

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☒ Final Report

Name of Company Enervest Operating	Contact Michael Dame
Address 2700 Farmington Ave Building K, Suite #1	Telephone No. 505-325-0318
Facility Name Jicarilla Apache Tribal 125 #001	Facility Type Oil & Gas Production

Surface Owner Jicarilla Tribe	Mineral Owner Jicarilla Tribe	API No. 30-039-20966
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**LOCATION OF RELEASE**

Unit Letter M	Section 35	Township 25N	Range 4W	Feet from the	North/South Line	Feet from the	East/West Line	County Rio Arriba
------------------	---------------	-----------------	-------------	---------------	------------------	---------------	----------------	----------------------

Latitude N. 36.35135 Longitude W -107.22794

**NATURE OF RELEASE**

Type of Release - None	Volume of Release - None	Volume Recovered - None
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Pipeline Spill: The cause of the problem was a flow line rubbed against rocks over time developing a hole. The line was shut down and repaired as well as pressure tested to 250 psi. Pipeline Spill Remediation: A five point composite sample was collected from the excavation and submitted to Envirotech Analytical Laboratory for analysis that was approved by Hobson Sandoval Jicarilla Tribal EPOC. Attached is an Environmental Remediation Plan that was drawn up as per Hobson Sandoval's Tribal EPOC request. Enervest has hauled off approximately 850 yards of contaminated soil to T-N-T Land Farm for remediation, as well as with another 150 yards of contaminated rock and soil to T-N-T, approximately total 1,000 yards of contaminated soil, rock and debris. A new 3 inch pipeline was installed on 5/4/2016 as per Hobson Sandoval's request and was pressure tested at 250 psi. All soil sampling was conducted as per Hobson Sandoval Tribal EPOC and shown in the lab analysis has passed.

The results are:

Benzene - Non Detect (EPA Method 8021)  
BTEX - Non Detect (EPA Method 8021)  
GRO/DRO - Non Detect (EPA 8015)  
Total Petroleum Hydrocarbons - Non Detect (EPA Method 418.1)  
Chloride - Non Detect (EPA Method 300.0)

**NMOCD**

**MAR 26 2018**

**DISTRICT III**

Describe Area Affected and Cleanup Action Taken.\* Enervest Operating completed a remediation plan that was put together by Envirotech as well as Hobson Sandoval's direct orders.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Michael Dame</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Michael Dame	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: HSE Specialist	Approval Date: <i>3/27/18</i>	Expiration Date:
E-mail Address: mdame@enervest.net	Conditions of Approval:	Attached <input checked="" type="checkbox"/> (Emails)
Date: 3/23/2018 Phone: 505-325-0318	<i>Additional Remediation Required as Detailed in Work plan</i>	

#NCS 1416337003

28

## **Smith, Cory, EMNRD**

---

**From:** Smith, Cory, EMNRD  
**Sent:** Tuesday, March 27, 2018 11:01 AM  
**To:** 'mdame@enervest.net'  
**Cc:** Fields, Vanessa, EMNRD; Powell, Brandon, EMNRD  
**Subject:** Jicarilla Apache Tribal 125 #1 C-141

Michael,

OCD has reviewed the two "final" C-141 received on March 12, 26, 2018 there is no documentation regarding the size or sampling locations for the remediation.

In the March 26, packet EnerVest provided the OCD EnerVests proposed work plan and it mentions multiple sections of cleanup followed by confirmation sampling. It is OCD understand based on previous phone conversations and the submitted C-141 that EnerVest has been executing this remediation plan in agreeance with JEPO and that remediation has been completed.

OCD is combining the two submissions and is approving the "final" C-141 submitted on March 26 with conditions of approval that additional remediation is required as detailed in the workplan.

Please submit a detailed final C-141 that include an executive summary of remediation details, a scaled site diagram, scaled excavation dimensions and sampling locations for each section of remediation, amount of potassium permanganate used and confirmation soil sampling laboratory data. If possible site photography of remediation project would also be beneficial for closure.

Please submit the detailed Final C-141 including all the necessary attachments no later than April 23, 2018 to the OCD District III Office.

If you have any questions please give me a call.

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](mailto:cory.smith@state.nm.us)

**Smith, Cory, EMNRD**

---

**From:** Dame, Michael <mdame@EnerVest.net>  
**To:** Smith, Cory, EMNRD  
**Sent:** Tuesday, March 27, 2018 11:03 AM  
**Subject:** Read: Jicarilla Apache Tribal 125 #1 C-141

**Your message**

**To:**  
**Subject:** Jicarilla Apache Tribal 125 #1 C-141  
**Sent:** Tuesday, March 27, 2018 11:02:48 AM (UTC-07:00) Mountain Time (US & Canada)

was read on Tuesday, March 27, 2018 11:02:38 AM (UTC-07:00) Mountain Time (US & Canada).



May 2, 2016

Hobson Sandoval  
Tribal EPO

Dear Mr. Sandoval,

On behalf of Enervest Operating, LLC, Sr. Production Foreman Jeff Cross and Michael Dame have devised a plan on cleaning up the remaining rocks and soil on the Jicarilla Apache Tribal 125 #001 pipeline spill. We will be hauling off the contaminated soil and rocks, approximately 150 yards that will be taken to T-N-T Land Farm.

We will be putting in three separate water diversions and large hay bale to divert water runoff into a small wash located to the north side of the pipeline and right of way road, to keep water from washing out the right of way and work done around the pipeline. The pipeline will be welded together with main supports under it to prevent future leaks. And lastly we will plant all sectioned areas with Jicarilla Southern Seed mix to bring back regrowth in the worked area.

If you have any questions, please feel free to contact me at 505-325-0318.

Sincerely,

Michael Dame  
HSE Associate



# **ENVIRONMENTAL REMEDIATION PLAN**

## **SITE NAME:**

**JICARILLA APACHE TRIBAL 125 #1 PIPELINE  
UNIT LETTER M SECTION 35, TOWNSHIP 25N, RANGE 4W  
RIO ARriba COUNTY, NEW MEXICO  
LATITUDE 36.32609° LONGITUDE -107.22060°**

## **SUBMITTED TO:**

**JICARILLA OIL AND GAS ADMINISTRATION  
P.O. BOX 146  
DULCE, NEW MEXICO 87528  
(575) 759-3485**

## **SUBMITTED BY:**

**WILLIAM JULIAN  
ENERVEST OPERATING, LLC  
2700 FARMINGTON AVE. BUILDING K, SUITE 1  
FARMINGTON, NEW MEXICO 87401  
(505) 486-2230**

**JUNE 2014**

**ENVIRONMENTAL REMEDIATION PLAN  
ENERVEST OPERATING, LLC  
JICARILLA APACHE TRIBAL 125 #1 PIPELINE  
RIO ARriba COUNTY, NEW MEXICO**

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**ATTACHMENTS:**

FIGURE 1, VICINITY MAP  
FIGURE 2, SITE MAP  
FIGURE 3, RIGHT-OF-WAY RECONSTRUCTION MAP

## **INTRODUCTION**

EnerVest Operating, LLC would like to submit an environmental remediation plan for the Jicarilla Apache Tribal 125 #1 Pipeline site located in the SW  $\frac{1}{4}$  SE  $\frac{1}{4}$  of Section 35, Township 25N, Range 4W, Rio Arriba County, New Mexico (**Figure 1, Vicinity Map**). The Jicarilla Apache Tribal 125 #1 Pipeline was discovered to have ruptured during wear and tear of the pipeline material on nearby bedrock. A release of an unknown amount of oil and condensate was discovered along the pipeline within an un-named ephemeral wash located in the Billy Rice Canyon U.S.G.S Topographic Quadrangle Map. The release area could be visually observed for a distance of approximately 1,760 feet within the wash and drainage system from the beginning of the release area (**Figure 2, Site Map**). A site assessment was conducted of the release area, by Envirotech, Inc., on May 30, 2014, and June 3, 2014. The site assessments conducted consisted of a site walk of the area with site photography, GPS Coordinates of the entire release area, and soil sampling of vertical and horizontal extents. The site assessments concluded that the release area was approximately 1,760 feet in length and ranged from contamination at surface (on bedrock) and approximately four (4) feet deep at the greatest depth where bedrock was encountered. The area of release is located in remote area of sandstone cliffs and hills, where equipment access is difficult. The vertical difference in elevation from the nearest well pad and road is approximately 200 feet to the beginning of the release area. The environmental remediation plan has been prepared in conformance with New Mexico Oil Conservation Division (NMOCD) and Jicarilla Nations Oil and Gas Administration regulations.

## **SCOPE OF WORK**

Environmental remediation activities will be performed and overseen by Envirotech, Inc. in Farmington, New Mexico. Envirotech will utilize appropriate subcontractors designated by EnerVest for labor, trucking, dirt work and restoration work.

### **Remediation Plan Option 1**

The location of the source of the release area is difficult to access with equipment, with a 200 foot drop from the nearest location or road to the release area. An old pipeline right-of-way is in existence in the vicinity of the release area. The pipeline right-of-way does not appear to have been maintained and equipment access is difficult. The re-construction of the pipeline right-of-way to the initial area of release is proposed so that remediation equipment may be utilized for removing contaminated soil and treating and cleaning hydrocarbon impacted bedrock.

The pipeline right-of-way will be re-constructed using earth moving equipment up to the initial release area (**Figure 3, Right-of-Way Construction Map**). A mini excavator and a skid-steer will be utilized to move remediation equipment to the initial release area. The first section (Section 1) of the release area is the initial release area where bedrock (sandstone) boulders are saturated with paraffin and additional hydrocarbon materials. This area is approximately 75 feet long and 35 feet wide. Section 1 will be washed with a solution of Simple Green Industrial Cleaner that will be applied from a pressure washer. Oil absorbent booms and pads will be placed at the bottom of the rock face to capture oil and additional hydrocarbon material.

The second section (Section 2) of the release area is a sandy wash directly south of Section 1. Section 2 will be excavated to bedrock (sandstone) and the contaminated soil will be transported to a New Mexico Oil Conservation Division (NMOCD) approved soil remediation facility for disposal. Section 2 is estimated to be approximately 390 feet in length, 12 feet wide, and ranges in depth between two (2) inches to three (3) feet deep. All sandstone and residual sand not removed through excavation, in addition to Section 1 will be sprayed with a final treatment of potassium permanganate and Simple Green solution.

The third section (Section 3) of the release area is approximately 544 horizontal feet of sandstone and boulders with minimal amount of sporadic sandy soil in between. It is not feasible for equipment to access this area. Section 3 will be flooded with a potassium permanganate and Simple Green solution. Oil absorbent booms and pads will be placed at the outfall of Section 3 to capture any hydrocarbons within the washout solution.

The last section (Section 4) of the release area is approximately 750 feet in length, six (6) feet wide, and a depth between two (2) and four (4) feet of contaminated soil. Section 4 will be excavated with equipment and the contaminated soil will be transported to an NMOCD permitted soil remediation facility.

Confirmation sampling of each section will be described below in the *Laboratory Analysis* section.

#### Remediation Plan Option 2

If an access road cannot be obtained to the beginning of the release area, a pressure washer with a Simple Green solution and potassium permanganate solution will be staged at the cliff above the initial release area. All sections of the release area will be conducted in the same manner as the above mentioned *Remediation Plan Option 1* with the exception of Section 2 which is described below.

Soil samples will be collected from Section 2 prior to any treatment to obtain baseline contaminate data. Soil samples will be analyzed at an Analytical Laboratory for total petroleum hydrocarbons (TPH) using USEPA Method 8015 and for benzene, toluene, ethylbenzene, and total xylene (BTEX) using USEPA Method 8021. The second section (Section 2) of the release area is a sandy wash directly south of Section 1. The soil in Section 2 will be remediated by flushing the sand with a Simple Green and potassium permanganate solution. The solution will be applied with a one inch poly sprinkler line until the sandy area is saturated. Absorbent booms will be placed at the end of the sandy area (outfall) to capture any hydrocarbon containing liquids that leach out of the contaminated soil. Soil samples from the treatment area will be collected one week after the initial application of Simple Green and potassium permanganate and analyzed for TPH using USEPA Method 8015 and for BTEX using USEPA Method 8021. The above treatment and confirmation sampling will be repeated until contaminate levels are below the NMOCD closure standards for TPH, benzene, and BTEX for soil.

Confirmation sampling of each section will be described below in the *Laboratory Analysis* section.

For both remediation options the pipeline Right-of-Way (ROW) will need to be repaired up to the rock ledge just above the spill source. This will serve as a staging point for equipment, water for remediation application and provide a place for the smaller equipment in option 1 to place contaminated soil into larger equipment to transport it to the top access point where it will be loaded into transport trucks for disposal.

Once the remediation is deemed successful by all applicable agencies the ROW will be restored. Erosion control BMPs will be placed in the ROW and the ROW will be reseeded with the appropriate seed mixture for the area.

### **SITE CHARACTERIZATION**

#### **Site Geology**

The soil type at the Jicarilla Apache Tribal 125 #1 Pipeline is the rock outcrop of the Vessilla-Menefee complex in the upper sections and the Orlie-Nalivag loams in the lower sections. The Vessilla-Menefee complex slopes 15 to 45 percent and consists of sandstone material with colluvium derived from sandstone and/or slope alluvium derived from sandstone. The Orlie-Nalivag loams slope 2 to 8 percent and consists of alluvium derived from sandstone and shale.

### **LABORATORY ANALYSIS**

Sampling procedures will follow regulatory standards per the NMOCD and Jicarilla Nations Oil and Gas Administration Department.

Samples to be collected for laboratory analysis will be collected into four (4) ounce glass jars, capped headspace free, labeled, and stored with ice in an ice chest. The samples will be same day delivered with chain of custody to Envirotech's Analytical Laboratory. Laboratory analysis for TPH will be conducted using USEPA Method 8015. Laboratory analysis for benzene and total BTEX will be conducted using USEPA Method 8021.



**DATA EVALUATION AND REVIEW**

A final report documenting all closure activities will be provided by Black Hills Gas Resources, Inc. to the Jicarilla Nations Oil and Gas Administration and the Bureau of Indian Affairs Jicarilla Agency within 60 days of work completion.

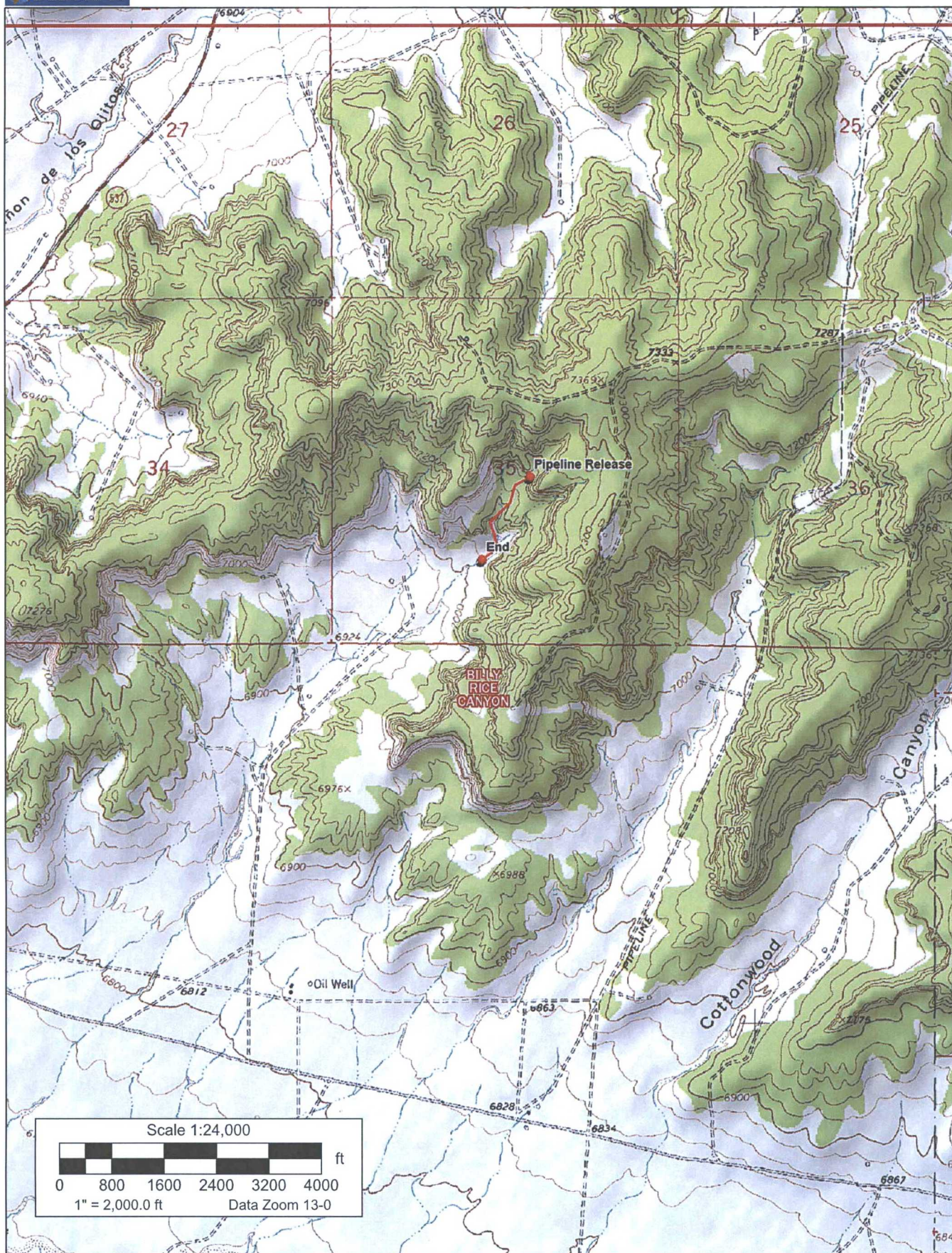
We appreciate the opportunity to be of service. If you have any questions or require further information, please do not hesitate to contact our office at (505) 634-5104.

Respectfully Submitted:  
**EnerVest Operating, LLC**

---

William Julian  
Production Foreman  
EnerVest Operating, LLC

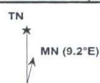




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**ENERVEST**  
 JICARILLA APACHE TRIBAL 125 #1 PIPELINE  
 SECTION 35, TOWNSHIP 25 N, RANGE 4 W  
 RIO ARriba COUNT, NEW MEXICO



5796 U.S. HIGHWAY 64  
 Farmington, New Mexico 87401  
 505.632.0615

## SITE MAP

FIGURE #2

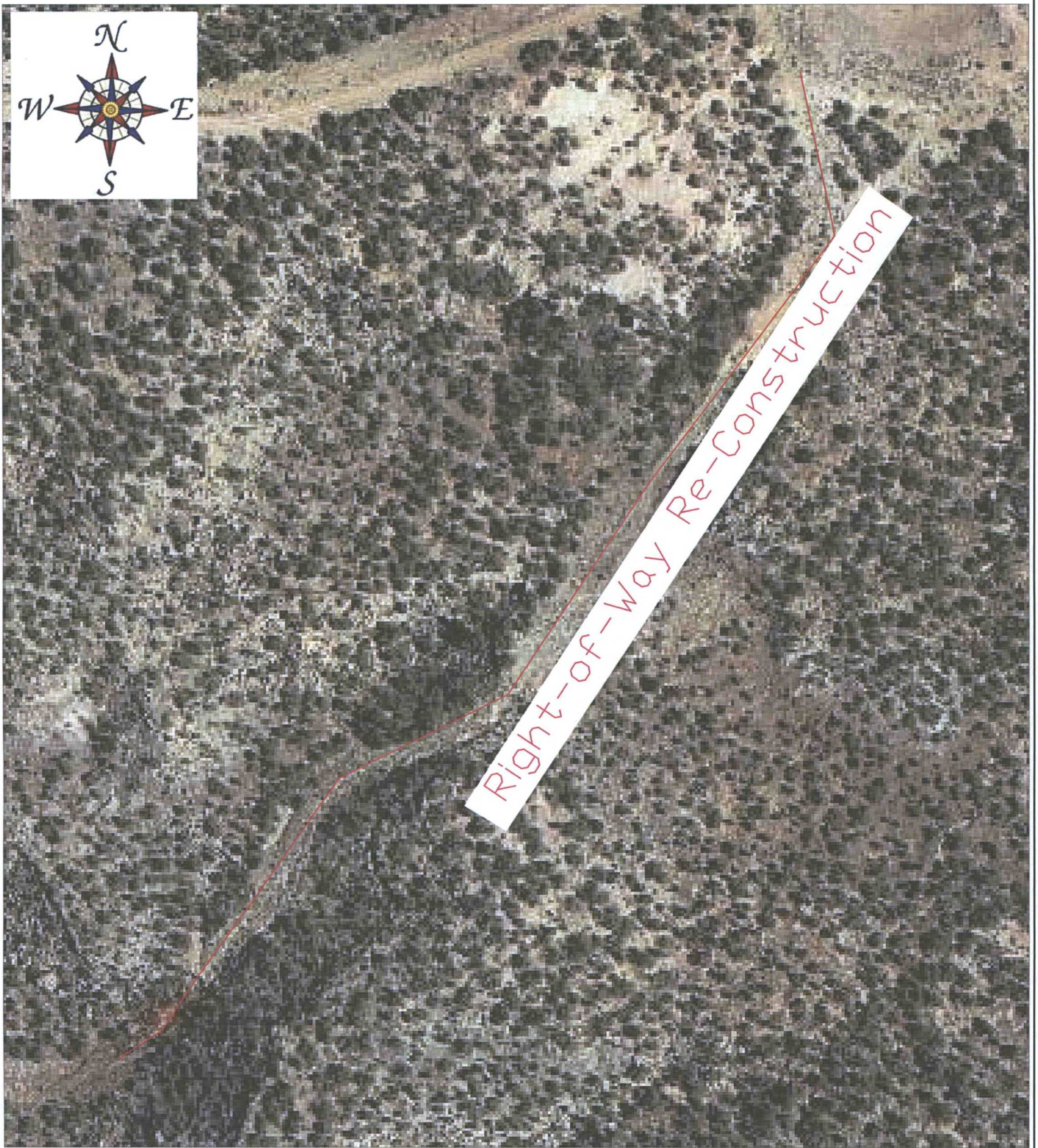
PROJECT NUMBER:  
 05123-0041

DATE DRAWN  
 June 5, 2014

DRAWN BY:  
 TONI MCKNIGHT

PROJECT MANAGER:  
 TONI MCKNIGHT





ENERVEST  
JICARILLA APACHE TRIBAL 125 #1 PIPELINE  
SECTION 35, TOWNSHIP 25 N, RANGE 4 W  
RIO ARriba COUNTY, NEW MEXICO



5796 U.S. HIGHWAY 64  
Farmington, New Mexico 87401  
505.632.0615

## RIGHT-OF-WAY CONSTRUCTION MAP

FIGURE #3

PROJECT NUMBER:  
05123-0041

DATE DRAWN  
June 17, 2014

DRAWN BY:  
TONI MCKNIGHT

PROJECT MANAGER:  
TONI MCKNIGHT



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Enervest Operating	Contact Lee Gardner	
Address 2700 Farmington Ave Building K, Suite #1	Telephone No. 505-325-0318	
Facility Name Jicarilla Apache Tribal 125 #001	Facility Type Oil & Gas Production	
Surface Owner Jicarilla Tribe	Mineral Owner Jicarilla Tribe	API No. 30-039-20966

### LOCATION OF RELEASE

Unit Letter M	Section 35	Township 25N	Range 4W	Feet from the	North/South Line	Feet from the	East/West Line	County Rio Arriba
------------------	---------------	-----------------	-------------	---------------	------------------	---------------	----------------	----------------------

Latitude N. 36.35135 Longitude W -107.22794

### NATURE OF RELEASE

Type of Release - None	Volume of Release - None	Volume Recovered - None
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Below grade tank excavation closure A five point composite sample was collect from the excavation and submitted to Envirotech Analytical Laboratory for analysis.

The results are:

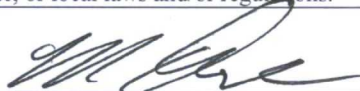
Benzene - Non Detect (EPA Method 8021)  
BTEX - Non Detect mg/kg (EPA Method 8021)  
GRO/DRO -Non Detect /kg (EPA 8015)  
Total Petroleum Hydrocarbons - 95.9 mg/kg (EPA Method 418.1)  
Chloride -Non Detect (EPA Method 300.0)

NMOCD  
MAR 12 2018  
DISTRICT III

Describe Area Affected and Cleanup Action Taken.\*

No release was detected by analysis

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Michael Dame	Approved by Environmental Specialist: <u>Combined with Subsequent C-141</u>	
Title: HSE Associate	Approval Date:	Expiration Date:
E-mail Address: mdame@enervest.net	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/12/2018 Phone: 505-325-0318		

\* Attach Additional Sheets If Necessary





## Analytical Report

### Report Summary

Client: Enervest Operating

Chain Of Custody Number:

Samples Received: 3/1/2018 10:05:00AM

Job Number: 05123-0002

Work Order: P803003

Project Name/Location: Jicarilla Apache Tribal 125  
#001

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', followed by a small 'CH' monogram.

Date: 3/6/18

Walter Hinchman, Laboratory Director

A handwritten signature in black ink, appearing to read 'Tim Cain'.

Date: 3/6/18

Tim Cain, Quality Assurance Officer

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Envirovest Operating  
2700 Farmington Ave.  
Farmington NM, 87401

Project Name: Jicarilla Apache Tribal 125 #001  
Project Number: 05123-0002  
Project Manager: Mike Dame

Reported:  
06-Mar-18 18:00

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Jicarilla Apache Tribal 125 #001	P803003-01A	Soil	03/01/18	03/01/18	Glass Jar, 4 oz.
	P803003-01B	Soil	03/01/18	03/01/18	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com  
laboratory@envirotech-inc.com



Enervest Operating 2700 Farmington Ave. Farmington NM, 87401	Project Name: Jicarilla Apache Tribal 125 #001 Project Number: 05123-0002 Project Manager: Mike Dame	Reported: 06-Mar-18 18:00
--	--	------------------------------

**Jicarilla Apache Tribal 125 #001  
P803003-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	100	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1809019	03/01/18	03/03/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %		50-150	1809019	03/01/18	03/03/18	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1809019	03/01/18	03/03/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1809022	03/01/18	03/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1809022	03/01/18	03/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		95.3 %		50-150	1809019	03/01/18	03/03/18	EPA 8015D	
Surrogate: n-Nonane		69.3 %		50-200	1809022	03/01/18	03/05/18	EPA 8015D	CV3
<b>Anions by 300.0</b>									
Chloride	ND	20.0	mg/kg	1	1809020	03/01/18	03/01/18	EPA 300.0	
<b>Total Petroleum Hydrocarbons by 418.1</b>									
Total Petroleum Hydrocarbons	ND	40.0	mg/kg	1	1809018	03/01/18	03/01/18	EPA 418.1	

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com  
laboratory@envirotech-inc.com



Envirotech Operating  
2700 Farmington Ave.  
Farmington NM, 87401

Project Name: Jicarilla Apache Tribal 125 #001  
Project Number: 05123-0002  
Project Manager: Mike Dame

Reported:  
06-Mar-18 18:00

### Volatiles Organics by EPA 8021 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch 1809019 - Purge and Trap EPA 5030A

##### Blank (1809019-BLK1)

Prepared: 01-Mar-18 Analyzed: 02-Mar-18

Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							

Surrogate: 4-Bromochlorobenzene-PID 7800 " 8000 97.5 50-150

##### LCS (1809019-BS1)

Prepared: 01-Mar-18 Analyzed: 02-Mar-18

Benzene	4880	100	ug/kg	5000		97.6	70-130			
Toluene	4830	100	"	5000		96.7	70-130			
Ethylbenzene	4880	100	"	5000		97.6	70-130			
p,m-Xylene	9750	200	"	10000		97.6	70-130			
o-Xylene	4800	100	"	5000		96.0	70-130			
Total Xylenes	14600	100	"	15000		97.1	70-130			

Surrogate: 4-Bromochlorobenzene-PID 7890 " 8000 98.6 50-150

##### Matrix Spike (1809019-MS1)

Source: P803001-01

Prepared: 01-Mar-18 Analyzed: 02-Mar-18

Benzene	4740	100	ug/kg	5000	ND	94.8	54.3-133			
Toluene	4700	100	"	5000	ND	94.1	61.4-130			
Ethylbenzene	4780	100	"	5000	ND	95.6	61.4-133			
p,m-Xylene	9510	200	"	10000	ND	95.1	63.3-131			
o-Xylene	4710	100	"	5000	ND	94.3	63.3-131			
Total Xylenes	14200	100	"	15000	ND	94.8	63.3-131			

Surrogate: 4-Bromochlorobenzene-PID 8350 " 8000 104 50-150

##### Matrix Spike Dup (1809019-MSD1)

Source: P803001-01

Prepared: 01-Mar-18 Analyzed: 02-Mar-18

Benzene	4800	100	ug/kg	5000	ND	96.1	54.3-133	1.34	20	
Toluene	4770	100	"	5000	ND	95.5	61.4-130	1.42	20	
Ethylbenzene	4840	100	"	5000	ND	96.9	61.4-133	1.26	20	
p,m-Xylene	9630	200	"	10000	ND	96.4	63.3-131	1.30	20	
o-Xylene	4770	100	"	5000	ND	95.4	63.3-131	1.21	20	
Total Xylenes	14400	100	"	15000	ND	96.1	63.3-131	1.27	20	

Surrogate: 4-Bromochlorobenzene-PID 8250 " 8000 103 50-150

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Enervest Operating 2700 Farmington Ave. Farmington NM, 87401	Project Name: Jicarilla Apache Tribal 125 #001 Project Number: 05123-0002 Project Manager: Mike Dame	Reported: 06-Mar-18 18:00
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### Nonhalogenated Organics by 8015 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1809019 - Purge and Trap EPA 5030A

<b>Blank (1809019-BLK1)</b>		Prepared: 01-Mar-18 Analyzed: 02-Mar-18								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.44		"	8.00		93.0	50-150			
<b>LCS (1809019-BS2)</b>		Prepared: 01-Mar-18 Analyzed: 02-Mar-18								
Gasoline Range Organics (C6-C10)	48.3	20.0	mg/kg	50.0		96.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.50		"	8.00		93.8	50-150			
<b>Matrix Spike (1809019-MS2)</b>		Source: P803001-01		Prepared: 01-Mar-18 Analyzed: 02-Mar-18						
Gasoline Range Organics (C6-C10)	54.9	20.0	mg/kg	50.0	ND	110	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.91		"	8.00		98.9	50-150			
<b>Matrix Spike Dup (1809019-MSD2)</b>		Source: P803001-01		Prepared: 01-Mar-18 Analyzed: 02-Mar-18						
Gasoline Range Organics (C6-C10)	54.8	20.0	mg/kg	50.0	ND	110	70-130	0.330	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		"	8.00		95.1	50-150			

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Enervest Operating  
2700 Farmington Ave.  
Farmington NM, 87401

Project Name: Jicarilla Apache Tribal 125 #001  
Project Number: 05123-0002  
Project Manager: Mike Dame

Reported:  
06-Mar-18 18:00

**Nonhalogenated Organics by 8015 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1809022 - DRO Extraction EPA 3570</b>										
<b>Blank (1809022-BLK1)</b>				Prepared: 01-Mar-18 Analyzed: 05-Mar-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	40.7		"	50.0		81.3	50-200			
<b>LCS (1809022-BS1)</b>				Prepared: 01-Mar-18 Analyzed: 02-Mar-18						
Diesel Range Organics (C10-C28)	502	25.0	mg/kg	500		100	38-132			
Surrogate: n-Nonane	50.0		"	50.0		100	50-200			
<b>Matrix Spike (1809022-MS1)</b>				Source: P803002-01		Prepared: 01-Mar-18 Analyzed: 02-Mar-18				
Diesel Range Organics (C10-C28)	567	25.0	mg/kg	500	ND	113	38-132			
Surrogate: n-Nonane	57.0		"	50.0		114	50-200			
<b>Matrix Spike Dup (1809022-MSD1)</b>				Source: P803002-01		Prepared: 01-Mar-18 Analyzed: 02-Mar-18				
Diesel Range Organics (C10-C28)	664	25.0	mg/kg	500	ND	133	38-132	15.7	20	SPK1
Surrogate: n-Nonane	63.9		"	50.0		128	50-200			

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Enervest Operating 2700 Farmington Ave. Farmington NM, 87401	Project Name: Jicarilla Apache Tribal 125 #001 Project Number: 05123-0002 Project Manager: Mike Dame	Reported: 06-Mar-18 18:00
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### Anions by 300.0 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1809020 - Anion Extraction EPA 300.0/9056A</b>										
<b>Blank (1809020-BL.K1)</b>										
					Prepared & Analyzed: 01-Mar-18					
Chloride	ND	20.0	mg/kg							
<b>LCS (1809020-BS1)</b>										
					Prepared & Analyzed: 01-Mar-18					
Chloride	248	20.0	mg/kg	250		99.0	90-110			
<b>Matrix Spike (1809020-MS1)</b>										
					Source: P803002-01 Prepared & Analyzed: 01-Mar-18					
Chloride	255	20.0	mg/kg	250	ND	102	80-120			
<b>Matrix Spike Dup (1809020-MSD1)</b>										
					Source: P803002-01 Prepared & Analyzed: 01-Mar-18					
Chloride	255	20.0	mg/kg	250	ND	102	80-120	0.251	20	

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Enervest Operating  
2700 Farmington Ave.  
Farmington NM, 87401

Project Name: Jicarilla Apache Tribal 125 #001  
Project Number: 05123-0002  
Project Manager: Mike Dame

Reported:  
06-Mar-18 18:00

### Total Petroleum Hydrocarbons by 418.1 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1809018 - 418 Freon Extraction</b>										
<b>Blank (1809018-BLK1)</b>					Prepared & Analyzed: 01-Mar-18					
Total Petroleum Hydrocarbons	ND	40.0	mg/kg							
<b>LCS (1809018-BS1)</b>					Prepared & Analyzed: 01-Mar-18					
Total Petroleum Hydrocarbons	978	40.0	mg/kg	1000		97.8	80-120			
<b>Matrix Spike (1809018-MS1)</b>					Prepared & Analyzed: 01-Mar-18					
Total Petroleum Hydrocarbons	996	40.0	mg/kg	1000	ND	99.6	70-130			
<b>Matrix Spike Dup (1809018-MSD1)</b>					Prepared & Analyzed: 01-Mar-18					
Total Petroleum Hydrocarbons	1010	40.0	mg/kg	1000	ND	101	70-130	1.40	30	

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Envirovest Operating  
2700 Farmington Ave.  
Farmington NM, 87401

Project Name: Jicarilla Apache Tribal 125 #001  
Project Number: 05123-0002  
Project Manager: Mike Dame

Reported:  
06-Mar-18 18:00

#### Notes and Definitions

SPK1 The spike recovery is outside of quality control limits.  
CV3 CV recovery was below quality control limits.  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
RPD Relative Percent Difference

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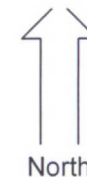
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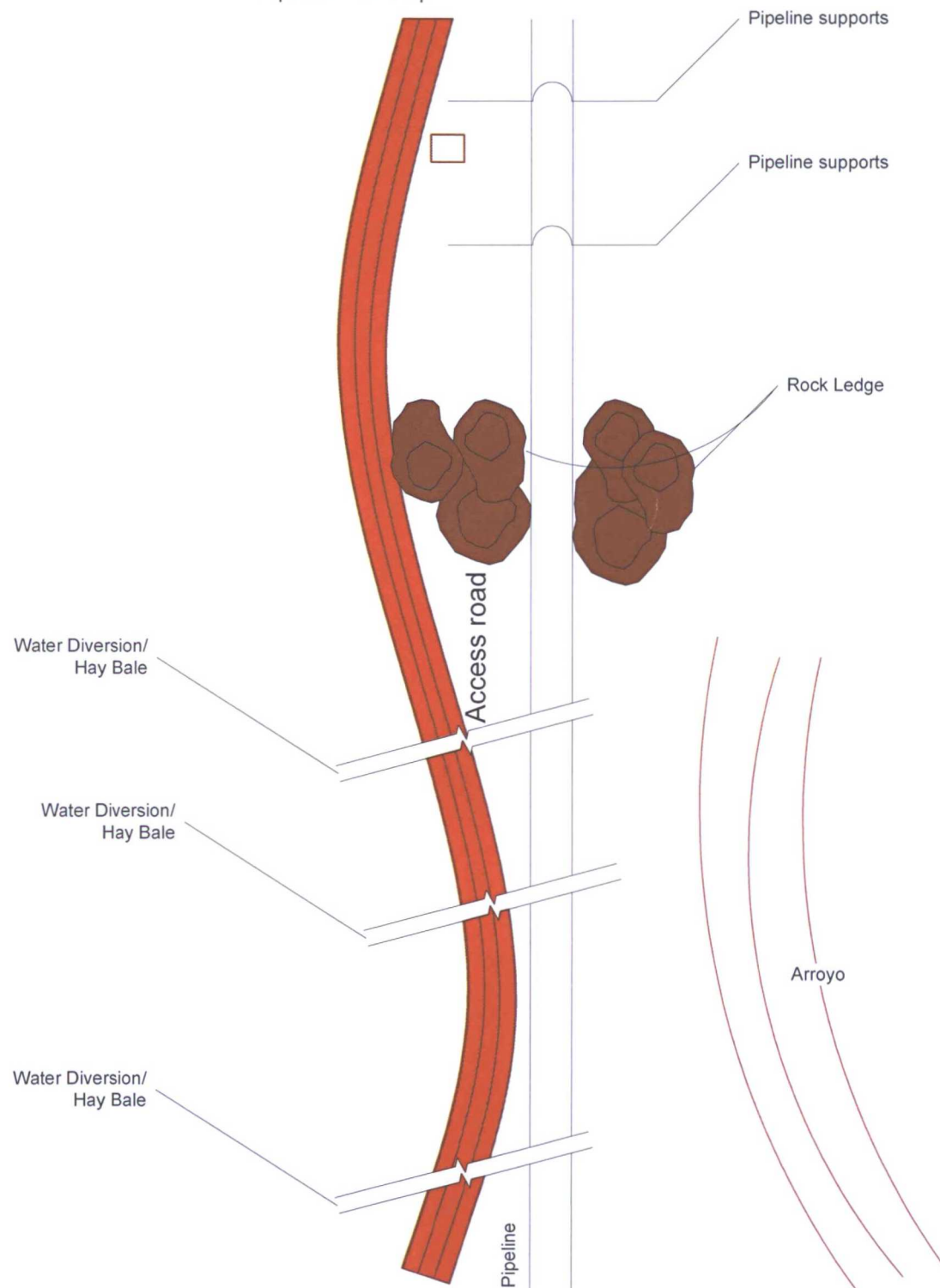
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We will be putting in three water diversions along with hay bales to divert the water away from the sensitive pipeline area, back into the arroyo. There is a rock ledge where the pipeline goes down into the arroyo. Down on the bottom of the arroyo we will have supports built to keep the pipeline from swaying to prevent from future leaks. After all this is completed we will seed the area needed with Jicarilla Southern Seed Mix. Keeping the right of way open for our annual pipeline inspections















May 2, 2016

Hobson Sandoval  
Tribal EPO

Dear Mr. Sandoval,

On behalf of Enervest Operating, LLC, Sr. Production Foreman Jeff Cross and Michael Dame have devised a plan on cleaning up the remaining rocks and soil on the Jicarilla Apache Tribal 125 #001 pipeline spill. We will be hauling off the contaminated soil and rocks, approximately 150 yards that will be taken to T-N-T Land Farm.

We will be putting in three separate water diversions and large hay bale to divert water runoff into a small wash located to the north side of the pipeline and right of way road, to keep water from washing out the right of way and work done around the pipeline. The pipeline will be welded together with main supports under it to prevent future leaks. And lastly we will plant all sectioned areas with Jicarilla Southern Seed mix to bring back regrowth in the worked area.

If you have any questions, please feel free to contact me at 505-325-0318.

Sincerely,

Michael Dame  
HSE Associate