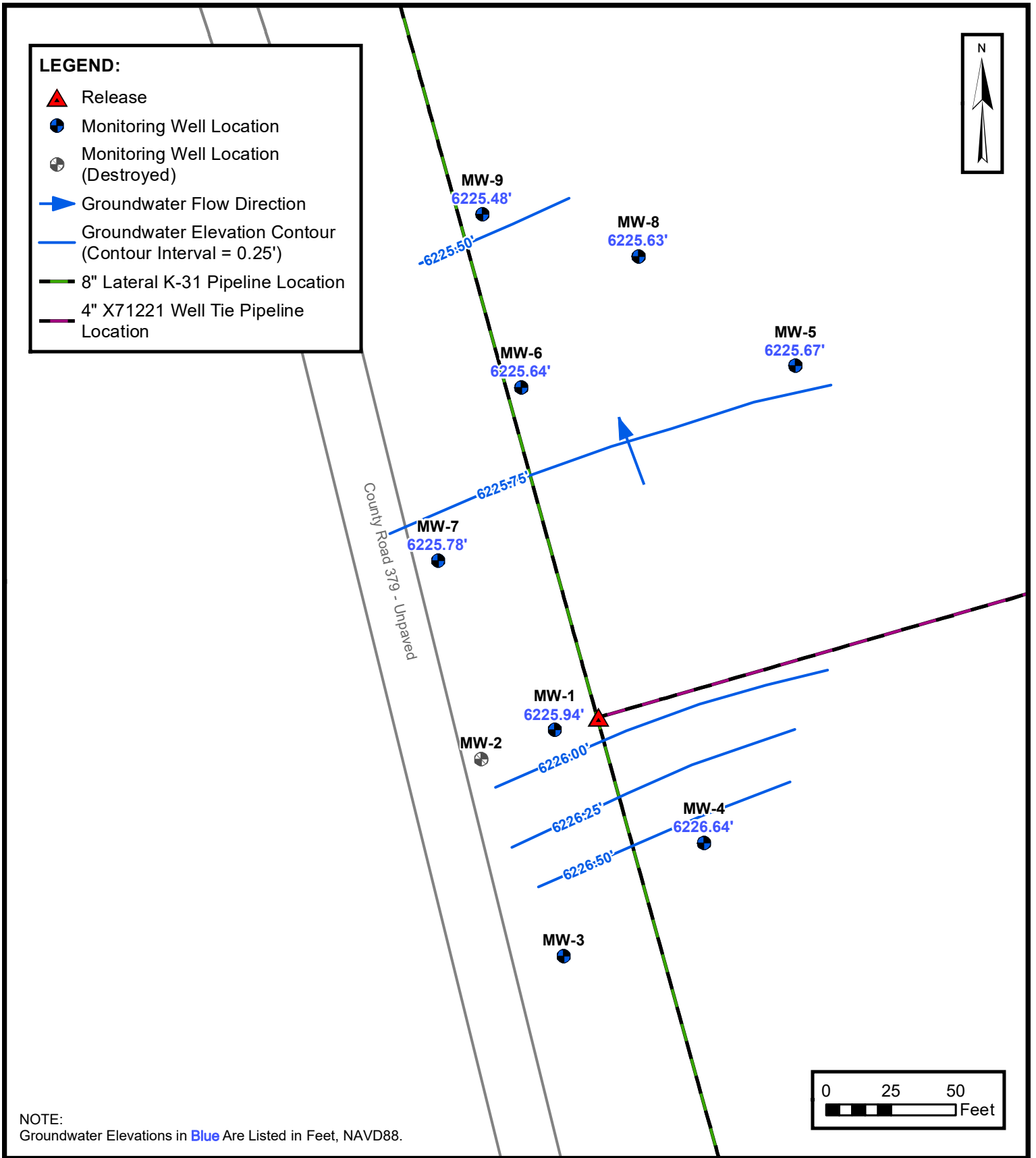


**GROUNDWATER GRADIENT MAP
(JUNE 2018)**

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-31 (12/02/2011) PIPELINE RELEASE
SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

**FIGURE
4A**



**GROUNDWATER GRADIENT MAP
(JANUARY 2018)**

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

**FIGURE
4B**



APPENDIX B

Tables



TABLE 1
Lateral K-31 Pipeline Release (12/02/2011)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
Test Hole Excavation and Soil Boring Soil Samples Collected by AES									
TP-1	12.08.11	14	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.8
	12.08.11	15.5	<0.047	<0.047	<0.047	<0.093	ND	<4.7	<9.9
TP-2	12.08.11	15	<0.050	<0.050	<0.050	<0.10	ND	<5.0	<10
TP-3	12.08.11	15	3.7	130	28	270	432	2,500	2,200
TP-4	12.08.11	7	<0.047	<0.047	<0.047	<0.094	ND	<4.7	<10
	12.08.11	15	8.0	210	75	690	982	5,800	3,000
SB-1	03.15.12	10	<0.49	<0.49	0.73	4.9	5.6	190	89
	03.15.12	14	<0.046	<0.046	<0.046	<0.092	ND	<4.6	<9.7
SB-2	03.15.12	2 to 4	0.070	0.10	0.054	0.49	0.71	5.3	<10
	03.15.12	12	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<10
SB-3	03.15.12	12	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<10
	03.15.12	14	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<10
SB-4	03.15.12	4	0.11	0.55	0.16	1.6	2.4	10	20
	03.15.12	14	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.8
SB-5	03.16.12	4	<0.048	<0.048	<0.048	0.24	0.24	<4.8	<9.7
	03.16.12	14	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.6
SB-6	03.16.12	2	<0.097	<0.097	<0.097	0.31	0.31	11	77
	03.16.12	14	<0.049	<0.049	<0.049	<0.097	ND	<4.9	<10
SB-7	03.16.12	6	<0.047	<0.047	<0.047	<0.095	ND	<4.7	<10
	03.16.12	14	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<9.9
SB-8	03.16.12	4	<0.050	<0.050	<0.050	0.20	0.20	<5.0	<10
	03.16.12	14	<0.047	<0.047	<0.047	0.098	0.098	<4.7	<9.9
SB-9	03.16.12	10	0.51	9.4	1.9	19	31	190	250
	03.16.12	14	29	480	64	580	1,153	6,700	2,000
SB-10	03.16.12	4	<0.047	<0.047	<0.047	0.20	0.20	5.8	32
	03.16.12	14	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.9
SB-11	03.16.12	10	0.67	14	10	83	108	1,100	240
	03.16.12	14	<0.048	<0.048	<0.048	<0.095	ND	7.0	<10
SB-12	03.16.12	4	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<10
	03.16.12	14	0.070	<0.048	<0.048	<0.096	0.070	<4.8	<10



TABLE 1
Lateral K-31 Pipeline Release (12/02/2011)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
Soil Borings Advanced by AES									
MW-1	08.13.12	0 to 2	<0.048	<0.048	<0.048	<0.096	ND	5.0	<9.8
	08.13.12	10 to 12	<0.049	<0.049	0.065	0.45	0.52	<4.9	37
MW-2	08.13.12	5 to 7	0.089	<0.049	<0.049	0.15	0.24	<4.9	<9.8
	08.13.12	10 to 12	<0.047	<0.047	<0.047	<0.095	ND	<4.7	<9.9
MW-3	08.15.12	0 to 2	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<10
	08.15.12	10 to 12	0.13	<0.048	<0.048	<0.095	ND	<4.8	<9.7
MW-4	08.15.12	0 to 2	0.072	<0.049	0.059	0.97	1.10	8.8	<10
	08.15.12	10 to 12	<0.048	<0.048	<0.048	0.23	0.23	<4.8	<10
MW-5	08.15.12	5 to 7	<0.049	<0.049	<0.049	<0.098	ND	<4.8	<9.9
	08.15.12	10 to 12	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<9.6
MW-6	08.13.12	0 to 2	0.055	<0.048	<0.048	0.27	0.33	<4.8	12
	08.13.12	10 to 12	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.8
MW-7	08.15.12	5 to 7	0.11	<0.049	<0.049	<0.098	ND	<4.9	<9.8
	08.15.12	10 to 12	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.7
MW-8	08.14.12	5 to 7	0.092	<0.046	<0.046	<0.093	ND	<4.6	<9.7
	08.14.12	10 to 12	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.7
MW-9	08.14.12	5 to 7	<0.047	<0.047	<0.047	<0.095	ND	<4.8	<9.9
	08.14.12	10 to 12	<0.049	<0.049	<0.049	<0.097	ND	<4.9	<9.8

Note: Concentrations in **bold** and yellow exceed the applicable OCD Remediation Action Level

mg/kg = milligrams per kilograms

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics



TABLE 2
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620
MW-1	9.5.12	18	2.9	3.3	25
	12.20.12	11	<2.0	<2.0	5.8
	3.21.13	29	14	<2.0	6.8
	9.4.13	24	3.0	<2.0	10
	12.9.13	42	20	10	45
	3.19.14	17	15	<1	6
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.17.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	4.1	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	1.8	<1.0	<1.0	<2.0
	12.28.17	<1.0	<1.0	<1.0	<1.5
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	
MW-2	9.5.12	9.5	9.2	<2.0	30
	12.20.12	17	<2.0	<2.0	41
	3.21.13	18	<2.0	<2.0	18
	9.4.13	8.0	<2.0	<2.0	4.2
	12.9.13	24	13	11	49
	3.19.14	<1	<1	<1	<3
	11.12.14	Monitoring Well Apparently Destroyed			
	6.17.15				
	11.17.15				
	6.08.16				
	12.29.16				
	6.30.17				
	12.28.17				
6.20.18					
1.17.19					
MW-3	9.5.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.21.13	<2.0	<2.0	<2.0	<4.0
	9.4.13	5.4	<2.0	<2.0	<4.0
	12.9.13	10	15	9.7	37
	3.19.14	3.0	4.0	<1	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	9.9	<1.0	<1.0	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	Unable to sample			
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<1.5
	12.28.17	Unable to sample			
	6.20.18	Unable to sample			
1.17.19	Unable to sample				
MW-4	9.5.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	19	<2.0	<2.0	<4.0
	3.21.13	4.8	<2.0	<2.0	<4.0
	9.4.13	<2.0	<2.0	<2.0	<4.0
	12.9.13	42	17	14	54
	3.19.14	<1	<1	<1	<3
	11.12.14	5.4	<1.0	<1.0	<2.0
	6.17.15	7.2	<1.0	<1.0	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	5.1	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
	12.28.17	<1.0	<1.0	<1.0	<1.5
	6.20.18	<1.0	<1.0	<1.0	<1.5
1.17.19	<1.0	<1.0	<1.0	<1.5	



TABLE 2
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620
MW-5	9.5.12	10	<2.0	<2.0	<4.0
	12.20.12	10	<2.0	<2.0	<4.0
	3.21.13	9.0	<2.0	<2.0	<4.0
	9.4.13	9.3	<2.0	<2.0	<4.0
	12.9.13	48	9.3	9.7	36
	3.19.14	27	<1	2	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	52	<1.0	1.4	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	230	<1.0	8.5	<2.0
	12.29.16	14	<1.0	2.1	<1.5
	6.30.17	2.4	<1.0	1.8	<2.0
12.28.17	42	<1.0	11	<1.5	
6.20.18	<1.0	<1.0	5.7	<1.5	
1.17.19	<1.0	<1.0	3.4	<1.5	
MW-6	9.5.12	37	8.3	<2.0	14
	12.20.12	82	5.8	<2.0	<4.0
	3.21.13	130	5.1	<2.0	<4.0
	9.4.13	40	22	<2.0	13
	12.9.13	210	20	12	51
	3.19.14	77	8.0	1.0	4.0
	11.12.14	19	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	<1.0	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
12.28.17	<1.0	<1.0	<1.0	<1.5	
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	
MW-7	9.5.12	3.6	<2.0	<2.0	<4.0
	12.20.12	5.9	<2.0	<2.0	<4.0
	3.21.13	<2.0	<2.0	<2.0	<4.0
	9.4.13	6.2	<2.0	<2.0	<4.0
	12.9.13	30	17	14	56
	3.19.14	<1	<1	<1	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.17.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	<1.0	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
12.28.17	<1.0	<1.0	<1.0	<1.5	
6.18.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	
MW-8	9.5.12	20	<2.0	<2.0	<4.0
	12.20.12	25	<2.0	<2.0	<4.0
	3.21.13	26	<2.0	<2.0	<4.0
	9.4.13	34	<2.0	<2.0	<4.0
	12.9.13	200	14	11	46
	3.19.14	57	<1	<1	<3
	11.12.14	5.8	<1.0	<1.0	<2.0
	6.17.15	1.5	<1.0	<1.0	<2.0
	11.18.15	1.7	<1.0	<1.0	<2.0
	6.08.16	4.2	<1.0	<1.0	<2.0
	12.29.16	1.3	<1.0	<1.0	<1.5
	6.30.17	1.2	<1.0	<1.0	<2.0
12.28.17	<1.0	<1.0	<1.0	<1.5	
6.20.18	<1.0	<1.0	1.9	<1.5	
1.17.19	<1.0	<1.0	1.9	<1.5	



TABLE 2
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620
MW-9	9.5.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.21.13	<2.0	<2.0	<2.0	<4.0
	9.4.13	<2.0	<2.0	<2.0	<4.0
	12.9.13	4.0	7.1	6.0	24
	3.19.14	<1	<1	<1	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.17.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	<1.0	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
	12.28.17	<1.0	<1.0	<1.0	<1.5
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	

Note: Concentrations in **bold** and yellow exceed the applicable WQCC GQS
 µg/L = microgram per liter
 <1.0 = the numeral (in this case "1.0") identifies the laboratory reporting limit or practical quantitation limit



TABLE 3
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)	
MW-1	9.5.12	ND	19.44	ND	6245.24	6225.80	
	12.20.12	ND	19.02	ND		6226.22	
	3.21.13	ND	18.59	ND		6226.65	
	9.4.13	ND	19.49	ND		6225.75	
	12.9.13	ND	18.80	ND		6226.44	
	3.19.14	ND	18.40	ND		6226.84	
	11.12.14	ND	19.11	ND		6226.13	
	6.17.15	ND	18.70	ND		6226.54	
	11.17.15	ND	19.08	ND		6226.16	
	6.08.16	ND	18.80	ND		6226.44	
	12.29.16	ND	19.18	ND		6226.06	
	6.30.17	ND	19.13	ND		6226.11	
	12.28.17	ND	19.16	ND		6226.08	
	6.20.18	ND	19.45	ND		6225.79	
1.17.19	ND	19.30	ND	6225.94			
MW-2	9.5.12	ND	16.69	ND	6242.58	6225.89	
	12.20.12	ND	16.33	ND		6226.25	
	3.21.13	ND	15.90	ND		6226.68	
	9.4.13	ND	16.72	ND		6225.86	
	12.9.13	ND	16.14	ND		6226.44	
	3.19.14	ND	15.72	ND		6226.86	
	11.12.14	Monitoring Well Apparently Destroyed					
	6.17.15						
	11.17.15						
	6.08.16						
	12.29.16						
	6.30.17						
	12.28.17						
	6.20.18						
1.17.19							
MW-3	9.5.12	ND	18.93	ND	6245.48	6226.55	
	12.20.12	ND	18.51	ND		6226.97	
	3.21.13	ND	18.07	ND		6227.41	
	9.4.13	ND	18.97	ND		6226.51	
	12.9.13	ND	18.30	ND		6227.18	
	3.19.14	ND	17.89	ND		6227.59	
	11.12.14	ND	18.59	ND		6226.89	
	6.17.15	ND	18.20	ND		6227.28	
	11.17.15	ND	18.56	ND		6226.92	
	6.08.16	ND	18.30	ND		6227.18	
	12.29.16	ND	18.66	ND		6226.82	
	6.30.17	ND	18.64	ND		6226.84	
	12.28.17	NG	NG	NG		NG	
	6.20.18	NG	NG	NG		NG	
1.17.19	NG	NG	NG	NG			
MW-4	9.5.12	ND	17.55	ND	6244.08	6226.53	
	12.20.12	ND	17.14	ND		6226.94	
	3.21.13	ND	16.71	ND		6227.37	
	9.4.13	ND	17.59	ND		6226.49	
	12.9.13	ND	16.93	ND		6227.15	
	3.19.14	ND	16.51	ND		6227.57	
	11.12.14	ND	17.24	ND		6226.84	
	6.17.15	ND	16.83	ND		6227.25	
	11.17.15	ND	17.21	ND		6226.87	
	6.08.16	ND	16.93	ND		6227.15	
	12.29.16	ND	17.30	ND		6226.78	
	6.30.17	ND	17.27	ND		6226.81	
	12.28.17	ND	17.30	ND		6226.78	
	6.20.18	ND	17.59	ND		6226.49	
1.17.19	ND	17.44	ND	6226.64			



TABLE 3
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-5	9.5.12	ND	15.88	ND	6241.41	6225.53
	12.20.12	ND	15.44	ND		6225.97
	3.21.13	ND	15.00	ND		6226.41
	9.4.13	ND	15.91	ND		6225.50
	12.9.13	ND	15.20	ND		6226.21
	3.19.14	ND	14.81	ND		6226.60
	11.12.14	ND	15.54	ND		6225.87
	6.17.15	ND	15.14	ND		6226.27
	11.17.15	ND	15.50	ND		6225.91
	6.08.16	ND	15.22	ND		6226.19
	12.29.16	ND	15.60	ND		6225.81
	6.30.17	ND	15.59	ND		6225.82
	12.30.17	ND	15.57	ND		6225.84
	6.20.18	ND	15.59	ND		6225.82
1.17.19	ND	15.74	ND	6225.67		
MW-6	9.5.12	ND	17.41	ND	6242.91	6225.50
	12.20.12	ND	16.97	ND		6225.94
	3.21.13	ND	16.53	ND		6226.38
	9.4.13	ND	17.45	ND		6225.46
	12.9.13	ND	16.75	ND		6226.16
	3.19.14	ND	16.34	ND		6226.57
	11.12.14	ND	17.06	ND		6225.85
	6.17.15	ND	16.66	ND		6226.25
	11.17.15	ND	17.03	ND		6225.88
	6.08.16	ND	16.74	ND		6226.17
	12.29.16	ND	17.13	ND		6225.78
	6.30.17	ND	17.11	ND		6225.80
	12.28.17	ND	17.10	ND		6225.81
	6.20.18	ND	17.41	ND		6225.50
1.17.19	ND	17.27	ND	6225.64		
MW-7	9.5.12	ND	17.61	ND	6243.27	6225.66
	12.20.12	ND	17.18	ND		6226.09
	3.21.13	ND	16.74	ND		6226.53
	9.4.13	ND	17.65	ND		6225.62
	12.9.13	ND	16.96	ND		6226.31
	3.19.14	ND	16.55	ND		6226.72
	11.12.14	ND	17.29	ND		6225.98
	6.17.15	ND	16.87	ND		6226.40
	11.17.15	ND	17.25	ND		6226.02
	6.08.16	ND	16.96	ND		6226.31
	12.29.16	ND	17.36	ND		6225.91
	6.30.17	ND	17.30	ND		6225.97
	12.28.17	ND	17.32	ND		6225.95
	6.20.18	ND	17.62	ND		6225.65
1.17.19	ND	17.49	ND	6225.78		
MW-8	9.5.12	ND	16.55	ND	6242.01	6225.46
	12.20.12	ND	16.09	ND		6225.92
	3.21.13	ND	15.65	ND		6226.36
	9.4.13	ND	16.57	ND		6225.44
	12.9.13	ND	15.86	ND		6226.15
	3.19.14	ND	15.46	ND		6226.55
	11.12.14	ND	16.18	ND		6225.83
	6.17.15	ND	15.79	ND		6226.22
	11.17.15	ND	16.17	ND		6225.84
	6.08.16	ND	15.90	ND		6226.11
	12.29.16	ND	16.25	ND		6225.76
	6.30.17	ND	16.25	ND		6225.76
	12.28.17	ND	16.23	ND		6225.78
	6.20.18	ND	16.55	ND		6225.46
1.17.19	ND	16.38	ND	6225.63		



TABLE 3
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-9	9.5.12	ND	16.33	ND	6241.59	6225.26
	12.20.12	ND	15.84	ND		6225.75
	3.21.13	ND	15.39	ND		6226.20
	9.4.13	ND	16.32	ND		6225.27
	12.9.13	ND	15.61	ND		6225.98
	3.19.14	ND	15.21	ND		6226.38
	11.12.14	ND	15.95	ND		6225.64
	6.17.15	ND	15.52	ND		6226.07
	11.17.15	ND	15.88	ND		6225.71
	6.08.16	ND	15.60	ND		6225.99
	12.29.16	ND	15.98	ND		6225.61
	6.30.17	ND	15.97	ND		6225.62
	12.28.17	ND	15.94	ND		6225.65
	6.20.18	ND	16.27	ND		6225.32
1.17.19	ND	16.11	ND	6225.48		

BTOC - Below Top of Casing
 TOC - Top of Casing
 ND - Not Detected
 NG - Not Gauged
 AMSL - Above Mean Sea Level (North American Vertical Datum 1988)



APPENDIX C

Soil Boring/Monitoring Wells Logs

  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-1
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39377 Longitude : W107.47505 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SC		Clayey Sand, Fine, Reddish Brown, Moist, Slight Odor.	31	
2	-2	SC		Clayey Sand, Fine, Dark Grey, Moist, Strong Odor, Staining.	201	
4	-4	SC		Sandy Clay, Black, Moist, Strong Odor, Staining.	64	
6	-6	SC			56	
8	-8	SC			48	
10	-10	SC		Sandy Clay, Dark Grey, Saturated, Strong Odor, Staining.	2,769	
12	-12	SC			25	
14	-14	SC		Sandy Clay, Black, Saturated, Strong Odor, Staining.	27	
16						



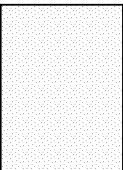

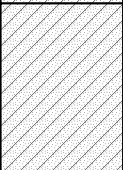
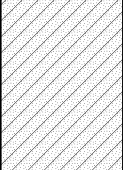

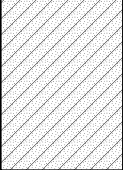

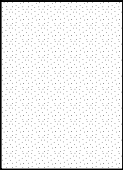
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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-2
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39386 Longitude : W107.47508 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Light Brown, Moist, No Odor.		
		SW				38.5
2	-2			Sand, Fine, Grey, Moist, Strong Odor, Staining		
		SW				184
		CL		Clay		
4	-4			Sandy Clay, Brown, Moist, Light Staining, Slight Odor.		
		SC				65
6	-6			Sandy Clay, Brown, Moist, Staining, Stronger Odor.		
		SC				81
8	-8					
		SW				47
10	-10			Sand, Fine		
		SW				
		SC		Sandy Clay, Brown/Black, Moist/Wet, Strong Odor, Slight Staining		
12	-12					
		SW				36
		SW		Sand, Fine, Brown, Wet, Strong Odor, Staining		
14	-14					
		SW				1,683
		SP		Sand, Fine, Black, Wet, Strong Odor, Strong Staining		
16						
						33

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 		SB-3					
ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W		Date Started	: 3/15/12		Latitude	: N36.39392	
		Date Completed	: 3/15/12		Longitude	: W107.47510	
		Hole Diameter	: 2-inch		Survey By	: Google Earth	
		Drilling Method	: Direct Push		Logged By	: T. Long	
		Sampling Method	: Split Spoon				
Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)	
0	0	SW		Sand, Fine, Brown, Dry, Slight Odor, Staining	57		
2	-2	SC		Sandy Clay, Grey/Black, Moist, Strong Odor, Heavy Staining	313		
4	-4	SC		Sandy Clay, Brown, Moist, Slight Odor, Slight Staining	78		
6	-6	SC		Sandy Clay, Brown, Moist, Slight Odor, Slight Staining	85		
8	-8	SC		Sandy Clay, Brown, Moist, Slight Odor, Heavy Staining	30		
10	-10	SC		Sandy Clay, Brown, Moist, Slight Odor, Heavy Staining	35		
12	-12	SW		Sand, Fine, Grey, Moist, Slight Odor, Heavy Staining	417		
14	-14	SW		Sand, Fine, Grey, Wet, Slight Odor, Heavy Staining	39		
16							


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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-4
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39398 Longitude : W107.47512 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SW		Sand, Fine, Brown, Moist, Slight Odor, Slight Staining		162
2	-2			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		482
4	-4					119
6	-6	SC				821
8	-8					23
10	-10					17
12	-12			Sand, Fine, Grey, Wet, Strong Odor, Heavy Staining		10.1
14	-14	SW				
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-5
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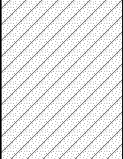
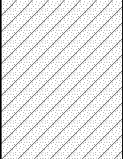


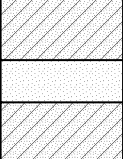

<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39381 Longitude : W107.47497 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SW		Sand, Fine, Black, Moist, Strong Odor, Heavy Staining	89	
2	-2	SC		Sandy Clay, Black, Moist, Slight Odor, Heavy Staining	70.5	
4	-4	SC			48	
6	-6	SC			47.3	
8	-8	SC		Sandy Clay, Black, Moist, Slight Odor, Heavy Staining	28.9	
10	-10	SC			20.2	
12	-12	SC		Sandy Clay, Black, Wet, Slight Odor, Heavy Staining	5.6	
14	-14	SW		Sand, Fine, Brown/Grey, Wet, No odor.	10.4	
16						

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 	SB-6
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ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W	Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon	Latitude : N36.39385 Longitude : W107.47484 Survey By : Google Earth Logged By : T. Long
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Light Brown, Dry, No Odor, No Staining		
		SW				48.9
2	-2			Sandy Clay, Black, Moist, Slight Odor, Slight Staining		
		SC				38.1
4	-4			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		
		SC				21.4
6	-6			Clayey Sand, Fine, Brown, Slight Odor, Slight Staining		
		SC				18.6
8	-8			Sandy Clay, Grey/Brown, Moist, Slight Odor, Slight Staining		
		SC				15.3
10	-10					17.7
		SW		Sand, Fine, Grey, Wet		
12	-12			Sandy Clay, Black, Wet, Strong Odor, Heavy Staining		
		SC				14.8
14	-14			Sand, Fine, Brown, Wet, No Odor, No Staining		
		SW				17.3
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-7
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39399 Longitude : W107.47489 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, No Odor, No Staining		
		SW				8.9
2	-2			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		32.7
		SC				40.3
4	-4					19.7
6	-6					11.2
8	-8					16.1
10	-10	SC		Clayey Sand, Fine, Grey/Black, Moist, Slight Odor, Heavy Staining		12.7
12	-12					20.5
14	-14	SC		Clayey Sand, Fine, Grey/Black, Wet, Slight Odor, Heavy Staining		
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-8
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ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W	Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon	Latitude : N36.39373 Longitude : W107.47479 Survey By : Google Earth Logged By : T. Long
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SW		Sand, Fine, Brown, Dry, No Odor, No Staining		2.5
2	-2			No Recovery		
4	-4	SC		Sandy Clay, Brown, Moist, No Odor, No Staining		39.1
6	-6					
8	-8					
10	-10	SC		Sandy Clay, Black, Moist, Slight Odor, Heavy Staining		31.9
12	-12	SC		Clayey Sand, Fine, Black, Moist, Slight Odor, Heavy Staining		19.4
14	-14	SW		Sand, Fine, Brown, Wet, No Odor, No Staining		17.3
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	<h1 style="margin: 0;">SB-9</h1>
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39370 Longitude : W107.47502 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, Dry, No Odor, No Staining		
		SW				2,679
2	-2			Sandy Clay, Grey, Moist, Slight Odor, Slight Staining		2,310
		SC				3,061
4	-4					1,508
		SC				3,519
6	-6					1,478
		SC				798
8	-8			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		1,478
		SC				1,478
10	-10			No Recovery		1,478
		SC				798
12	-12			Clayey Sand, Fine, Black, Slight Odor, Heavy Staining		798
		SC				128
14	-14					128
		SC				128
16						








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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-10
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39359 Longitude : W107.47495 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, Dry, No Odor, No Staining		
		SW				202
2	-2			Sand, Fine, Brown, Dry, No Odor, Grey Staining		
		SW				211
4	-4			Sandy Clay, Black, Moist, Slight Odor, Heavy Staining		
		SC				29.2
6	-6					38.2
8	-8	SC				47
10	-10					48.6
12	-12	SC		Sandy Clay, Brown, Wet, Slight Odor, Heavy Black Staining		25.9
14	-14			Sand, Fine, Brown, Wet, No Odor		
		SW				19.1
16						

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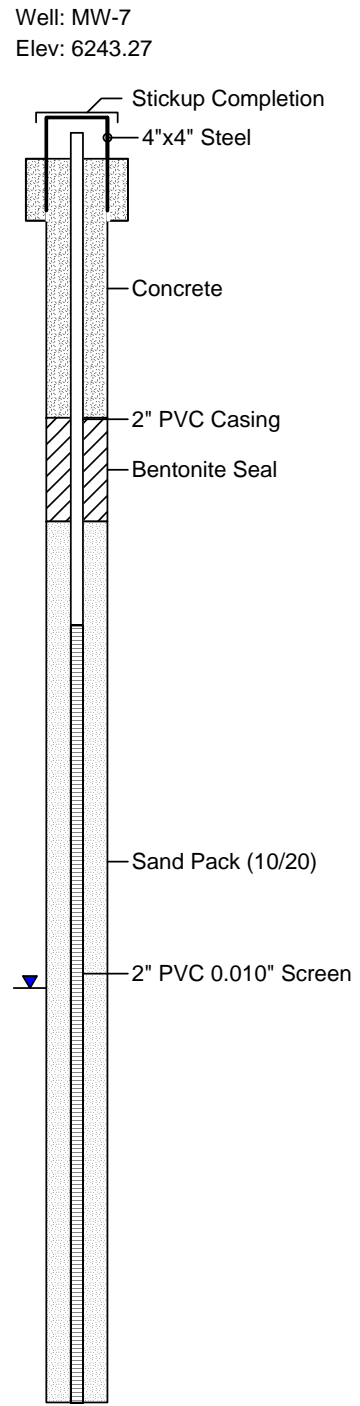
 		SB-11					
ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W			Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon		Latitude : N36.39375 Longitude : W107.47514 Survey By : Google Earth Logged By : T. Long		
Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)	
0	0	SP		Sand, Fine, Brown, Dry, No Odor, No Staining		7.4	
2	-2	SW		Sand, Fine, Brown, Dry, Slight Odor, Slight Grey Staining		213	
4	-4	SC		Sandy Clay, Brown, Moist, Slight Odor, Heavy Staining		56.8	
6	-6					33.2	
8	-8	SP					
10	-10					3,210	
12	-12	SC		Sand, Fine, Odor, Heavy Staining			
14	-14					110.3	
16	-16					23.7	

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 <p>Animas Environmental Services, LLC. 624 East Comanche Farmington, NM 87401</p>	MW-7
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ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE GW INVESTIGATION RIO ARRIBA COUNTY, NEW MEXICO SE1/4 SW1/4, SEC. 16, T25N, R6W N36.39373, W107.47519	Date Started : 8/15/12 Date Completed : 8/15/12 Hole Diameter : 2.25 Drilling Method : HSA Sampling Method : Split Spoon	Lat. : N36.394 Long. : W107.475293 Survey By : Enterprise Products Co. Logged By : Tom Long
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Depth in Feet	Surf. Elev. 6241	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6241			Sand, Black, Fine Grained, Moist, Heavy Staining, Slight Odor		
2	6239	SP			6.6	
4	6237					
6	6235	CL		Sandy Clay, Black, Moist, Heavy Staining, Slight Odor	16.1	
8	6233					
10	6231	CL		Sandy Clay, Black, Moist, Heavy Staining, Slight Odor	18.3	
12	6229					
14	6227	CL		Sandy Clay, Brown, Wet, Slight Staining, Slight Odor	16.1	
16	6225					
18	6223	SP		Sand, Brown, Fine Grained, Some Clay, Wet, No Staining, No Odor	3.4	
20	6221					
22	6219	SP		Sand, Brown, Fine Grained, Wet, No Staining, No Odor	2.1	
24	6217					
26						

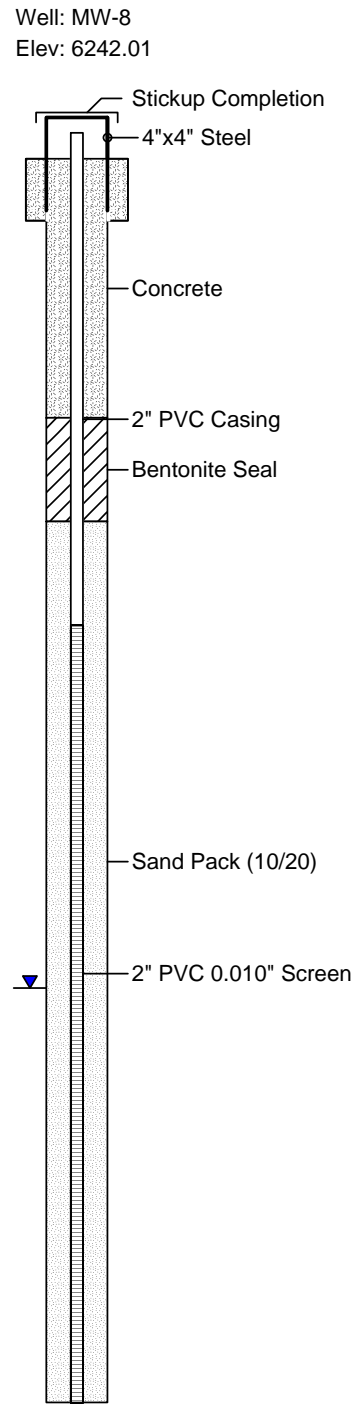


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 <p>Animas Environmental Services, LLC. 624 East Comanche Farmington, NM 87401</p>	<h1 style="margin: 0;">MW-8</h1>
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE GW INVESTIGATION RIO ARRIBA COUNTY, NEW MEXICO SE1/4 SW1/4, SEC. 16, T25N, R6W N36.39373, W107.47519</p>	<p>Date Started : 8/14/12 Date Completed : 8/14/12 Hole Diameter : 2.25 Drilling Method : HSA Sampling Method : Split Spoon</p>	<p>Lat. : N36.394331 Long. : W107.475038 Survey By : Enterprise Products Co. Logged By : Tom Long</p>
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Depth in Feet	Surf. Elev. 6239	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6239			Sandy Clay, Black, Moist, Heavy Staining, No Odor		
2	6237	CL			3.0	
4	6235					
6	6233	CL		Sandy Clay, Brown, Moist, No Staining, No Odor		
8	6231	CL			7.3	
10	6229			Sandy Clay, Black, Wet, Heavy Staining, No Odor		
12	6227	CL			10.8	
14	6225					
16	6223	CL		Sandy Clay, Brown, Wet, No Odor, No Staining		
18	6221	CL			2.3	
20	6219			Sand, Brown, Fine to Medium Grained, Some Clay, Wet, No Staining, No Odor		
22	6217	SP			1.8	
24	6215					
26		SP		Sand, Brown, Fine Grained, Wet, No Staining, No Odor		2.1

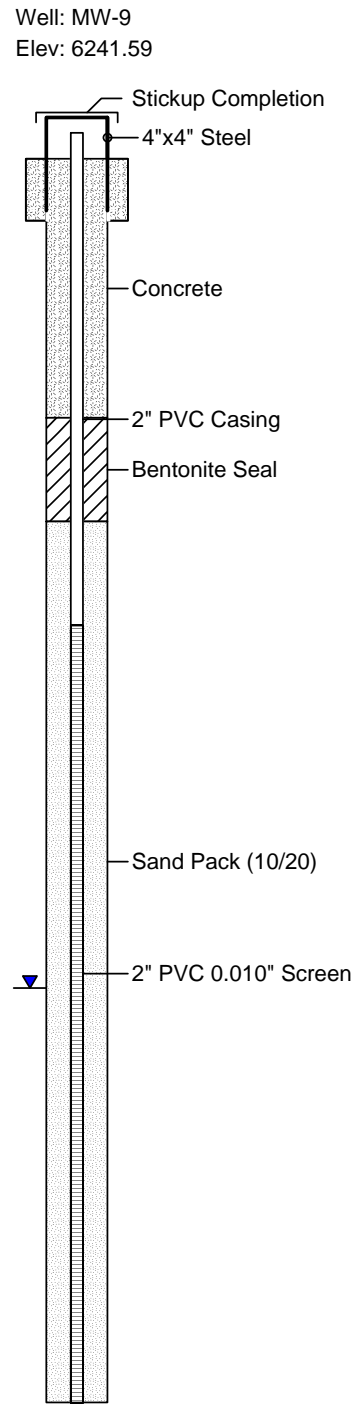


11-13-2012 R:\Animas 2000\2012 Projects\Enterprise\Lateral K-31\Groundwater Investigation August 2012\Soil Boring Logs August 2012\MW-8.bor

 <p>Animas Environmental Services, LLC. 624 East Comanche Farmington, NM 87401</p>	<h1 style="margin: 0;">MW-9</h1>
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE GW INVESTIGATION RIO ARRIBA COUNTY, NEW MEXICO SE1/4 SW1/4, SEC. 16, T25N, R6W N36.39373, W107.47519</p>	<p>Date Started : 8/14/12 Date Completed : 8/14/12 Hole Diameter : 2.25 Drilling Method : HSA Sampling Method : Split Spoon</p>	<p>Lat. : N36.36.394376 Long. : W107.475233 Survey By : Enterprise Products Co. Logged By : Tom Long</p>
--	---	--

Depth in Feet	Surf. Elev. 6239	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6239			Sand, Brown, Fine Grained, Dry, No Staining, No Odor		
2	6237	SP			2.7	
4	6235					
6	6233	CL		Sandy Clay, Brown, Moist, No Staining, No Odor		
8	6231				3.5	
10	6229			Sandy Clay, Brown, Wet, No Staining, No Odor		
12	6227				6.4	
14	6225	CL				
16	6223					
18	6221				1.2	
20	6219			Sand, Brown, Fine to Medium Grained, Wet, No Staining, No Odor		
22	6217	SP			1.6	
24	6215					
26					1.2	



11-13-2012 R:\Animas 2000\2012 Projects\Enterprise\Lateral K-31\Groundwater Investigation August 2012\Soil Boring Logs August 2012\MW-9.bor



APPENDIX D

Public Notice and Landowner Table

Enterprise proposes the following language for public notice:

Enterprise Field Services, LLC (Enterprise) hereby announces the publication of a Stage 1 Abatement Plan for soil and groundwater impacts identified at the Lateral K-31 pipeline release site located at latitude 36.393827° and longitude -107.475065° within the southwest (SW) ¼ in Section 16 of Township 25 North, Range 6 West in rural Rio Arriba County.

On December 2, 2011, a release of natural gas condensate was identified due to a leak on the Lateral K-31 pipeline. Initial site assessments and subsurface investigations concluded that soil and groundwater impacts were present above applicable New Mexico (NM) Energy, Minerals and Natural Resource Department (EMNRD) Oil Conservation Division (OCD) standards for soil and Water Quality Control Commission (WQCC) standards for groundwater. Soil remediation has not been initiated at the site. The current extent of soil and groundwater impact is estimated to be less than 0.3 acres. No surface water was impacted.

The Director of the NM EMNRD OCD has approved a Stage 1 Abatement Plan in which Enterprise proposes to confirm delineation through the replacement of a damaged monitoring well at the site. Groundwater will be sampled subsequent to the replacement of the damaged well and analyzed for applicable constituents of concern. The data obtained from the Stage 1 Abatement Plan activities will be evaluated to determine a preferred abatement plan remediation option at the site. In order to determine that the Stage 1 Abatement Plan is administratively complete, the NM EMNRD OCD Director has complied with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC.

Members of the public may view a copy of the Stage 1 Abatement Plan at the NM EMNRD OCD's Santa Fe office located at 1220 South St Francis Drive, #3, Santa Fe, New Mexico or at the NM EMNRD OCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NM EMNRD OCD public database at <http://www.emnrd.state.nm.us/OCD/>.

The NM EMNRD OCD is accepting written comments and requests for consideration if they are received within 30 days after the publication date of this public notice. Any person seeking to comment on a Stage 1 Abatement Plan should submit written comments to:

Mr. Corey Smith
Environmental Specialist
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NM EMNRD OCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

Additional information can be obtained from the Enterprise project contact:

Gregory E. Miller, P.G.
1100 Louisiana Street
Houston, Texas 77002-5227
(713) 381-8780

Table 1
Property Owners Within One (1) Mile Radius

Lateral K-31 Pipeline Release (2011)
Rio Arriba County, New Mexico
Enterprise Field Services, LLC

Parcel Number	Owner Name	Owner Address	Owner City, Stae, Zip Code
2034147160185	Navajo Nation Of Indian - Navajo Land Dept.	PO Box 9000	Window Rock, AZ 86515
2034147198264	United States of America	6251 College Blv d., Suite A	Farmington, NM 87402
2033148396008	United States of America	6251 College Blv d., Suite A	Farmington, NM 87402
No Parcel Number	United States of America	6251 College Blv d., Suite A	Farmington, NM 87402
No Parcel Number	New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501



ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

May 20, 2019

Return Receipt Requested

7016 3010 0000 0899 0824

M. Cory Smith
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

**RE: Revised Lateral K-31 Pipeline Release (12/02/2011) Stage 1 Abatement Plan
(Ensolum, May 5, 2019)**

Enterprise Field Services, LLC – K-31 Pipeline Release (12/2/2011)

Rio Arriba Co., New Mexico

OCD AP: 129

OCD RP: 3R-440

Dear Mr. Smith:

In response to the New Mexico (NM) Energy, Minerals and Natural Resource Department (EMNRD) Oil Conservation Division (OCD) letter dated January 22, 2019, and in compliance with the requirements of NM Administrative Code (NMAC) 19.15.30.15 (for public notice and participation with regards to the Stage 1 Abatement Plan), Please find attached, the *Revised Lateral K-31 Pipeline Release (12/02/2011) Stage 1 Abatement Plan* prepared by Ensolum, LLC (Ensolum) dated May 7, 2019. The initial Stage 1 Abatement Plan was submitted to the NM EMNRD OCP on March 21, 2019 and included both the proposed language for public notices, as well as a list of landowners located within a one-mile radius of the above-referenced location (hereinafter the "Site"). The Revised Abatement Plan was subsequently revised to include a proposed schedule (refer to Section 6 in the attached document).

Also, within the Revised Stage 1 Abatement Plan, Enterprise proposes the following courses of actions for the Site:

- The installation of four soil borings to be completed as groundwater monitor wells.
- The implementation of additional Site-specific aquifer testing (bail-down or slug testing).

Enterprise appreciates the OCD's continued assistance and guidance with this project. Should you have any questions, comments or concerns, or require additional information, please feel free to contact me any time at 713-381-8780, or at gemiller@eprod.com.

Sincerely,

Gregory E. Miller, P.G.
Supervisor, Environmental

Rodney M. Sartor
Sr. Director, Environmental

cc: Mr. Nick Jaramillo – NM State Land Office, Santa Fe, NM (landowner)

ec: Mr. Cory Smith – NMOCD, Aztec, NM
Mr. Jim Griswold – NMOCD, Santa Fe, NM
Mr. Brad Billings – NMOCD, Santa Fe, NM
Ms. Liz Scaggs – Ensolum, Dallas, TX



**REVISED LATERAL K-31 PIPELINE RELEASE (12/02/2011)
STAGE 1 ABATEMENT PLAN**

Property:
Lateral K-31 Pipeline Release (12/02/2011)
SW 1/4 S16, T25N R6W
Rio Arriba County, New Mexico

Abatement Plan No. 129
New Mexico EMNRD OCD RP No. 3R-440

Revised May 7, 2019

Ensolum Job No: 05B1226002

Prepared for:
Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attn: Mr. Gregory E. Miller, P.G.

A handwritten signature in blue ink, appearing to read "Marc E. Gentry", written over a horizontal line.

Marc E. Gentry, P.G.
Principal



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1 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared a Stage 1 Abatement Plan for the Enterprise Field Services, LLC (Enterprise) Lateral K-31 (2011) pipeline release site located southwest (SW) 1/4 of Section 16, Township 25 North, Range 6 West, in Rio Arriba County, New Mexico (36.393827 ° N, 107.475065 ° W), hereinafter referred to as the “Site”.

Based on correspondence from the New Mexico Energy Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD), dated January 22, 2019, Enterprise is required to submit a Stage 1 Abatement Plan no later than March 22, 2019. The Stage 1 Abatement Plan is intended to define site conditions such that an effective abatement option can be selected. Stage 2 is implementation of the remedial option. This Stage 1 Abatement Plan details the site description and background, historic site investigation and remediation activities and the geologic and hydrogeologic characteristics. Additionally, the Stage 1 Abatement Plan proposes additional delineation, monitoring activities, and remediation activities and provides a proposed schedule to complete delineation activities in accordance with New Mexico Administrative Code (NMAC) 19.15.30. Subsequent to the successful completion and the agency approval of the proposed delineation activities, a Stage 2 Abatement Plan will be developed to address the remediation of constituents of concern (COCs) remaining at the Site in excess of the applicable New Mexico EMNRD closure criteria.

1.1 Standard of Care and Limitations

Ensolum’s services will be performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services to be performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information to be used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client and regulatory agency, as detailed in our discussions.

Findings, conclusions, and recommendations resulting from these services will be based upon information derived from public information resources and it should be noted that this information is subject to change over time. Ensolum’s findings are based solely upon data available to Ensolum at the time of these services.

This report has been prepared for the exclusive use of Enterprise Products Operating LLC (Enterprise), and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise and Ensolum. Any unauthorized distribution or reuse is at the client’s sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Stage 1 Abatement Plan and Ensolum’s Agreement with the client. The limitation of liability defined in the agreement is the aggregate limit of Ensolum’s liability to the client.

2 SITE DESCRIPTION AND BACKGROUND

The Lateral K-31 pipeline release Site is located on land managed by the State of New Mexico. The Site is surrounded by rangeland and oil and gas production and gathering facilities, including the natural gas gathering pipeline that traverses the area from approximately north to south.

On December 2, 2011, a pipeline release of natural gas and associated pipeline liquids was discovered at the Site and was subsequently repaired. Site assessments conducted by Animas Environmental Services, LLC (AES) during December 2011 and June 2012 identified concentrations of COCs in soils and groundwater above the New Mexico EMNRD-OCD closure criteria and the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs)*.

During September 2012, AES advanced nine (9) additional soil borings/monitoring wells (MW-1 through MW-9) to further evaluate the extent of dissolved phase COCs in groundwater. Based on laboratory analytical results, COCs were not identified in soil above the New Mexico EMNRD OCD RALs at these soil boring/monitoring well boring locations. However, COCs were identified in groundwater above the WQCC GQSs. Groundwater monitoring events were conducted by AES during December 2012, June 2013, September 2013, and December 2013 and were subsequently collected by Apex TITAN, Inc. (Apex) in June 2017 and January 2018. Based on the laboratory analytical results, COC concentrations were identified in groundwater above the WQCC standards.

A **Topographic Map** is provided as **Figure 1 of Appendix A**, which was reproduced from a portion of a United States Geological Survey (USGS) 7.5-minute series topographic map. A **Site Vicinity Map**, created from an aerial photograph, is provided as **Figure 2**, and a **Site Map**, which indicates the locations of the monitoring wells and recent soil borings in relation to pertinent structures and general Site boundaries, is provided as **Figure 3A of Appendix A**.

3 SITE CHARACTERIZATION

3.1 Regional Geology

The site is located within the San Juan Basin which is the major structural feature in the northwest corner of New Mexico. The San Juan Basin is classified as an arid region, as most of the area receives less than 10 inches of precipitation per year. Mean annual precipitation in the mountainous regions along the basin margin may be as much as 30 inches a year. Surface water is relatively scarce, with the exception of the San Juan River and its tributaries.

Based upon reference information from the New Mexico Bureau of Geology and Mineral Resources publication on the background geology of the San Juan Basin (Decision-Makers Field Conference 2002) “most of the aquifers in the San Juan Basin exist under confined or semi-confined hydrologic conditions. In Mesozoic rocks of the region, the confined sandstone aquifers are interbedded with shales that behave as aquitards. The Triassic mudrock sequence is the aquitard for the Permian Limestone. Groundwater in the alluvium along streams and in the shallow Tertiary sandstone aquifers is generally unconfined and is open to the atmosphere through pores in the overlying permeable rocks.”

The major aquifer underlying the Site vicinity is listed as the Colorado Plateaus Aquifer, which is made up of four smaller aquifers – Uinta-Anima, Mesa Verde, Dakota-Glen, and Coconino-De Chelly. The Uinta-Animas is the shallowest of these aquifers and is present in the San Juan Basin. The general composition of the aquifers is moderately to well-consolidated sedimentary rocks of an age ranging from Permian to Tertiary. Each aquifer is separated from the others by an impermeable confining unit. Two of the confining units are completely impermeable and cover the entire area of the aquifers. The other two confining units are less extensive and are thinner. These units allow water to flow between the principal aquifers.

According to the New Mexico Bureau of Geology and Mineral Resource (Geologic Map of New Mexico 2003), the Site is located within the lower Eocene San Jose Formation which was deposited along high energy, low-sinuosity streams and on extensive muddy floodplains. The Eocene age San Jose geologic formation contains a mixture of clastic sedimentary rocks varying from siltstone to conglomerate, dominated by rocks containing sand-sized particles.

3.2 Local Geology and Hydrogeology

Boring logs have been completed during historic site investigation activities. The boring logs recorded sample identification, depth collected, and method of collection, as well as observations of soil moisture, color, grain size, contaminant presence, and overall stratigraphy. The lithology encountered at the Site during boring activities were composed of Quaternary alluvial deposits derived from erosion of the parent San Jose sandstones and siltstones which comprise the canyon walls. Based on the data collected during the completion of the soil borings, the alluvia generally consist of dark grey sand and brown to dark grey sandy clays from the ground surface to at least 26 feet below grade surface (bgs).

The lithology observed during the advancement of soil boring MW-1 at the Site included a dark grey sand from the surface to approximately five (5) feet bgs. The sand stratum was underlain by a dark grey sandy clay from five (5) feet bgs to 15 feet bgs. The sand clay stratum was underlain by black sand from 15 feet bgs to 20 feet bgs. A brown sandy clay was encountered from 20 feet bgs to 25 feet bgs and a brown sand was encountered from 25 feet bgs to the terminus depth of 26 feet bgs. The lithologies observed in the remaining soil borings at the Site were similar to that of soil boring MW-1. Detailed lithologic descriptions are presented on the monitoring well soil boring logs included in **Appendix C**.

The initial groundwater-bearing unit at the Site was encountered at a depth of 16 feet bgs during supplemental investigation activities. The groundwater flow direction (gradient) at the Site is generally toward the north/northwest and averages approximately 0.005 feet per foot (ft/ft) across the Site.

Based on Domenico and Schwartz (1990) a default hydraulic conductivity value for the impacted sand unit at the site would be, on average 2×10^{-6} m/sec which is equivalent to 0.57 feet per day (ft/day). Additional site-specific aquifer characterization is proposed in this Stage 1 Abatement Plan Proposal.

3.3 Proposed Cleanup Goals

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Initial Site activities were performed in accordance with the New Mexico ENMRD OCD *Guidelines for Remediation of*

Mr. Gregory E. Miller, Enterprise Field Services, LLC
Stage 1 Abatement Plan – Lateral K-31 (2011) Pipeline Release

May 7, 2019
Page 4

Leaks, Spills and Releases, in addition to the New Mexico EMNRD OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.29 *Release Notification*. This guidance established investigation and abatement action requirements for sites subject to reporting and/or corrective action prior to the update of the rule finalized August 14, 2018. Groundwater remediation activities at the Site will be performed in accordance with NMAC 19.15.30 *Remediation*.

Ensolum, LLC (Ensolum) utilized information provided by Enterprise, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD Imaging database to determine the appropriate closure criteria for the Site.

- Two (2) water wells were identified less than a mile of the Site on the OSE Water Rights Reporting System (WRRS) database. Nine (9) monitoring wells (SJ 04070 POD 1 through SJ 04070 POD 9) were located approximately 50 feet south of the Site, however these monitoring wells were plugged and abandoned. There are currently nine (9) monitoring wells at the Site. Based on groundwater monitoring wells located at the Site, the depth to the groundwater unit is less than 50 feet below grade surface (bgs).
- The Site is located approximately 1,554 feet southeast of Largo Canyon Wash.
- The Site is not located within 200 feet of a lakebed, sinkhole or playa lake.
- The Site is not located within 300 feet from a permanent residence, school, hospital, institution or church.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include: milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total BTEX, 100 mg/kg for TPH GRO/DRO/MRO and 600 mg/kg for chlorides.

In addition, cleanup/delineation goals for groundwater at the Site include: 10 micrograms per liter



(µg/L) for benzene, 750 µg/L for toluene, 750 µg/L for ethylbenzene, and 620 µg /L for total xylenes.

4 SUMMARY OF SITE ASSESSMENT ACTIVITIES

On December 2, 2011, a pipeline release of natural gas and associated pipeline liquids was discovered at the Site and was subsequently repaired. An initial site assessment was conducted by AES on December 8, 2011, which included the collection of soil samples from four (4) test holes (TP-1 through TP-4) completed near the release area a groundwater sample from an existing monitoring well located south of the release location and associated with another operator's release site. Based on laboratory analytical results, COCs were identified in soils from two of the test holes (TP-3 and TP-4) at concentrations above the New Mexico EMNRD-OCD RALs. The groundwater sample did not exhibit COC concentrations above WQCC GQs.

During June 2012, AES advanced twelve (12) soil borings (SB-1 through SB-12) at the Site to further delineate the extent of hydrocarbon affected soil and potentially impacted groundwater. Based on laboratory analytical results of soil and groundwater samples collected from the soil borings, COC concentrations were identified in soil above the New Mexico EMNRD-OCD RALs and in groundwater above the WQCC GQs (*Site Investigation Report, dated May 16, 2012 – AES*).

During September 2012, AES performed groundwater investigation activities and advanced nine (9) additional soil borings to further evaluate the extent of dissolved phase COCs in groundwater. Subsequent to advancement, the soil borings were completed as groundwater monitoring wells (MW-1 through MW-9). Based on laboratory analytical results, COCs were not identified in soil above the New Mexico EMNRD OCD RALs at these monitoring well/soil boring locations. However, COCs were identified in groundwater above the WQCC GQs (*Groundwater Investigation Report, dated November 28, 2012 – AES*).

Groundwater monitoring events were conducted by AES during December 2012, June 2013, September 2013, and December 2013, and were subsequently collected by Apex TITAN, Inc. (Apex). Based on the laboratory analytical results, COC concentrations were identified in groundwater above WQCC standards.

The proposed activities identified herein are based on a work plan submitted to the New Mexico EMNRD OCD provided by Apex to Enterprise (*Supplemental Environmental Site Investigation Workplan, dated August 17, 2017 - Apex*). The proposed activities included the installation of two (2) monitoring wells, the reinstallation of MW-2, which has not been located, and groundwater monitoring activities.

Soil laboratory results that includes data from previous site investigations are provided in **Table 1 (Appendix B)**. Groundwater analytical results are summarized in **Table 2 (Appendix B)**. Groundwater measurements (including historical data) are presented with top of casing (TOC) elevations in **Table 3 (Appendix B)**. June 2018 and January 2019 groundwater gradient maps provided as **Figure 4A** and **Figure 4B (Appendix A)**. Please note that the historic soil analytical data tables reference the Remediation Action Levels provided in the now obsolete New Mexico EMNRD OCD *Guidelines for Remediation of Leaks, Spills and Releases*.

5 PROPOSED DELINEATION ACTIVITIES

5.1 Health and Safety Plan

Ensolum will develop a site-specific Health and Safety Plan (HSP) for the performance of the proposed scope of services described in this work plan. For the purposes of this HSP, it is assumed that the constituents of concern include petroleum hydrocarbons. For the purposes of this proposed plan, it is assumed that the scope of services can be conducted under modified Level D personal protective equipment (PPE), which will include a hard hat, steel-toed boots, protective eyewear, and gloves. Should the need arise to upgrade PPE (e.g. respiratory protection), the client will be notified, and the HSP will be modified accordingly. Although it is not anticipated at this time, it should be noted that a PPE upgrade will constitute a change in scope of work, requiring a change order.

Ensolum will clear utilities through the New Mexico One Call System and will coordinate with the utility companies and Enterprise to evaluate the line locations in order to select the actual soil boring locations.

5.2 Soil Boring Installation

Subsequent to “daylighting” the known subsurface utilities and clearing the initial five (5) feet of each proposed drilling location utilizing a hydro-excavator, three (3) soil borings will be advanced utilizing a hollow stem auger drilling rig. The soil borings will be advanced to a maximum total depth of approximately 20 feet below grade surface (bgs), five feet below the initial water table, or auger refusal, whichever is shallower. The proposed total depth of the soil borings/monitoring wells will not be exceeded without verbal approval from Enterprise.

Non-disposable sampling and drilling equipment will be decontaminated using an Alconox[®] wash and potable water rinse prior to commencement of the project and between the advancement of each soil boring.

Soil samples will be collected continuously using core barrels or split spoon samplers to document lithology, color, relative moisture content, and visual or olfactory evidence of impairment. In addition, the samples will be scanned with a photoionization detector (PID) to evaluate the presence of volatile organic compounds (VOCs).

Soil boring cuttings will be stored in labeled drums until appropriate disposal measures have been determined.

5.3 Soil Sampling Program

A minimum of two (2) soil samples from each monitoring well boring will be submitted for laboratory analysis from some combination of the following intervals:

- The depth interval exhibiting the highest concentration of VOCs based on PID evidence;
- An interval exhibiting visual/olfactory evidence of impairment;
- The capillary fringe zone;
- From a change in lithology; or,
- From the bottom of the boring.



The soil samples will be collected in laboratory prepared glassware, labeled/sealed using laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples will be relinquished to the courier for Heal Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.4 Soil Laboratory Analytical Program

Selected soil samples will be analyzed for TPH GRO/DRO/MRO utilizing EPA Method SW-846 8015, BTEX using EPA Method SW-846 8021 or 8260, and Chlorides using EPA Method 300.0.

A summary of the analytes, sample type, number of samples, and EPA-approved methods is presented in the following table:

Analytes	Sample Type	No. of Samples	Method
TPH GRO/DRO/MRO	Soil	4	SW-846 8015
BTEX	Soil	4	SW-846 8021/8260
Chlorides	Soil	4	Method 300.0

5.5 Monitoring Well Installation

Subsequent to advancement, the soil borings will be completed as monitoring wells. The monitoring wells will be completed as follows:

- Installation of 10 to 15 feet of 2-inch diameter, machine slotted (0.010 inch) schedule 40 polyvinyl chloride (PVC) well screen assembly with a threaded bottom plug;
- Installation of schedule 40 PVC riser pipe to surface;
- Addition of graded silica sand for annular sand pack around the well screen from the bottom of the well to two feet above the top of the screen;
- Placement of two (2) feet of hydrated bentonite above the sand;
- Addition of cement/bentonite slurry to the surface; and
- Installation of an above-grade steel riser with an integrated padlock hasp.

The monitoring wells will be developed by surging and removing groundwater until the fluid appears relatively free of fine-grained sediment. Additionally, one (1) or more slug tests will also be attempted at the Site to obtain site specific aquifer characteristics.

5.6 Groundwater Gradient Determination

Following installation, the monitoring wells will be geospatially surveyed to determine the top of casing (TOC) and ground surface elevation for each monitoring well. The TOC elevations will allow the calculation of the groundwater elevations at each well. This information will facilitate the creation of groundwater potentiometric surface maps, which will identify groundwater flow direction and gradient. The relative ground elevations will facilitate the creation of lithologic and/or hydrogeologic cross-sections, if deemed necessary.

5.7 Groundwater Sampling Program

A groundwater monitoring event will be performed at the Site following the installation and development of the monitoring wells. During the groundwater sampling event, Ensolum will collect one (1) groundwater sample from each on-Site monitoring well.

Prior to sampling, fluid levels in each of the monitoring wells will be gauged utilizing an interface probe capable of detecting non-aqueous phase liquid (NAPL).

Groundwater samples will be collected utilizing low-flow sampling or bailer-purge sampling methods. Low-flow refers to the velocity with which groundwater enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system, to the extent practical, taking into account established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (L/min) are maintained during sampling activities, using dedicated or decontaminated sampling equipment.

The pump intake is placed within the screened interval such that the groundwater recovered is drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

The groundwater samples will be collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are taken every three to five minutes while purging. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for three successive readings.

If a disposable bailer is utilized to sample the monitoring well, the monitoring well will be purged until effectively dry and once groundwater recovers to static or near static levels, a groundwater sample will be collected.

Samples will be collected in laboratory supplied containers, labels/sealed using the laboratory supplied custody seals, and placed on ice in a cooler. The samples will be relinquished to the courier for HEAL of Albuquerque, New Mexico under proper chain-of-custody procedures.

5.8 Groundwater Laboratory Analytical Program

The groundwater samples collected from the monitoring wells will be analyzed for BTEX utilizing EPA Method SW-846 8021/8260.

A summary of the analytes, sample type, estimated number of samples, and EPA-approved methods are presented below:

Analytes	Sample Type	No. of Samples	Method
BTEX	Water	26	SW-846 8021/8260

5.9 Stage 2 Abatement Plan Proposal

Based on the data generated from the delineation activities and subsequent groundwater sampling event, Ensolum will complete a Stage 2 Abatement Plan Proposal. The plan will include an evaluation of the cumulative laboratory analytical data to determine the description and justification for a preferred abatement option at the Site. In addition, the Stage 2 Abatement Plan Proposal will include a modification to the groundwater monitoring program, Site maintenance activities, a proposed schedule for duration of abatement activities, and public notification proposal designed to satisfy the requirements of Subsections A through C of 19.15.30.15 NMAC.

5.10 Quality Assurance

Sampling and analytical techniques have been identified in the text above and conforms with the references identified in Subsection B of 20.6.2.3107 NMAC and with 20.6.4.14 NMAC of the water quality standards for interstate and intrastate surface waters in New Mexico.

6 PROPOSED SCHEDULE

Public Notice

Enterprise will provide Public Notice within 15 days of notice from NMOCD that this Abatement Plan is administratively complete as required per NMAC 19.15.30.15. Enterprise will provide written notice of the Stage 1 Abatement Plan to the following parties:

- Surface owners of record within 1 mile of the perimeter of the identified impacted area as currently delineated in the Stage 1 Abatement Plan. The list of Landowners is provided in Table A (Appendix D).
- The County Commission of Rio Arriba County, New Mexico.
- The Office of Natural Resources Trustee for the State of New Mexico.

Please note the release was not identified to be within one (1) mile of any city limits or tribal boundaries.

Enterprise understands that the NM EMNRD OCD may request additional notification to persons or entities that have requested such, as well as other local, state, or federal governmental agencies upon approval of the Stage 1 Abatement Plan.

Once approval is received, Enterprise will publish the NM EMNRD OCD approved notice in the Rio Grande Sun, a newspaper circulated in Rio Arriba County, New Mexico, and in the Albuquerque Journal, a newspaper of general circulation across the state of New Mexico. The newspaper publications will run for a cycle of one (1) business day.

Enterprise will issue the public notice via the newspapers and certified mailings within 15 days after the NM EMNRD OCD has provided determination that the Stage 1 Abatement Plan is administratively complete. Proposed verbiage for the public notice and a list of landowners within a one-mile radius are provided in Appendix D.

If no public comments are received within 30 days of posting public notice, Ensolum will proceed with permitting and scheduling supplemental site investigation activities.



Mr. Gregory E. Miller, Enterprise Field Services, LLC
Stage 1 Abatement Plan – Lateral K-31 (2011) Pipeline Release

May 7, 2019
Page 10

Field Activities

The additional delineation activities are proposed to be completed before the end of June 2019. The availability of drilling and hydro excavation contractors, weather conditions and public notice will dictate the drilling schedule. Prior to any field work, Ensolum and/or Enterprise will provide the NM EMNRD OCD with 48-hour notification.

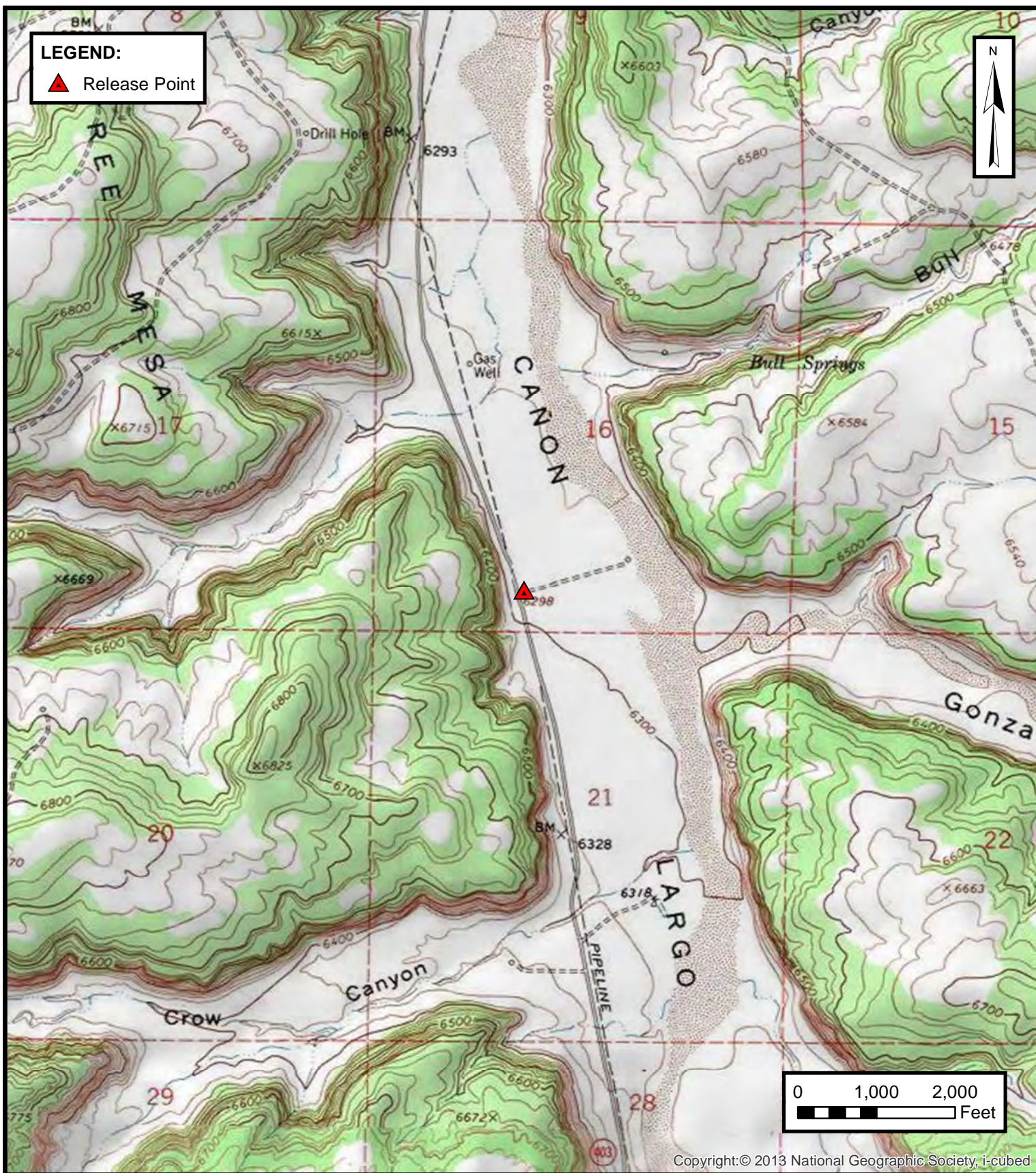
Quarterly Progress Reports

In accordance with NMAC 19.15.30.13 C. (5), Enterprise will provide the New Mexico ENMRD OCD with summary quarterly progress reports of the Stage 1 Abatement Plan implementation beginning 30 days after the approval and initiation of the Stage 1 activities. At this time the summary quarterly progress reports are anticipated to begin in June 2019.



APPENDIX A

Figures



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ENSOLUM
 Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 04B1226024

FIGURE
1

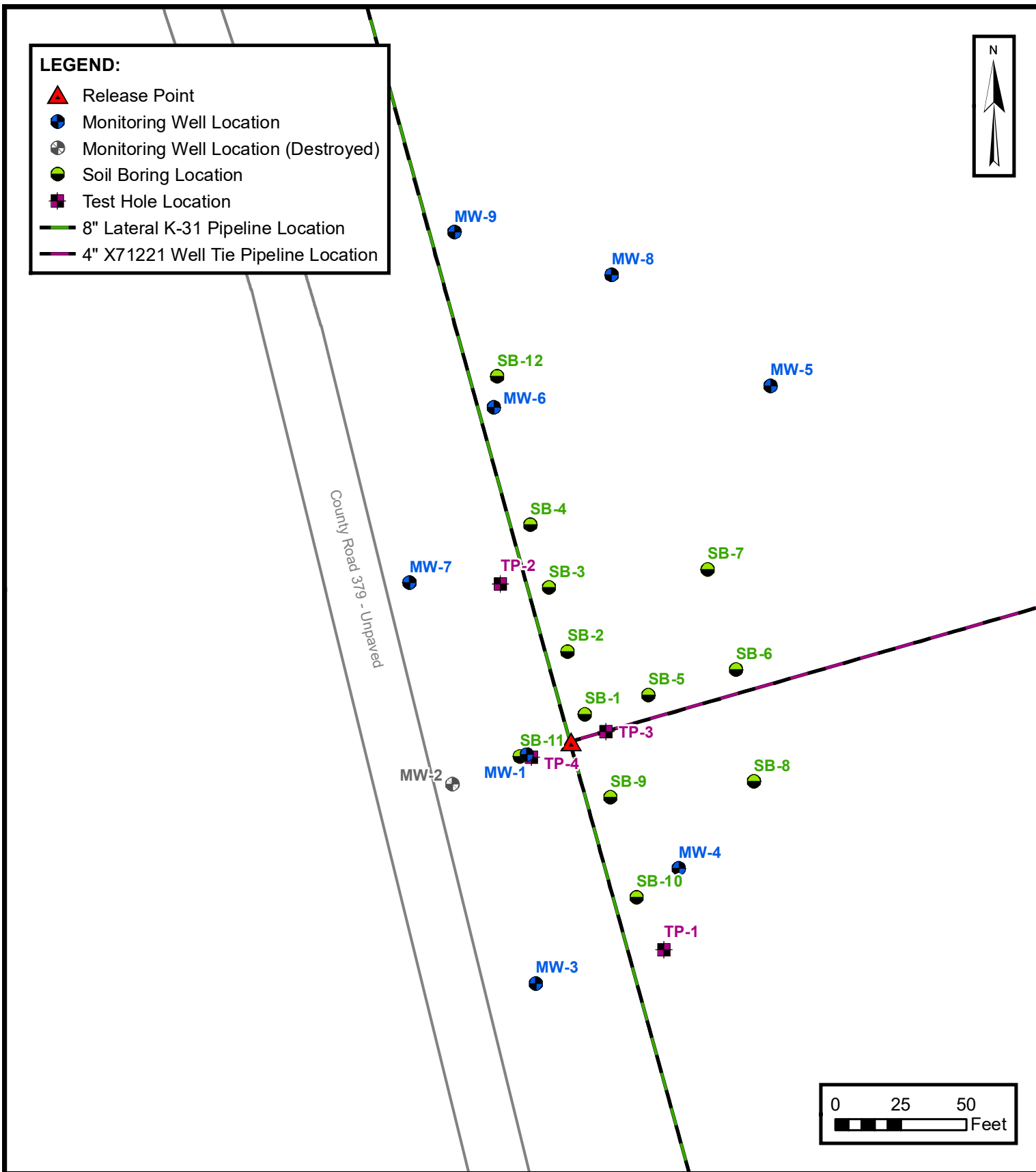


SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 04B1226024

FIGURE
2

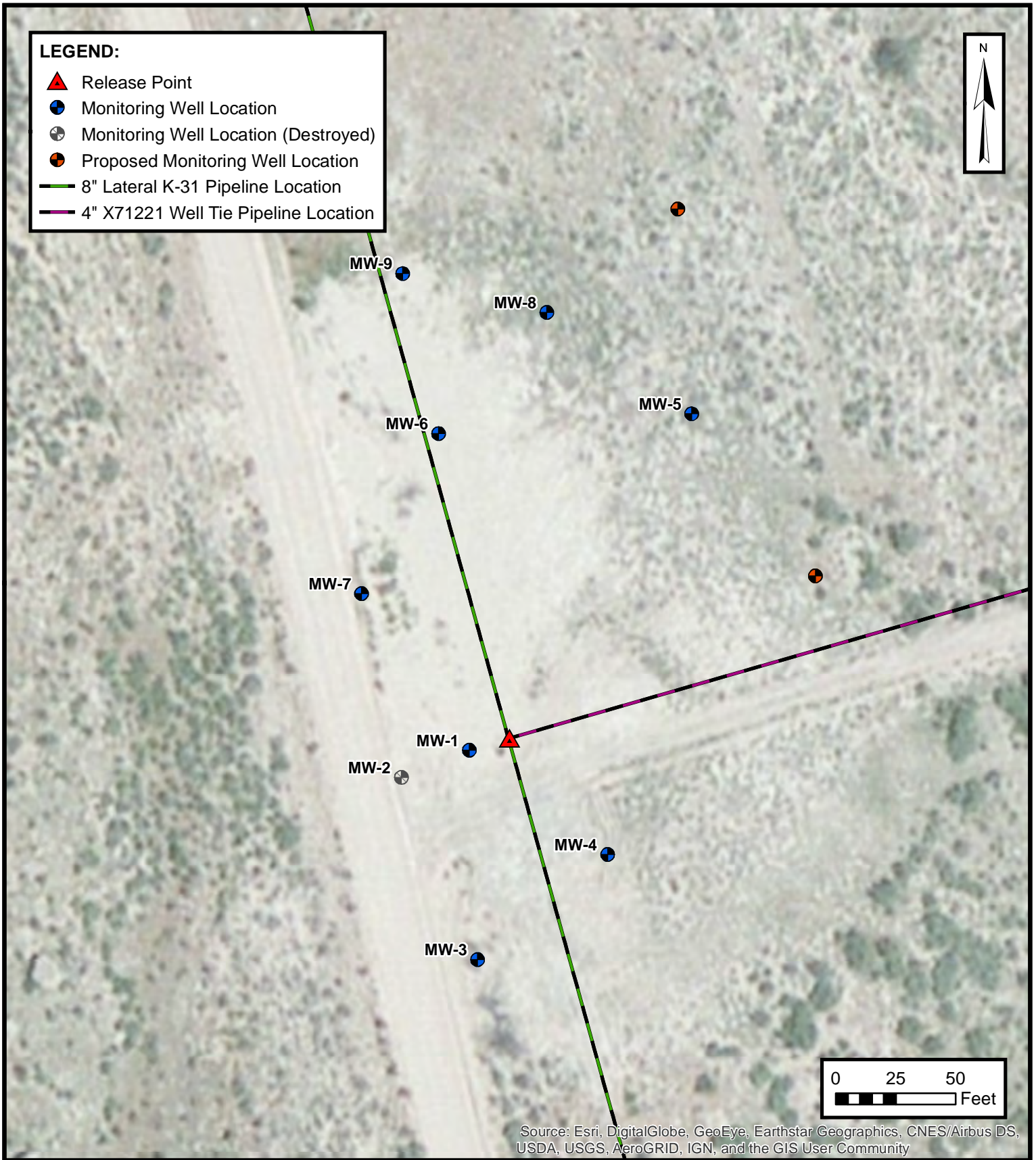


SITE MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

FIGURE
3A

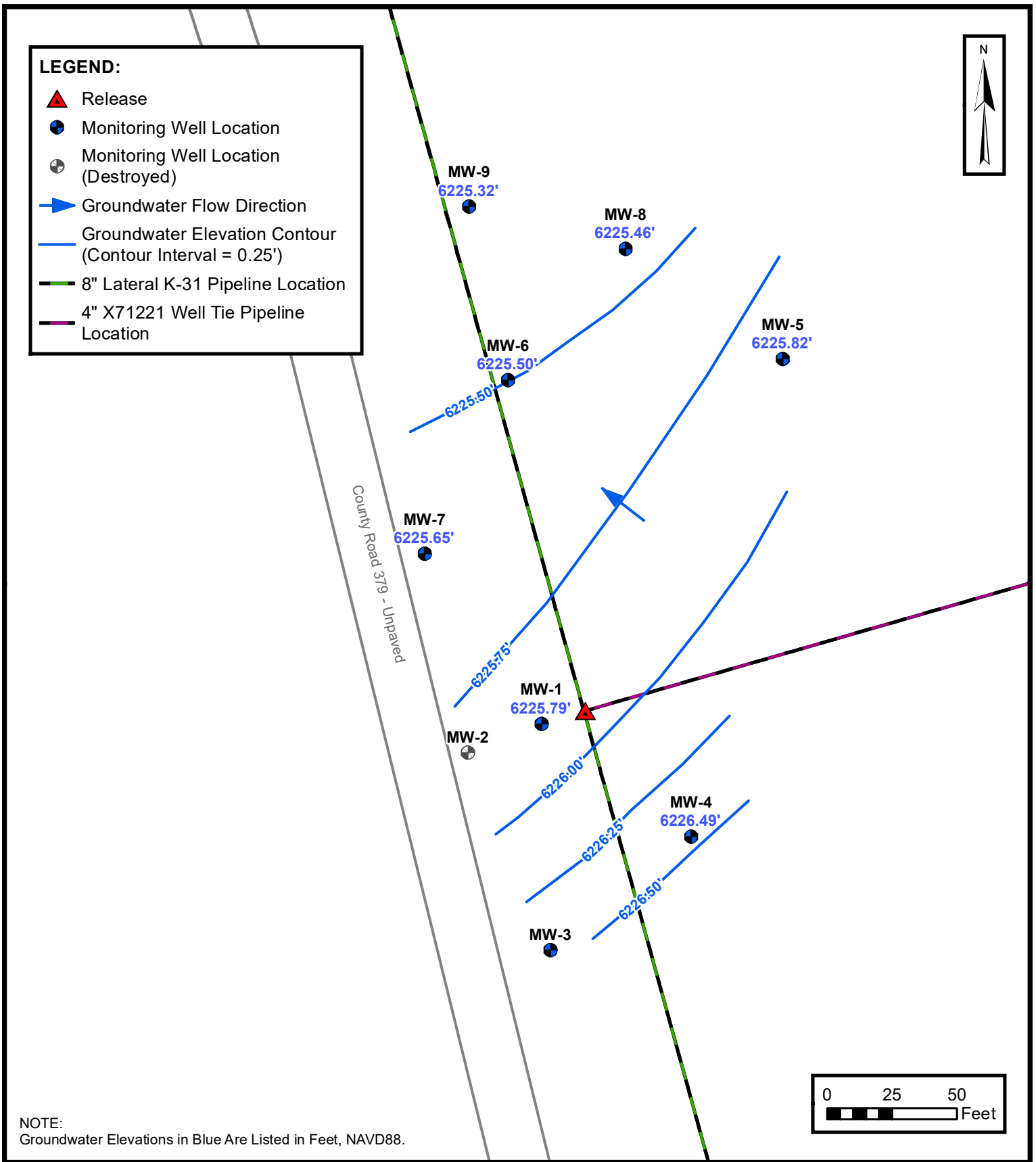


PROPOSED MONITORING WELL LOCATION MAP

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

**FIGURE
3B**

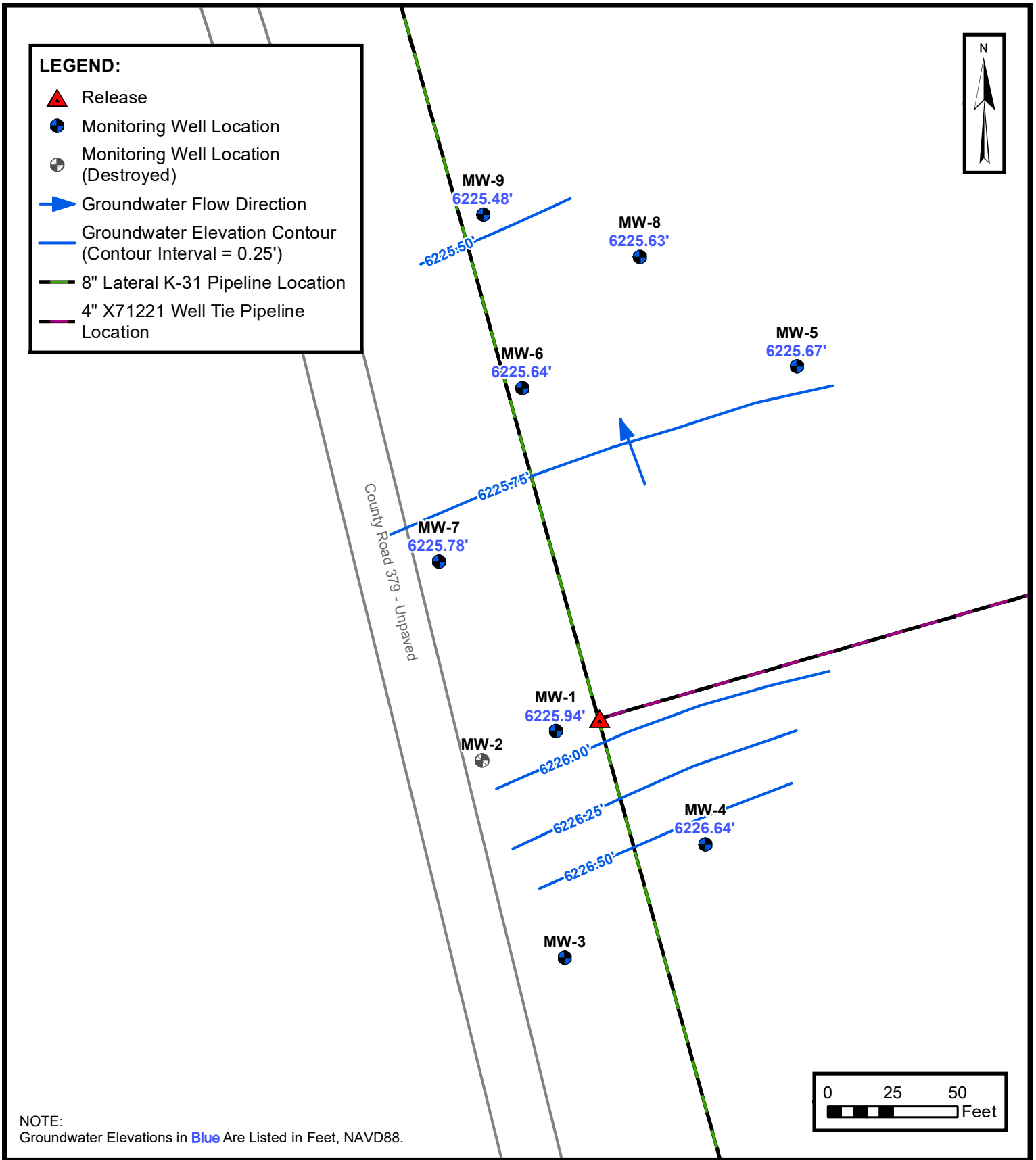


**GROUNDWATER GRADIENT MAP
(JUNE 2018)**

ENTERPRISE FIELD SERVICES, LLC
LATERAL K-31 (12/02/2011) PIPELINE RELEASE
SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

**FIGURE
4A**



**GROUNDWATER GRADIENT MAP
(JANUARY 2018)**

ENTERPRISE FIELD SERVICES, LLC
 LATERAL K-31 (12/02/2011) PIPELINE RELEASE
 SW ¼, S16 T25N R6W, Rio Arriba County, New Mexico
 36.393827° N, 107.475065° W

PROJECT NUMBER: 05B1226002

**FIGURE
4B**



APPENDIX B

Tables



TABLE 1
Lateral K-31 Pipeline Release (12/02/2011)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
Test Hole Excavation and Soil Boring Soil Samples Collected by AES									
TP-1	12.08.11	14	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.8
	12.08.11	15.5	<0.047	<0.047	<0.047	<0.093	ND	<4.7	<9.9
TP-2	12.08.11	15	<0.050	<0.050	<0.050	<0.10	ND	<5.0	<10
TP-3	12.08.11	15	3.7	130	28	270	432	2,500	2,200
TP-4	12.08.11	7	<0.047	<0.047	<0.047	<0.094	ND	<4.7	<10
	12.08.11	15	8.0	210	75	690	982	5,800	3,000
SB-1	03.15.12	10	<0.49	<0.49	0.73	4.9	5.6	190	89
	03.15.12	14	<0.046	<0.046	<0.046	<0.092	ND	<4.6	<9.7
SB-2	03.15.12	2 to 4	0.070	0.10	0.054	0.49	0.71	5.3	<10
	03.15.12	12	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<10
SB-3	03.15.12	12	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<10
	03.15.12	14	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<10
SB-4	03.15.12	4	0.11	0.55	0.16	1.6	2.4	10	20
	03.15.12	14	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.8
SB-5	03.16.12	4	<0.048	<0.048	<0.048	0.24	0.24	<4.8	<9.7
	03.16.12	14	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.6
SB-6	03.16.12	2	<0.097	<0.097	<0.097	0.31	0.31	11	77
	03.16.12	14	<0.049	<0.049	<0.049	<0.097	ND	<4.9	<10
SB-7	03.16.12	6	<0.047	<0.047	<0.047	<0.095	ND	<4.7	<10
	03.16.12	14	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<9.9
SB-8	03.16.12	4	<0.050	<0.050	<0.050	0.20	0.20	<5.0	<10
	03.16.12	14	<0.047	<0.047	<0.047	0.098	0.098	<4.7	<9.9
SB-9	03.16.12	10	0.51	9.4	1.9	19	31	190	250
	03.16.12	14	29	480	64	580	1,153	6,700	2,000
SB-10	03.16.12	4	<0.047	<0.047	<0.047	0.20	0.20	5.8	32
	03.16.12	14	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.9
SB-11	03.16.12	10	0.67	14	10	83	108	1,100	240
	03.16.12	14	<0.048	<0.048	<0.048	<0.095	ND	7.0	<10
SB-12	03.16.12	4	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<10
	03.16.12	14	0.070	<0.048	<0.048	<0.096	0.070	<4.8	<10



TABLE 1
Lateral K-31 Pipeline Release (12/02/2011)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
Soil Borings Advanced by AES									
MW-1	08.13.12	0 to 2	<0.048	<0.048	<0.048	<0.096	ND	5.0	<9.8
	08.13.12	10 to 12	<0.049	<0.049	0.065	0.45	0.52	<4.9	37
MW-2	08.13.12	5 to 7	0.089	<0.049	<0.049	0.15	0.24	<4.9	<9.8
	08.13.12	10 to 12	<0.047	<0.047	<0.047	<0.095	ND	<4.7	<9.9
MW-3	08.15.12	0 to 2	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<10
	08.15.12	10 to 12	0.13	<0.048	<0.048	<0.095	ND	<4.8	<9.7
MW-4	08.15.12	0 to 2	0.072	<0.049	0.059	0.97	1.10	8.8	<10
	08.15.12	10 to 12	<0.048	<0.048	<0.048	0.23	0.23	<4.8	<10
MW-5	08.15.12	5 to 7	<0.049	<0.049	<0.049	<0.098	ND	<4.8	<9.9
	08.15.12	10 to 12	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<9.6
MW-6	08.13.12	0 to 2	0.055	<0.048	<0.048	0.27	0.33	<4.8	12
	08.13.12	10 to 12	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.8
MW-7	08.15.12	5 to 7	0.11	<0.049	<0.049	<0.098	ND	<4.9	<9.8
	08.15.12	10 to 12	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.7
MW-8	08.14.12	5 to 7	0.092	<0.046	<0.046	<0.093	ND	<4.6	<9.7
	08.14.12	10 to 12	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.7
MW-9	08.14.12	5 to 7	<0.047	<0.047	<0.047	<0.095	ND	<4.8	<9.9
	08.14.12	10 to 12	<0.049	<0.049	<0.049	<0.097	ND	<4.9	<9.8

Note: Concentrations in **bold** and yellow exceed the applicable OCD Remediation Action Level

mg/kg = milligrams per kilograms

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics



TABLE 2
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620
MW-1	9.5.12	18	2.9	3.3	25
	12.20.12	11	<2.0	<2.0	5.8
	3.21.13	29	14	<2.0	6.8
	9.4.13	24	3.0	<2.0	10
	12.9.13	42	20	10	45
	3.19.14	17	15	<1	6
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.17.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	4.1	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	1.8	<1.0	<1.0	<2.0
	12.28.17	<1.0	<1.0	<1.0	<1.5
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	
MW-2	9.5.12	9.5	9.2	<2.0	30
	12.20.12	17	<2.0	<2.0	41
	3.21.13	18	<2.0	<2.0	18
	9.4.13	8.0	<2.0	<2.0	4.2
	12.9.13	24	13	11	49
	3.19.14	<1	<1	<1	<3
	11.12.14	Monitoring Well Apparently Destroyed			
	6.17.15				
	11.17.15				
	6.08.16				
	12.29.16				
	6.30.17				
	12.28.17				
6.20.18					
1.17.19					
MW-3	9.5.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.21.13	<2.0	<2.0	<2.0	<4.0
	9.4.13	5.4	<2.0	<2.0	<4.0
	12.9.13	10	15	9.7	37
	3.19.14	3.0	4.0	<1	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	9.9	<1.0	<1.0	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	Unable to sample			
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<1.5
	12.28.17	Unable to sample			
6.20.18	Unable to sample				
1.17.19	Unable to sample				
MW-4	9.5.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	19	<2.0	<2.0	<4.0
	3.21.13	4.8	<2.0	<2.0	<4.0
	9.4.13	<2.0	<2.0	<2.0	<4.0
	12.9.13	42	17	14	54
	3.19.14	<1	<1	<1	<3
	11.12.14	5.4	<1.0	<1.0	<2.0
	6.17.15	7.2	<1.0	<1.0	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	5.1	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
	12.28.17	<1.0	<1.0	<1.0	<1.5
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	



TABLE 2
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620
MW-5	9.5.12	10	<2.0	<2.0	<4.0
	12.20.12	10	<2.0	<2.0	<4.0
	3.21.13	9.0	<2.0	<2.0	<4.0
	9.4.13	9.3	<2.0	<2.0	<4.0
	12.9.13	48	9.3	9.7	36
	3.19.14	27	<1	2	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	52	<1.0	1.4	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	230	<1.0	8.5	<2.0
	12.29.16	14	<1.0	2.1	<1.5
	6.30.17	2.4	<1.0	1.8	<2.0
12.28.17	42	<1.0	11	<1.5	
6.20.18	<1.0	<1.0	5.7	<1.5	
1.17.19	<1.0	<1.0	3.4	<1.5	
MW-6	9.5.12	37	8.3	<2.0	14
	12.20.12	82	5.8	<2.0	<4.0
	3.21.13	130	5.1	<2.0	<4.0
	9.4.13	40	22	<2.0	13
	12.9.13	210	20	12	51
	3.19.14	77	8.0	1.0	4.0
	11.12.14	19	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.18.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	<1.0	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
12.28.17	<1.0	<1.0	<1.0	<1.5	
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	
MW-7	9.5.12	3.6	<2.0	<2.0	<4.0
	12.20.12	5.9	<2.0	<2.0	<4.0
	3.21.13	<2.0	<2.0	<2.0	<4.0
	9.4.13	6.2	<2.0	<2.0	<4.0
	12.9.13	30	17	14	56
	3.19.14	<1	<1	<1	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.17.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	<1.0	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
12.28.17	<1.0	<1.0	<1.0	<1.5	
6.18.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	
MW-8	9.5.12	20	<2.0	<2.0	<4.0
	12.20.12	25	<2.0	<2.0	<4.0
	3.21.13	26	<2.0	<2.0	<4.0
	9.4.13	34	<2.0	<2.0	<4.0
	12.9.13	200	14	11	46
	3.19.14	57	<1	<1	<3
	11.12.14	5.8	<1.0	<1.0	<2.0
	6.17.15	1.5	<1.0	<1.0	<2.0
	11.18.15	1.7	<1.0	<1.0	<2.0
	6.08.16	4.2	<1.0	<1.0	<2.0
	12.29.16	1.3	<1.0	<1.0	<1.5
	6.30.17	1.2	<1.0	<1.0	<2.0
12.28.17	<1.0	<1.0	<1.0	<1.5	
6.20.18	<1.0	<1.0	1.9	<1.5	
1.17.19	<1.0	<1.0	1.9	<1.5	



TABLE 2
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ANALYTICAL SUMMARY

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		10	750	750	620
MW-9	9.5.12	<2.0	<2.0	<2.0	<4.0
	12.20.12	<2.0	<2.0	<2.0	<4.0
	3.21.13	<2.0	<2.0	<2.0	<4.0
	9.4.13	<2.0	<2.0	<2.0	<4.0
	12.9.13	4.0	7.1	6.0	24
	3.19.14	<1	<1	<1	<3
	11.12.14	<1.0	<1.0	<1.0	<2.0
	6.17.15	<1.0	<1.0	<1.0	<2.0
	11.17.15	<1.0	<1.0	<1.0	<2.0
	6.08.16	<1.0	<1.0	<1.0	<2.0
	12.29.16	<1.0	<1.0	<1.0	<1.5
	6.30.17	<1.0	<1.0	<1.0	<2.0
	12.28.17	<1.0	<1.0	<1.0	<1.5
6.20.18	<1.0	<1.0	<1.0	<1.5	
1.17.19	<1.0	<1.0	<1.0	<1.5	

Note: Concentrations in **bold** and yellow exceed the applicable WQCC GQS
 µg/L = microgram per liter
 <1.0 = the numeral (in this case "1.0") identifies the laboratory reporting limit or practical quantitation limit



TABLE 3
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)	
MW-1	9.5.12	ND	19.44	ND	6245.24	6225.80	
	12.20.12	ND	19.02	ND		6226.22	
	3.21.13	ND	18.59	ND		6226.65	
	9.4.13	ND	19.49	ND		6225.75	
	12.9.13	ND	18.80	ND		6226.44	
	3.19.14	ND	18.40	ND		6226.84	
	11.12.14	ND	19.11	ND		6226.13	
	6.17.15	ND	18.70	ND		6226.54	
	11.17.15	ND	19.08	ND		6226.16	
	6.08.16	ND	18.80	ND		6226.44	
	12.29.16	ND	19.18	ND		6226.06	
	6.30.17	ND	19.13	ND		6226.11	
	12.28.17	ND	19.16	ND		6226.08	
	6.20.18	ND	19.45	ND		6225.79	
1.17.19	ND	19.30	ND	6225.94			
MW-2	9.5.12	ND	16.69	ND	6242.58	6225.89	
	12.20.12	ND	16.33	ND		6226.25	
	3.21.13	ND	15.90	ND		6226.68	
	9.4.13	ND	16.72	ND		6225.86	
	12.9.13	ND	16.14	ND		6226.44	
	3.19.14	ND	15.72	ND		6226.86	
	11.12.14	Monitoring Well Apparently Destroyed					
	6.17.15						
	11.17.15						
	6.08.16						
	12.29.16						
	6.30.17						
	12.28.17						
	6.20.18						
1.17.19							
MW-3	9.5.12	ND	18.93	ND	6245.48	6226.55	
	12.20.12	ND	18.51	ND		6226.97	
	3.21.13	ND	18.07	ND		6227.41	
	9.4.13	ND	18.97	ND		6226.51	
	12.9.13	ND	18.30	ND		6227.18	
	3.19.14	ND	17.89	ND		6227.59	
	11.12.14	ND	18.59	ND		6226.89	
	6.17.15	ND	18.20	ND		6227.28	
	11.17.15	ND	18.56	ND		6226.92	
	6.08.16	ND	18.30	ND		6227.18	
	12.29.16	ND	18.66	ND		6226.82	
	6.30.17	ND	18.64	ND		6226.84	
	12.28.17	NG	NG	NG		NG	
	6.20.18	NG	NG	NG		NG	
1.17.19	NG	NG	NG	NG			
MW-4	9.5.12	ND	17.55	ND	6244.08	6226.53	
	12.20.12	ND	17.14	ND		6226.94	
	3.21.13	ND	16.71	ND		6227.37	
	9.4.13	ND	17.59	ND		6226.49	
	12.9.13	ND	16.93	ND		6227.15	
	3.19.14	ND	16.51	ND		6227.57	
	11.12.14	ND	17.24	ND		6226.84	
	6.17.15	ND	16.83	ND		6227.25	
	11.17.15	ND	17.21	ND		6226.87	
	6.08.16	ND	16.93	ND		6227.15	
	12.29.16	ND	17.30	ND		6226.78	
	6.30.17	ND	17.27	ND		6226.81	
	12.28.17	ND	17.30	ND		6226.78	
	6.20.18	ND	17.59	ND		6226.49	
1.17.19	ND	17.44	ND	6226.64			



TABLE 3
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-5	9.5.12	ND	15.88	ND	6241.41	6225.53
	12.20.12	ND	15.44	ND		6225.97
	3.21.13	ND	15.00	ND		6226.41
	9.4.13	ND	15.91	ND		6225.50
	12.9.13	ND	15.20	ND		6226.21
	3.19.14	ND	14.81	ND		6226.60
	11.12.14	ND	15.54	ND		6225.87
	6.17.15	ND	15.14	ND		6226.27
	11.17.15	ND	15.50	ND		6225.91
	6.08.16	ND	15.22	ND		6226.19
	12.29.16	ND	15.60	ND		6225.81
	6.30.17	ND	15.59	ND		6225.82
	12.30.17	ND	15.57	ND		6225.84
	6.20.18	ND	15.59	ND		6225.82
1.17.19	ND	15.74	ND	6225.67		
MW-6	9.5.12	ND	17.41	ND	6242.91	6225.50
	12.20.12	ND	16.97	ND		6225.94
	3.21.13	ND	16.53	ND		6226.38
	9.4.13	ND	17.45	ND		6225.46
	12.9.13	ND	16.75	ND		6226.16
	3.19.14	ND	16.34	ND		6226.57
	11.12.14	ND	17.06	ND		6225.85
	6.17.15	ND	16.66	ND		6226.25
	11.17.15	ND	17.03	ND		6225.88
	6.08.16	ND	16.74	ND		6226.17
	12.29.16	ND	17.13	ND		6225.78
	6.30.17	ND	17.11	ND		6225.80
	12.28.17	ND	17.10	ND		6225.81
	6.20.18	ND	17.41	ND		6225.50
1.17.19	ND	17.27	ND	6225.64		
MW-7	9.5.12	ND	17.61	ND	6243.27	6225.66
	12.20.12	ND	17.18	ND		6226.09
	3.21.13	ND	16.74	ND		6226.53
	9.4.13	ND	17.65	ND		6225.62
	12.9.13	ND	16.96	ND		6226.31
	3.19.14	ND	16.55	ND		6226.72
	11.12.14	ND	17.29	ND		6225.98
	6.17.15	ND	16.87	ND		6226.40
	11.17.15	ND	17.25	ND		6226.02
	6.08.16	ND	16.96	ND		6226.31
	12.29.16	ND	17.36	ND		6225.91
	6.30.17	ND	17.30	ND		6225.97
	12.28.17	ND	17.32	ND		6225.95
	6.20.18	ND	17.62	ND		6225.65
1.17.19	ND	17.49	ND	6225.78		
MW-8	9.5.12	ND	16.55	ND	6242.01	6225.46
	12.20.12	ND	16.09	ND		6225.92
	3.21.13	ND	15.65	ND		6226.36
	9.4.13	ND	16.57	ND		6225.44
	12.9.13	ND	15.86	ND		6226.15
	3.19.14	ND	15.46	ND		6226.55
	11.12.14	ND	16.18	ND		6225.83
	6.17.15	ND	15.79	ND		6226.22
	11.17.15	ND	16.17	ND		6225.84
	6.08.16	ND	15.90	ND		6226.11
	12.29.16	ND	16.25	ND		6225.76
	6.30.17	ND	16.25	ND		6225.76
	12.28.17	ND	16.23	ND		6225.78
	6.20.18	ND	16.55	ND		6225.46
1.17.19	ND	16.38	ND	6225.63		



TABLE 3
Lateral K-31 Pipeline Release (12/02/2011)
GROUNDWATER ELEVATIONS

Well I.D.	Date	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	TOC Elevations (feet AMSL)	Groundwater Elevation* (feet AMSL)
MW-9	9.5.12	ND	16.33	ND	6241.59	6225.26
	12.20.12	ND	15.84	ND		6225.75
	3.21.13	ND	15.39	ND		6226.20
	9.4.13	ND	16.32	ND		6225.27
	12.9.13	ND	15.61	ND		6225.98
	3.19.14	ND	15.21	ND		6226.38
	11.12.14	ND	15.95	ND		6225.64
	6.17.15	ND	15.52	ND		6226.07
	11.17.15	ND	15.88	ND		6225.71
	6.08.16	ND	15.60	ND		6225.99
	12.29.16	ND	15.98	ND		6225.61
	6.30.17	ND	15.97	ND		6225.62
	12.28.17	ND	15.94	ND		6225.65
	6.20.18	ND	16.27	ND		6225.32
1.17.19	ND	16.11	ND	6225.48		

BTOC - Below Top of Casing
 TOC - Top of Casing
 ND - Not Detected
 NG - Not Gauged
 AMSL - Above Mean Sea Level (North American Vertical Datum 1988)



APPENDIX C

Soil Boring/Monitoring Wells Logs

  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-1
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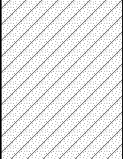
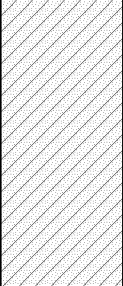

ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W	Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon	Latitude : N36.39377 Longitude : W107.47505 Survey By : Google Earth Logged By : T. Long
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SC		Clayey Sand, Fine, Reddish Brown, Moist, Slight Odor.		31
2	-2	SC		Clayey Sand, Fine, Dark Grey, Moist, Strong Odor, Staining.		201
4	-4	SC		Sandy Clay, Black, Moist, Strong Odor, Staining.		64
6	-6	SC				56
8	-8	SC				48
10	-10	SC		Sandy Clay, Dark Grey, Saturated, Strong Odor, Staining.		2,769
12	-12	SC				25
14	-14	SC		Sandy Clay, Black, Saturated, Strong Odor, Staining.		27
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-2
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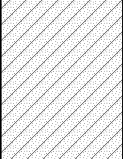
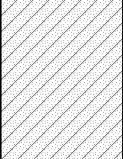




<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39386 Longitude : W107.47508 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Light Brown, Moist, No Odor.		
		SW				38.5
2	-2			Sand, Fine, Grey, Moist, Strong Odor, Staining		
		SW				184
		CL		Clay		
4	-4			Sandy Clay, Brown, Moist, Light Staining, Slight Odor.		
		SC				65
6	-6			Sandy Clay, Brown, Moist, Staining, Stronger Odor.		
		SC				81
8	-8					
		SW		Sand, Fine		47
10	-10			Sandy Clay, Brown/Black, Moist/Wet, Strong Odor, Slight Staining		
		SC				36
12	-12			Sand, Fine, Brown, Wet, Strong Odor, Staining		
		SW				1,683
14	-14			Sand, Fine, Black, Wet, Strong Odor, Strong Staining		
		SP				33
16						



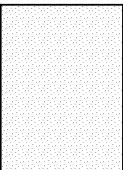
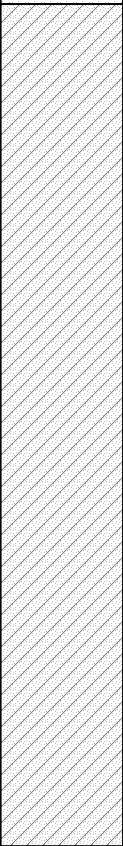

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-3
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ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W	Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon	Latitude : N36.39392 Longitude : W107.47510 Survey By : Google Earth Logged By : T. Long
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, Dry, Slight Odor, Staining		
		SW				57
2	-2			Sandy Clay, Grey/Black, Moist, Strong Odor, Heavy Staining		
		SC				313
4	-4			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		
		SC				78
6	-6					85
		SC				
8	-8			Sandy Clay, Brown, Moist, Slight Odor, Heavy Staining		
		SC				30
10	-10					35
		SC				
12	-12			Sand, Fine, Grey, Moist, Slight Odor, Heavy Staining		
		SW				417
14	-14			Sand, Fine, Grey, Wet, Slight Odor, Heavy Staining		
		SW				39
16						

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  <p>Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>		<h1>SB-4</h1>				
<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>			<p>Date Started : 3/15/12 Date Completed : 3/15/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>		<p>Latitude : N36.39398 Longitude : W107.47512 Survey By : Google Earth Logged By : T. Long</p>	
Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SW		Sand, Fine, Brown, Moist, Slight Odor, Slight Staining		162
2	-2	SC		Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		482
4	-4					119
6	-6					821
8	-8					23
10	-10					17
12	-12					
14	-14	SW		Sand, Fine, Grey, Wet, Strong Odor, Heavy Staining		10.1
16						

05-21-2012 S:\Animas 2000\2012 Projects\Enterprise\Lateral K-31\Soil Boring Logs\SB-4.bor

  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-5
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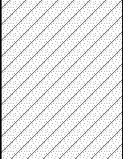
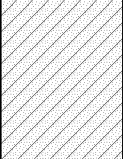

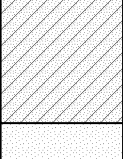


<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39381 Longitude : W107.47497 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SW		Sand, Fine, Black, Moist, Strong Odor, Heavy Staining	89	
2	-2	SC		Sandy Clay, Black, Moist, Slight Odor, Heavy Staining	70.5	
4	-4	SC			48	
6	-6	SC			47.3	
8	-8	SC		Sandy Clay, Black, Moist, Slight Odor, Heavy Staining	28.9	
10	-10	SC			20.2	
12	-12	SC		Sandy Clay, Black, Wet, Slight Odor, Heavy Staining	5.6	
14	-14	SW		Sand, Fine, Brown/Grey, Wet, No odor.	10.4	
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-6
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39385 Longitude : W107.47484 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Light Brown, Dry, No Odor, No Staining		
		SW				48.9
2	-2			Sandy Clay, Black, Moist, Slight Odor, Slight Staining		
		SC				38.1
4	-4			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		
		SC				21.4
6	-6			Clayey Sand, Fine, Brown, Slight Odor, Slight Staining		
		SC				18.6
8	-8			Sandy Clay, Grey/Brown, Moist, Slight Odor, Slight Staining		
		SC				15.3
10	-10					17.7
		SW		Sand, Fine, Grey, Wet		
12	-12			Sandy Clay, Black, Wet, Strong Odor, Heavy Staining		
		SC				14.8
14	-14			Sand, Fine, Brown, Wet, No Odor, No Staining		
		SW				17.3
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-7
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39399 Longitude : W107.47489 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, No Odor, No Staining		
		SW				8.9
2	-2			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		32.7
		SC				40.3
4	-4					19.7
6	-6					11.2
8	-8					16.1
10	-10			Clayey Sand, Fine, Grey/Black, Moist, Slight Odor, Heavy Staining		12.7
		SC				20.5
12	-12			Clayey Sand, Fine, Grey/Black, Wet, Slight Odor, Heavy Staining		
		SC				
14	-14					
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-8
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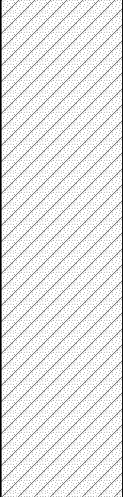
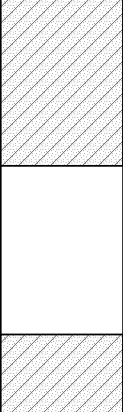

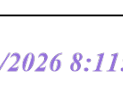
ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W	Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon	Latitude : N36.39373 Longitude : W107.47479 Survey By : Google Earth Logged By : T. Long
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0	SW		Sand, Fine, Brown, Dry, No Odor, No Staining		2.5
2	-2			No Recovery		
4	-4	SC		Sandy Clay, Brown, Moist, No Odor, No Staining		39.1
6	-6					
8	-8					
10	-10	SC		Sandy Clay, Black, Moist, Slight Odor, Heavy Staining		31.9
12	-12	SC		Clayey Sand, Fine, Black, Moist, Slight Odor, Heavy Staining		19.4
14	-14	SW		Sand, Fine, Brown, Wet, No Odor, No Staining		17.3
16						

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  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-9
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W</p>	<p>Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon</p>	<p>Latitude : N36.39370 Longitude : W107.47502 Survey By : Google Earth Logged By : T. Long</p>
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, Dry, No Odor, No Staining		
		SW				2,679
2	-2			Sandy Clay, Grey, Moist, Slight Odor, Slight Staining		2,310
		SC				3,061
4	-4					1,508
		SC				3,519
6	-6					
		SC				1,478
8	-8			Sandy Clay, Brown, Moist, Slight Odor, Slight Staining		
		SC				798
10	-10			No Recovery		
						128
12	-12			Clayey Sand, Fine, Black, Slight Odor, Heavy Staining		
		SC				
14	-14					
16						









05-21-2012 S:\Animas 2000\2012 Projects\Enterprise\Lateral K-31\Soil Boring Logs\SB-9.bor

  <p style="font-size: small;">Animas Environmental Services, LLC. 624 East Comanche St. Farmington, NM 87401</p>	SB-10
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ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W	Date Started : 3/16/12 Date Completed : 3/16/12 Hole Diameter : 2-inch Drilling Method : Direct Push Sampling Method : Split Spoon	Latitude : N36.39359 Longitude : W107.47495 Survey By : Google Earth Logged By : T. Long
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Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	0			Sand, Fine, Brown, Dry, No Odor, No Staining		
		SW				202
2	-2			Sand, Fine, Brown, Dry, No Odor, Grey Staining		
		SW				211
4	-4			Sandy Clay, Black, Moist, Slight Odor, Heavy Staining		
		SC				29.2
6	-6					38.2
8	-8	SC				47
10	-10					48.6
12	-12	SC		Sandy Clay, Brown, Wet, Slight Odor, Heavy Black Staining		25.9
14	-14			Sand, Fine, Brown, Wet, No Odor		
		SW				19.1
16						

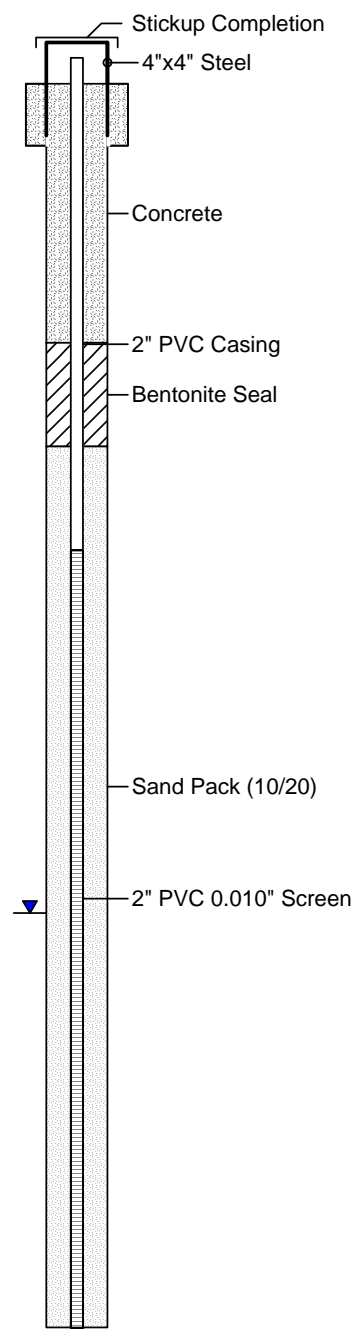
05-21-2012 S:\Animas 2000\2012 Projects\Enterprise\Lateral K-31\Soil Boring Logs\SB-10.bor

 		SB-11					
ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE RELEASE RIO ARRIBA COUNTY, NEW MEXICO SE1/4, SW1/4, SECTION 16, T25N, R6W		Date Started	: 3/16/12		Latitude	: N36.39375	
		Date Completed	: 3/16/12		Longitude	: W107.47514	
		Hole Diameter	: 2-inch		Survey By	: Google Earth	
		Drilling Method	: Direct Push		Logged By	: T. Long	
		Sampling Method	: Split Spoon				
Depth in Feet	Surf. Elev. 0	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)	
0	0	SP		Sand, Fine, Brown, Dry, No Odor, No Staining		7.4	
2	-2	SW		Sand, Fine, Brown, Dry, Slight Odor, Slight Grey Staining		213	
4	-4	SC		Sandy Clay, Brown, Moist, Slight Odor, Heavy Staining		56.8	
6	-6					33.2	
8	-8	SP				3,210	
10	-10						
12	-12	SP		Sand, Fine, Odor, Heavy Staining			
14	-14	SC		Clayey Sand, Grey/Black, Wet, Slight Odor, Heavy Staining		110.3	
16	-16					23.7	

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 <p>Animas Environmental Services, LLC. 624 East Comanche Farmington, NM 87401</p>	<h1 style="margin: 0;">MW-7</h1>
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE GW INVESTIGATION RIO ARRIBA COUNTY, NEW MEXICO SE1/4 SW1/4, SEC. 16, T25N, R6W N36.39373, W107.47519</p>	<p>Date Started : 8/15/12 Date Completed : 8/15/12 Hole Diameter : 2.25 Drilling Method : HSA Sampling Method : Split Spoon</p>	<p>Lat. : N36.394 Long. : W107.475293 Survey By : Enterprise Products Co. Logged By : Tom Long</p>
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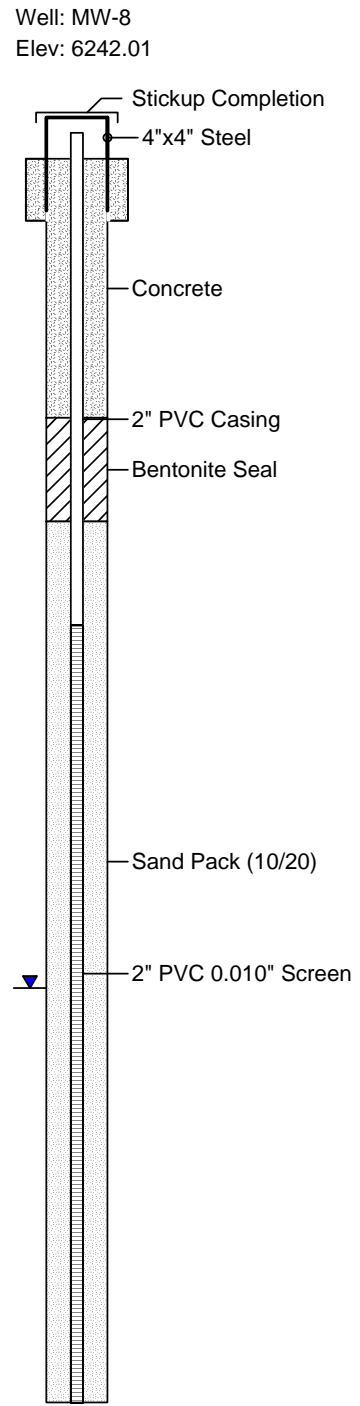
Depth in Feet	Surf. Elev. 6241	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)	
0	6241			Sand, Black, Fine Grained, Moist, Heavy Staining, Slight Odor			<div style="text-align: center;"> <p>Well: MW-7 Elev: 6243.27</p>  <p>Stickup Completion 4"x4" Steel Concrete 2" PVC Casing Bentonite Seal Sand Pack (10/20) 2" PVC 0.010" Screen</p> </div>
2	6239	SP				6.6	
4	6237						
6	6235	CL		Sandy Clay, Black, Moist, Heavy Staining, Slight Odor		16.1	
8	6233						
10	6231	CL		Sandy Clay, Black, Moist, Heavy Staining, Slight Odor		18.3	
12	6229						
14	6227	CL		Sandy Clay, Brown, Wet, Slight Staining, Slight Odor		16.1	
16	6225						
18	6223	CL		Sandy Clay, Brown, Wet, Slight Staining, Slight Odor		3.4	
20	6221	SP		Sand, Brown, Fine Grained, Some Clay, Wet, No Staining, No Odor			
22	6219						
24	6217	SP		Sand, Brown, Fine Grained, Wet, No Staining, No Odor		2.1	
26							

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 <p>Animas Environmental Services, LLC. 624 East Comanche Farmington, NM 87401</p>	<h1 style="margin: 0;">MW-8</h1>
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE GW INVESTIGATION RIO ARRIBA COUNTY, NEW MEXICO SE1/4 SW1/4, SEC. 16, T25N, R6W N36.39373, W107.47519</p>	<p>Date Started : 8/14/12 Date Completed : 8/14/12 Hole Diameter : 2.25 Drilling Method : HSA Sampling Method : Split Spoon</p>	<p>Lat. : N36.394331 Long. : W107.475038 Survey By : Enterprise Products Co. Logged By : Tom Long</p>
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Depth in Feet	Surf. Elev. 6239	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6239			Sandy Clay, Black, Moist, Heavy Staining, No Odor		
2	6237	CL			3.0	
4	6235					
6	6233	CL		Sandy Clay, Brown, Moist, No Staining, No Odor		
8	6231	CL			7.3	
10	6229			Sandy Clay, Black, Wet, Heavy Staining, No Odor		
12	6227	CL			10.8	
14	6225					
16	6223	CL		Sandy Clay, Brown, Wet, No Odor, No Staining		
18	6221	CL			2.3	
20	6219			Sand, Brown, Fine to Medium Grained, Some Clay, Wet, No Staining, No Odor		
22	6217	SP			1.8	
24	6215					
26		SP		Sand, Brown, Fine Grained, Wet, No Staining, No Odor		2.1

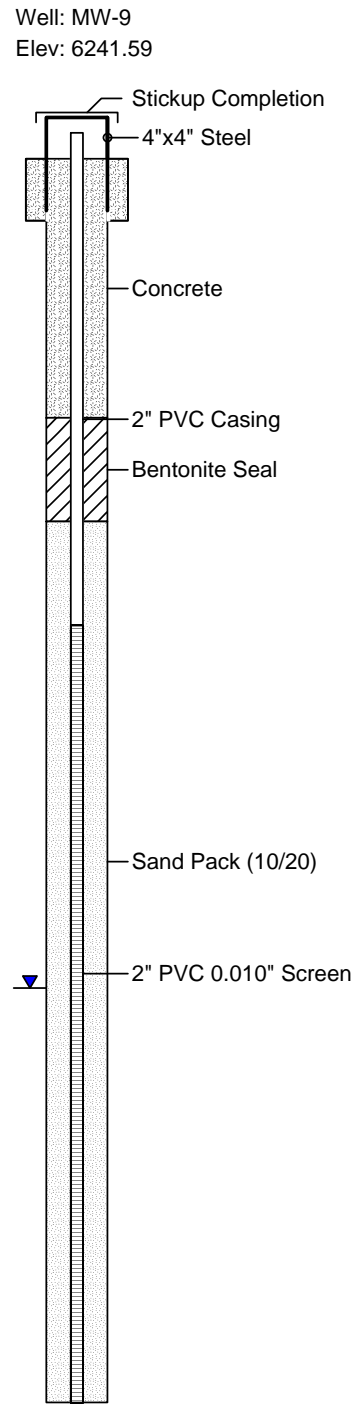


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 <p>Animas Environmental Services, LLC. 624 East Comanche Farmington, NM 87401</p>	<h1 style="margin: 0;">MW-9</h1>
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<p>ENTERPRISE PRODUCTS COMPANY LATERAL K-31 PIPELINE GW INVESTIGATION RIO ARRIBA COUNTY, NEW MEXICO SE1/4 SW1/4, SEC. 16, T25N, R6W N36.39373, W107.47519</p>	<p>Date Started : 8/14/12 Date Completed : 8/14/12 Hole Diameter : 2.25 Drilling Method : HSA Sampling Method : Split Spoon</p>	<p>Lat. : N36.36.394376 Long. : W107.475233 Survey By : Enterprise Products Co. Logged By : Tom Long</p>
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Depth in Feet	Surf. Elev. 6239	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6239			Sand, Brown, Fine Grained, Dry, No Staining, No Odor		
2	6237	SP			2.7	
4	6235					
6	6233	CL		Sandy Clay, Brown, Moist, No Staining, No Odor		
8	6231				3.5	
10	6229			Sandy Clay, Brown, Wet, No Staining, No Odor		
12	6227				6.4	
14	6225	CL				
16	6223					
18	6221				1.2	
20	6219			Sand, Brown, Fine to Medium Grained, Wet, No Staining, No Odor		
22	6217	SP			1.6	
24	6215					
26					1.2	



11-13-2012 R:\Animas 2000\2012 Projects\Enterprise\Lateral K-31\Groundwater Investigation August 2012\Soil Boring Logs August 2012\MW-9.bor



APPENDIX D

Public Notice and Landowner Table

Enterprise proposes the following language for public notice:

Enterprise Field Services, LLC (Enterprise) hereby announces the publication of a Stage 1 Abatement Plan for soil and groundwater impacts identified at the Lateral K-31 pipeline release site located at latitude 36.393827° and longitude -107.475065° within the southwest (SW) ¼ in Section 16 of Township 25 North, Range 6 West in rural Rio Arriba County.

On December 2, 2011, a release of natural gas condensate was identified due to a leak on the Lateral K-31 pipeline. Initial site assessments and subsurface investigations concluded that soil and groundwater impacts were present above applicable New Mexico (NM) Energy, Minerals and Natural Resource Department (EMNRD) Oil Conservation Division (OCD) standards for soil and Water Quality Control Commission (WQCC) standards for groundwater. Soil remediation has not been initiated at the site. The current extent of soil and groundwater impact is estimated to be less than 0.3 acres. No surface water was impacted.

The Director of the NM EMNRD OCD has approved a Stage 1 Abatement Plan in which Enterprise proposes to confirm delineation through the replacement of a damaged monitoring well at the site. Groundwater will be sampled subsequent to the replacement of the damaged well and analyzed for applicable constituents of concern. The data obtained from the Stage 1 Abatement Plan activities will be evaluated to determine a preferred abatement plan remediation option at the site. In order to determine that the Stage 1 Abatement Plan is administratively complete, the NM EMNRD OCD Director has complied with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC.

Members of the public may view a copy of the Stage 1 Abatement Plan at the NM EMNRD OCD's Santa Fe office located at 1220 South St Francis Drive, #3, Santa Fe, New Mexico or at the NM EMNRD OCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NM EMNRD OCD public database at <http://www.emnrd.state.nm.us/OCD/>.

The NM EMNRD OCD is accepting written comments and requests for consideration if they are received within 30 days after the publication date of this public notice. Any person seeking to comment on a Stage 1 Abatement Plan should submit written comments to:

Mr. Corey Smith
Environmental Specialist
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NM EMNRD OCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

Additional information can be obtained from the Enterprise project contact:

Gregory E. Miller, P.G.
1100 Louisiana Street
Houston, Texas 77002-5227
(713) 381-8780

Table 1
 Property Owners Within One (1) Mile Radius

Lateral K-31 Pipeline Release (2011)
 Rio Arriba County, New Mexico
 Enterprise Field Services, LLC

Parcel Number	Owner Name	Owner Address	Owner City, Stae, Zip Code
2034147160185	Navajo Nation Of Indian - Navajo Land Dept.	PO Box 9000	Window Rock, AZ 86515
2034147198264	United States of America	6251 College Blv d., Suite A	Farmington, NM 87402
2033148396008	United States of America	6251 College Blv d., Suite A	Farmington, NM 87402
No Parcel Number	United States of America	6251 College Blv d., Suite A	Farmington, NM 87402
No Parcel Number	New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501

From: [Marc Gentry](#)
To: [Smith, Cory, EMNRD](#); [Kyle Summers](#)
Cc: ["Scott Drewry"](#); [Miller, Greg](#); [Cooksey, Nick](#); [Long, Thomas](#)
Subject: RE: [EXT] (OCD RP No. 3R-440, AP-129) Lateral K-31 - Stage 1 Abatement Plan
Date: Wednesday, May 22, 2019 4:37:33 PM
Attachments: [Abatement Plan Final Revised.pdf](#)

Cory,

Thanks for the email. Appended is the Revised Stage 1 Abatement Plan for the Lateral K-31 site (AP-129). Section 6 has been revised to include the information you requested in your earlier email. Based on your approval of the revised language in Section 6 we will amend the remaining reports and provide you with both electronic copies and hard copies. Please feel free to reach out with any additional questions or concerns.

With regards,

marc

Marc E. Gentry, P.G.
Principal

Ensolum, LLC | Environmental & Hydrogeologic Consultants
10333 Harwin Drive, Suite 230 | Houston, TX 77036
Mobile 832.978.7700
mgentry@ensolum.com
www.ensolum.com



From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Wednesday, May 22, 2019 12:57 PM
To: Kyle Summers <ksummers@ensolum.com>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Jaramillo, Nick <njaramillo@slo.state.nm.us>; Marc Gentry <mgentry@ensolum.com>; Liz Scaggs <lscaggs@ensolum.com>; 'Scott Drewry' <scott.drewry@entechservice.com>; 'Miller, Greg' <GEMiller@eprod.com>; 'Cooksey, John Nicholas' <jncooksey@eprod.com>; 'Long, Thomas' <tjlong@eprod.com>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
Subject: RE: [EXT] (OCD RP No. 3R-440, AP-129) Lateral K-31 - Stage 1 Abatement Plan

Kyle,

I have not received the updated reports for AP-128,129,130,131,132. Enterprise has had 30 days to make the minor changes described in the below email and our following phone conversation.

Please resubmit the Stage 1 plans for AP 128-132 no later than end of business May 29, 2019 via email is fine.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Kyle Summers <ksummers@ensolum.com>
Sent: Friday, April 26, 2019 9:05 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Jaramillo, Nick <njaramillo@slo.state.nm.us>; Marc Gentry <[mgentry@ensolum.com](mailto:mgency@ensolum.com)>; Liz Scaggs <lscaggs@ensolum.com>; 'Scott Drewry' <scott.drewry@entechservice.com>; 'Miller, Greg' <GEMiller@eprod.com>; 'Cooksey, John Nicholas' <jncooksey@eprod.com>; 'Long, Thomas' <tjlong@eprod.com>
Subject: RE: [EXT] (OCD RP No. 3R-440, AP-129) Lateral K-31 - Stage 1 Abatement Plan

Thanks Cory. The other plans will be similar. We will start revising for resubmittal.

Kyle Summers

Ensolum, LLC | Environmental & Hydrogeologic Consultants
606 South Rio Grande, Suite A | Aztec, NM 87410
Mobile 903.821.5603
ksummers@ensolum.com
www.ensolum.com



From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Friday, April 26, 2019 8:35 AM
To: Kyle Summers <ksummers@ensolum.com>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Jaramillo, Nick <njaramillo@slo.state.nm.us>; Marc Gentry <[mgentry@ensolum.com](mailto:mgency@ensolum.com)>; Liz Scaggs <lscaggs@ensolum.com>; 'Scott Drewry' <scott.drewry@entechservice.com>; 'Miller, Greg' <GEMiller@eprod.com>; 'Cooksey, John Nicholas' <jncooksey@eprod.com>; 'Long, Thomas' <tjlong@eprod.com>
Subject: RE: [EXT] (OCD RP No. 3R-440, AP-129) Lateral K-31 - Stage 1 Abatement Plan

All,

I have reviewed the stage 1 abatement plan it looks good to go except for the following.

6. Proposed Schedule (Page 12 of the PDF document)

I need some language that discusses Enterprises proposed schedule to submit quarterly progress reports, and an estimated time frame to submit the Final site investigation report.

Either Enterprise can send me an edited page 12 and I can just insert it into the document or you can just send me a completed document via Email.

I will start the process of getting the Admin complete letter signed by the director in the meantime.

Thanks,

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: ksummers@ensolum.com <ksummers@ensolum.com>

Sent: Friday, March 22, 2019 1:02 PM

To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>

Cc: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Jaramillo, Nick <njaramillo@slo.state.nm.us>; Marc Gentry <mgentry@ensolum.com>; lscaggs@ensolum.com; 'Scott Drewry' <scott.drewry@entechservice.com>; 'Miller, Greg' <GEMiller@eprod.com>; 'Cooksey, John Nicholas' <jncooksey@eprod.com>; 'Long, Thomas' <tjlong@eprod.com>

Subject: [EXT] (OCD RP No. 3R-440, AP-129) Lateral K-31 - Stage 1 Abatement Plan

Mr. Cory Smith,

Please find attached, the Stage 1 Abatement Plan for the above referenced site. If you have any questions, please contact Greg Miller (713-381-8780) or myself (903-821-5603).

Respectfully,

Kyle Summers

Kyle Summers

Ensolum, LLC | Environmental & Hydrogeologic Consultants
606 South Rio Grande, Suite A | Aztec, NM 87410
Mobile 903.821.5603
ksummers@ensolum.com
www.ensolum.com



Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 439988

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 439988
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
shanna.smith	For record only.	2/23/2026