

3R-1012

**Release Report/ General
Correspondence**

Enterprise RA

Date: Jan-Mar 2015

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

OIL CONS. DIV DIST. 3

JAN 02 2015

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

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral K-36; San Juan 28-7 Unit #3	Facility Type: Natural Gas Gathering Line Valve

Surface Owner: BLM	Mineral Owner: BLM	API No.
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LOCATION OF RELEASE

Unit Letter N	Section 6	Township 27N	Range 7W	Feet from the 1255	North South Line	Feet from the 1367	East West Line	County Rio Arriba
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Latitude 36.599037 Longitude -107.619455

NATURE OF RELEASE

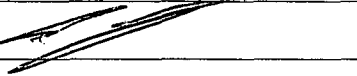
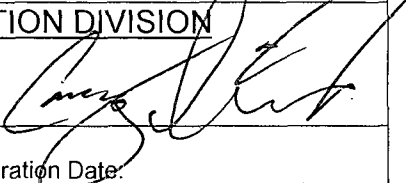
Type of Release: Natural Gas Liquids	Volume of Release 3-5 BBLS	Volume Recovered: NONE
Source of Release: Leaking Valve	Date and Hour of Occurrence: 12/16/2014 @ 4:40 p.m.	Date and Hour of Discovery: 12/16/2014 @ 5:40 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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: On December 16, 2014, a third party reported a valve leaf on the Lateral K-36, San Juan 28-7 Unit #3 well tie. Enterprise technicians confirmed a leak. The line was isolated and de-pressurized and lock out tag out was applied. Repairs and remediation are currently being scheduled. A third party environmental contractor will oversee excavation activities and collect closure samples during repair activities.

Describe Area Affected and Cleanup Action: On December 16, 2014, a third party reported a valve leaf on the Lateral K-36, San Juan 28-7 Unit #3 well tie. Enterprise technicians confirmed a leak. The line was isolated and de-pressurized and lock out tag out was applied. Repairs and remediation are currently being scheduled. A third party environmental contractor will oversee excavation activities and collect closure samples during repair activities. A "final" c-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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: Ivan W. Zirbes	Approved by Environmental Specialist: 	
Title: Sr. Director, Environmental	Approval Date: 2/6/15	Expiration Date:
E-mail Address: snolan@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12-30-14	Phone: (713)381-6595	

* Attach Additional Sheets If Necessary

#NCS 1503738901

①

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Energy Minerals and Natural
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Santa Fe, NM 87505

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NMOCD

DISTRICT

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral K-7	Facility Type: Natural Gas Gathering Pipeline

Surface Owner: BLM	Mineral Owner: BLM	API No.
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LOCATION OF RELEASE

Unit Letter N	Section 27	Township 26N	Range 7W	Feet from the 225	North South Line	Feet from the 2086	East West Line	County Rio Arriba
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Latitude 36.46422 Longitude -107.56505

NATURE OF RELEASE

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release Unknown	Volume Recovered: None
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 2/18/2015 @ 3:12 p.m.	Date and Hour of Discovery: 2/18/2015 @ 7:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification - Cory Smith - NMOCD; Shari Ketcham - BLM	
By Whom? Thomas Long	Date and	
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: On February 18, 2015, Enterprise discovered a leak on the Lateral K-7 pipeline. The pipeline was isolated, blown down, locked out and tagged out. An area of staining of approximately five feet in diameter was observed on the ground surface. Pipeline repairs began February 26, 2015.

Describe Area Affected and Cleanup Action: On February 18, 2015, Enterprise discovered a leak on the Lateral K-7 pipeline. An area of staining of approximately five feet in diameter was observed on the ground surface. A third party environmental contractor is managing excavation activities and has collected closure samples. A "Final" C-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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>Jon Fields</i>	OIL CONSERVATION DIVISION	
Printed Name: Jon E. Fields	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Director, Environmental	Approval Date: 3/13/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/3/2015 Phone: (713)381-6684		

* Attach Additional Sheets If Necessary

#NCS 150 72 52 901

①

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Oil Conservation Division
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Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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MAR 09 2015

NMOCD

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: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral K-31 (Two Release Sites)	Facility Type: Natural Gas Gathering Line
Surface Owner: State	Mineral Owner: BLM
API No.	

LOCATION OF RELEASE

Unit Letter D/N	Section 16	Township 25N	Range 6W	Feet from the	North/South Line	Feet from the	East/West Line	County Rio Arriba
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Latitude 36.404829 Longitude 107.478125

Latitude 36.39373 Longitude 107.47519

NATURE OF RELEASE

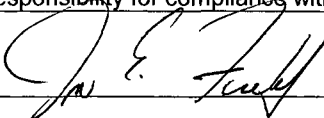

Type of Release: Natural Gas	Volume of Release: 3-5 BBLS fluids	Volume Recovered: Unknown
Source of Release: Suspected internal corrosion	Date and Hour of Occurrence: 2/19/2015 @ 3:00 p.m.	Date and Hour of Discovery: 2/19/2015 @ 5:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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: On February 19, 2015, Enterprise discovered two leaks on the Lateral K-31 pipeline. The GPS locations for the leaks are 36.404829, -107.478125 and 36.39373, -107.47519. The pipeline was isolated, blown down, locked out and tagged out. No surface impacts were observed. Repairs and remediation began March 2, 2015.

Describe Area Affected and Cleanup Action Taken.*: No surface impacts were observed. Impacts to the subsurface were confirmed on 3/4/2015. A "Final" C-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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: Jon E. Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: <u>3/13/15</u>	Expiration Date: <u> </u>
E-mail Address: jefields@eprod.com	Conditions of Approval:	
Date: <u>3-5-2015</u> Phone: (713)381-6684	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

#NCS 150 72 52576

①

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Copy to appropriate District Office
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NMOCD

DISTRICT III

Form C-141
Revised August 8, 2011

FEB 18 2015

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: San Juan 29-5 #214	Facility Type: Natural Gas Gather Pipeline

Surface Owner: Private	Mineral Owner: BLM	API No.
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LOCATION OF RELEASE

Unit Letter G	Section 27	Township 29N	Range 10W	Feet from the 1401	North South Line	Feet from the 1350	East West Line	County Rio Arriba
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Latitude 36.699905 Longitude -107.340519

NATURE OF RELEASE

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 1/26/2015@ 1:45 p.m.	Date and Hour of Discovery: 1/26/2015@ 3:30 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification - Cory Smith - NMOCD	
By Whom? Thomas Long	Date and Hour 2/9/2015 @ 8:20 a.m.	
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: On January 26, 2015, a leak was discovered on the SJ 29-5 #214 well location approximately two feet from the downstream end of the meter run. An Enterprise gathering technician was dispatched and verified the leak. The single well tie line was isolated, de-pressured and lock out tag out was applied. A third party environmental contractor will oversee excavation activities and collect closure samples.

Describe Area Affected and Cleanup Action: On January 26, 2015, a leak was discovered on the SJ 29-5 #214 well location approximately two feet from the downstream end of the meter run. An Enterprise gathering technician was dispatched and verified the leak. The single well tie line was isolated, de-pressured and lock out tag out was applied. A third party environmental contractor will oversee excavation activities and collect closure samples. A third party environmental contractor will oversee excavation activities and collect closure samples. A "Final" C-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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>Jon Fields</i>	OIL CONSERVATION DIVISION	
Printed Name: Jon Fields	Approved by Environmental Specialist: <i>Cory Smith</i>	
Title: Director, Environmental	Approval Date: 3/13/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 2-10-2015	Phone: (713)381-6684	

* Attach Additional Sheets If Necessary

#NCS 150 72 49522

①

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FEB 04 2015

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Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long	
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286	
Facility Name: Lateral K-31 Release Site	Facility Type: Natural Gas Gathering Line	
Surface Owner: State of NM	Mineral Owner: BLM	API No.

LOCATION OF RELEASE

Unit Letter D	Section 16	Township 25N	Range 6W	Feet from the 1293	North South Line	Feet from the 1092	East West Line	County Rio Arriba
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Latitude 36.403565 Longitude -107.477592

NATURE OF RELEASE

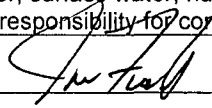
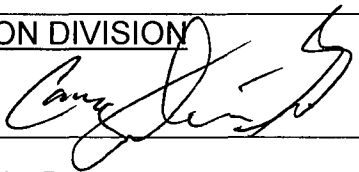
Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release Unknown	Volume Recovered: Unknown
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 1/19/2015 @ 11:30 a.m.	Date and Hour of Discovery: 1/19/2015 @ 12:30 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification - Cory Smith, NMOCD	
By Whom? Thomas Long	Date and Hour 1/26/2015 @ 7:19 a.m.	
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: On January 19, 2015, Enterprise technicians confirmed a leak on Lateral K-31 pipeline. The pipeline was isolated, de-pressurized and lock out tag out was applied. Repairs and remediation began on January 26, 2015. A third party environmental contractor oversaw excavation activities and collected closure samples.

Describe Area Affected and Cleanup Action: On January 19, 2015, Enterprise technicians confirmed a leak on Lateral K-31 pipeline. The pipeline was isolated, de-pressurized and lock out tag out was applied. Repairs and remediation began on January 26, 2015. A third party environmental contractor oversaw excavation activities and collected closure samples. A "Final" C-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 3/13/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 1/26/2015	Phone: (713)381-6684	

* Attach Additional Sheets If Necessary

#NCS 1507248889

①

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Form C-141
Revised August 8, 2011

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NMOCD

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Mid-American Pipeline	Contact: Thomas Long	
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286	
Facility Name: Lybrook Station	Facility Type: NGL Pumping Station	
Surface Owner: Private	Mineral Owner: BLM	API No.

LOCATION OF RELEASE

Unit Letter C	Section 14	Township 23N	Range 7W	Feet from the 123	North/South Line	Feet from the 2202	East/West Line	County Rio Arriba
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Latitude 36.232608 Longitude -107.546006

NATURE OF RELEASE

Type of Release: Natural Gas Liquids	Volume of Release 23.74 BBLs	Volume Recovered: None
Source of Release: Piping Freeze	Date and Hour of Occurrence: 1/19/2014 @ 11:30 a.m.	Date and Hour of Discovery: 1/19/2014 @ 12:30 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification – Cory Smith, NMOCD, NRC Case # 1106616	
By Whom? Thomas Long	Date and Hour 1/26/2015 @ 7:19 a.m.	
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: On January 19, 2015, technicians were completing a station check and discovered a gas odor in the control building. The technicians began monitoring the conduit raceways and conduit floor pits. High LEL readings were detected in the conduit. Hydro-excavating of potholes at the facility were initiated to determine the source of the high LELs. The hydro-excavating was directed to the area of highest LEL readings. Hydro-excavating and mechanical excavating determined the leak was on the NGL piping to the main suction header. The piping was isolated, depressurized and lock out tag out was applied. A third party environmental contractor will oversee excavation activities and collect closure samples.

Describe Area Affected and Cleanup Action: On January 19, 2015, technicians were completing a station check and discovered a gas odor in the control building. The technicians began monitoring the conduit raceways and conduit floor pits. High LEL readings were detected in the conduit. Hydro-excavating of potholes at the facility were initiated to determine the source of the high LELs. The hydro-excavating was directed to the area of highest LEL readings. Hydro-excavating and mechanical excavating determined the leak was on the NGL piping to the main suction header. The piping was isolated, depressurized and lock out tag out was applied. A third party environmental contractor will oversee excavation activities and collect closure samples. A "Final" C-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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Signature:	OIL CONSERVATION DIVISION	
Printed Name: Jon Fields	Approved by Environmental Specialist:	
Title: Director, Environmental	Approval Date: 3/13/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 1/25/2015	Phone: (713)381-6684	

* Attach Additional Sheets If Necessary

#NCS 150 72 48615

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JAN 15 2015

Form C-141
Revised August 8, 2011

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

NMOCD

DISTRICT III

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral K-31 Six Release Sites	Facility Type: Natural Gas Gathering Line

Surface Owner: BLM/State	Mineral Owner: BLM	API No.
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LOCATION OF RELEASE

Unit Letter SW/SW	Section 9/16	Township 25N	Range 6W	Feet from the	North/South Line	Feet from the	East/West Line	County Rio Arriba
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Latitude	36.3986	Longitude	-107.4765
Latitude	36.3979	Longitude	-107.4763
Latitude	36.40734	Longitude	-107.47930
Latitude	36.39985	Longitude	-107.47667
Latitude	36.39557	Longitude	-107.47572
Latitude	36.39408	Longitude	-107.47519

NATURE OF RELEASE

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release 752 MCF gas Loss; Estimated 20-30 bbls of fluids	Volume Recovered: NONE
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 8/22/2014 @ 1:00 p.m.	Date and Hour of Discovery: 8/22/2014 @ 2:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? NMOCD - Cory Smith onsite when discovered; Courtesy notification to BLM - Shari Ketcham on 9/17/2014	
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: On August 22, 2014, a third party reported possible line leaks on an Enterprise Right of Way. Technicians were dispatched to the locations and the two leaks were confirmed. The line was isolated and de-pressurized and lock out tag out was applied. On September 8, 2014, Enterprise Products applied pressure to the Lateral K-31 pipeline and surveyed the pipeline right-of-way to determine if there were additional sections of the pipeline that were compromised. Four additional leak locations were identified. Repairs and remediation for all six release locations were completed on October 8, 2014. Approximately 374 cubic yards of hydrocarbon impacted soil was excavated and transported to an approved NMOCD land farm facility. Additionally, approximately 1635 bbls of water was removed from the excavations and transported to an approved NMOCD facility for proper disposal.

Describe Area Affected and Cleanup Action Taken: On August 22, 2014, a third party reported possible line leaks on an Enterprise Right of Way. Technicians were dispatched to the locations and the two leaks were confirmed. The line was isolated and de-pressurized and lock out tag out was applied. On September 8, 2014, Enterprise Products applied pressure to the Lateral K-31 pipeline and surveyed the pipeline right-of-way to determine if there were additional sections of the pipeline that were compromised. Four additional leak locations were identified. Repairs and remediation for all six release locations were completed on October 8, 2014. A third party environmental contractor oversaw excavation activities and collected closure samples during repair activities. Approximately 374 cubic yards of hydrocarbon impacted soil was excavated and transported to an approved NMOCD land farm facility. Additionally, approximately 1635 bbls of water was removed from the excavations and transported to an approved NMOCD facility for proper disposal. Two third party corrective action reports are included with this Final "C-141".

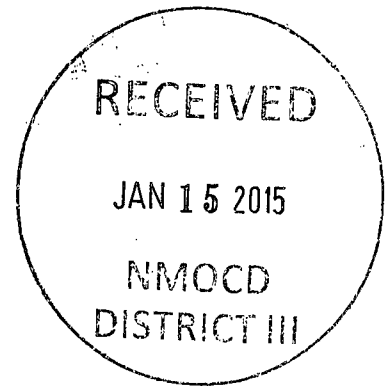
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger 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>Jon Fields</i>	OIL CONSERVATION DIVISION	
Printed Name: Jon Fields	Approved by Environmental Specialist: <i>Cory Smith</i>	
Title: Director, Environmental	Approval Date: 3/23/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval: *Note Deleter From Rain Events Not Groundwater.	Attached <input type="checkbox"/>
Date: 1-8-2015	Phone: (713)381-6684	

* Attach Additional Sheets If Necessary

HNCS 150 82 32107

157



CORRECTIVE ACTION REPORT

1st Report

Property:

**Lateral K-31 Truby #2 Pipeline Releases
SW 1/4, S16 T25N R6W
Rio Arriba County, New Mexico**

November 17, 2014
Apex Project No. 7030414G031

Prepared for:

**Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long**

Prepared by:

Heather M. Woods

Heather M. Woods, P.G.
Senior Project Manager

Liz Scaggs

Elizabeth Scaggs, P.G.
Senior Program Manager

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	Figure 2 – Site Vicinity Map
	Figure 3A – North Release Site Map with Sample Locations
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Appendix C:	Photographic Documentation
Appendix D:	Tables
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CORRECTIVE ACTION REPORT

Lateral K-31 Truby #2 Pipeline Releases

SW 1/4, S16 T25N R6W
Rio Arriba County, New Mexico

Apex Project No. 7030414G031

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral K-31 Truby #2 Pipeline Release Site is comprised of two (2) pipeline repair locations in close proximity to each other within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 16 in Township 25 North and Range 6 West in rural Rio Arriba County, New Mexico (North Release 36.3986N, 107.4765W; South Release 36.3979N, 107.4763W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land owned by the State of New Mexico, and consists of native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On September 3, 2014, Enterprise shut in the Lateral K-31 pipeline and initiated excavation activities at the Site in an effort to locate and repair two (2) subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were identified by the instrument detection of natural gas at the ground surface.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

2.0 SITE RANKING

In accordance with the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of the State Engineer to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	20
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or, <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	10
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			30

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "30". This ranking is based on the following:

- Depth to groundwater is approximately 15 feet below ground surface (bgs) as observed in nearby groundwater monitoring wells and elevation differential between the Site and Largo Wash, resulting in a depth to groundwater ranking of "20". No nearby water wells were identified on the Office of the State Engineer (OSE) website database.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site.
- The Site is located approximately 600 feet west of Largo Wash. Based on this proximity, a ranking for distance to surface water was assigned at "10".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On September 3, 2014, Enterprise shut in the Lateral K-31 pipeline and initiated excavation activities at the Site in an effort to locate and repair two subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were identified by the instrument detection of natural gas at the ground surface. During the corrective action activities, Energy Maintenance Services provided heavy equipment and labor support, and Kyle Summers, an Apex environmental professional, provided environmental support.

The surface expression of North Excavation measured approximately 25 feet long by 9 feet wide and 4.5 feet in depth and the South Excavation measured approximately 15 feet long by 6 feet wide and 3.5 feet in depth. The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands.

A total volume of approximately 48 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm in Hilltop, New Mexico for disposal/remediation. The majority of the spoils removed from the southern excavation were unaffected by hydrocarbon impact and were sampled for re-use as backfill material. The excavations were subsequently backfilled with clean imported fill and remaining stockpiled soils, and the Site was contoured to the surrounding grade. The executed C-138 form is provided in Appendix B.

Figures 3A and 3B are site maps indicating the approximate locations of the excavated areas in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to estimate excavation limits.

Apex's soil sampling program included the collection of five (5) final confirmation samples (S-1 through S-5) from the North Excavation and five (5) final confirmation samples (C-1 through C-5) from the South Excavation for laboratory analysis. Additionally, one (1) composite sample (SP-1) was collected from remaining stockpiled soils near the South Excavation to determine the potential to reuse these soils as excavation backfill. Figures 3A and 3B depict the approximate locations of the excavated areas and show the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for rush analysis.

3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Remediation Plan*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits associated with the final confirmation samples (S-1 through S-5 and C-1 through C-5) collected from the excavated areas and stockpile sample (SP-1) to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".

- The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD *Remediation Action Level*.

- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate total BTEX concentrations ranging from below the laboratory reporting limits to 1.91 mg/kg, which are below the *OCD Remediation Action Levels*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 24.1 mg/kg, which are below the *OCD Remediation Action Levels* for a Site ranking of "30".

Confirmation sample results are provided in Table 1 in Appendix D.

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral K-31 Truby #2 Pipeline Release Site is comprised of two (2) pipeline repair locations in close proximity to each other within the Enterprise pipeline ROW in the SW ¼ of Section 16 in Township 25 North and Range 6 West in rural Rio Arriba County, New Mexico (North Release 36.3986N, 107.4765W; South Release 36.3979N, 107.4763W). The Site is located on land owned by the State of New Mexico, and consists of native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On September 3, 2014, Enterprise shut in the Lateral K-31 pipeline and initiated excavation activities at the Site in an effort to locate and repair two subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were identified by the instrument detection of natural gas at the ground surface.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands with clay lenses.
- The surface expression of North Excavation measured approximately 25 feet long by 9 feet wide and 4.5 feet in depth and the South Excavation measured approximately 15 feet long by 6 feet wide and 3.5 feet in depth.
- Prior to backfilling, five (5) final confirmation samples were collected from each of the resulting excavations for laboratory analysis. Additionally, one (1) composite sample was collected from stockpiled soils to determine the potential to reuse these soils as excavation backfill. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the *OCD Remediation Action Levels* for a Site ranking of "30".
- A total of approximately 48 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm in Hilltop, New Mexico for disposal/remediation. The excavations were backfilled with clean imported fill and unaffected stockpiled soils, and The Site was contoured to the surrounding grade.

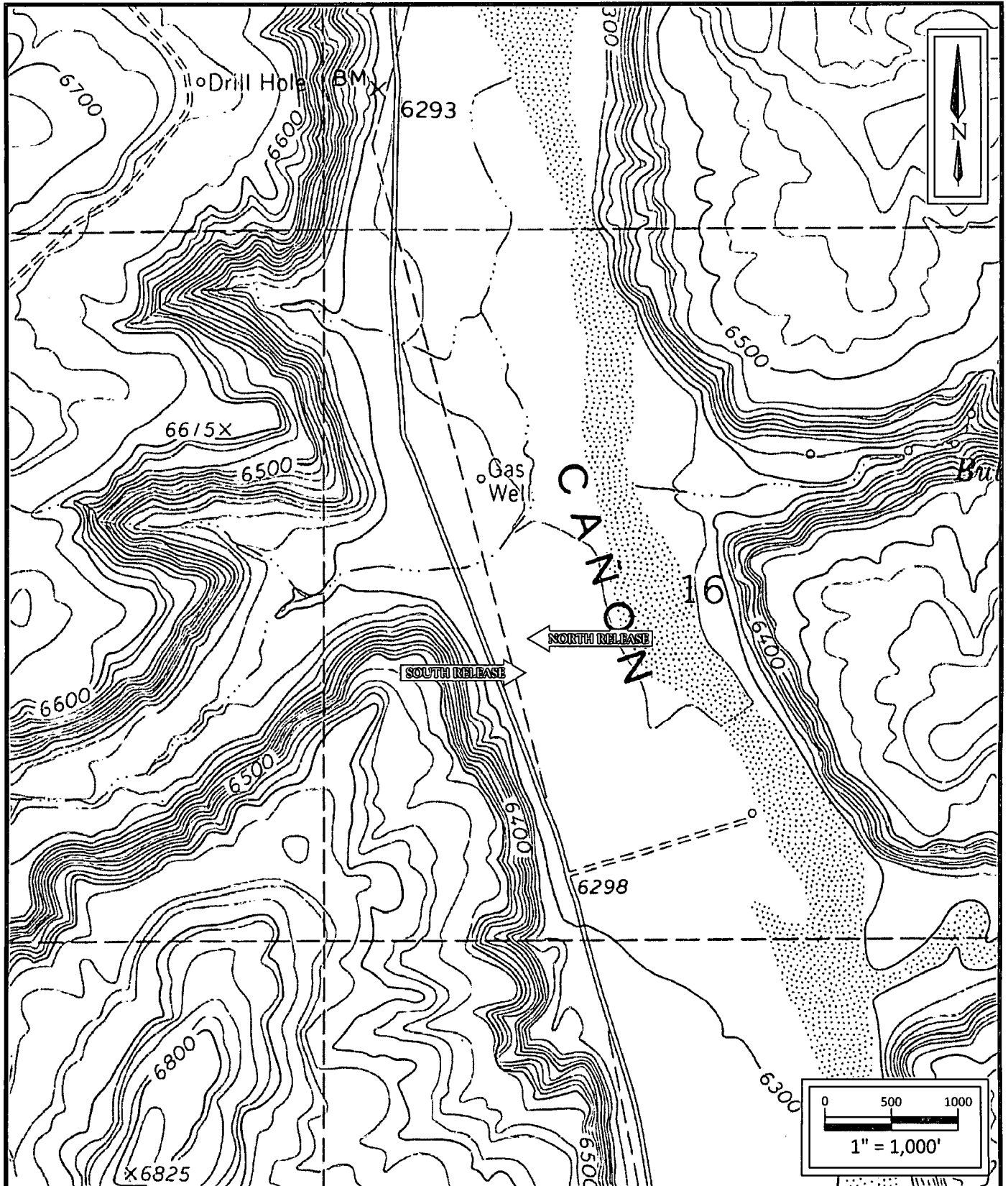
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of 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 expressed written authorization of Enterprise and Apex. 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 proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.



Lateral K-31 Truby #2 Pipeline Releases

SW¼ S16 T25N R6W

Rural Rio Arriba County, NM

36.3986N, 107.4765W North Release

36.3979N, 107.4763W South Release

Project No. 7030414G031



Apex TITAN, Inc.

606 S. Rio Grande, Suite A

Aztec, New Mexico 87410

Phone: (505) 334-5200

www.apexcos.com

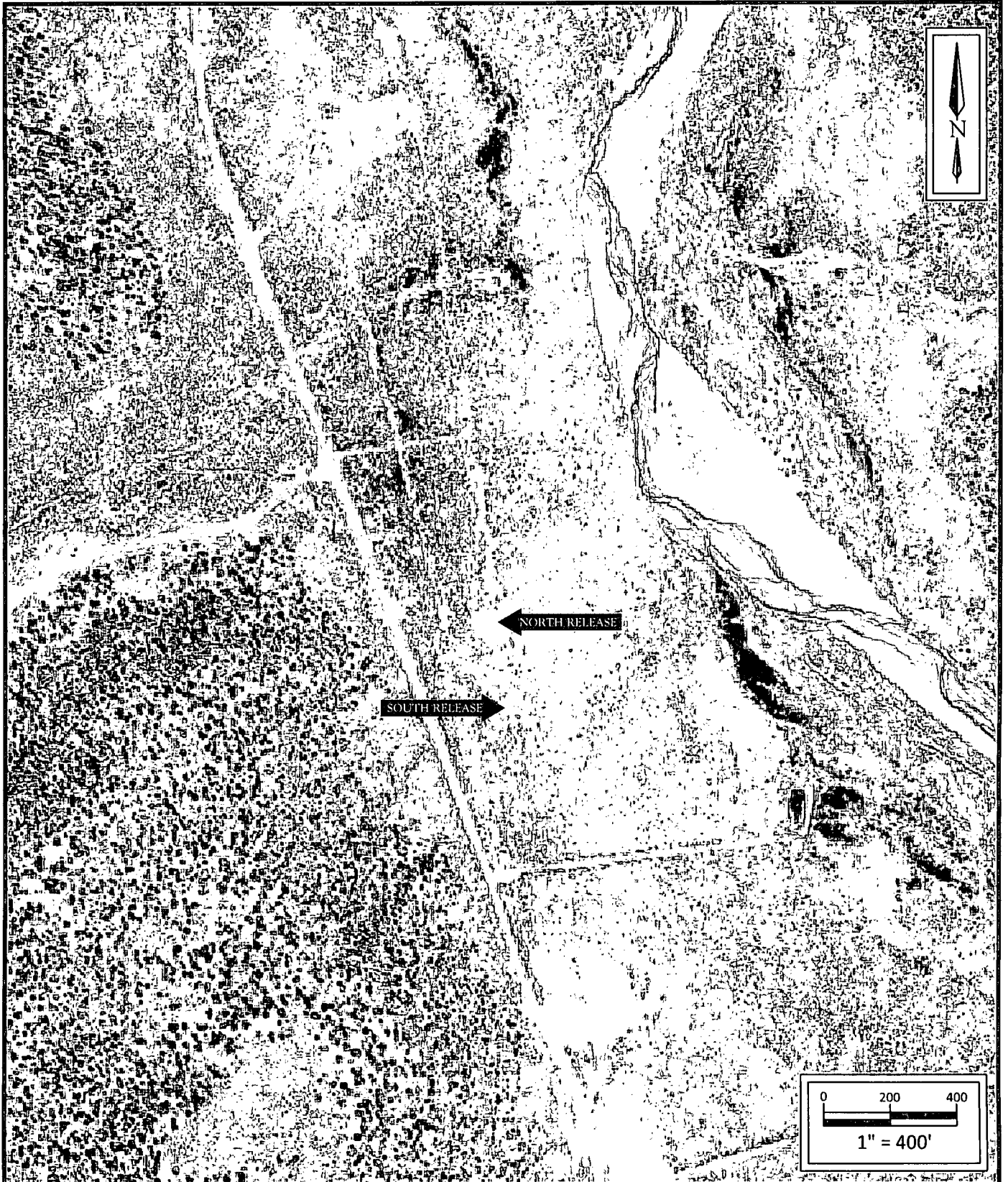
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

Gonzales Mesa, NM Quadrangle

1963



Lateral K-31 Truby #2 Pipeline Releases
 SW $\frac{1}{4}$ S16 T25N R6W
 Rural Rio Arriba County, NM
 36.3986N, 107.4765W North Release
 36.3979N, 107.4763W South Release

Project No. 7030414G031



Apex TITAN, Inc.
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 Aztec, New Mexico 87410
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www.apexcos.com
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FIGURE 2
Site Vicinity Map
 2013 Aerial Photograph

S-5 9/3/2014	
Benzene:	<0.05
Toluene:	<0.05
Ethylbenzene:	<0.05
Xylenes:	<0.10
Total BTEX:	ND
GRO:	<4.98
DRO:	<29.9



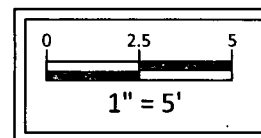
S-1 9/3/2014	
Benzene:	<0.05
Toluene:	<0.05
Ethylbenzene:	<0.05
Xylenes:	<0.10
Total BTEX:	ND
GRO:	<4.99
DRO:	<30.0

S-3 9/3/2014	
Benzene:	<0.05
Toluene:	<0.05
Ethylbenzene:	<0.05
Xylenes:	<0.10
Total BTEX:	ND
GRO:	<4.99
DRO:	<30.0

S-2 9/3/2014	
Benzene:	<0.05
Toluene:	0.14
Ethylbenzene:	<0.05
Xylenes:	1.77
Total BTEX:	1.91
GRO:	24.1
DRO:	<30.0

S-4 9/3/2014	
Benzene:	<0.05
Toluene:	<0.05
Ethylbenzene:	<0.05
Xylenes:	<0.10
Total BTEX:	ND
GRO:	<5.00
DRO:	<30.0

LEGEND:	
---	PIPELINE
●	SAMPLE LOCATION
△	RELEASE POINT
▨	EXTENT OF EXCAVATION



NOTE: ALL VALUES ARE REPORTED IN mg/kg

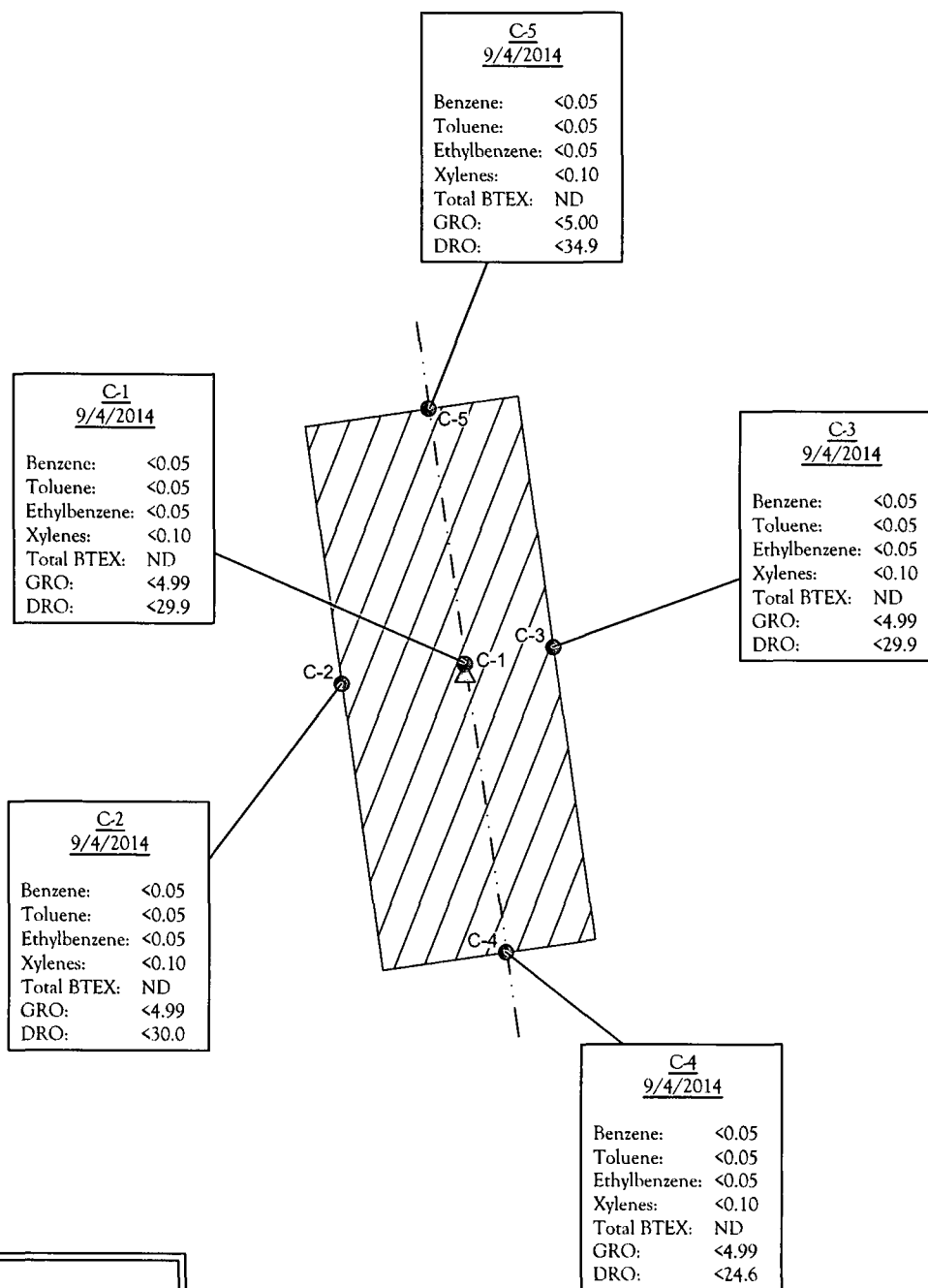
Lateral K-31 Truby #2 Pipeline Releases
 SW $\frac{1}{4}$ S16 T25N R6W
 Rural Rio Arriba County, NM
 36.3986N, 107.4765W



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FIGURE 3A
Site Map with
Soil Analytical Results
North Release

Project No. 7030414G031



Lateral K-31 Truby #2 Pipeline Releases
SW $\frac{1}{4}$ S16 T25N R6W
Rural Rio Arriba County, NM
36.3979N, 107.4763W

Project No. 7030414G031



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FIGURE 3B
Site Map with
Soil Analytical Results
South Release

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

97257-0649
Form C-138
Revised 08/01/11
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site: Lateral K-31

Sep 2014

3. Location of Material (Street Address, City, State or ULSTR):

Unit Letter K Section 16 T 25N R 6W, GPS 36.39791, -107.47631, San Juan County, NM

4. Source and Description of Waste:

Source: Natural Gas Pipeline Release

Description: Exempt petroleum affected soil from clean-up efforts at pipeline release.

Estimated Volume 50 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 48 yd³ bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☒ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, Kendra Running, representative for Envirotech, Inc. do hereby certify that

Representative Agent Signature

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: ~~West States Energy Contractors~~ JTP Trucking
OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011

Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

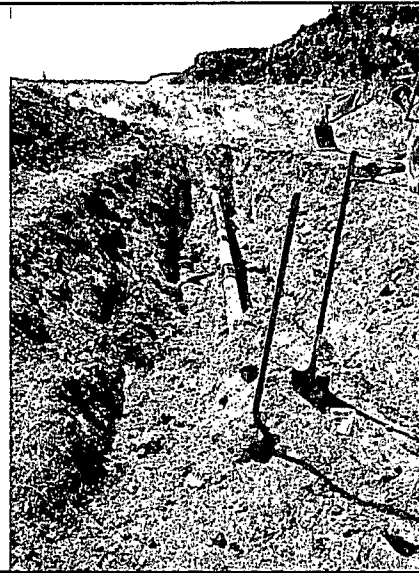
☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Kendra Running
SIGNATURE: Kendra Running
Surface Waste Management Facility Authorized Agent

TITLE: Waste Coordinator DATE: 9/3/14
TELEPHONE NO.: 505-632-0615

Photograph 1

View of final excavation at the North release location, facing north.



Photograph 2

View of excavation at the south release location during repair activities, facing east.





TABLE 1
Lateral K-31 Truby #2 Pipeline Release
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 Entergy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
North Excavation Final Confirmation Samples									
S-1	9/3/2014	4.5	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<30.0
S-2	9/3/2014	2 to 4.5	<0.05	0.14	<0.05	1.77	1.91	24.1	<30.0
S-3	9/3/2014	2 to 4.5	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<30.0
S-4	9/3/2014	2 to 4.5	<0.05	<0.05	<0.05	<0.10	ND	<5.00	<30.0
S-5	9/3/2014	2 to 4.5	<0.05	<0.05	<0.05	<0.10	ND	<4.98	<29.9
South Excavation Final Confirmation Samples									
C-1	9/4/2014	3.5	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<29.9
C-2	9/4/2014	1 to 3.5	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<30.0
C-3	9/4/2014	1 to 3.5	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<29.9
C-4	9/4/2014	1 to 3.5	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<24.6
C-5	9/4/2014	1 to 3.5	<0.05	<0.05	<0.05	<0.10	ND	<5.00	<34.9
Stockpile Sample									
SP-1	9/4/2014	Stockpile	<0.05	<0.05	<0.05	<0.10	ND	<5.00	<30.0

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

NE = Not Established

ND = Not Detected above Laboratory Reporting Limits



Analytical Report

Report Summary

Client: Enterprise Products
Chain Of Custody Number: 17390
Samples Received: 9/3/2014 4:28:00PM
Job Number: 97057-0352
Work Order: P409017
Project Name/Location: K-31 #2 Truby

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 9/5/14

Tim Cain, Laboratory Manager

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.

Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

Project Name: K-31 #2 Truby
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

Reported:
 05-Sep-14 10:56

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P409017-01A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
S-2	P409017-02A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
S-3	P409017-03A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
S-4	P409017-04A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
S-5	P409017-05A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.



Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:56

S-1

P409017-01 (Solid)

Analyte	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		81.6 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.4 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		126 %		50-200	1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:56

S-2

P409017-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	0.14	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	1.39	0.10	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	0.38	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	1.77	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	1.91	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		87.4 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		69.0 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	24.1	5.00	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		107 %		50-200	1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

 Project Name: K-31 #2 Truby
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

Reported:
 05-Sep-14 10:56

S-3
P409017-03 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		77.7 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		90.0 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		119 %		50-200		1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:56

S-4

P409017-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		89.0 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		79.1 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		111 %		50-200	1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:56

S-5

P409017-05 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		88.5 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		75.1 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		103 %		50-200		1436024	09/04/14	09/04/14	EPA 8015D	

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 Project Name: K-31 #2 Truby
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

Reported:
 05-Sep-14 10:56

Volatile 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 1436025 - Purge and Trap EPA 5030A
Blank (1436025-BLK1)

Prepared & Analyzed: 04-Sep-14

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.10	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.7	50-150			
Surrogate: Bromochlorobenzene	42.5		"	50.0		85.0	50-150			

Duplicate (1436025-DUP1)

Source: P409017-01

Prepared & Analyzed: 04-Sep-14

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.10	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	45.9		ug/L	50.0		91.8	50-150			
Surrogate: Bromochlorobenzene	39.7		"	50.0		79.4	50-150			

Matrix Spike (1436025-MS1)

Source: P409017-01

Prepared & Analyzed: 04-Sep-14

Benzene	47.9		ug/L	50.0	ND	95.7	39-150			
Toluene	46.9		"	50.0	ND	93.7	46-148			
Ethylbenzene	45.7		"	50.0	ND	91.5	32-160			
p,m-Xylene	86.9		"	100	ND	86.9	46-148			
o-Xylene	43.3		"	50.0	ND	86.5	46-148			
Surrogate: 1,3-Dichlorobenzene	45.6		"	50.0		91.2	50-150			
Surrogate: Bromochlorobenzene	39.8		"	50.0		79.5	50-150			

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Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

 Project Name: K-31 #2 Truby
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

 Reported:
 05-Sep-14 10:56

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
Batch 1436024 - DRO Extraction EPA 3550M										
Blank (1436024-BLK1)				Prepared & Analyzed: 04-Sep-14						
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg							
Surrogate: Benzo[a]pyrene	22.9		"	19.9		115	50-200			
LCS (1436024-BS1)				Prepared & Analyzed: 04-Sep-14						
Diesel Range Organics (C10-C28)	530	29.9	mg/kg	499		106	38-132			
Surrogate: Benzo[a]pyrene	20.9		"	20.0		105	50-200			
Matrix Spike (1436024-MS1)				Source: P409017-01		Prepared & Analyzed: 04-Sep-14				
Diesel Range Organics (C10-C28)	528	30.0	mg/kg	499	ND	106	38-132			
Surrogate: Benzo[a]pyrene	24.8		"	20.0		124	50-200			
Matrix Spike Dup (1436024-MSD1)				Source: P409017-01		Prepared & Analyzed: 04-Sep-14				
Diesel Range Organics (C10-C28)	569	30.0	mg/kg	499	ND	114	38-132	7.49	20	
Surrogate: Benzo[a]pyrene	25.8		"	20.0		129	50-200			

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Enterprise Products	Project Name:	K-31 #2 Truby	Reported: 05-Sep-14 10:56
614 Reilly Ave	Project Number:	97057-0352	
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	

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
Batch 1436025 - Purge and Trap EPA 5030A										
Blank (1436025-BLK1)				Prepared & Analyzed: 04-Sep-14						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
Duplicate (1436025-DUP1)				Source: P409017-01 Prepared & Analyzed: 04-Sep-14						
Gasoline Range Organics (C6-C10)	ND	4.96	mg/kg		ND				30	
Matrix Spike (1436025-MS1)				Source: P409017-01 Prepared & Analyzed: 04-Sep-14						
Gasoline Range Organics (C6-C10)	0.41		mg/L	0.450	0.03	83.7	75-125			

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Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:56

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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CHAIN OF CUSTODY RECORD

17390

Client: Enterprise		Project Name / Location: K-31 #2 Trub		ANALYSIS / PARAMETERS														
Email, results to: Rsummers@APEX001.com		Sampler Name: Ryle Summers		<div style="display: flex; justify-content: space-between; font-size: small;"> <div>TPH (Method 8015)</div> <div>BTEX (Method 8021)</div> <div>VOC (Method 8260)</div> <div>RCRA 8 Metals</div> <div>Cation / Anion</div> <div>RCI</div> <div>TCLP with H/P</div> <div>CO Table 910-1</div> <div>TPH (418.1)</div> <div>CHLORIDE</div> <div>Sample Cool</div> <div>Sample Intact</div> </div>														
Client Phone No.: 903 821 5603		Client No.: 97097-0352																

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative		TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE		Sample Cool	Sample Intact	
					HNO ₃	HCl														
S-1	9/3/14	1130	PH09017-01	1 X 40%			X	X											Y	Y
S-2	↓	1135	-02	↓			↓	↓											↓	↓
S-3	↓	1140	-03				↓	↓											↓	↓
S-4	↓	1145	-04				↓	↓											↓	↓
S-5	↓	1150	-05	↓			↓	↓											↓	↓
			NFS																	
			NFS																	

Relinquished by: (Signature)		Date: 9/3/14	Time: 1628	Received by: (Signature)		Date: 9/3/14	Time: 1628
Relinquished by: (Signature)				Received by: (Signature)			
Sample Matrix							
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>							
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area.							

envirotech
 Analytical Laboratory

6.1, 6.3, 4.3 5.6



Analytical Report

Report Summary

Client: Enterprise Products
Chain Of Custody Number: 17391
Samples Received: 9/4/2014 2:45:00PM
Job Number: 97057-0352
Work Order: P409018
Project Name/Location: K-31 #2 Truby South

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 9/5/14

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.

Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

Project Name: K-31 #2 Truby South
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

Reported:
 05-Sep-14 10:59

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
C-1	P409018-01A	Soil	09/04/14	09/04/14	Glass Jar, 4 oz.
C-2	P409018-02A	Soil	09/04/14	09/04/14	Glass Jar, 4 oz.
C-3	P409018-03A	Soil	09/04/14	09/04/14	Glass Jar, 4 oz.
C-4	P409018-04A	Soil	09/04/14	09/04/14	Glass Jar, 4 oz.
C-5	P409018-05A	Soil	09/04/14	09/04/14	Glass Jar, 4 oz.
SP-1	P409018-06A	Soil	09/04/14	09/04/14	Glass Jar, 4 oz.

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Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

 Project Name: K-31 #2 Truby South
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

 Reported:
 05-Sep-14 10:59

C-1
P409018-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		94.9 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.7 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		128 %		50-200	1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
 614 Reilly Ave
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 Project Name: K-31 #2 Truby South
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

 Reported:
 05-Sep-14 10:59

C-2
P409018-02 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		95.2 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		96.5 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		115 %		50-200		1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

 Project Name: K-31 #2 Truby South
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

Reported:
 05-Sep-14 10:59

C-3
P409018-03 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.4 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		96.2 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		143 %		50-200		1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products	Project Name:	K-31 #2 Truby South	Reported: 05-Sep-14 10:59
614 Reilly Ave	Project Number:	97057-0352	
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	

C-4

P409018-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		94.5 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		95.5 %		50-150	1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	24.6	mg/kg	1	1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		116 %		50-200	1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

 Project Name: K-31 #2 Truby South
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

 Reported:
 05-Sep-14 10:59

C-5
P409018-05 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		97.2 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.6 %		50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1		1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	34.9	mg/kg	1		1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		132 %		50-200		1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products
 614 Reilly Ave
 Farmington NM, 87401

 Project Name: K-31 #2 Truby South
 Project Number: 97057-0352
 Project Manager: Kyle Summers-Apex TITAN

 Reported:
 05-Sep-14 10:59

SP-1
P409018-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.3 %	50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.5 %	50-150		1436025	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1436025	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1436024	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		120 %	50-200		1436024	09/04/14	09/04/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: K-31 #2 Truby South Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 05-Sep-14 10:59
---	---	------------------------------

Volatile 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 1436025 - Purge and Trap EPA 5030A										
Blank (1436025-BLK1)				Prepared & Analyzed: 04-Sep-14						
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.10	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.7	50-150			
Surrogate: Bromochlorobenzene	42.5		"	50.0		85.0	50-150			
Duplicate (1436025-DUP1)				Source: P409017-01 Prepared & Analyzed: 04-Sep-14						
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.10	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	45.9		ug/L	50.0		91.8	50-150			
Surrogate: Bromochlorobenzene	39.7		"	50.0		79.4	50-150			
Matrix Spike (1436025-MS1)				Source: P409017-01 Prepared & Analyzed: 04-Sep-14						
Benzene	47.9		ug/L	50.0	ND	95.7	39-150			
Toluene	46.9		"	50.0	ND	93.7	46-148			
Ethylbenzene	45.7		"	50.0	ND	91.5	32-160			
p,m-Xylene	86.9		"	100	ND	86.9	46-148			
o-Xylene	43.3		"	50.0	ND	86.5	46-148			
Surrogate: 1,3-Dichlorobenzene	45.6		"	50.0		91.2	50-150			
Surrogate: Bromochlorobenzene	39.8		"	50.0		79.5	50-150			

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Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby South
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:59

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
Batch 1436024 - DRO Extraction EPA 3550M										
Blank (1436024-BLK1)				Prepared & Analyzed: 04-Sep-14						
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg							
Surrogate: Benzo[a]pyrene	22.9		"	19.9		115	50-200			
LCS (1436024-BS1)				Prepared & Analyzed: 04-Sep-14						
Diesel Range Organics (C10-C28)	530	29.9	mg/kg	499		106	38-132			
Surrogate: Benzo[a]pyrene	20.9		"	20.0		105	50-200			
Matrix Spike (1436024-MS1)				Source: P409017-01		Prepared & Analyzed: 04-Sep-14				
Diesel Range Organics (C10-C28)	528	30.0	mg/kg	499	ND	106	38-132			
Surrogate: Benzo[a]pyrene	24.8		"	20.0		124	50-200			
Matrix Spike Dup (1436024-MSD1)				Source: P409017-01		Prepared & Analyzed: 04-Sep-14				
Diesel Range Organics (C10-C28)	569	30.0	mg/kg	499	ND	114	38-132	7.49	20	
Surrogate: Benzo[a]pyrene	25.8		"	20.0		129	50-200			

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Enterprise Products	Project Name:	K-31 #2 Truby South	Reported: 05-Sep-14 10:59
614 Reilly Ave	Project Number:	97057-0352	
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1436025 - Purge and Trap EPA 5030A

Blank (1436025-BLK1)

Prepared & Analyzed: 04-Sep-14

Gasoline Range Organics (C6-C10) ND 4.99 mg/kg

Duplicate (1436025-DUP1)

Source: P409017-01

Prepared & Analyzed: 04-Sep-14

Gasoline Range Organics (C6-C10) ND 4.96 mg/kg ND 30

Matrix Spike (1436025-MS1)

Source: P409017-01

Prepared & Analyzed: 04-Sep-14

Gasoline Range Organics (C6-C10) 0.41 mg/L 0.450 0.03 83.7 75-125

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Enterprise Products
614 Reilly Ave
Farmington NM, 87401

Project Name: K-31 #2 Truby South
Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:
05-Sep-14 10:59

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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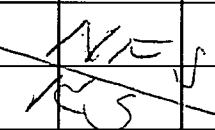
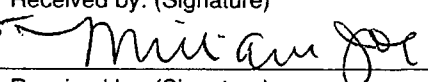

Ph (505) 632-0615 Fx (505) 632-1865

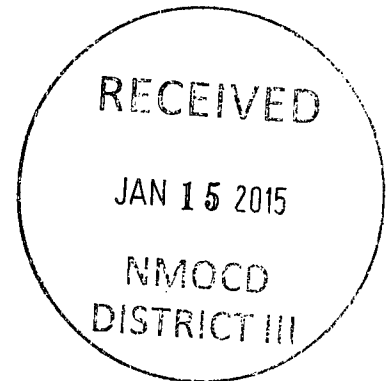
Ph (970) 259-0615 Fr (800) 362-1879

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laboratory@envirotech-inc.com

CHAIN OF CUSTODY RECORD

17391

Client: <u>Enterprise</u>		Project Name / Location: <u>R-31 #2 Truby South</u>		ANALYSIS / PARAMETERS																	
Email results to: <u>R Summers@Apexcos.com</u>		Sampler Name: <u>Ry L Summers</u>		<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;"> TPH (Method 8015) <u>GRD</u> BTEX (Method 8021) <u>GRD</u> VOC (Method 8260) <u>GRD</u> RCRA 8 Metals Cation / Anion RCI TCLP with H/P CO Table 910-1 TPH (418.1) CHLORIDE </div> <div style="width: 15%; text-align: center;"> Sample Cool Sample Intact </div> </div>																	
Client Phone No.: <u>903-821-5603</u>		Client No.: <u>97057-0352</u>																			
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH	BTEX	VOC	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
					HNO ₃	HCl															
C-1	9/4/14	1200	P409018-01	1 X 4oz.				X	X											X	X
C-2		1205	P409018-02																	X	X
C-3		1210	P409018-03																	X	X
C-4		1215	P409018-04																	X	X
C-5		1220	P409018-05																	X	X
SP-1		1240	P409018-06																	X	X
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div>																					
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time								
					9/4/14	1445						9/4/14	1445								
Relinquished by: (Signature)							Received by: (Signature)														
Sample Matrix																					
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>																					
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area. <u>RUSH</u>													<u>10.4 9.7 8.3</u> 9.5								



CORRECTIVE ACTION REPORT

Property:

2ND Report

**Lateral K-31 September 2014 Pipeline Releases
SW 1/4, S9 T25N R6W
NW 1/4 and SW 1/4, S16 T25N R6W
Rio Arriba County, New Mexico**

December 15, 2014
Apex Project No. 7030414G034

Prepared for:

**Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long**

Prepared by:

Heather M. Woods

Heather M. Woods, P.G.
Senior Project Manager

Liz Scaggs

Elizabeth Scaggs, P.G.
Senior Program Manager

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	Figure 2 – Site Vicinity Map
	Figure 3A – Site Map with Soil Analytical Results: North Release
	Figure 3B – Site Map with Soil Analytical Results: Mid-North Release
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	Figure 3D – Site Map with Soil Analytical Results: South Release
Appendix B:	Executed C-138 Solid Waste Acceptance Forms
Appendix C:	Photographic Documentation
Appendix D:	Tables
Appendix E:	Laboratory Analytical Reports & Chain of Custody Documentation

CORRECTIVE ACTION REPORT

Lateral K-31 September 2014 Pipeline Releases

SW 1/4, S9 T25N R6W
NW 1/4 and SW 1/4, S16 T25N R6W
Rio Arriba County, New Mexico

Apex Project No. 7030414G034

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral K-31 September 2014 Pipeline Release Sites are located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 9, and the northwest (NW) ¼ and SW ¼ of Section 16, in Township 25 North and Range 6 West in rural Rio Arriba County, New Mexico (North Release 36.40734N, 107.47930W; Mid-North Release 36.39985N, 107.47667W; Mid-South Release 36.39557N, 107.47572W; and South Release 36.39408N, 107.47519W), referred to hereinafter as the "Sites" or "subject Sites". The North Release Site is located on public land managed by the United States Bureau of Land Management (BLM) and the Mid-North, Mid-South, and South Releases are located on land owned by the State of New Mexico. The Sites are surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

Beginning on September 11, 2014, Enterprise initiated excavation activities at the Sites in an effort to locate and repair four subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were initially identified by releases of natural gas and/or minor staining at the ground surface.

A topographic map depicting the location of the Sites is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New

Mexico Office of the State Engineer (OSE) to determine the appropriate "ranking" for the Sites. The ranking criteria and associated scoring are provided in the following tables:

North, Mid-North and Mid-South Sites			
Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	20
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	10
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			30

Based on Apex's evaluation of the scoring criteria, the North, Mid-North, and Mid-South Sites would have a maximum Total Ranking Score of "30".

South Site			
Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	20
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	0
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			20

Based on Apex's evaluation of the scoring criteria, the South Site would have a maximum Total Ranking Score of "20". The rankings are based on the following:

- Depth to groundwater is approximately 15 feet below grade surface (bgs) as observed in nearby groundwater monitoring wells and elevation differential between the Site and Largo Wash, resulting in a depth to groundwater ranking of "20". No nearby water wells were identified on the Office of the State Engineer (OSE) website database.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site. These proximities result in a wellhead protection area ranking of "0".
- The North and Mid-North release points are located between 500 feet to 700 feet of small ephemeral washes which drain to the Largo Wash east of the Sites. The Mid-South release point is located approximately 870 feet southwest of a stockpond. These proximities result in a distance to surface water body ranking of "10" for the North, Mid-North, and Mid-South Sites. The South release point is located approximately 1,500 feet west of the Largo Wash, resulting in a distance to surface water body ranking of "0".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

Beginning on September 11, 2014, Enterprise initiated excavation activities at the Sites in an effort to locate and repair four subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were initially identified by releases of natural gas and/or minor staining at the ground surface. During the corrective action activities, Energy Maintenance Services USA, Inc. provided heavy equipment and labor support, and Heather Woods, an Apex environmental professional, provided environmental support.

The surface expression of the North excavation measured approximately 36 feet long by 8 feet wide and 4 feet bgs in depth; the Mid-North excavation measured approximately 24 feet long by 10.5 feet wide and 6 feet bgs in depth; the Mid-South excavation measured approximately 38 feet long by 8 feet wide and 5 feet bgs in depth (with an extension of 6 feet long by 8 feet wide and 5 feet bgs in depth); and the South excavation measured approximately 31 feet long by 12 feet wide by 10 to 12 feet bgs in depth (with an extension of approximately 15 feet wide by 4 feet long by 10 to 12 feet bgs in depth).

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands, with silt and clay lenses.

A total of approximately 374 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. Additionally, a total of approximately 1,635 barrels (bbls) of water were removed from the four excavations during dewatering activities and transported to the Basin Disposal, Inc. facility in Bloomfield, New Mexico for disposal. The executed C-138 forms are provided in Appendix B. The remaining unaffected soil stockpiles were sampled to verify acceptable COC concentrations prior to use as backfill. Clean imported fill was then utilized to complete the backfilling activities, and the resulting areas were then contoured to surrounding grade.

Figures 3A through 3D are site maps indicating the approximate locations of the excavated areas in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 electron volt (eV) lamp to aid in determining the excavation limits.

Apex's soil sampling program included the collection of five (5) final confirmation samples (S-1 North through S-5 North) from the North Release excavation, five (5) final confirmation samples (S-1 Mid-North through S-5 Mid-North) from the Mid-North Release excavation, six (6) final confirmation samples (S-1 Mid-South through S-6 Mid-South) from the Mid-South Release excavation, and twelve (12) final confirmation samples (S-1 South through S-12 South) from the South Release excavation for laboratory analysis. Additionally, the sampling program included the collection of three (3) composite samples (SP-1 North through SP-3 North) from the remaining North Release stockpiled soils, two (2) composite samples (SP-1 Mid-North and SP-2 Mid-North) from the remaining Mid-North Release stockpiled soils, and two (2) composite samples (SP-1 Mid-South and SP-2 Mid-South) from the remaining Mid-South Release stockpiled soils to determine the potential to reuse these soils as backfill material. Figures 3A, 3B, 3C, and

3D show the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis.

3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015. At the request of the OCD, soil samples S-5 North, and SP-1 North through SP-3 North were analyzed for chlorides utilizing EPA Method 300.0.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-of-custody forms and laboratory data reports are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Remediation Plan*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits associated with the final confirmation samples collected from the excavated areas to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of greater than 20.

North Release

- The laboratory analyses of confirmation samples collected from soils remaining in place at the North Release location do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RAL.
- The laboratory analyses of confirmation samples collected from soils remaining in place at the North Release location indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.18 milligrams per kilogram (mg/kg), which are below the OCD RAL.
- The laboratory analyses of confirmation samples collected from soils remaining in place at the North Release location do not indicate combined TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the OCD RAL for a Site ranking of "30".
- The OCD requested that a sample from the excavation and all the stockpile samples at the North Release location be analyzed to determine the chloride concentration of the

release area soils. The laboratory analysis of sample S-5 North, collected from the base of the excavation, and stockpile samples SP-1 through SP-3, exhibited chloride concentrations ranging from 59 mg/kg to 180 mg/kg.

Mid-North Release

- The laboratory analyses of confirmation samples collected from soils remaining in place at the Mid-North Release location do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RAL.
- The laboratory analyses of confirmation samples collected from soils remaining in place at the Mid-North Release location do not indicate total BTEX concentrations above the laboratory reporting limits, which are below the OCD RAL.
- The laboratory analyses of confirmation samples collected from soils remaining in place at the North Release location do not indicate combined TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the OCD RAL for a Site ranking of "30".

Mid-South Release

Soil sample S-1 Mid-South was removed by excavation and is not included in the following discussion. Subsequent to the extension of the excavation to the north, soil sample S-6 Mid-South was collected from the north wall to replace soil sample S-1 Mid-South.

- The laboratory analyses of confirmation samples collected from soils remaining in place at the Mid-North Release location do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RAL.
- The laboratory analyses of confirmation samples collected from soils remaining in place at the Mid-South Release location indicate total BTEX concentrations ranging from below the laboratory reporting limits to 3.7 mg/kg, which are below the OCD RAL.
- The laboratory analyses of the confirmation samples collected from soils remaining in place at the Mid-South Release location indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 52 mg/kg, which are below the OCD RAL for a Site ranking of "30".

South Release

Soil samples S-6 South and S-7 South were removed by excavation and are not included in the following discussion. Subsequent to the extension of the excavation to the northwest, soil sample S-10 South was collected to replace soil sample S-6 South. Additionally, following the excavation was extended from a depth of approximately 8 feet bgs to approximately 10 to 12 feet bgs, where soil samples S-8 South, S-9 South, S-11 South, and S-12 South were collected to replace soil sample S-7 South.

- The laboratory analysis of confirmation samples collected from soils remaining in place at the South excavation indicated benzene concentrations ranging from below the laboratory reporting limits to 0.32 mg/kg, which are below the OCD RAL.
- The laboratory analyses of confirmation samples collected from soils remaining in place at the South Release location indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.92 mg/kg, which are below the OCD RAL.

- The laboratory analyses of the confirmation samples collected from soils remaining in place at the South Release location indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 22 mg/kg, which are below the OCD RAL for a Site ranking of "20".

Confirmation sample results are provided in Table 1 through Table 4 in Appendix D.

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral K-31 September 2014 Pipeline Release Sites are located within the Enterprise pipeline ROW in the SW ¼ of Section 9, and the NW ¼ and SW ¼ of Section 16, in Township 25 North and Range 6 West in rural Rio Arriba County, New Mexico (North Release 36.40734N, 107.47930W; Mid-North Release 36.39985N, 107.47667W; Mid-South Release 36.39557N, 107.47572W; and South Release 36.39408N, 107.47519W). The North Release Site is located on public land managed by the BLM and the Mid-North, Mid-South, and South Releases are located on land owned by the State of New Mexico. The Sites are surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

Beginning on September 11, 2014, Enterprise initiated excavation activities at the Sites in an effort to locate and repair four subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were initially identified by releases of natural gas and/or minor staining at the ground surface.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands, with silt and clay lenses.
- The surface expression of the North excavation measured approximately 36 feet long by 8 feet wide and 4 feet bgs in depth; the Mid-North excavation measured approximately 24 feet long by 10.5 feet wide and 6 feet bgs in depth; the Mid-South excavation measured approximately 38 feet long by 8 feet wide and 5 feet bgs in depth (with an extension of 6 feet long by 8 feet wide and 5 feet bgs in depth); and the South excavation measured approximately 31 feet long by 12 feet wide by 10 to 12 feet bgs in depth (with an extension of approximately 15 feet wide by 4 feet long by 10 to 12 feet bgs in depth).
- Prior to backfilling, final confirmation samples were collected from the resulting excavations for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the OCD RALs for Sites with rankings of "20" and "30".
- A total of approximately 374 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. Additionally, a total of approximately 1,635 barrels (bbls) of water were removed from the four excavations during dewatering activities and transported to the Basin Disposal, Inc. facility in Bloomfield, New Mexico for disposal. The remaining unaffected soil stockpiles were sampled to verify acceptable COC concentrations prior to use as backfill. Clean

imported fill was then utilized to complete the backfilling activities, and the resulting areas were then contoured to surrounding grade.

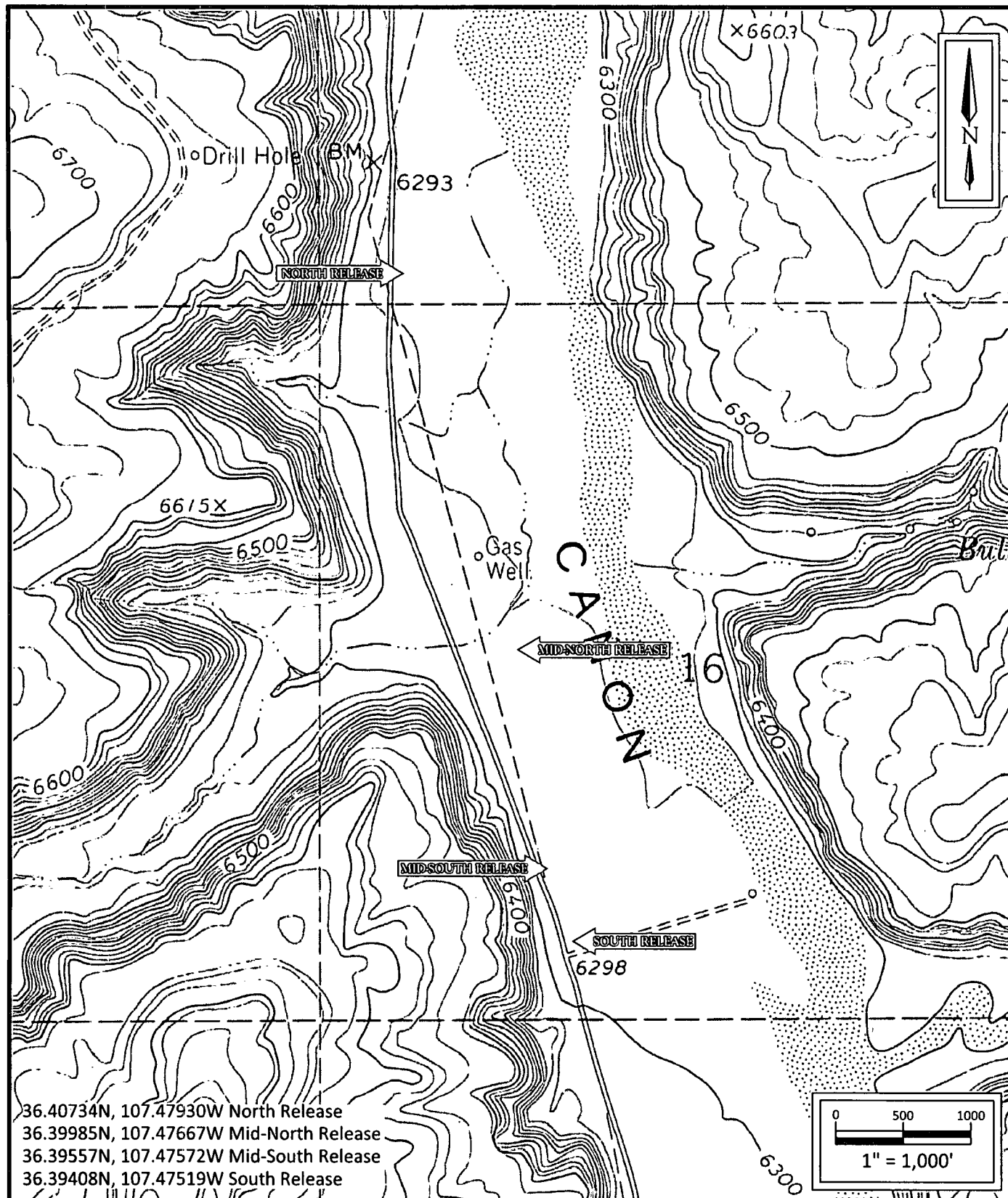
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of 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 expressed written authorization of Enterprise and Apex. 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 proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.



Lateral K-31 September 2014

Pipeline Releases

SW $\frac{1}{4}$ S9 T25N R6W

NW $\frac{1}{4}$ and SW $\frac{1}{4}$ S16 T25N R6W

Rural Rio Arriba County, NM

Project No. 7030414G034



Apex TITAN, Inc.

606 S. Rio Grande, Suite A

Aztec, New Mexico 87410

Phone: (505) 334-5200

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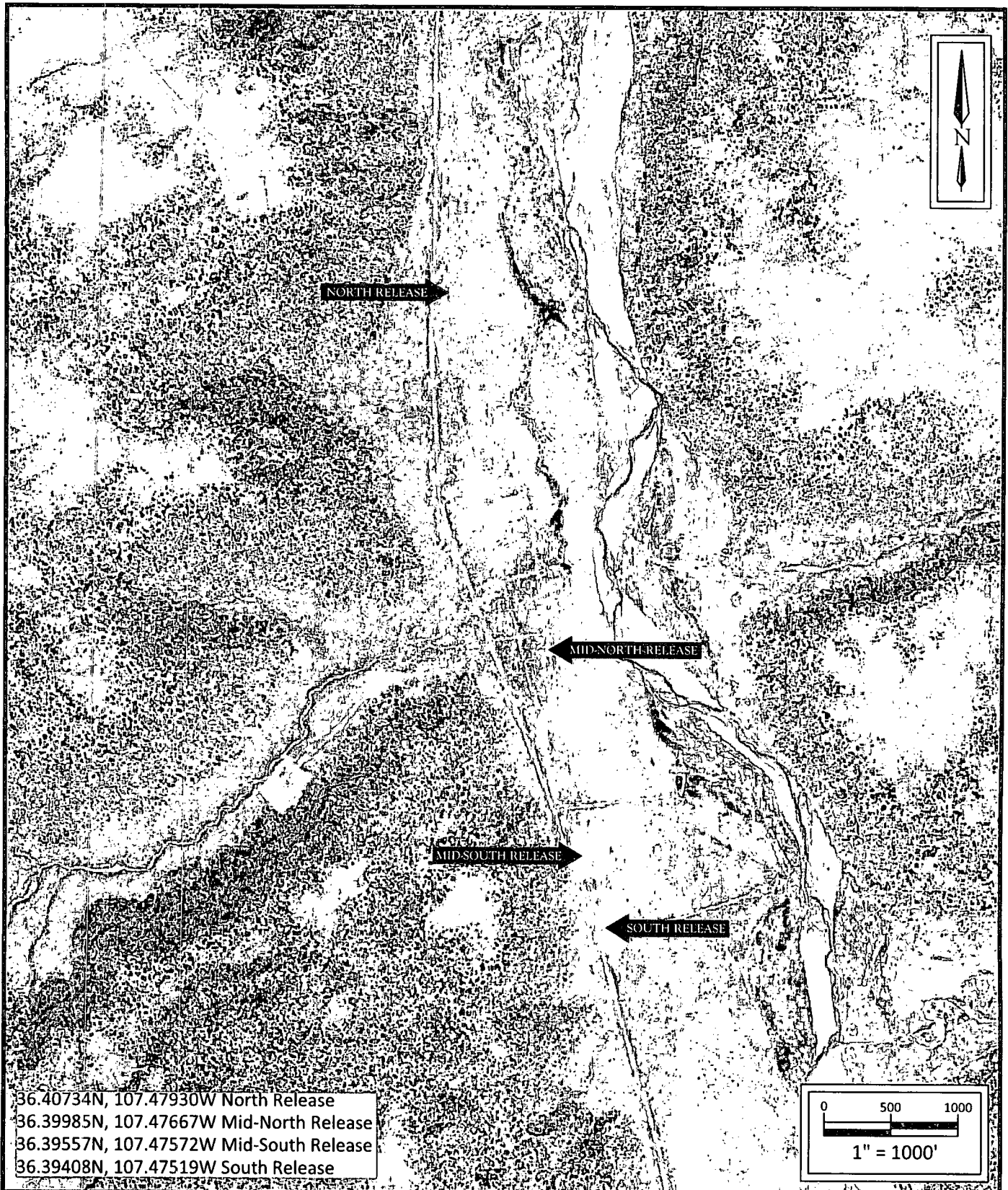
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

Gonzales Mesa, NM Quadrangle

1963



**Lateral K-31 September 2014
 Pipeline Releases**

SW $\frac{1}{4}$ S9 T25N R6W
 NW $\frac{1}{4}$ and SW $\frac{1}{4}$ S16 T25N R6W
 Rural Rio Arriba County, NM



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**FIGURE 2
 Site Vicinity Map
 2013 Aerial Photograph**

Project No. 7030414G034



S-1 North
9/18/2014

Benzene:	<0.048
Toluene:	<0.048
Ethylbenzene:	<0.048
Xylenes:	<0.097
Total BTEX:	ND
GRO:	<4.8
DRO:	<10
Chloride:	NA

S-2 North
9/18/2014

Benzene:	<0.047
Toluene:	0.062
Ethylbenzene:	<0.047
Xylenes:	<0.095
Total BTEX:	0.06
GRO:	<4.7
DRO:	<9.9
Chloride:	NA

S-5 North
9/18/2014

Benzene:	<0.047
Toluene:	<0.047
Ethylbenzene:	<0.047
Xylenes:	0.12
Total BTEX:	0.12
GRO:	<4.7
DRO:	<9.9
Chloride:	59

S-4 North
9/18/2014

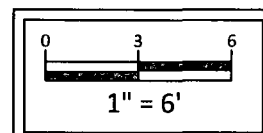
Benzene:	<0.047
Toluene:	0.075
Ethylbenzene:	<0.047
Xylenes:	0.10
Total BTEX:	0.18
GRO:	<4.7
DRO:	<10
Chloride:	NA

S-3 North
9/18/2014

Benzene:	<0.049
Toluene:	<0.049
Ethylbenzene:	<0.049
Xylenes:	<0.098
Total BTEX:	ND
GRO:	<4.9
DRO:	<9.9
Chloride:	NA

LEGEND:

---	PIPELINE
●	SAMPLE LOCATION
▲	RELEASE POINT
▨	EXTENT OF EXCAVATION



NOTE: ALL VALUES ARE REPORTED IN mg/kg

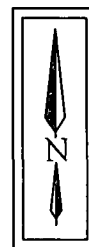
Lateral K-31 September 2014
Pipeline Releases
SW 1/4 S9 T25N R6W
Rural Rio Arriba County, NM
36.40734N, 107.47930W

Project No. 7030414G034



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Aztec, New Mexico 87410
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FIGURE 3A
Site Map with
Soil Analytical Results
North Release



S-1 Mid-North 9/18/2014	
Benzene:	<0.048
Toluene:	<0.048
Ethylbenzene:	<0.048
Xylenes:	<0.097
Total BTEX:	ND
GRO:	<4.8
DRO:	<10

S-2 Mid-North 9/18/2014	
Benzene:	<0.048
Toluene:	<0.048
Ethylbenzene:	<0.048
Xylenes:	<0.096
Total BTEX:	ND
GRO:	<4.8
DRO:	<10

S-4 Mid-North 9/16/2014	
Benzene:	<0.049
Toluene:	<0.049
Ethylbenzene:	<0.049
Xylenes:	<0.098
Total BTEX:	ND
GRO:	<4.9
DRO:	<9.8

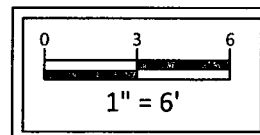
S-5 Mid-North 10/2/2014	
Benzene:	<0.046
Toluene:	<0.046
Ethylbenzene:	<0.046
Xylenes:	<0.093
Total BTEX:	ND
GRO:	<4.6
DRO:	<10

S-3 Mid-North 9/16/2014	
Benzene:	<0.048
Toluene:	<0.048
Ethylbenzene:	<0.048
Xylenes:	<0.095
Total BTEX:	ND
GRO:	<4.8
DRO:	<9.9

LEGEND:

- PIPELINE
- SAMPLE LOCATION
- ▲ RELEASE POINT
- ▨ EXTENT OF EXCAVATION

NOTE: ALL VALUES ARE REPORTED IN mg/kg



**Lateral K-31 September 2014
Pipeline Releases**

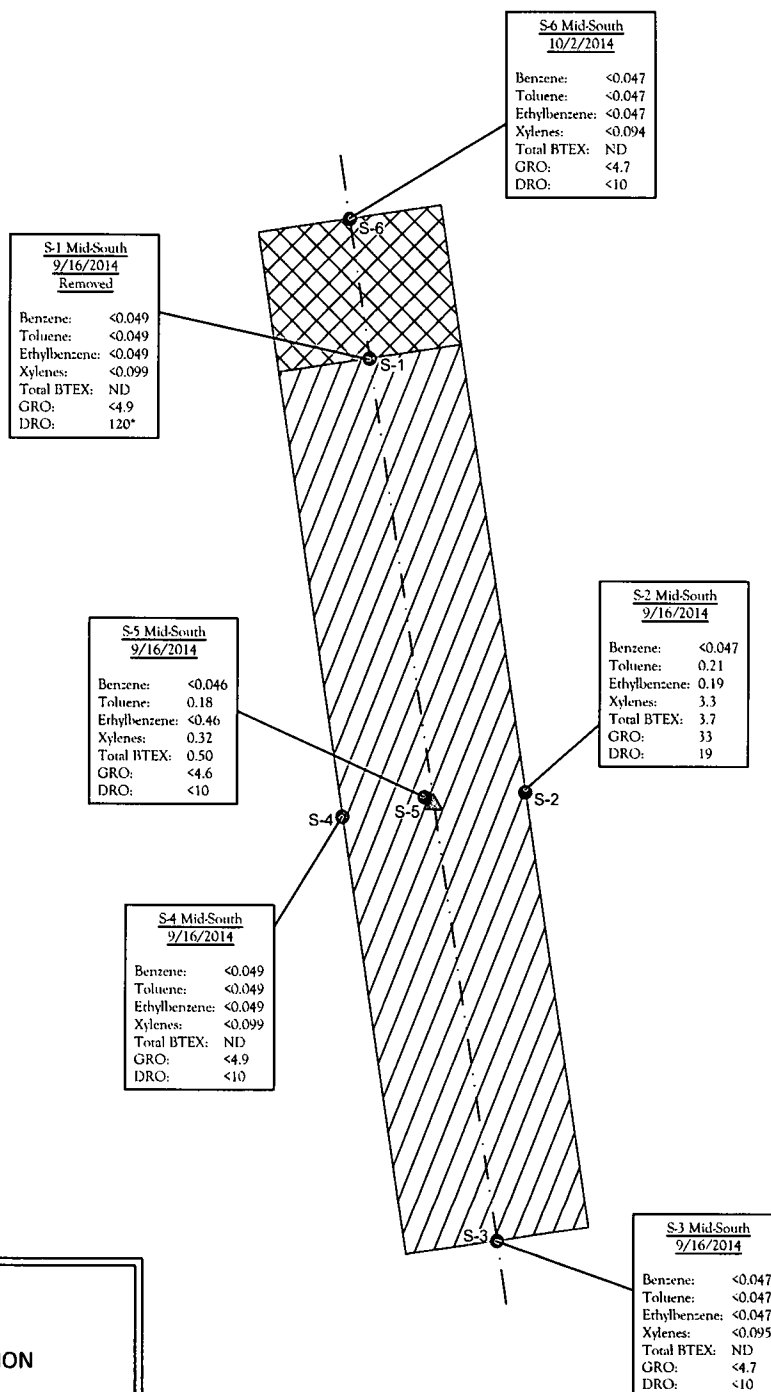
NW $\frac{1}{4}$ and SW $\frac{1}{4}$ S16 T25N R6W
Rural Rio Arriba County, NM
36.39985N, 107.47667W

Project No. 7030414G034



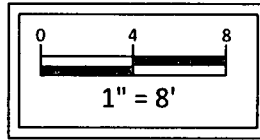
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**FIGURE 3B
Site Map with
Soil Analytical Results
Mid-North Release**



LEGEND:


- PIPELINE
- SAMPLE LOCATION
- ▲ RELEASE POINT
- ▨ EXTENT OF EXCAVATION
- ▩ EXTENDED EXCAVATION



NOTE: ALL VALUES ARE REPORTED IN mg/kg

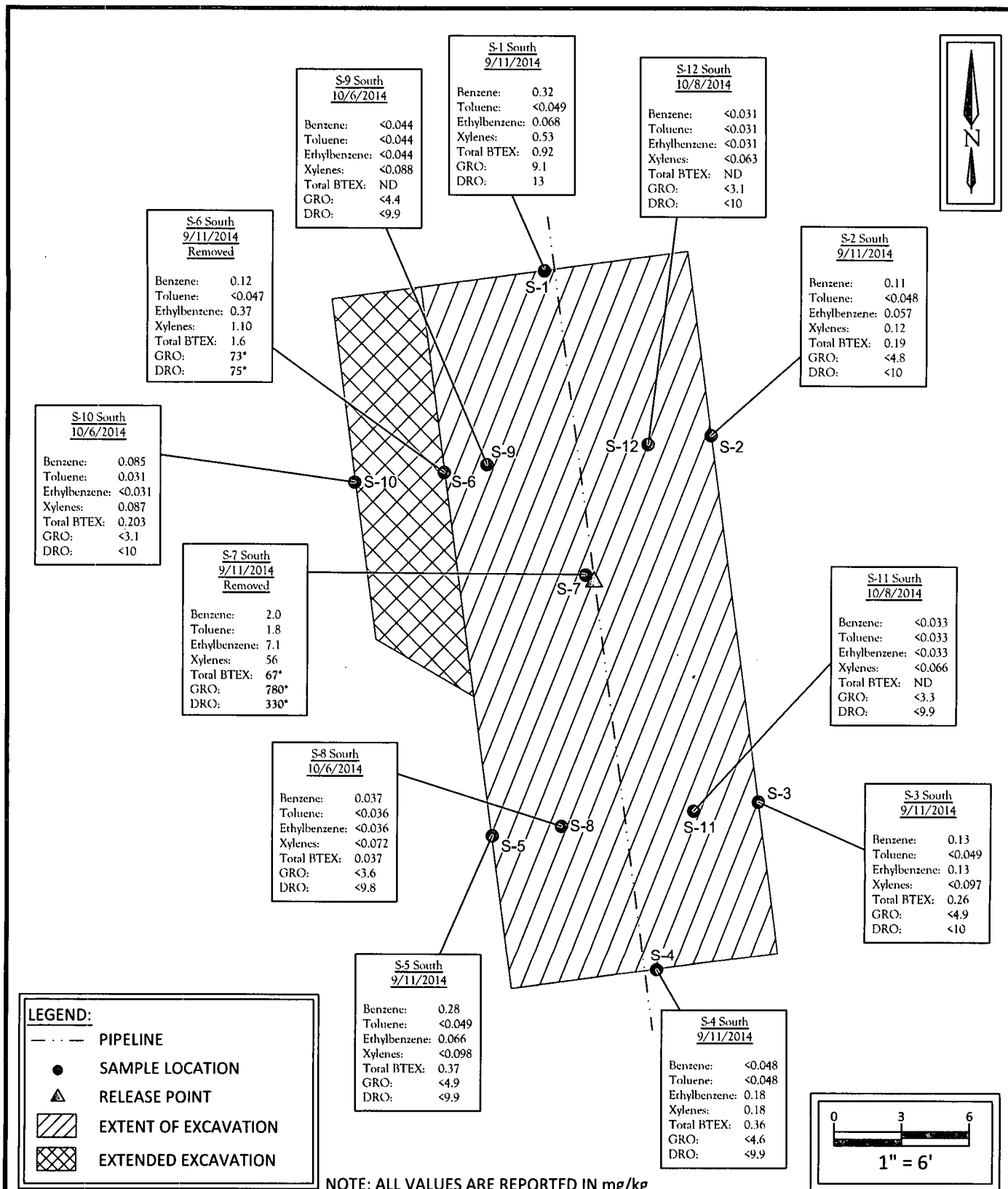
Lateral K-31 September 2014
Pipeline Releases
SW¼ S16 T25N R6W
Rural Rio Arriba County, NM
36.39557N, 107.47572W

Project No. 7030414G034



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FIGURE 3C
Site Map with
Soil Analytical Results
Mid-South Release



**Lateral K-31 September 2014
Pipeline Releases**

SW 1/4 S16 T25N R6W
Rural Rio Arriba County, NM
36.39408N, 107.47519W

Project No. 7030414G034



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**FIGURE 3D
Site Map with
Soil Analytical Results
South Release**

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

97057-0649

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Oct. 2014

2. Originating Site: Lateral K-31 Release Sites

3. Location of Material (Street Address, City, State or ULSTR):

Sections 16 and 25 T 25N R 6W, GPS 36.39408, -107.47519, 36.39557, -107.47572, 36.39985, -107.47667, 36.40734, -107.47930
Rio Arriba County, NM

4. Source and Description of Waste:

Source: Natural Gas Pipeline Release

Description: Exempt petroleum affected soil from clean-up efforts at pipeline release.

Estimated Volume 200 yd³ Known Volume (to be entered by the operator at the end of the haul) 374 yd³ bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☒ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, 9-16-14, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete the required testing/sign the Generator Waste Testing Certification.

I, Kendra Runnag, representative for Envirotech, Inc do hereby certify that

Representative Agent Signature

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: West States Energy Contractors- Kiehl, 3D Services, Del Prado, Ritchey,

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011

Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Kendra Runnag
SIGNATURE: Kendra Runnag
Surface Waste Management Facility Authorized Agent

TITLE: Waste Coordinator DATE: 10/01/14
TELEPHONE NO.: 505-632-0615

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site: Lateral K-31 Release Sites

3. Location of Material (Street Address, City, State or ULSTR):

Sections 16 and 25 T 25N R 6W, Rio Arriba County, NM

4. Source and Description of Waste:

Source: Natural Gas Pipeline Release

Description: Exempt petroleum affected soil from clean-up efforts at pipeline release.

Estimated Volume 200 yd³ (bbls) Known Volume (to be entered by the operator at the end of the haul) 1635 yd³ (bbls)

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, John Long, representative or authorized agent for Enterprise Field Services, LLC do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☒ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, John Long, 9-30-14, representative for _____ authorize Basin Disposal, Inc. to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____ do hereby certify that

Representative/Agent Signature

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Various transporters on the OCD approved haulers list.

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Basin Disposal, Inc. * Permit #: NM1-005**

Address of Facility: **200 Montana Bloomfield, NM**

Method of Treatment and/or Disposal:

☒ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED**

☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME:

John Volkerd

TITLE:

Gen Mgr - VP

DATE:

11/25/14

SIGNATURE:

Surface Waste Management Facility Authorized Agent

TELEPHONE NO.:

505-632-8936

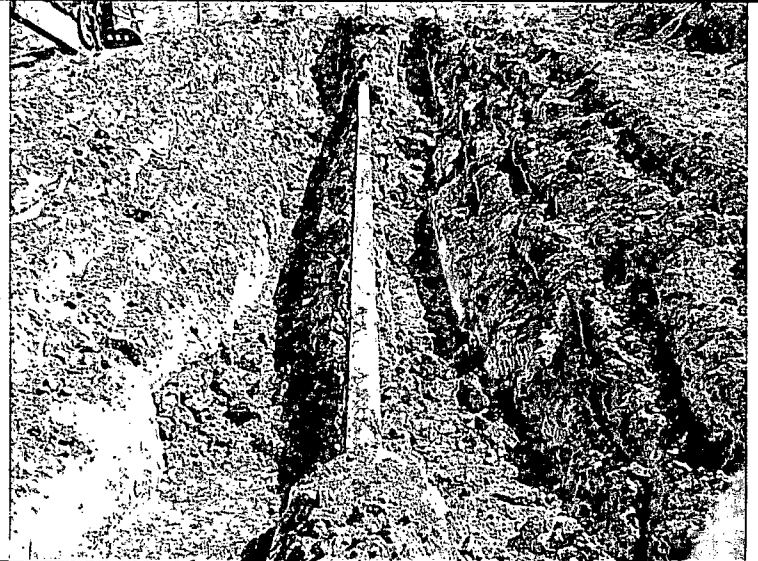
Photograph 1

View of the final North Release excavation, facing northwest.



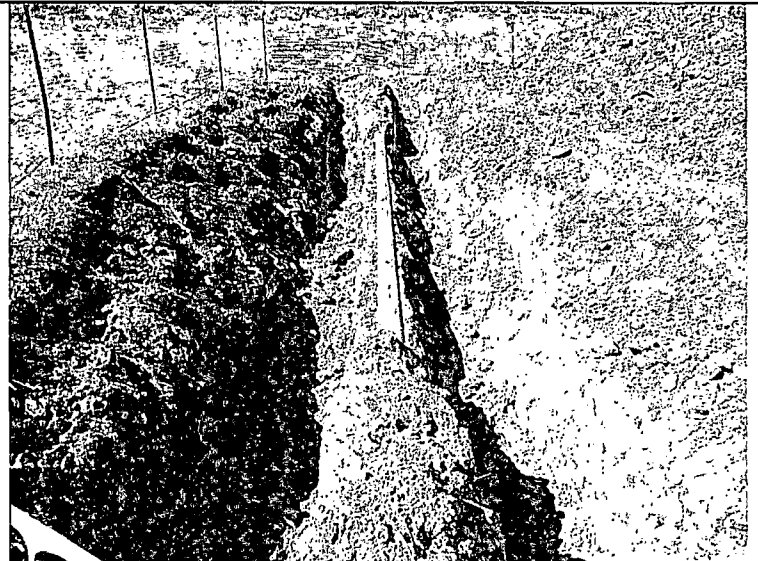
Photograph 2

View of the final Mid-North Release excavation, facing northwest.



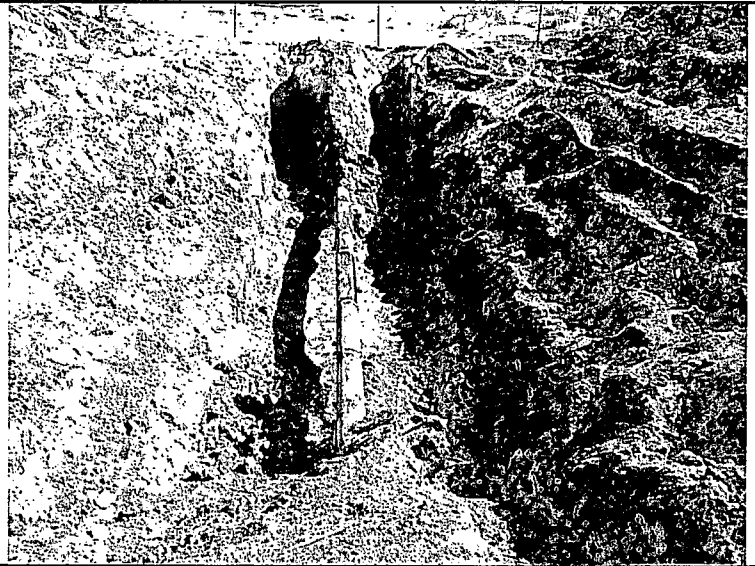
Photograph 3

View of the final Mid-South Release excavation, facing northwest.



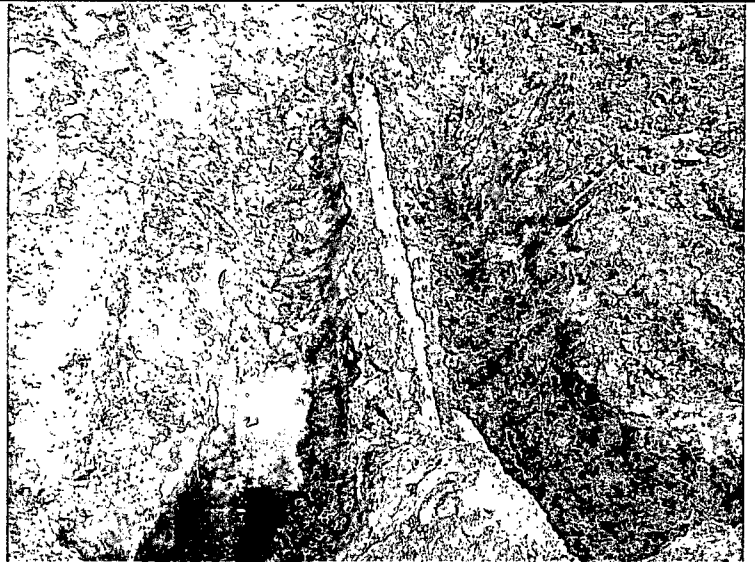
Photograph 4

View of the partially completed South Release excavation following pipeline repair activities, facing northwest.



Photograph 5

View of the final South Release excavation following corrective action activities, facing northwest.



Photograph 6

View of the final South Release excavation following corrective action activities, facing southeast.

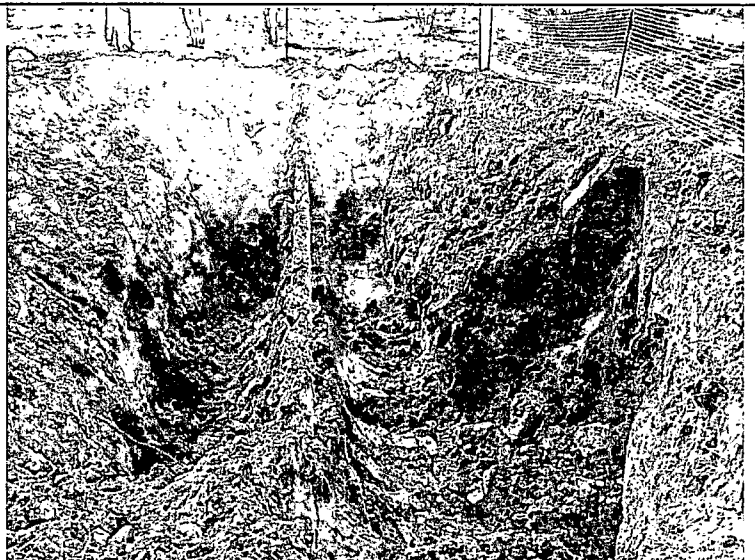




TABLE 1
Lateral K-31 "North" Pipeline Release
SOIL ANALYTICAL SUMMARY

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)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100		NE
Excavation Confirmation Samples										
S-1	9/18/2014	2 to 4	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<10	NA
S-2	9/18/2014	2 to 4	<0.047	0.062	<0.047	<0.095	0.06	<4.7	<9.9	NA
S-3	9/18/2014	2 to 4	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<9.9	NA
S-4	9/18/2014	2 to 4	<0.047	0.075	<0.047	0.10	0.18	<4.7	<10	NA
S-5	9/18/2014	4	<0.047	<0.047	<0.047	0.12	0.12	<4.7	<9.9	59
Stockpile Confirmation Samples										
SP-1	9/24/2014	Stockpile	<0.050	<0.050	<0.050	<0.10	ND	<5.0	<9.9	160
SP-2	9/24/2014	Stockpile	<0.056	<0.056	<0.056	<0.11	ND	<5.6	<9.9	110
SP-3	9/24/2014	Stockpile	<0.050	<0.050	<0.050	<0.10	ND	<5.0	<10	180

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits

NA = Not analyzed



TABLE 2
Lateral K-31 "Mid-North" Pipeline Release
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	
Excavation Confirmation Samples									
S-1	9/18/2014	3 to 6	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<10
S-2	9/18/2014	3 to 6	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<10
S-3	9/16/2014	3 to 6	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.9
S-4	9/16/2014	3 to 6	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<9.8
S-5	10/2/2014	6	<0.046	<0.046	<0.046	<0.093	ND	<4.6	<10
Stockpile Confirmation Samples									
SP-1	9/24/2014	Stockpile	<0.047	<0.047	<0.047	<0.094	ND	<4.7	<9.9
SP-2	9/24/2014	Stockpile	<0.054	<0.054	<0.054	<0.11	ND	<5.4	<10

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits



TABLE 3
Lateral K-31 "Mid-South" Pipeline Release
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	
Sample Removed by Excavation									
S-1	9/16/2014	3 to 5	<0.049	<0.049	<0.049	<0.099	ND	<4.9	120
Confirmation Samples									
S-2	9/16/2014	3 to 5	<0.047	0.21	0.19	3.3	3.7	33	19
S-3	9/16/2014	3 to 5	<0.047	<0.047	<0.047	<0.095	ND	<4.7	<10
S-4	9/16/2014	3 to 5	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<10
S-5	9/16/2014	5	<0.046	0.18	<0.46	0.32	0.50	<4.6	<10
S-6	10/2/2014	3 to 5	<0.047	<0.047	<0.047	<0.094	ND	<4.7	<10
Stockpile Confirmation Samples									
SP-1	10/2/2014	Stockpile	<0.047	<0.047	<0.047	<0.094	ND	8.1	12
SP-2	10/2/2014	Stockpile	<0.047	<0.047	<0.047	<0.094	ND	<4.7	<9.9

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits



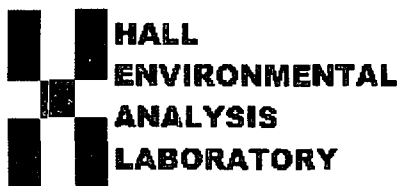
TABLE 4
Lateral K-31 "South" Pipeline Release
SOIL ANALYTICAL SUMMARY

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	
Samples Removed by Excavation									
S-6	9/11/2014	4 to 8	0.12	<0.047	0.37	1.10	1.6	73	75
S-7	9/11/2014	8	2.0	1.8	7.1	56	67	780	330
Excavation Confirmation Samples									
S-1	9/11/2014	4 to 8	0.32	<0.049	0.068	0.53	0.92	9.1	13
S-2	9/11/2014	4 to 8	0.11	<0.048	0.057	0.12	0.19	<4.8	<10
S-3	9/11/2014	4 to 8	0.13	<0.049	0.13	<0.097	0.26	<4.9	<10
S-4	9/11/2014	4 to 8	<0.048	<0.048	0.18	0.18	0.36	<4.6	<9.9
S-5	9/11/2014	4 to 8	0.28	<0.049	0.066	<0.098	0.37	<4.9	<9.9
S-8	10/6/2014	10 to 12	0.037	<0.036	<0.036	<0.072	0.037	<3.6	<9.8
S-9	10/6/2014	10 to 12	<0.044	<0.044	<0.044	<0.088	ND	<4.4	<9.9
S-10	10/6/2014	4 to 10	0.085	0.031	<0.031	0.087	0.203	<3.1	<10
S-11	10/8/2014	10 to 12	<0.033	<0.033	<0.033	<0.066	ND	<3.3	<9.9
S-12	10/8/2014	10 to 12	<0.031	<0.031	<0.031	<0.063	ND	<3.1	<10

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits



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

November 04, 2014

Heather Woods
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Enterprise Lateral K-31 North

OrderNo.: 1409949

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/19/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 25, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1409949

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** S-1 North**Project:** Enterprise Lateral K-31 North**Collection Date:** 9/18/2014 1:19:00 PM**Lab ID:** 1409949-001**Matrix:** SOIL**Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2014 7:37:32 AM	15396
Surr: DNOP	87.1	57.9-140		%REC	1	9/20/2014 7:37:32 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2014 2:15:08 PM	15403
Surr: BFB	80.3	80-120		%REC	1	9/22/2014 2:15:08 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/22/2014 2:15:08 PM	15403
Toluene	ND	0.048		mg/Kg	1	9/22/2014 2:15:08 PM	15403
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2014 2:15:08 PM	15403
Xylenes, Total	ND	0.097		mg/Kg	1	9/22/2014 2:15:08 PM	15403
Surr: 4-Bromofluorobenzene	94.3	80-120		%REC	1	9/22/2014 2:15:08 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1409949

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** S-2 North**Project:** Enterprise Lateral K-31 North**Collection Date:** 9/18/2014 1:24:00 PM**Lab ID:** 1409949-002**Matrix:** SOIL**Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2014 8:41:39 AM	15396
Surr: DNOP	89.3	57.9-140		%REC	1	9/20/2014 8:41:39 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/22/2014 10:17:24 PM	15403
Surr: BFB	83.5	80-120		%REC	1	9/22/2014 10:17:24 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/22/2014 10:17:24 PM	15403
Toluene	0.062	0.047		mg/Kg	1	9/22/2014 10:17:24 PM	15403
Ethylbenzene	ND	0.047		mg/Kg	1	9/22/2014 10:17:24 PM	15403
Xylenes, Total	ND	0.095		mg/Kg	1	9/22/2014 10:17:24 PM	15403
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	9/22/2014 10:17:24 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 9
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-3 North

Project: Enterprise Lateral K-31 North

Collection Date: 9/18/2014 1:31:00 PM

Lab ID: 1409949-003

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2014 9:02:57 AM	15396
Surr: DNOP	86.3	57.9-140		%REC	1	9/20/2014 9:02:57 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2014 4:45:52 PM	15403
Surr: BFB	84.1	80-120		%REC	1	9/22/2014 4:45:52 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	9/22/2014 4:45:52 PM	15403
Toluene	ND	0.049		mg/Kg	1	9/22/2014 4:45:52 PM	15403
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2014 4:45:52 PM	15403
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2014 4:45:52 PM	15403
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	9/22/2014 4:45:52 PM	15403

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1409949

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** S-4 North**Project:** Enterprise Lateral K-31 North**Collection Date:** 9/18/2014 1:34:00 PM**Lab ID:** 1409949-004**Matrix:** SOIL**Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2014 9:24:19 AM	15396
Surr: DNOP	88.4	57.9-140		%REC	1	9/20/2014 9:24:19 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/22/2014 5:16:10 PM	15403
Surr: BFB	90.1	80-120		%REC	1	9/22/2014 5:16:10 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/22/2014 5:16:10 PM	15403
Toluene	0.075	0.047		mg/Kg	1	9/22/2014 5:16:10 PM	15403
Ethylbenzene	ND	0.047		mg/Kg	1	9/22/2014 5:16:10 PM	15403
Xylenes, Total	0.10	0.095		mg/Kg	1	9/22/2014 5:16:10 PM	15403
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	9/22/2014 5:16:10 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-5 North

Project: Enterprise Lateral K-31 North

Collection Date: 9/18/2014 1:29:00 PM

Lab ID: 1409949-005

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2014 9:45:41 AM	15396
Surr: DNOP	85.9	57.9-140		%REC	1	9/20/2014 9:45:41 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/22/2014 10:47:24 PM	15403
Surr: BFB	92.6	80-120		%REC	1	9/22/2014 10:47:24 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/22/2014 10:47:24 PM	15403
Toluene	ND	0.047		mg/Kg	1	9/22/2014 10:47:24 PM	15403
Ethylbenzene	ND	0.047		mg/Kg	1	9/22/2014 10:47:24 PM	15403
Xylenes, Total	0.12	0.094		mg/Kg	1	9/22/2014 10:47:24 PM	15403
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	9/22/2014 10:47:24 PM	15403
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	59	30		mg/Kg	20	9/24/2014 5:06:26 PM	15468

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409949

04-Nov-14

Client: Enterprise Field Services
Project: Enterprise Lateral K-31 North

Sample ID	MB-15468	SampType	MBLK	TestCode	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	15468	RunNo	21418					
Prep Date	9/23/2014	Analysis Date	9/23/2014	SeqNo	625609	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-15468	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID	LCSS	Batch ID	15468	RunNo	21418					
Prep Date	9/23/2014	Analysis Date	9/23/2014	SeqNo	625610	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	90	110			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409949

04-Nov-14

Client: Enterprise Field Services

Project: Enterprise Lateral K-31 North

Sample ID	MB-15396		SampType:	MBLK		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	15396		RunNo:	21269				
Prep Date:	9/19/2014		Analysis Date:	9/19/2014		SeqNo:	621919		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	9.4		10.00		94.4	57.9	140				

Sample ID	LCS-15396		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 15396		RunNo: 21269					
Prep Date:	9/19/2014		Analysis Date: 9/19/2014		SeqNo: 621920		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	10	50.00	0	354	68.6	130			S
Surr: DNOP	15		5.000		292	57.9	140			S

Sample ID	LCS-15396		SampType:	LCS		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	15396		RunNo:	21269				
Prep Date:	9/19/2014		Analysis Date:	9/19/2014		SeqNo:	622111		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	53	10	50.00	0	107	68.6	130				
Surr: DNOP	5.1		5.000		103	57.9	140				

Sample ID	1409949-001AMS		SampType: MS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	S-1 North		Batch ID: 15396		RunNo: 21309					
Prep Date:	9/19/2014		Analysis Date: 9/20/2014		SeqNo: 623192		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.35	0	89.7	40.1	152			
Surr: DNOP	4.4		5.035		86.7	57.9	140			

Sample ID	1409949-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	S-1 North		Batch ID:	15396		RunNo:	21309				
Prep Date:	9/19/2014		Analysis Date:	9/20/2014		SeqNo:	623193		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48	10	49.90	0	95.6	40.1	152	5.42	32.1		
Surr: DNOP	4.6		4.990		92.0	57.9	140	0	0		

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409949

04-Nov-14

Client: Enterprise Field Services
Project: Enterprise Lateral K-31 North

Sample ID	MB-15403	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623436	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.9	80	120			

Sample ID	LCS-15403	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.5	65.8	139			
Surr: BFB	910		1000		91.0	80	120			

Sample ID	1409949-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S-1 North	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623508	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.20	0	105	71.8	132			
Surr: BFB	950		968.1		97.7	80	120			

Sample ID	1409949-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S-1 North	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623517	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.13	0	107	71.8	132	1.74	20	
Surr: BFB	940		965.3		97.8	80	120	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409949

04-Nov-14

Client: Enterprise Field Services
Project: Enterprise Lateral K-31 North

Sample ID	MB-15403		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 15403		RunNo: 21348					
Prep Date:	9/19/2014		Analysis Date: 9/22/2014		SeqNo: 623564		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	LCS-15403		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 15403		RunNo: 21348					
Prep Date:	9/19/2014		Analysis Date: 9/22/2014		SeqNo: 623565		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0	91.7	80	120			
Toluene	0.92	0.050	1.000	0	91.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	1409949-002AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	S-2 North		Batch ID: 15403		RunNo: 21348					
Prep Date:	9/19/2014		Analysis Date: 9/22/2014		SeqNo: 623577		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.047	0.9434	0.03974	83.2	77.4	142			
Toluene	0.89	0.047	0.9434	0.06206	88.2	77	132			
Ethylbenzene	0.85	0.047	0.9434	0	90.5	77.6	134			
Xylenes, Total	2.7	0.094	2.830	0.1089	93.1	77.4	132			
Surr: 4-Bromofluorobenzene	1.1		0.9434		114	80	120			

Sample ID	1409949-002AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles					
Client ID:	S-2 North		Batch ID: 15403		RunNo: 21348					
Prep Date:	9/19/2014		Analysis Date: 9/22/2014		SeqNo: 623578		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.047	0.9416	0.03974	92.2	77.4	142	9.56	20	
Toluene	0.96	0.047	0.9416	0.06206	95.8	77	132	7.55	20	
Ethylbenzene	0.94	0.047	0.9416	0	100	77.6	134	9.99	20	
Xylenes, Total	3.0	0.094	2.825	0.1089	102	77.4	132	8.53	20	
Surr: 4-Bromofluorobenzene	0.83		0.9416		87.8	80	120	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: Enterprise

Work Order Number: 1409949

RcptNo: 1

Received by/date:

AF 09/19/14

Logged By: Anne Thorne

9/19/2014 7:00:00 AM

Anne Thorne

Completed By: Anne Thorne

9/19/2014

Anne Thorne

Reviewed By:

MG

09/19/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: Enterprise Field Services

Mailing Address: 614 Reilly Ave
Farmington, NM 87401

Phone #: (505) 716-2787

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush 3-Day 9/23

Project Name:

Enterprise Lateral K-31 North

Project #:

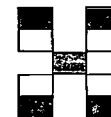
Project Manager:

Heather Woods

Sampler: Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 19



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTE	BTEX + MTE	TPH 8015B	TPH (Method 8015B)	EDB (Method 8015B)	PAH's (8310)	RCRA 8 Metals	Anions (F, Cl)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
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Date: 9/18/14 Time: 1840 Relinquished by: Heather M. Woods

Received by: Christopher Waller Date: 9/18/14 Time: 1840

Date: 9/18/14 Time: 1857 Relinquished by: Christopher Waller

Received by: Tom Long Date: 9/19/14 Time: 0700

Remarks: Direct bill to Enterprise from Heather on 10/31/14. Attn: Tom Long "North" to IDS. Chloride add to sample S-5 per Heather on 9/23/14 KMS

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

November 04, 2014

Heather Woods
APEX AZTEC
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX (505) 334-5204

RE: Lateral K-31 North

OrderNo.: 1409C44

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/25/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 30, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409C44

Date Reported: 11/4/2014

CLIENT: APEX AZTEC

Client Sample ID: SP-1 North

Project: Lateral K-31 North

Collection Date: 9/24/2014 1:50:00 PM

Lab ID: 1409C44-001

Matrix: MEOH (SOIL)

Received Date: 9/25/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/26/2014 8:00:15 PM	15500
Surr: DNOP	104	57.9-140		%REC	1	9/26/2014 8:00:15 PM	15500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/25/2014 11:07:53 PM	R21449
Surr: BFB	90.1	80-120		%REC	1	9/25/2014 11:07:53 PM	R21449
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/25/2014 11:07:53 PM	R21449
Toluene	ND	0.050		mg/Kg	1	9/25/2014 11:07:53 PM	R21449
Ethylbenzene	ND	0.050		mg/Kg	1	9/25/2014 11:07:53 PM	R21449
Xylenes, Total	ND	0.10		mg/Kg	1	9/25/2014 11:07:53 PM	R21449
Surr: 4-Bromofluorobenzene	93.3	80-120		%REC	1	9/25/2014 11:07:53 PM	R21449
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	160	30		mg/Kg	20	9/25/2014 4:24:48 PM	15510

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409C44

Date Reported: 11/4/2014

CLIENT: APEX AZTEC

Client Sample ID: SP-2 North

Project: Lateral K-31 North

Collection Date: 9/24/2014 2:15:00 PM

Lab ID: 1409C44-002

Matrix: MEOH (SOIL)

Received Date: 9/25/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/26/2014 8:30:36 PM	15500
Surr: DNOP	97.5	57.9-140		%REC	1	9/26/2014 8:30:36 PM	15500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.6		mg/Kg	1	9/25/2014 11:36:24 PM	R21449
Surr: BFB	95.4	80-120		%REC	1	9/25/2014 11:36:24 PM	R21449
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.056		mg/Kg	1	9/25/2014 11:36:24 PM	R21449
Toluene	ND	0.056		mg/Kg	1	9/25/2014 11:36:24 PM	R21449
Ethylbenzene	ND	0.056		mg/Kg	1	9/25/2014 11:36:24 PM	R21449
Xylenes, Total	ND	0.11		mg/Kg	1	9/25/2014 11:36:24 PM	R21449
Surr: 4-Bromofluorobenzene	94.0	80-120		%REC	1	9/25/2014 11:36:24 PM	R21449
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	110	30		mg/Kg	20	9/25/2014 4:49:37 PM	15510

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1409C44

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX AZTEC**Client Sample ID:** SP-3 North**Project:** Lateral K-31 North**Collection Date:** 9/24/2014 2:28:00 PM**Lab ID:** 1409C44-003**Matrix:** MEOH (SOIL)**Received Date:** 9/25/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/29/2014 11:29:05 AM	15500
Surr: DNOP	96.5	57.9-140		%REC	1	9/29/2014 11:29:05 AM	15500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/26/2014 12:04:48 AM	R21449
Surr: BFB	88.1	80-120		%REC	1	9/26/2014 12:04:48 AM	R21449
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/26/2014 12:04:48 AM	R21449
Toluene	ND	0.050		mg/Kg	1	9/26/2014 12:04:48 AM	R21449
Ethylbenzene	ND	0.050		mg/Kg	1	9/26/2014 12:04:48 AM	R21449
Xylenes, Total	ND	0.10		mg/Kg	1	9/26/2014 12:04:48 AM	R21449
Surr: 4-Bromofluorobenzene	91.6	80-120		%REC	1	9/26/2014 12:04:48 AM	R21449
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	180	30		mg/Kg	20	9/25/2014 5:14:26 PM	15510

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C44

04-Nov-14

Client: APEX AZTEC
Project: Lateral K-31 North

Sample ID	MB-15510	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	15510	RunNo:	21476					
Prep Date:	9/25/2014	Analysis Date:	9/25/2014	SeqNo:	627974	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-15510	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	15510	RunNo:	21476					
Prep Date:	9/25/2014	Analysis Date:	9/25/2014	SeqNo:	627975	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C44

04-Nov-14

Client: APEX AZTEC
Project: Lateral K-31 North

Sample ID	MB-15500	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15500	RunNo:	21436					
Prep Date:	9/25/2014	Analysis Date:	9/25/2014	SeqNo:	626728	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.9		10.00		99.2	57.9	140			

Sample ID	LCS-15500	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15500	RunNo:	21436					
Prep Date:	9/25/2014	Analysis Date:	9/25/2014	SeqNo:	626795	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	113	68.6	130			
Surr: DNOP	4.8		5.000		96.5	57.9	140			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C44

04-Nov-14

Client: APEX AZTEC
Project: Lateral K-31 North

Sample ID	MB-15490 MK		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	R21449		RunNo:	21449				
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627596		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	880		1000		87.7	80	120				

Sample ID	LCS-15490 MK		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	R21449		RunNo:	21449				
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627597		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	65.8	139				
Surr: BFB	980		1000		98.0	80	120				

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C44

04-Nov-14

Client: APEX AZTEC
Project: Lateral K-31 North

Sample ID	MB-15490 MK	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R21449	RunNo:	21449					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627632	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.4	80	120			

Sample ID	LCS-15490 MK	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R21449	RunNo:	21449					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627633	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |




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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1409C44

RcptNo: 1

Received by/date:		09/25/14
Logged By:	Lindsay Mangin	9/25/2014 7:00:00 AM
Completed By:	Lindsay Mangin	9/25/2014 9:09:02 AM
Reviewed By:	CS	09/25/14

Chain of Custody

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

Log In

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

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

Special Handling (If applicable)

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


Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); display: inline-block;"> 8021 BTEX 8015 TPH (Geo-Pro) 300-9 Chlorides </div>										Lab use only Due Date:								
		Contact: <u>Andy Freeman</u> Phone:												Temp. of coolers when received (C°): <u>1.5</u>								
Project Manager <u>Heather Woods</u>		PO/SO #: <u>Direct Bill to Enterprise</u>												Page <u>1</u> of <u>1</u>								
Sampler's Name <u>Heather Woods</u>		Sampler's Signature <u>Heather M. Woods</u>																				
Proj. No. <u>10304146034</u>		Project Name <u>Lateral K-31 North</u>		No/Type of Containers <u>4-02</u>																		
Matrix	Date	Time	COOP	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)									
S	9/24/14	1350	X		SP-1 North						1											
S	9/24/14	1415	X		SP-2 North						1		X	X	X							
S	9/24/14	1428	X		SP-3 North						1		X	X	X							
 <div> <div>MS</div> <div>HW</div> </div> 																						
Turn around time <input type="checkbox"/> Normal <input checked="" type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush Results end of day <u>9/29/14</u>																						
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:		NOTES: Direct Bill to Enterprise Field Services Attn: Tom Long * per e mail from Heather Woods on 10/31/14, added "North" to all sample IDs. KMS 11/3/14										
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:												
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:												
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:												
Matrix		WW - Wastewater		W - Water		S - Soil		SD - Solid		L - Liquid		A - Air Bag		C - Charcoal tube		SL - sludge		O - Other				
Container		VOA - 40 ml vial		AG - Amber / Or Glass 1 Liter						250 ml - Glass wide mouth				P/O - Plastic or other								



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

November 04, 2014

Heather Woods
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Enterprise Lateral K-31 Mid-North

OrderNo.: 1409950

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/19/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 23, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services **Client Sample ID:** S-1 Mid-North
Project: Enterprise Lateral K-31 Mid-North **Collection Date:** 9/18/2014 2:02:00 PM
Lab ID: 1409950-001 **Matrix:** SOIL **Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2014 10:07:06 AM	15396
Surr: DNOP	112	57.9-140		%REC	1	9/20/2014 10:07:06 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2014 5:46:18 PM	15403
Surr: BFB	89.1	80-120		%REC	1	9/22/2014 5:46:18 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/22/2014 5:46:18 PM	15403
Toluene	ND	0.048		mg/Kg	1	9/22/2014 5:46:18 PM	15403
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2014 5:46:18 PM	15403
Xylenes, Total	ND	0.097		mg/Kg	1	9/22/2014 5:46:18 PM	15403
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	9/22/2014 5:46:18 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409950

Date Reported: 11/4/2014

CLIENT: Enterprise Field Services

Client Sample ID: S-2 Mid-North

Project: Enterprise Lateral K-31 Mid-North

Collection Date: 9/18/2014 2:06:00 PM

Lab ID: 1409950-002

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2014 10:28:32 AM	15396
Surr: DNOP	107	57.9-140		%REC	1	9/20/2014 10:28:32 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2014 6:16:28 PM	15403
Surr: BFB	86.6	80-120		%REC	1	9/22/2014 6:16:28 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/22/2014 6:16:28 PM	15403
Toluene	ND	0.048		mg/Kg	1	9/22/2014 6:16:28 PM	15403
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2014 6:16:28 PM	15403
Xylenes, Total	ND	0.096		mg/Kg	1	9/22/2014 6:16:28 PM	15403
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	9/22/2014 6:16:28 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical ReportLab Order **1409950**

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** S-3 Mid-North**Project:** Enterprise Lateral K-31 Mid-North**Collection Date:** 9/18/2014 2:10:00 PM**Lab ID:** 1409950-003**Matrix:** SOIL**Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2014 10:50:06 AM	15396
Surr: DNOP	108	57.9-140		%REC	1	9/20/2014 10:50:06 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2014 6:46:34 PM	15403
Surr: BFB	79.0	80-120	S	%REC	1	9/22/2014 6:46:34 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	9/22/2014 6:46:34 PM	15403
Toluene	ND	0.048		mg/Kg	1	9/22/2014 6:46:34 PM	15403
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2014 6:46:34 PM	15403
Xylenes, Total	ND	0.095		mg/Kg	1	9/22/2014 6:46:34 PM	15403
Surr: 4-Bromofluorobenzene	94.0	80-120		%REC	1	9/22/2014 6:46:34 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical ReportLab Order **1409950**

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** S-4 Mid-North**Project:** Enterprise Lateral K-31 Mid-North**Collection Date:** 9/18/2014 2:14:00 PM**Lab ID:** 1409950-004**Matrix:** SOIL**Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/20/2014 11:11:29 AM	15396
Surr: DNOP	108	57.9-140		%REC	1	9/20/2014 11:11:29 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2014 11:17:32 PM	15403
Surr: BFB	84.7	80-120		%REC	1	9/22/2014 11:17:32 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	9/22/2014 11:17:32 PM	15403
Toluene	ND	0.049		mg/Kg	1	9/22/2014 11:17:32 PM	15403
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2014 11:17:32 PM	15403
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2014 11:17:32 PM	15403
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	9/22/2014 11:17:32 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1409950

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Enterprise Field Services**Client Sample ID:** S-5 Mid-North**Project:** Enterprise Lateral K-31 Mid-North**Collection Date:** 9/18/2014 2:19:00 PM**Lab ID:** 1409950-005**Matrix:** SOIL**Received Date:** 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2014 11:32:56 AM	15396
Surr: DNOP	113	57.9-140		%REC	1	9/20/2014 11:32:56 AM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/22/2014 11:47:40 PM	15403
Surr: BFB	75.3	80-120	S	%REC	1	9/22/2014 11:47:40 PM	15403
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	9/22/2014 11:47:40 PM	15403
Toluene	ND	0.046		mg/Kg	1	9/22/2014 11:47:40 PM	15403
Ethylbenzene	ND	0.046		mg/Kg	1	9/22/2014 11:47:40 PM	15403
Xylenes, Total	ND	0.093		mg/Kg	1	9/22/2014 11:47:40 PM	15403
Surr: 4-Bromofluorobenzene	86.4	80-120		%REC	1	9/22/2014 11:47:40 PM	15403

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409950

04-Nov-14

Client: Enterprise Field Services
Project: Enterprise Lateral K-31 Mid-North

Sample ID	MB-15396	SampType	MBLK	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	PBS	Batch ID	15396	RunNo	21269					
Prep Date	9/19/2014	Analysis Date	9/19/2014	SeqNo	621919	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.4	57.9	140			

Sample ID	LCS-15396	SampType	LCS	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	LCSS	Batch ID	15396	RunNo	21269					
Prep Date	9/19/2014	Analysis Date	9/19/2014	SeqNo	621920	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	10	50.00	0	354	68.6	130			S
Surr: DNOP	15		5.000		292	57.9	140			S

Sample ID	LCS-15396	SampType	LCS	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	LCSS	Batch ID	15396	RunNo	21269					
Prep Date	9/19/2014	Analysis Date	9/19/2014	SeqNo	622111	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	68.6	130			
Surr: DNOP	5.1		5.000		103	57.9	140			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409950

04-Nov-14

Client: Enterprise Field Services

Project: Enterprise Lateral K-31 Mid-North

Sample ID	MB-15403	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623436	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.9	80	120			

Sample ID	LCS-15403	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.5	65.8	139			
Surr: BFB	910		1000		91.0	80	120			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409950

04-Nov-14

Client: Enterprise Field Services
Project: Enterprise Lateral K-31 Mid-North

Sample ID	MB-15403		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	15403		RunNo:	21348			
Prep Date:	9/19/2014		Analysis Date:	9/22/2014		SeqNo:	623564		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	LCS-15403		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	15403		RunNo:	21348			
Prep Date:	9/19/2014		Analysis Date:	9/22/2014		SeqNo:	623565		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0	91.7	80	120			
Toluene	0.92	0.050	1.000	0	91.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenenvironmental.com

Sample Log-In Check List

Client Name: Enterprise

Work Order Number: 1409950

RcptNo: 1

Received by/date: AT 09/19/14

Logged By: Anne Thorne 9/19/2014 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 9/19/2014 Anne Thorne

Reviewed By: mg 09/19/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:	
Client: <u>Enterprise Field Services</u>	<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush	<u>3-Day 9/23</u>
Mailing Address: <u>614 Reilly Ave</u> <u>Farmington, NM 87401</u>	Project Name: <u>Enterprise Lateral K-31 Mid-North</u>		
Phone #: <u>(505) 716-2703</u>	Project #:		
email or Fax#:	Project Manager:		
QA/QC Package:	<u>Heather Woods</u>		
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)	Sampler: <u>H. Woods</u>	
Accreditation	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____	Sample Temperature: <u>18.9</u>		
<input type="checkbox"/> EDD (Type) _____			

☐ Standard ☒ Rush 3-Day 9/23

Enterprise Lateral K-31 Mid-North

Project Manager:

Heather Woods

Sampler: H. Woods

On Ice: ☒ Yes

Sample Temperature: 50.00

Container Type and #	Material	Quantity	Remarks
1
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Preservative
Type

HEAL No

149950

[illegible]

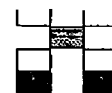
Date:	Time:	Relinquished by:
9/8/14	1840	Heath M. Wood

Received by:	Date	Time
Christine Walcott	9/18/14	1840

Date:	Time:	Relinquished by:
9/8/14	1857	Christie Walter

Received by: Am J Date 09/19/14 Time 17

Remarks: Bill to Enterprise Field Services
Attn: Tom Long
Per email from Heather Woods on
10/31/14, added Mid-North to all I



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

11/31



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

November 04, 2014

Heather Woods
APEX AZTEC
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX (505) 334-5204

RE: Lateral K-31 Mid-North

OrderNo.: 1409C43

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/25/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 29, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1409C43

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX AZTEC

Client Sample ID: SP-1 Mid-North

Project: Lateral K-31 Mid-North

Collection Date: 9/24/2014 1:11:00 PM

Lab ID: 1409C43-001

Matrix: MEOH (SOIL)

Received Date: 9/25/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/26/2014 6:59:15 PM	15500
Surr: DNOP	82.5	57.9-140		%REC	1	9/26/2014 6:59:15 PM	15500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/25/2014 10:10:49 PM	R21449
Surr: BFB	88.4	80-120		%REC	1	9/25/2014 10:10:49 PM	R21449
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/25/2014 10:10:49 PM	R21449
Toluene	ND	0.047		mg/Kg	1	9/25/2014 10:10:49 PM	R21449
Ethylbenzene	ND	0.047		mg/Kg	1	9/25/2014 10:10:49 PM	R21449
Xylenes, Total	ND	0.094		mg/Kg	1	9/25/2014 10:10:49 PM	R21449
Surr: 4-Bromofluorobenzene	91.4	80-120		%REC	1	9/25/2014 10:10:49 PM	R21449

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX AZTEC Client Sample ID: SP-2 Mid-North
 Project: Lateral K-31 Mid-North Collection Date: 9/24/2014 1:33:00 PM
 Lab ID: 1409C43-002 Matrix: MEOH (SOIL) Received Date: 9/25/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/26/2014 7:29:45 PM	15500
Surr: DNOP	92.2	57.9-140		%REC	1	9/26/2014 7:29:45 PM	15500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.4		mg/Kg	1	9/25/2014 10:39:19 PM	R21449
Surr: BFB	88.5	80-120		%REC	1	9/25/2014 10:39:19 PM	R21449
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.054		mg/Kg	1	9/25/2014 10:39:19 PM	R21449
Toluene	ND	0.054		mg/Kg	1	9/25/2014 10:39:19 PM	R21449
Ethylbenzene	ND	0.054		mg/Kg	1	9/25/2014 10:39:19 PM	R21449
Xylenes, Total	ND	0.11		mg/Kg	1	9/25/2014 10:39:19 PM	R21449
Surr: 4-Bromofluorobenzene	92.5	80-120		%REC	1	9/25/2014 10:39:19 PM	R21449

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C43

04-Nov-14

Client: APEX AZTEC

Project: Lateral K-31 Mid-North

Sample ID	MB-15500	SampType	MBLK	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	PBS	Batch ID	15500	RunNo	21436					
Prep Date	9/25/2014	Analysis Date	9/25/2014	SeqNo	626728	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.9		10.00		99.2	57.9	140			

Sample ID	LCS-15500	SampType	LCS	TestCode	EPA Method 8015D: Diesel Range Organics					
Client ID	LCSS	Batch ID	15500	RunNo	21436					
Prep Date	9/25/2014	Analysis Date	9/25/2014	SeqNo	626795	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	113	68.6	130			
Surr: DNOP	4.8		5.000		96.5	57.9	140			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C43

04-Nov-14

Client: APEX AZTEC

Project: Lateral K-31 Mid-North

Sample ID	MB-15490 MK	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R21449	RunNo:	21449					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627596	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.7	80	120			

Sample ID	LCS-15490 MK	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R21449	RunNo:	21449					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627597	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	65.8	139			
Surr: BFB	980		1000		98.0	80	120			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C43

04-Nov-14

Client: APEX AZTEC

Project: Lateral K-31 Mid-North

Sample ID	MB-15490 MK		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	R21449		RunNo:	21449			
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627632		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.4	80	120			

Sample ID	LCS-15490 MK		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	R21449		RunNo:	21449			
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627633		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1409C43

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

9/25/2014 7:00:00 AM

Completed By: Lindsay Mangin

9/25/2014 9:04:03 AM

Reviewed By:

CS

09/25/14

[Signature]

[Signature]

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:


Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); display: inline-block;"> 8021 BTEX 8015 TPH (GRO/DEO) </div>		Lab use only Due Date:								
		Contact: <u>Andy Freeman</u> Phone:				Temp. of coolers when received (C°): <u>1.5</u> <div style="display: flex; justify-content: space-around;"> 12345 </div> Page <u>1</u> of <u>1</u>								
Project Manager <u>Heather Woods</u>		PO/ISO #: <u>Direct Bill to Enterprise</u>												
Sampler's Name <u>Heather Woods</u>		Sampler's Signature <u>Heather M. Woods</u>												
Proj. No. <u>7030414 G034</u>		Project Name <u>Lateral K-31 Mid-North</u>		No/Type of Containers <u>4 oz</u>										
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1-L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)	
S	9/24/14	1311	X		SP-1 Mid-North						1		X X	1409043-001
S	9/24/14	1333	X		SP-2 Mid-North						1		X X	-002
<div style="transform: rotate(-30deg); display: inline-block; opacity: 0.5;"> NES H42 </div>														
Turn around time <input type="checkbox"/> Normal <input checked="" type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush Results end of day <u>9/29/14</u>														
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:	NOTES: Direct Bill to Enterprise Field Services Attn: Tom Long *Per e-mail from Heather Woods on 10/31/14, added "Mid-North" to all sample IDs. <u>WMS 11/3/14</u>						
<u>Heather M. Woods</u>		<u>9/24/14</u>	<u>1647</u>	<u>Christopher Webster</u>		<u>9/24/14</u>	<u>1647</u>							
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:							
<u>Christopher Webster</u>		<u>9/24/14</u>	<u>1915</u>	<u>[Signature]</u>		<u>09/25/14</u>	<u>0900</u>							
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:							
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:							

Matrix Container WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil
 VOA - 40 ml vial AG - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other



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

November 04, 2014

Heather Woods
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX

RE: Lateral K-31 Mid-South

OrderNo.: 1409878

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/18/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 25, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409878**Date Reported: **11/4/2014****CLIENT:** APEX TITAN**Client Sample ID:** S-1 Mid-South**Project:** Lateral K-31 Mid-South**Collection Date:** 9/16/2014 3:45:00 PM**Lab ID:** 1409878-001**Matrix:** SOIL**Received Date:** 9/18/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	120	9.8		mg/Kg	1	9/23/2014 1:49:28 PM	15363
Surr: DNOP	122	57.9-140		%REC	1	9/23/2014 1:49:28 PM	15363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2014 10:52:21 PM	15378
Surr: BFB	95.2	80-120		%REC	1	9/22/2014 10:52:21 PM	15378
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	9/22/2014 10:52:21 PM	15378
Toluene	ND	0.049		mg/Kg	1	9/22/2014 10:52:21 PM	15378
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2014 10:52:21 PM	15378
Xylenes, Total	ND	0.099		mg/Kg	1	9/22/2014 10:52:21 PM	15378
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	9/22/2014 10:52:21 PM	15378

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-2 Mid-South

Project: Lateral K-31 Mid-South

Collection Date: 9/16/2014 3:50:00 PM

Lab ID: 1409878-002

Matrix: SOIL

Received Date: 9/18/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	19	10		mg/Kg	1	9/19/2014 7:51:09 PM	15369
Surr: DNOP	90.8	57.9-140		%REC	1	9/19/2014 7:51:09 PM	15369
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	33	4.7		mg/Kg	1	9/22/2014 11:20:57 PM	15378
Surr: BFB	195	80-120	S	%REC	1	9/22/2014 11:20:57 PM	15378
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/22/2014 11:20:57 PM	15378
Toluene	0.21	0.047		mg/Kg	1	9/22/2014 11:20:57 PM	15378
Ethylbenzene	0.19	0.047		mg/Kg	1	9/22/2014 11:20:57 PM	15378
Xylenes, Total	3.3	0.094		mg/Kg	1	9/22/2014 11:20:57 PM	15378
Surr: 4-Bromofluorobenzene	116	80-120		%REC	1	9/22/2014 11:20:57 PM	15378

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical ReportLab Order **1409878**Date Reported: **11/4/2014****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** APEX TITAN**Client Sample ID:** S-3 Mid-South**Project:** Lateral K-31 Mid-South**Collection Date:** 9/16/2014 3:55:00 PM**Lab ID:** 1409878-003**Matrix:** SOIL**Received Date:** 9/18/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/19/2014 8:55:21 PM	15369
Surr: DNOP	110	57.9-140		%REC	1	9/19/2014 8:55:21 PM	15369
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/22/2014 11:49:32 PM	15378
Surr: BFB	97.9	80-120		%REC	1	9/22/2014 11:49:32 PM	15378
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	9/22/2014 11:49:32 PM	15378
Toluene	ND	0.047		mg/Kg	1	9/22/2014 11:49:32 PM	15378
Ethylbenzene	ND	0.047		mg/Kg	1	9/22/2014 11:49:32 PM	15378
Xylenes, Total	ND	0.095		mg/Kg	1	9/22/2014 11:49:32 PM	15378
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	9/22/2014 11:49:32 PM	15378

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-4 Mid-South

Project: Lateral K-31 Mid-South

Collection Date: 9/16/2014 4:00:00 PM

Lab ID: 1409878-004

Matrix: SOIL

Received Date: 9/18/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/19/2014 9:16:52 PM	15369
Surr: DNOP	107	57.9-140		%REC	1	9/19/2014 9:16:52 PM	15369
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/23/2014 12:18:04 AM	15378
Surr: BFB	96.4	80-120		%REC	1	9/23/2014 12:18:04 AM	15378
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	9/23/2014 12:18:04 AM	15378
Toluene	ND	0.049		mg/Kg	1	9/23/2014 12:18:04 AM	15378
Ethylbenzene	ND	0.049		mg/Kg	1	9/23/2014 12:18:04 AM	15378
Xylenes, Total	ND	0.099		mg/Kg	1	9/23/2014 12:18:04 AM	15378
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	9/23/2014 12:18:04 AM	15378

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 9
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1409878

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** S-5 Mid-South**Project:** Lateral K-31 Mid-South**Collection Date:** 9/16/2014 4:05:00 PM**Lab ID:** 1409878-005**Matrix:** SOIL**Received Date:** 9/18/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/19/2014 9:38:11 PM	15369
Surr: DNOP	98.6	57.9-140		%REC	1	9/19/2014 9:38:11 PM	15369
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/23/2014 12:46:43 AM	15378
Surr: BFB	102	80-120		%REC	1	9/23/2014 12:46:43 AM	15378
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	9/23/2014 12:46:43 AM	15378
Toluene	0.18	0.046		mg/Kg	1	9/23/2014 12:46:43 AM	15378
Ethylbenzene	ND	0.046		mg/Kg	1	9/23/2014 12:46:43 AM	15378
Xylenes, Total	0.32	0.092		mg/Kg	1	9/23/2014 12:46:43 AM	15378
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	9/23/2014 12:46:43 AM	15378

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409878

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Mid-South

Sample ID	MB-15363		SampType:	MBLK		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	15363		RunNo:	21269				
Prep Date:	9/18/2014		Analysis Date:	9/18/2014		SeqNo:	620601		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	10		10.00		100	57.9	140				

Sample ID	LCS-15363		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 15363		RunNo: 21269					
Prep Date:	9/18/2014		Analysis Date: 9/18/2014		SeqNo: 620602		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	10	50.00	0	125	68.6	130			
Surr: DNOP	5.2		5.000		104	57.9	140			

Sample ID	LCS-15369		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 15369		RunNo: 21309					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 622110		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	68.6	130			
Surr: DNOP	5.0		5.000		100	57.9	140			

Sample ID	MB-15369		SampType:	MBLK		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	15369		RunNo:	21309				
Prep Date:	9/18/2014		Analysis Date:	9/19/2014		SeqNo:	622115		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	8.9		10.00		89.3	57.9	140				

Sample ID	1409878-002AMS		SampType: MS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	S-2 Mid-South		Batch ID: 15369		RunNo: 21309					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 623164		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	93	10	49.75	19.20	149	40.1	152			
Surr: DNOP	5.1		4.975		103	57.9	140			

Sample ID	1409878-002AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	S-2 Mid-South		Batch ID:	15369		RunNo:	21309				
Prep Date:	9/18/2014		Analysis Date:	9/19/2014		SeqNo:	623165		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409878

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Mid-South

Sample ID	1409878-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	S-2 Mid-South	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	623165	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.9	49.55	19.20	162	40.1	152	6.79	32.1	S
Surr: DNOP	7.1		4.955		143	57.9	140	0	0	S

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409878

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Mid-South

Sample ID	MB-15378	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	15378	RunNo:	21342					
Prep Date:	9/18/2014	Analysis Date:	9/22/2014	SeqNo:	623292	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.2	80	120			

Sample ID	LCS-15378	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	15378	RunNo:	21342					
Prep Date:	9/18/2014	Analysis Date:	9/22/2014	SeqNo:	623293	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	65.8	139			
Surr: BFB	1000		1000		101	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409878

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Mid-South

Sample ID	MB-15378		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS		Batch ID:	15378		RunNo:	21342				
Prep Date:	9/18/2014		Analysis Date:	9/22/2014		SeqNo:	623326		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120				

Sample ID	LCS-15378		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 15378		RunNo: 21342					
Prep Date:	9/18/2014		Analysis Date: 9/22/2014		SeqNo: 623327		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.050	1.000	0	90.6	80	120			
Toluene	0.91	0.050	1.000	0	91.1	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID	1409878-001AMS			SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	S-1 Mid-South			Batch ID:	15378		RunNo:	21342			
Prep Date:	9/18/2014			Analysis Date:	9/22/2014		SeqNo:	623339		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.76	0.049	0.9843	0	77.0	77.4	142			S	
Toluene	0.83	0.049	0.9843	0	84.8	77	132				
Ethylbenzene	0.88	0.049	0.9843	0	89.5	77.6	134				
Xylenes, Total	2.7	0.098	2.953	0	89.9	77.4	132				
Surr: 4-Bromofluorobenzene	1.1		0.9843		108	80	120				

Sample ID	1409878-001AMSD			SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	S-1 Mid-South			Batch ID:	15378		RunNo:	21342			
Prep Date:	9/18/2014			Analysis Date:	9/22/2014		SeqNo:	623340		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.88	0.049	0.9881	0	89.5	77.4	142	15.3	20		
Toluene	0.90	0.049	0.9881	0	91.2	77	132	7.62	20		
Ethylbenzene	0.91	0.049	0.9881	0	92.1	77.6	134	3.28	20		
Xylenes, Total	2.7	0.099	2.964	0	91.7	77.4	132	2.39	20		
Surr: 4-Bromofluorobenzene	1.1		0.9881		109	80	120	0	0		

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1409878

RcptNo: 1

Received by/date: AT 09/18/14

Logged By: Lindsay Mangin 9/18/2014 7:30:00 AM [Signature]

Completed By: Lindsay Mangin 9/18/2014 9:10:19 AM [Signature]

Reviewed By: [Signature] 09/18/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)


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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



APEX

Office Location Aztec, NM

Laboratory: Hall Environmental

Address: Albuquerque, NM

Contact: H. Woods Andy Freeman

Phone: _____

PO/SO #: Direct Bill to Enterprise

ANALYSIS REQUESTED

8021 BTEX

8015 TPH (Geo/Deo)

Lab use only

Due Date: _____

Temp. of coolers when received (C°):

1	2	3	4	5
---	---	---	---	---

Page 1 of 1

1.0

Project Manager Heather Woods

Sampler's Name Heather Woods

Sampler's Signature Heather M. Woods

Proj. No. 7030414G034

Project Name Lateral K-31 Mid-South

No/Type of Containers 4 oz.

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
S	9/16/14	1545			S-1 Mid-South						1		X X 1409878-001
S	9/16/14	1550			S-2 Mid-South						1		X X -002
S	9/16/14	1555			S-3 Mid-South						1		X X -003
S	9/16/14	1600			S-4 Mid-South						1		X X -004
S	9/16/14	1605			S-5 Mid-South						1		X X -005
													-00

Turn around time ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature) <u>Heather M. Woods</u>	Date: <u>9/16/14</u>	Time: <u>1901</u>	Received by (Signature) <u>[Signature]</u>	Date: <u>9/16/14</u>	Time: <u>1901</u>
Relinquished by (Signature) <u>[Signature]</u>	Date: <u>9/17/14</u>	Time: <u>757</u>	Received by (Signature) <u>Christine Lybette</u>	Date: <u>9/17/14</u>	Time: <u>757</u>
Relinquished by (Signature) <u>[Signature]</u>	Date: <u>9/17/14</u>	Time: <u>2040</u>	Received by (Signature) <u>[Signature]</u>	Date: <u>9/18/14</u>	Time: <u>0730</u>
Relinquished by (Signature) _____	Date: _____	Time: _____	Received by (Signature) _____	Date: _____	Time: _____

NOTES: Direct Bill to Enterprise Field Services

Attn: Tom Long

* Per email from Heather Woods on 10/31/14, added "Mid-South" all sample IDs. kms 11/3/14

Matrix Container

WW - Wastewater

VOA - 40 ml vial

W - Water

A/G - Amber / Or Glass 1 Liter

S - Soil

SD - Solid

L - Liquid

250 ml - Glass wide mouth

A - Air Bag

C - Charcoal tube

P/O - Plastic or other

SL - sludge

O - Oil



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

November 04, 2014

Heather Woods
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX

RE: Lateral K-31 Mid-South

OrderNo.: 1410144

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/3/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 08, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-6 Mid-South

Project: Lateral K-31 Mid-South

Collection Date: 10/2/2014 11:25:00 AM

Lab ID: 1410144-001

Matrix: SOIL

Received Date: 10/3/2014 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/6/2014 3:55:41 PM	15711
Surr: DNOP	92.4	57.9-140		%REC	1	10/6/2014 3:55:41 PM	15711
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/6/2014 3:57:31 PM	15706
Surr: BFB	92.6	80-120		%REC	1	10/6/2014 3:57:31 PM	15706
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	10/6/2014 3:57:31 PM	15706
Toluene	ND	0.047		mg/Kg	1	10/6/2014 3:57:31 PM	15706
Ethylbenzene	ND	0.047		mg/Kg	1	10/6/2014 3:57:31 PM	15706
Xylenes, Total	ND	0.094		mg/Kg	1	10/6/2014 3:57:31 PM	15706
Surr: 4-Bromofluorobenzene	97.7	80-120		%REC	1	10/6/2014 3:57:31 PM	15706

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical ReportLab Order **1410144**Date Reported: **11/4/2014****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** APEX TITAN**Client Sample ID:** SP-1 Mid-South**Project:** Lateral K-31 Mid-South**Collection Date:** 10/2/2014 11:40:00 AM**Lab ID:** 1410144-002**Matrix:** SOIL**Received Date:** 10/3/2014 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	12	10		mg/Kg	1	10/6/2014 4:16:58 PM	15711
Surr: DNOP	105	57.9-140		%REC	1	10/6/2014 4:16:58 PM	15711
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	8.1	4.7		mg/Kg	1	10/6/2014 8:43:25 PM	15706
Surr: BFB	129	80-120	S	%REC	1	10/6/2014 8:43:25 PM	15706
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	10/6/2014 8:43:25 PM	15706
Toluene	ND	0.047		mg/Kg	1	10/6/2014 8:43:25 PM	15706
Ethylbenzene	ND	0.047		mg/Kg	1	10/6/2014 8:43:25 PM	15706
Xylenes, Total	ND	0.094		mg/Kg	1	10/6/2014 8:43:25 PM	15706
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	10/6/2014 8:43:25 PM	15706

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical ReportLab Order **1410144**

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** SP-2 Mid-South**Project:** Lateral K-31 Mid-South**Collection Date:** 10/2/2014 11:52:00 AM**Lab ID:** 1410144-003**Matrix:** SOIL**Received Date:** 10/3/2014 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/6/2014 4:38:28 PM	15711
Surr: DNOP	121	57.9-140		%REC	1	10/6/2014 4:38:28 PM	15711
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/6/2014 9:12:04 PM	15706
Surr: BFB	97.9	80-120		%REC	1	10/6/2014 9:12:04 PM	15706
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	10/6/2014 9:12:04 PM	15706
Toluene	ND	0.047		mg/Kg	1	10/6/2014 9:12:04 PM	15706
Ethylbenzene	ND	0.047		mg/Kg	1	10/6/2014 9:12:04 PM	15706
Xylenes, Total	ND	0.094		mg/Kg	1	10/6/2014 9:12:04 PM	15706
Surr: 4-Bromofluorobenzene	98.0	80-120		%REC	1	10/6/2014 9:12:04 PM	15706

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410144

04-Nov-14

Client: APEX TITAN
Project: Lateral K-31 Mid-South

Sample ID	MB-15711	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15711	RunNo:	21668					
Prep Date:	10/4/2014	Analysis Date:	10/6/2014	SeqNo:	636214	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.9		10.00		79.2	57.9	140			

Sample ID	LCS-15711	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15711	RunNo:	21668					
Prep Date:	10/4/2014	Analysis Date:	10/6/2014	SeqNo:	636215	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	10	50.00	0	124	68.6	130			
Surr: DNOP	4.1		5.000		81.1	57.9	140			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410144

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Mid-South

Sample ID	MB-15706	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	15706	RunNo:	21690					
Prep Date:	10/3/2014	Analysis Date:	10/6/2014	SeqNo:	636820	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.1	80	120			

Sample ID	LCS-15706	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	15706	RunNo:	21690					
Prep Date:	10/3/2014	Analysis Date:	10/6/2014	SeqNo:	636821	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	65.8	139			
Surr: BFB	1000		1000		101	80	120			

Sample ID	1410144-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S-6 Mid-South	Batch ID:	15706	RunNo:	21690					
Prep Date:	10/3/2014	Analysis Date:	10/6/2014	SeqNo:	636823	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.56	0	107	71.8	132			
Surr: BFB	950		942.5		101	80	120			

Sample ID	1410144-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S-6 Mid-South	Batch ID:	15706	RunNo:	21690					
Prep Date:	10/3/2014	Analysis Date:	10/6/2014	SeqNo:	636824	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.61	0	104	71.8	132	2.54	20	
Surr: BFB	950		944.3		101	80	120	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410144

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Mid-South

Sample ID	MB-15706		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	15706		RunNo:	21690			
Prep Date:	10/3/2014		Analysis Date:	10/6/2014		SeqNo:	636858		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.7	80	120			

Sample ID	LCS-15706		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	15706		RunNo:	21690			
Prep Date:	10/3/2014		Analysis Date:	10/6/2014		SeqNo:	636859		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	98.9	80	120			
Toluene	0.99	0.050	1.000	0	99.3	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	1410144-002AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SP-1 Mid-South		Batch ID:	15706		RunNo:	21690			
Prep Date:	10/3/2014		Analysis Date:	10/6/2014		SeqNo:	636862		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.047	0.9390	0	94.9	77.4	142			
Toluene	0.90	0.047	0.9390	0.009615	94.7	77	132			
Ethylbenzene	0.93	0.047	0.9390	0.01758	97.7	77.6	134			
Xylenes, Total	2.8	0.094	2.817	0.04160	97.9	77.4	132			
Surr: 4-Bromofluorobenzene	1.0		0.9390		106	80	120			

Sample ID	1410144-002AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SP-1 Mid-South		Batch ID:	15706		RunNo:	21690			
Prep Date:	10/3/2014		Analysis Date:	10/6/2014		SeqNo:	636863		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.047	0.9398	0	99.0	77.4	142	4.33	20	
Toluene	0.93	0.047	0.9398	0.009615	97.8	77	132	3.25	20	
Ethylbenzene	0.97	0.047	0.9398	0.01758	101	77.6	134	3.80	20	
Xylenes, Total	2.9	0.094	2.820	0.04160	100	77.4	132	2.65	20	
Surr: 4-Bromofluorobenzene	1.0		0.9398		106	80	120	0	0	

Qualifiers:

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

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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1410144

RcptNo: 1

Received by/date:	UM	10/03/14
Logged By:	Michelle Garcia	10/3/2014 7:40:00 AM
Completed By:	Michelle Garcia	10/3/2014 9:22:50 AM
Reviewed By:	CS	10/3/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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


Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

- Additional remarks:

18. Cooler Information

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

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u>		ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> B021 BTEX G01S TPH (Geo/Deo) </div>		Lab use only Due Date:													
		Contact: <u>Andy Freeman</u> Phone: <u>505-345-3975</u> PO/SO #: <u>Direct Bill to Enterprise</u>				Temp. of coolers when received (C°): <u>1.6</u> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> </table> Page _____ of _____		1	2	3	4	5							
1	2	3	4	5															
Project Manager <u>Heather Woods</u>				Sampler's Name: <u>Heather Woods</u> Sampler's Signature: <u>Heather M. Woods</u>															
Proj. No. <u>70304146034,001</u>		Project Name <u>Lateral K-31 Mid-South</u>		No/Type of Containers <u>4 oz Glass</u>															
Matrix	Date	Time	COED	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)						
S	10/2/14	1125		✓	S-6 Mid-South						1		X	X	1410144 -001 1410144 -002 1410144 -003				
S	10/2/14	1140		✓	SP-1 Mid South						1		X	X					
S	10/2/14	1152		✓	SP-2 Mid South						1		X	X					
 NPS HWS 																			
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush <u>Results by 10/10 AM</u>																			
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:	NOTES: Direct Bill to Enterprise Field Service Attn: Tom Long Per email from Heather Woods on 10/31/14, re: WD: 879213 Paykey: AG11580 "Mid-South" to all sample IDs. <u>KMS 11/3/14</u>											
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:												
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:												
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:												

Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil
 Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other



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

November 04, 2014

Heather Woods
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX

RE: Lateral K-31 Sept 2014 (Release A)

OrderNo.: 1409639

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/13/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 24, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1409639

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** S-1 South**Project:** Lateral K-31 Sept 2014 (Release A)**Collection Date:** 9/11/2014 4:30:00 PM**Lab ID:** 1409639-001**Matrix:** SOIL**Received Date:** 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	13	9.8		mg/Kg	1	9/17/2014 12:22:23 PM	15281
Surr: DNOP	95.3	57.9-140		%REC	1	9/17/2014 12:22:23 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	9.1	4.9		mg/Kg	1	9/17/2014 3:35:54 PM	15287
Surr: BFB	108	80-120		%REC	1	9/17/2014 3:35:54 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	0.32	0.049		mg/Kg	1	9/17/2014 3:35:54 PM	15287
Toluene	ND	0.049		mg/Kg	1	9/17/2014 3:35:54 PM	15287
Ethylbenzene	0.068	0.049		mg/Kg	1	9/17/2014 3:35:54 PM	15287
Xylenes, Total	0.53	0.099		mg/Kg	1	9/17/2014 3:35:54 PM	15287
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	9/17/2014 3:35:54 PM	15287

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: S-2 South
 Project: Lateral K-31 Sept 2014 (Release A) Collection Date: 9/11/2014 4:35:00 PM
 Lab ID: 1409639-002 Matrix: SOIL Received Date: 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/17/2014 1:27:22 PM	15281
Surr: DNOP	90.5	57.9-140		%REC	1	9/17/2014 1:27:22 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/17/2014 5:01:57 PM	15287
Surr: BFB	101	80-120		%REC	1	9/17/2014 5:01:57 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	0.11	0.048		mg/Kg	1	9/17/2014 5:01:57 PM	15287
Toluene	ND	0.048		mg/Kg	1	9/17/2014 5:01:57 PM	15287
Ethylbenzene	0.057	0.048		mg/Kg	1	9/17/2014 5:01:57 PM	15287
Xylenes, Total	0.12	0.095		mg/Kg	1	9/17/2014 5:01:57 PM	15287
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	9/17/2014 5:01:57 PM	15287

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 10
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: S-3 South
 Project: Lateral K-31 Sept 2014 (Release A) Collection Date: 9/11/2014 4:40:00 PM
 Lab ID: 1409639-003 Matrix: SOIL Received Date: 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/17/2014 1:52:05 PM	15281
Surr: DNOP	91.1	57.9-140		%REC	1	9/17/2014 1:52:05 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/17/2014 8:22:16 PM	15287
Surr: BFB	92.0	80-120		%REC	1	9/17/2014 8:22:16 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	0.13	0.049		mg/Kg	1	9/17/2014 8:22:16 PM	15287
Toluene	ND	0.049		mg/Kg	1	9/17/2014 8:22:16 PM	15287
Ethylbenzene	0.13	0.049		mg/Kg	1	9/17/2014 8:22:16 PM	15287
Xylenes, Total	ND	0.097		mg/Kg	1	9/17/2014 8:22:16 PM	15287
Surr: 4-Bromofluorobenzene	95.7	80-120		%REC	1	9/17/2014 8:22:16 PM	15287

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 10
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1409639

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** S-4 South**Project:** Lateral K-31 Sept 2014 (Release A)**Collection Date:** 9/11/2014 4:45:00 PM**Lab ID:** 1409639-004**Matrix:** SOIL**Received Date:** 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/17/2014 2:13:48 PM	15281
Surr: DNOP	97.1	57.9-140		%REC	1	9/17/2014 2:13:48 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/17/2014 2:10:03 PM	15287
Surr: BFB	96.5	80-120		%REC	1	9/17/2014 2:10:03 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	ND	0.048		mg/Kg	1	9/17/2014 2:10:03 PM	15287
Toluene	ND	0.048		mg/Kg	1	9/17/2014 2:10:03 PM	15287
Ethylbenzene	0.18	0.048		mg/Kg	1	9/17/2014 2:10:03 PM	15287
Xylenes, Total	0.18	0.096		mg/Kg	1	9/17/2014 2:10:03 PM	15287
Surr: 4-Bromofluorobenzene	98.5	80-120		%REC	1	9/17/2014 2:10:03 PM	15287

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1409639

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-5 South

Project: Lateral K-31 Sept 2014 (Release A)

Collection Date: 9/11/2014 4:50:00 PM

Lab ID: 1409639-005

Matrix: SOIL

Received Date: 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/17/2014 2:35:27 PM	15281
Surr: DNOP	92.1	57.9-140		%REC	1	9/17/2014 2:35:27 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/17/2014 2:38:42 PM	15287
Surr: BFB	93.8	80-120		%REC	1	9/17/2014 2:38:42 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	0.28	0.049		mg/Kg	1	9/17/2014 2:38:42 PM	15287
Toluene	ND	0.049		mg/Kg	1	9/17/2014 2:38:42 PM	15287
Ethylbenzene	0.066	0.049		mg/Kg	1	9/17/2014 2:38:42 PM	15287
Xylenes, Total	ND	0.098		mg/Kg	1	9/17/2014 2:38:42 PM	15287
Surr: 4-Bromofluorobenzene	98.2	80-120		%REC	1	9/17/2014 2:38:42 PM	15287

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 10
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1409639

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** S-6 South**Project:** Lateral K-31 Sept 2014 (Release A)**Collection Date:** 9/11/2014 4:55:00 PM**Lab ID:** 1409639-006**Matrix:** SOIL**Received Date:** 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	75	9.8		mg/Kg	1	9/17/2014 2:57:13 PM	15281
Surr: DNOP	100	57.9-140		%REC	1	9/17/2014 2:57:13 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	73	4.7		mg/Kg	1	9/17/2014 3:07:19 PM	15287
Surr: BFB	350	80-120	S	%REC	1	9/17/2014 3:07:19 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	0.12	0.047		mg/Kg	1	9/17/2014 3:07:19 PM	15287
Toluene	ND	0.047		mg/Kg	1	9/17/2014 3:07:19 PM	15287
Ethylbenzene	0.37	0.047		mg/Kg	1	9/17/2014 3:07:19 PM	15287
Xylenes, Total	1.1	0.095		mg/Kg	1	9/17/2014 3:07:19 PM	15287
Surr: 4-Bromofluorobenzene	118	80-120		%REC	1	9/17/2014 3:07:19 PM	15287

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN **Client Sample ID:** S-7 South
Project: Lateral K-31 Sept 2014 (Release A) **Collection Date:** 9/11/2014 5:00:00 PM
Lab ID: 1409639-007 **Matrix:** SOIL **Received Date:** 9/13/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	330	9.9		mg/Kg	1	9/17/2014 3:18:50 PM	15281
Surr: DNOP	102	57.9-140		%REC	1	9/17/2014 3:18:50 PM	15281
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	780	47		mg/Kg	10	9/18/2014 1:16:28 PM	15287
Surr: BFB	353	80-120	S	%REC	10	9/18/2014 1:16:28 PM	15287
EPA METHOD 8021B: VOLATILES							Analyst: DJF
Benzene	2.0	0.047		mg/Kg	1	9/17/2014 8:50:59 PM	15287
Toluene	1.8	0.047		mg/Kg	1	9/17/2014 8:50:59 PM	15287
Ethylbenzene	7.1	0.47		mg/Kg	10	9/18/2014 1:16:28 PM	15287
Xylenes, Total	56	0.94		mg/Kg	10	9/18/2014 1:16:28 PM	15287
Surr: 4-Bromofluorobenzene	386	80-120	S	%REC	1	9/17/2014 8:50:59 PM	15287

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409639

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Sept 2014 (Release A)

Sample ID	MB-15281	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics						
Client ID:	PBS	Batch ID:	15281	RunNo:	21197						
Prep Date:	9/15/2014	Analysis Date:	9/15/2014	SeqNo:	617317	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	12		10.00		116	57.9	140				

Sample ID	LCS-15281	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics						
Client ID:	LCSS	Batch ID:	15281	RunNo:	21197						
Prep Date:	9/15/2014	Analysis Date:	9/15/2014	SeqNo:	617442	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	55	10	50.00	0	110	68.6	130				
Surr: DNOP	5.3		5.000		107	57.9	140				

Sample ID	1409639-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics						
Client ID:	S-1 South	Batch ID:	15281	RunNo:	21309						
Prep Date:	9/15/2014	Analysis Date:	9/19/2014	SeqNo:	621820	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	77	10	50.15	13.39	126	40.1	152				
Surr: DNOP	4.2		5.015		84.7	57.9	140				

Sample ID	1409639-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics						
Client ID:	S-1 South	Batch ID:	15281	RunNo:	21309						
Prep Date:	9/15/2014	Analysis Date:	9/19/2014	SeqNo:	622101	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	52	10	50.00	13.39	76.2	40.1	152	39.5	32.1	R	
Surr: DNOP	4.0		5.000		79.7	57.9	140	0	0		

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409639

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Sept 2014 (Release A)

Sample ID	MB-15287	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	15287	RunNo:	21265					
Prep Date:	9/15/2014	Analysis Date:	9/17/2014	SeqNo:	620315	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.4	80	120			

Sample ID	LCS-15287	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	15287	RunNo:	21265					
Prep Date:	9/15/2014	Analysis Date:	9/17/2014	SeqNo:	620316	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	25.00	0	119	65.8	139			
Surr: BFB	990		1000		99.1	80	120			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409639

04-Nov-14

Client: APEX TITAN

Project: Lateral K-31 Sept 2014 (Release A)

Sample ID	MB-15287		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	15287		RunNo:	21265			
Prep Date:	9/15/2014		Analysis Date:	9/17/2014		SeqNo:	620342		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	80	120			

Sample ID	LCS-15287		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	15287		RunNo:	21265			
Prep Date:	9/15/2014		Analysis Date:	9/17/2014		SeqNo:	620343		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	1409639-002AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	S-2 South		Batch ID:	15287		RunNo:	21265			
Prep Date:	9/15/2014		Analysis Date:	9/17/2014		SeqNo:	620348		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.048	0.9524	0.1056	99.3	77.4	142			
Toluene	0.95	0.048	0.9524	0.01092	99.0	77	132			
Ethylbenzene	1.0	0.048	0.9524	0.05727	102	77.6	134			
Xylenes, Total	3.0	0.095	2.857	0.1233	101	77.4	132			
Surr: 4-Bromofluorobenzene	0.99		0.9524		104	80	120			

Sample ID	1409639-002AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	S-2 South		Batch ID:	15287		RunNo:	21265			
Prep Date:	9/15/2014		Analysis Date:	9/17/2014		SeqNo:	620349		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.048	0.9524	0.1056	91.1	77.4	142	7.74	20	
Toluene	0.87	0.048	0.9524	0.01092	89.9	77	132	9.45	20	
Ethylbenzene	0.91	0.048	0.9524	0.05727	90.0	77.6	134	11.5	20	
Xylenes, Total	2.7	0.095	2.857	0.1233	91.1	77.4	132	10.1	20	
Surr: 4-Bromofluorobenzene	0.99		0.9524		104	80	120	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1409639

RcptNo: 1

Received by/date:	<i>[Signature]</i>	09/13/14
Logged By:	Lindsay Mangin	9/13/2014 8:00:00 AM
Completed By:	Lindsay Mangin	9/13/2014 8:55:58 AM
Reviewed By:	IO	09/15/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

- Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.8	Good	Yes			

 APEX Office Location <u>Aztec, NM</u>						Laboratory: <u>Hall Environmental</u>								ANALYSIS REQUESTED <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;"> 8021 BTEX 8015 TPH (Geo/Deg) </div>								Lab use only																																					
						Address: <u>Albuquerque, NM</u>																Due Date:																																					
						Contact: <u>Andy Freeman</u>																Temp. of coolers when received (C°): <u>1.8</u>																																					
						Phone: <u>(505) 345-3975</u>																<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%;">1</td> <td style="width:20%;">2</td> <td style="width:20%;">3</td> <td style="width:20%;">4</td> <td style="width:20%;">5</td> </tr> </table>				1	2	3	4	5																													
1	2	3	4	5																																																							
Project Manager <u>Heather Woods</u>						PO/SO #: <u>Direct Bill Enterprise</u>								Page _____ of _____																																													
Sampler's Name						Sampler's Signature																																																					
<u>Heather Woods</u>						<u>Heather M. Woods</u>																																																					
Proj. No.			Project Name			No./Type of Containers																																																					
<u>7030414 G034</u>			<u>Lateral K-31 Sept 2014 (Release A)</u>			<u>4 oz</u>																																																					
Matrix	Date	Time	Cod	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)																																														
S	9/11/14	1630			S-1 South						I		X X	1409639 - 001																																													
S	9/11/14	1635			S-2 South						I		X X	- 002																																													
S	9/11/14	1640			S-3 South						I		X X	- 003																																													
S	9/11/14	1645			S-4 South						I		X X	- 004																																													
S	9/11/14	1650			S-5 South						I		X X	- 005																																													
S	9/11/14	1655			S-6 South						I		X X	- 006																																													
S	9/11/14	1700			S-7 South						I		X X	- 007																																													
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush																																																											
Relinquished by (Signature) <u>Heather M. Woods</u>						Date: <u>9/12/14</u>		Time: <u>1035</u>		Received by (Signature) <u>Martin Walters</u>						Date: <u>9/12/14</u>		Time: <u>1035</u>		NOTES: <u>Direct Bill to Enterprise Field Services</u> <u>Attn: Tom Long</u> <u>* per e-mail from Heather Woods on 10/31/14; Added South to all sample IDs KMS 11/3/14</u>																																							
Relinquished by (Signature) <u>Martin Walters</u>						Date: <u>9/12/14</u>		Time: <u>1800</u>		Received by (Signature) <u>[Signature]</u>						Date: <u>9/13/14</u>		Time: <u>0800</u>																																									
Relinquished by (Signature)						Date:		Time:		Received by (Signature)						Date:		Time:																																									
Relinquished by (Signature)						Date:		Time:		Received by (Signature)						Date:		Time:																																									
Matrix						WW - Wastewater						W - Water						S - Soil						SD - Solid						L - Liquid						A - Air Bag						C - Charcoal tube						SL - sludge						O - Oil					
Container						VOA - 40 ml vial						A/G - Amber / Or Glass 1 Liter						250 ml - Glass wide mouth						P/O - Plastic or other																																			



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

November 04, 2014

Heather Woods
APEX AZTEC
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX (505) 334-5204

RE: Enterprise Lateral K-31 South

OrderNo.: 1410259

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/7/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 08, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX AZTEC Client Sample ID: S-8 South
 Project: Enterprise Lateral K-31 South Collection Date: 10/6/2014 3:40:00 PM
 Lab ID: 1410259-001 Matrix: SOIL Received Date: 10/7/2014 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/7/2014 10:21:50 AM	15755
Surr: DNOP	86.3	57.9-140		%REC	1	10/7/2014 10:21:50 AM	15755
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	10/7/2014 10:23:50 AM	R21722
Surr: BFB	91.8	80-120		%REC	1	10/7/2014 10:23:50 AM	R21722
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.037	0.036		mg/Kg	1	10/7/2014 10:23:50 AM	R21722
Toluene	ND	0.036		mg/Kg	1	10/7/2014 10:23:50 AM	R21722
Ethylbenzene	ND	0.036		mg/Kg	1	10/7/2014 10:23:50 AM	R21722
Xylenes, Total	ND	0.072		mg/Kg	1	10/7/2014 10:23:50 AM	R21722
Surr: 4-Bromofluorobenzene	97.3	80-120		%REC	1	10/7/2014 10:23:50 AM	R21722

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 6
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX AZTEC **Client Sample ID:** S-9 South
Project: Enterprise Lateral K-31 South **Collection Date:** 10/6/2014 4:40:00 PM
Lab ID: 1410259-002 **Matrix:** SOIL **Received Date:** 10/7/2014 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/7/2014 10:43:09 AM	15755
Surr: DNOP	90.4	57.9-140		%REC	1	10/7/2014 10:43:09 AM	15755
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	10/7/2014 10:52:22 AM	R21722
Surr: BFB	94.6	80-120		%REC	1	10/7/2014 10:52:22 AM	R21722
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.044		mg/Kg	1	10/7/2014 10:52:22 AM	R21722
Toluene	ND	0.044		mg/Kg	1	10/7/2014 10:52:22 AM	R21722
Ethylbenzene	ND	0.044		mg/Kg	1	10/7/2014 10:52:22 AM	R21722
Xylenes, Total	ND	0.088		mg/Kg	1	10/7/2014 10:52:22 AM	R21722
Surr: 4-Bromofluorobenzene	99.7	80-120		%REC	1	10/7/2014 10:52:22 AM	R21722

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical ReportLab Order **1410259**Date Reported: **11/4/2014****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** APEX AZTEC**Client Sample ID:** S-10 South**Project:** Enterprise Lateral K-31 South**Collection Date:** 10/6/2014 4:48:00 PM**Lab ID:** 1410259-003**Matrix:** SOIL**Received Date:** 10/7/2014 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/7/2014 11:04:25 AM	15755
Surr: DNOP	92.3	57.9-140		%REC	1	10/7/2014 11:04:25 AM	15755
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	10/7/2014 11:20:53 AM	R21722
Surr: BFB	96.2	80-120		%REC	1	10/7/2014 11:20:53 AM	R21722
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.085	0.031		mg/Kg	1	10/7/2014 11:20:53 AM	R21722
Toluene	0.031	0.031		mg/Kg	1	10/7/2014 11:20:53 AM	R21722
Ethylbenzene	ND	0.031		mg/Kg	1	10/7/2014 11:20:53 AM	R21722
Xylenes, Total	0.087	0.062		mg/Kg	1	10/7/2014 11:20:53 AM	R21722
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	10/7/2014 11:20:53 AM	R21722

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410259

04-Nov-14

Client: APEX AZTEC

Project: Enterprise Lateral K-31 South

Sample ID	MB-15755	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15755	RunNo:	21712					
Prep Date:	10/7/2014	Analysis Date:	10/7/2014	SeqNo:	637426	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.5		10.00		75.4	57.9	140			

Sample ID	LCS-15755	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15755	RunNo:	21712					
Prep Date:	10/7/2014	Analysis Date:	10/7/2014	SeqNo:	637427	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	115	68.6	130			
Surr: DNOP	4.2		5.000		84.2	57.9	140			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410259

04-Nov-14

Client: APEX AZTEC

Project: Enterprise Lateral K-31 South

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R21722	RunNo:	21722					
Prep Date:		Analysis Date:	10/7/2014	SeqNo:	637912	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.3	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R21722	RunNo:	21722					
Prep Date:		Analysis Date:	10/7/2014	SeqNo:	637913	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	78.8	65.8	139			
Surr: BFB	990		1000		99.0	80	120			

Sample ID	1410259-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S-8 South	Batch ID:	R21722	RunNo:	21722					
Prep Date:		Analysis Date:	10/7/2014	SeqNo:	637914	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.6	17.97	0	92.2	71.8	132			
Surr: BFB	600		718.9		83.8	80	120			

Sample ID	1410259-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S-8 South	Batch ID:	R21722	RunNo:	21722					
Prep Date:		Analysis Date:	10/7/2014	SeqNo:	637915	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	3.6	17.97	0	116	71.8	132	22.8	20	R
Surr: BFB	580		718.9		80.8	80	120	0	0	

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410259

04-Nov-14

Client: APEX AZTEC

Project: Enterprise Lateral K-31 South

Sample ID	5ML RB	SampType	MBLK	TestCode	EPA Method 8021B: Volatiles					
Client ID	PBS	Batch ID	R21722	RunNo	21722					
Prep Date:		Analysis Date	10/7/2014	SeqNo	637934	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	80	120			

Sample ID	100NG BTEX LCS	SampType	LCS	TestCode	EPA Method 8021B: Volatiles					
Client ID	LCSS	Batch ID	R21722	RunNo	21722					
Prep Date:		Analysis Date	10/7/2014	SeqNo	637935	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	107	80	120			
Toluene	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	1410259-002AMS	SampType	MS	TestCode	EPA Method 8021B: Volatiles					
Client ID	S-9 South	Batch ID	R21722	RunNo	21722					
Prep Date:		Analysis Date	10/7/2014	SeqNo	637936	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.044	0.8787	0.01798	106	77.4	142			
Toluene	0.95	0.044	0.8787	0.007434	107	77	132			
Ethylbenzene	0.97	0.044	0.8787	0.02104	108	77.6	134			
Xylenes, Total	2.9	0.088	2.636	0.04567	107	77.4	132			
Surr: 4-Bromofluorobenzene	0.31		0.8787		35.2	80	120			S

Sample ID	1410259-002AMSD	SampType	MSD	TestCode	EPA Method 8021B: Volatiles					
Client ID	S-9 South	Batch ID	R21722	RunNo	21722					
Prep Date:		Analysis Date	10/7/2014	SeqNo	637937	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0.01798	104	77.4	142	1.75	20	
Toluene	1.1	0.050	1.000	0.007434	106	77	132	0.797	20	
Ethylbenzene	1.1	0.050	1.000	0.02104	106	77.6	134	2.14	20	
Xylenes, Total	3.2	0.10	3.000	0.04567	106	77.4	132	1.23	20	
Surr: 4-Bromofluorobenzene	0.29		1.000		28.6	80	120	0	0	S

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1410259

RcptNo: 1

Received by/date: At 10/07/14

Logged By: Anne Thorne 10/7/2014 8:55:00 AM

Anne Thorne

Completed By: Anne Thorne 10/7/2014

Anne Thorne

Reviewed By: CS 10/07/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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


Person Notified:	<div></div>	Date:	<div></div>
By Whom:	<div></div>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<div></div>		
Client Instructions:	<div></div>		

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>			Laboratory: <u>Hall Environmental</u> Address: _____ Contact: <u>Andy Freeman</u> Phone: _____ Project Manager <u>Heather Woods</u> PO/SO #: <u>Direct Bill Enterprise</u>			ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> 8021 BTX 8015 TPH </div>										Lab use only Due Date: _____ Temp. of coolers when received (C°): <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> </table>					1	2	3	4	5
			1	2	3											4	5								
Sampler's Name _____ Sampler's Signature _____			Page _____ of _____																						
Proj. No. _____		Project Name <u>Enterprise Lateral K-31 South</u>				No/Type of Containers <u>1-402</u>				<div style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div> 4/1 Lab Sample ID (Lab Use Only) <u>1410259-001</u> <u>-002</u> <u>-003</u> </div> <div style="text-align: right;"> 4/1 </div> </div> </div>															
Matrix	Date	Time	COED	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L											250 ml	Glass Jar	P/O			
S	10/6/14	1540			S-8																X				
S	10/6/14	1640			S-9																X				
S	10/6/14	1648			S-10																X				
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush Results End of Day <u>10/7/14</u>																									
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:	NOTES: Direct Bill to Enterprise Field Services Attn: Tom Long																	
<u>Heather M. Woods</u>		<u>10/6/14</u>	<u>1910</u>	<u>Tom Long</u>		<u>10/6/14</u>	<u>1910</u>																		
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:																		
<u>Tom Long</u>		<u>10/6/14</u>	<u>1925</u>	<u>Tom Long</u>		<u>10/6/14</u>	<u>0655</u>																		
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:																		
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:																		

Matrix Container WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil
 VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1410259

RcptNo: 1

Received by/date: AA 10/07/14

Logged By: Anne Thorne 10/7/2014 6:55:00 AM

Completed By: Anne Thorne 10/7/2014

Reviewed By: CS 10/07/14

Anne Thorne

Anne Thorne

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

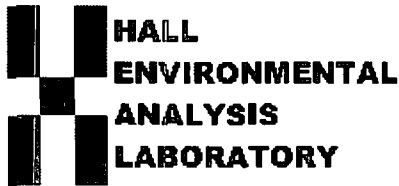
Person Notified:	<div></div>	Date:	<div></div>
By Whom:	<div></div>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<div></div>		
Client Instructions:	<div></div>		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

[illegible]



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

November 04, 2014

Heather Woods
APEX AZTEC
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (505) 716-2787
FAX (505) 334-5204

RE: Lateral K-31 South

OrderNo.: 1410435

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/9/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 10, 2014.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410435

Date Reported: 11/4/2014

CLIENT: APEX AZTEC

Client Sample ID: S-11 South

Project: Lateral K-31 South

Collection Date: 10/8/2014 10:15:00 AM

Lab ID: 1410435-001

Matrix: MEOH (SOIL)

Received Date: 10/9/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/9/2014 11:49:32 AM	15814
Surr: DNOP	79.8	57.9-140		%REC	1	10/9/2014 11:49:32 AM	15814
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	10/9/2014 10:24:08 AM	R21782
Surr: BFB	90.1	80-120		%REC	1	10/9/2014 10:24:08 AM	R21782
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.033		mg/Kg	1	10/9/2014 10:24:08 AM	R21782
Toluene	ND	0.033		mg/Kg	1	10/9/2014 10:24:08 AM	R21782
Ethylbenzene	ND	0.033		mg/Kg	1	10/9/2014 10:24:08 AM	R21782
Xylenes, Total	ND	0.066		mg/Kg	1	10/9/2014 10:24:08 AM	R21782
Surr: 4-Bromofluorobenzene	93.6	80-120		%REC	1	10/9/2014 10:24:08 AM	R21782

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical ReportLab Order **1410435**

Date Reported: 11/4/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX AZTEC**Client Sample ID:** S-12 South**Project:** Lateral K-31 South**Collection Date:** 10/8/2014 11:20:00 AM**Lab ID:** 1410435-002**Matrix:** MEOH (SOIL)**Received Date:** 10/9/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/9/2014 12:32:52 PM	15814
Surr: DNOP	80.7	57.9-140		%REC	1	10/9/2014 12:32:52 PM	15814
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	10/9/2014 10:52:46 AM	R21782
Surr: BFB	89.8	80-120		%REC	1	10/9/2014 10:52:46 AM	R21782
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.031		mg/Kg	1	10/9/2014 10:52:46 AM	R21782
Toluene	ND	0.031		mg/Kg	1	10/9/2014 10:52:46 AM	R21782
Ethylbenzene	ND	0.031		mg/Kg	1	10/9/2014 10:52:46 AM	R21782
Xylenes, Total	ND	0.063		mg/Kg	1	10/9/2014 10:52:46 AM	R21782
Surr: 4-Bromofluorobenzene	92.1	80-120		%REC	1	10/9/2014 10:52:46 AM	R21782

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410435

04-Nov-14

Client: APEX AZTEC
Project: Lateral K-31 South

Sample ID	MB-15814	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15814	RunNo:	21764					
Prep Date:	10/9/2014	Analysis Date:	10/9/2014	SeqNo:	639341	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.5		10.00		95.5	57.9	140			

Sample ID	LCS-15814	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15814	RunNo:	21764					
Prep Date:	10/9/2014	Analysis Date:	10/9/2014	SeqNo:	639456	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	10	50.00	0	126	68.6	130			
Surr: DNOP	3.9		5.000		77.1	57.9	140			

Sample ID	1410435-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	S-11 South	Batch ID:	15814	RunNo:	21764					
Prep Date:	10/9/2014	Analysis Date:	10/9/2014	SeqNo:	639668	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	9.9	49.26	0	129	40.1	152			
Surr: DNOP	4.0		4.926		80.6	57.9	140			

Sample ID	1410435-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	S-11 South	Batch ID:	15814	RunNo:	21764					
Prep Date:	10/9/2014	Analysis Date:	10/9/2014	SeqNo:	639696	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	9.9	49.46	0	132	40.1	152	3.27	32.1	
Surr: DNOP	4.1		4.946		82.3	57.9	140	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410435

04-Nov-14

Client: APEX AZTEC
Project: Lateral K-31 South

Sample ID	MB-15760 MK	SampType	MBLK	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	PBS	Batch ID	R21782	RunNo	21782					
Prep Date:		Analysis Date	10/9/2014	SeqNo	640373	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.7	80	120			

Sample ID	LCS-15760 MK	SampType	LCS	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	LCSS	Batch ID	R21782	RunNo	21782					
Prep Date:		Analysis Date	10/9/2014	SeqNo	640374	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	65.8	139			
Surr: BFB	970		1000		96.9	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410435

04-Nov-14

Client: APEX AZTEC

Project: Lateral K-31 South

Sample ID	MB-15760 MK		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	R21782		RunNo:	21782			
Prep Date:			Analysis Date:	10/9/2014		SeqNo:	640422		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		90.7	80	120			

Sample ID	LCS-15760 MK		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	R21782		RunNo:	21782			
Prep Date:			Analysis Date:	10/9/2014		SeqNo:	640423		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.0	80	120			
Toluene	0.96	0.050	1.000	0	96.5	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.6	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.5	80	120			

Qualifiers:

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

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



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1410435

RcptNo: 1

Received by/date:	<i>[Signature]</i> 10/09/14
Logged By:	Lindsay Mangin 10/9/2014 7:00:00 AM <i>[Signature]</i>
Completed By:	Lindsay Mangin 10/9/2014 7:40:36 AM <i>[Signature]</i>
Reviewed By:	<i>[Signature]</i> 10/10/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp. °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	3.1	Good	Yes			

[illegible]

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

RECEIVED

FEB 17 2015

NMCCD

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	Enterprise Field Services, LLC	Contact	Thomas Long
Address	614 Reilly Avenue, Farmington NM 87401	Telephone No.	(505) 599-2286
Facility Name	Chacon Jicarilla Apache D#102	Facility Type	Natural Gas Gathering line

Surface Owner	Jicarilla Tribal	Mineral Owner	Jicarilla Tribal	API No.
---------------	------------------	---------------	------------------	---------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	26	23N	3W					Rio Arriba

Latitude 36.197473

Longitude -107.133945

NATURE OF RELEASE

Type of Release	Natural Gas Condensate and Water	Volume of Release Estimated at 3-5 bbls of Fluids	Volume Recovered	None
Source of Release:	Pipeline freeze and rupture.	Date and Hour of Occurrence	Unknown	
Date and Hour of Discovery		1/10/2013 @ 13:02 hours		
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Bryce Hammond and Hobson Sandoval	
By Whom?	Aaron Dailey	Date and Hour	1/11/2013 @ 08:00 hours	
Was a Watercourse Reached?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.		

If a Watercourse was Impacted, Describe Fully.* The release entered a small ephemeral wash.

Describe Cause of Problem and Remedial Action Taken.*

Third party producer discovered and reported to Enterprise a pipeline leak on the Enterprise Chacon Jicarilla Apache D #102 natural gas gathering pipeline. Enterprise supervisor dispatched two technicians to investigate and verify the leak. These technicians verified, isolated, depressurized and applied LOTO to the pipeline. A contractor was dispatched to clean up the impacted ice, snow and soil and haul it to an OCD approved land farm facility. Further remediation work to the affected soil was conducted when weather conditions permitted. On In March 2013 approval was granted by the Jicarilla Apache Environmental Protection Office (JAEPO) to install a soil vapor extraction (SVE) units at the release location and conduct quarterly vapor monitoring. In December 2013, at the request of JAEPO no work was performed at the site due to weather conditions and restricted access.

Describe Area Affected and Cleanup Action Taken.* In December 2014, after approval from JAEPO, Enterprise initiated excavation activities to remove the remaining subsurface contaminants. Final excavation dimension measured approximately fifty (50) feet long ranging from five (5) to eight (8) wide ranging from two (2) to six (5) feet deep. Approximately 43 cubic yards of hydrocarbon impacted soil was excavated and transported to an approved NMOC land farm facility. A third party environmental contractor corrective action report is included with this "Final" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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>Jon E. Fields</i>	OIL CONSERVATION DIVISION		
Printed Name: Jon E. Fields	Approved by: Environmental Specialist: <i>[Signature]</i>		
Title: Director, Environmental	Approval Date: <i>4/13/15</i>	Expiration Date: <i>[Signature]</i>	
E-mail Address: jefields@eprod.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <i>2-9-2015</i> Phone: (713) 381-6684			

* Attach Additional Sheets If Necessary

#NCS 1510349816

(84)

Enterprise Products
Chacon Jicarilla Apache D #102
Latitude North 36.197476°, Longitude West -107.133945°
Unit K (NE ¼, SW ¼) Section 26 T23N R3W
Sandoval County, New Mexico
January 8, 2015



Submitted To:
Enterprise Products
Field Environmental-San Juan Basin
614 Reilly Avenue
Farmington, NM 87401

Submitted By:
Souder, Miller & Associates
401 West Broadway
Farmington, NM 87401
(505)325-7535



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3.0	Site Ranking and Land Jurisdiction	1
4.0	Summary of Field Activities	2
5.0	Vapor Monitoring and Soil Sampling	3
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Figures:

Figure 1: Vicinity Map

Figure 2: SVE Layout and Construction Diagram

Figure 3: Site and Soil Contaminant Concentration Map

Tables:

Table 1: Release Information

Table 2: Site Ranking

Table 3: Summary of Laboratory Analysis

Table 4: Summary of Initial Field Screening Results

Table 5: Summary of Field Screening Results

Appendices:

Appendix A: Photographic Documentation

Appendix B: Soil Disposal Documentation

Appendix D: Laboratory Analytical Reports

1.0 Executive Summary

In January and March of 2014, Souder, Miller & Associates (SMA) responded to excavate the hydrocarbon release associated with the Chacon Jicarilla Apache D #102 well tie. The release was initially reported on January 10, 2013 and was a result of a steel pipeline freeze due to exposure to ambient temperatures. SMA returned to the site in October and December of 2014 to monitor, further delineate and oversee the excavation of contaminated soil.

TABLE 1: RELEASE INFORMATION

Name	Chacon Jicarilla Apache D #102 Pipeline Release				
Location	Latitude/Longitude		Section, Township, Range		
	36.197476°	-107.133945°	Unit K	Section 26	T 23N, R 3W
Date Reported	January 10, 2013				
Reported to	Tom Long				
Land Owner	Jicarilla Apache Nation				
Reported To	NM Oil Conservation Division (NMOCD) Jicarilla Apache Environmental Protection Office				
Diameter of Pipeline	4 inches				
Source of Release	Freezing				
Release Contents	Natural Gas Liquids/Condensate				
Release Volume	Unknown				
Nearest Waterway	Unnamed tributary of Valles Arroyo Wash				
Depth to Groundwater	Estimated to be less than 50 feet				
Nearest Domestic Water Source	Greater than 1,000 feet				
NMOCD Ranking	40				
SMA Response Dates					
Subcontractors	Industrial Mechanical Inc. (IMI)				
Disposal Facility	Envirotech				
Yd ³ Contaminated Soil Excavated and Disposed	42.5 (Reported on Completed C-138)				

2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of the hydrocarbon release associated with the Chacon Jicarilla Apache D #102 pipeline. The release is located in Unit K (NE ¼, SW ¼) Section 26 Township 23 North, Range 3 West, 36.197476° N, -107.133945° W, Sandoval County, New Mexico. Figure 1, Vicinity Map, illustrates the location of the release.

3.0 Site Ranking and Land Jurisdiction

The release site is located in a tributary of Arroyo Valles wash on land owned by the Jicarilla Apache Nation and governed by the Jicarilla Apache Environmental Protection Office (JAEPO). The site is at an elevation of approximately 7,350 feet above sea level. After evaluation of the

site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 50 feet below ground surface (bgs).

SMA searched the New Mexico Office of the State Engineer online water well data base for water wells in the vicinity of the release. No wells were located in Sections 10, 32 and 34. The physical location of this release is within the jurisdiction of JAEPO. In the absence of JAEPO regulations related to oil and gas releases, this release defaults to the most stringent New Mexico Oil Conservation Division's (OCD) soil remediation standard. This release location has been assigned an OCD ranking of 40, which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm total benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On January 11, 2013, SMA responded to a release at the Chacon Jicarilla Apache D #102 well tie. The release was from a frozen pipeline spanning an arroyo that ruptured. SMA was contracted to excavate the impacted snow and ice with hand tools. The surface area stain measured approximately 12 feet in diameter. Surface stained snow and ice was excavated to depths between 4" and 6". During excavation activities, a calibrated photo ionization detector (PID) detected volatile organics up to 450 parts per million in the breathing zone of the excavation area. A personal four gas meter detected reduced oxygen levels and elevated hydrogen sulfide levels. SMA personnel terminated excavation activities and left the area for health and safety reasons. One thirty-gallon drum of impacted snow and ice was transported to Carson Compressor station and placed in the petroleum contaminated soil container for temporary containment.

On January 14, 2013, SMA returned to the site to continue removal of the impacted snow and ice. Breathing zone air was screened and volatile organic levels were at acceptable levels within the release area. Four additional 30-gallon containers of impacted snow and ice were removed from the excavation area and brought to the Carson Compressor station for temporary containment. One composite soil sample was collected from below the point of release. The soil was submitted to Hall Environmental Analytical Laboratory for analysis per EPA Methods 8021 BTEX and 8015B Diesel Range Organics (DRO)/Gasoline Range Organics (GRO). Laboratory analysis results are summarized in Table 3 and a copy of the Laboratory Report is included in Appendix A.

SMA returned to the site on January 18, 2013 to assess the lateral and horizontal extent of the release. Seven soil borings were installed with a hand auger and soil samples were collected at one foot intervals and field screened with a PID.

Laboratory soil samples were collected from the bottom of each soil boring. A total of seven soil samples were collected and submitted to Hall Environmental Analytical Laboratory for analysis per EPA Methods 8021 BTEX and 8015B DRO/GRO. Laboratory analysis results for this sampling event are also summarized in Table 3 and copies of the Laboratory Reports are included in Appendix A.

Due to the inclement weather conditions and snow, SMA was instructed to wait to complete

remedial activities. On March 15, 2013, SMA installed four soil vapor extraction (SVE) wells near the point of release to remove subsurface hydrocarbon vapors. Each SVE well was installed to a total depth of seven feet below ground surface (bgs). Each well was constructed with two-inch inside diameter 0.010 inch slotted PVC well screen from total depth to two feet bgs and two feet of two-inch inside diameter solid PVC well casing from two feet bgs to ground surface. The annulus was backfilled with 10/20 silica sand to one foot bgs. Then 3/8" bentonite chips were placed from one foot bgs to ground surface and hydrated to seal the annulus.

SVE wells SVE-1 and SVE-2 were plumbed together and a single modified roof vent was installed above SVE-1. SVE wells SVE-3 and SVE-4 were plumbed together and a modified roof vent was installed directly above SVE-4. Photographs of the remediation system are included in Appendix C. Figure 2 illustrates the layout of the SVE remediation system and construction details of each SVE well. Initial hydrocarbon vapor concentrations from each SVE vent were measured at approximately 60 ppm with a calibrated PID.

Mr. Hobson Sandoval with JAEPO was on site to observe the installation of the remediation system. While onsite, Mr. Hobson instructed Enterprise to remove additional contaminated soil from the wash because he was concerned that the surface contaminants would wash down stream. Subsequently, Enterprise representatives reported to SMA that IMI excavated the hydrocarbon impacted soil from the wash with hand tools from March 20, 2013 to March 27, 2013. Approximately 12 cubic yards of hydrocarbon contaminated soil was removed and transported to Envirotech Land Farm for proper disposal. The excavation was backfilled with clean imported material from the Jicarilla Apache Reservation. No samples were collected for laboratory analysis during the excavation because of the SVE system implementation and future scheduled soil sampling.

4.1.1 Vapor Monitoring and Soil Sampling

The first vapor monitoring event was conducted on June 18, 2013. During this event three soil borings were hand augured to a total depth of four feet bgs each. Samples were collected at one foot intervals and field screened with a calibrated PID. The PID readings ranged from 55 – 4,884 ppm. The hydrocarbon vapor effluent from SVE wells was screened with a PID over a five minute period with results recorded every minute. The readings from both SVE wells ranged from 54 – 66 ppm. Results of the initial and quarterly field screenings are included in Tables 4 and 5, respectively. At the direction of Enterprise representatives, no laboratory samples were collected due to the elevated PID field screening results.

The second monitoring event was conducted on September 20, 2013. During this event, three soil borings were hand augured to a total depth of six feet bgs. Samples were collected at one foot intervals and field screened with a calibrated PID. The PID results ranged from 0 ppm to 4,963 ppm. Each SVE fan was screened for two minutes with no detection of hydrocarbon vapors. At the direction of Enterprise representatives, no laboratory samples were collected due to the elevated soil screening results.

On October 17, 2014 SMA conducted a monitoring event with oversight from Jonathan Kelly from the OCD-Aztec, NM field office and Hobson Sandoval. During this sampling event eight soil borings were advanced to a total depth of five feet and one boring to a total depth of ten feet. Samples were collected at one foot intervals and field screened with a calibrated PID. The

PID results ranged from 0.3-1707 ppm. One SVE ventilation fan had been broken off. The other SVE ventilation fan was screened for approximately one minute with no detection of hydrocarbon vapors. One soil sample was collected from each of the eight borings from the interval with the highest PID reading and from the bottom of SB-5, with a total depth of 10 feet. The soil samples were submitted to Hall Environmental Analytical Laboratory for analysis per EPA Methods 8021 BTEX and 8015 Diesel Range Organics (DRO)/Gasoline Range Organics (GRO). Laboratory analysis results are summarized in Table 3 and a copy of the Laboratory Report is included in Appendix A.

Laboratory results from the October 17, 2014 monitoring event indicated remaining contamination approximately 1 to 2 feet bgs in soil borings SB-3, SB-4, and SB-5, which were located approximately 28 to 90 feet down wash from the release point. Concentrations of DRO and GRO ranged from 56 mg/kg to 2700 mg/kg and 160 mg/kg to 750 mg/kg, respectively. Due to the shallow extent of contamination, SMA was again contracted to excavate the existing contamination with hand tools.

On December 2, 3, and 8, 2014, SMA and Industrial Mechanical Inc. (IMI) excavated an area of 40 feet in length by 5 feet wide with depths ranging from 2.0 to 4.0 feet using hand tools. During excavation activities, soil samples were collected and field screened using a properly calibrated PID and a Petroflag soil testing kit for total petroleum hydrocarbons. PID results ranged from 248.8 to 2932 ppm with the highest reading located at the south center base section of the excavation. Field screening result summaries can be found in Table 5. Petroflag total petroleum hydrocarbon results ranged from 15.0 to 1865 mg/kg with the highest reading located at the south base portion of the excavation. Three laboratory soil samples were collected from the north base, north center base and south center base. Analysis confirmed the north sections were below NMOCD soil remediation standards and south sections were still above NMOCD soil remediation standards.

SMA and IMI returned to the site on December 12, 2014. Approximately 18 cubic yards of clean backfill material was placed into the north section of the excavation. IMI continued excavating the south portion of the excavation using a mini-excavator and a skid-steer, and SMA oversaw excavation activities. During excavation activities, soil samples were collected and field screened using a properly calibrated PID and a Petroflag soil testing kit for total petroleum hydrocarbons. PID results ranged from 6.2 to 514 ppm with the highest reading located at the south central base section of the excavation. Field screening results summaries can be found in Table 5. Petroflag total petroleum hydrocarbon results ranged from 15.0 to 79 mg/kg with the highest reading located at the south center base portion of the excavation. Laboratory soil samples were collected from the north base, north center base and south center base. Analysis confirmed the south section was still above NMOCD soil remediation standards.

SMA and IMI returned to the site on December 23, IMI continued excavating the south portion of the excavation using a mini-excavator and a skid-steer, and SMA oversaw excavation activities. During excavation, soil samples were collected and field screened using a properly calibrated PID and a Petroflag soil testing kit for total petroleum hydrocarbons. PID results ranged from 631 to 873 ppm with the highest reading located on the south wall of the excavation. Field screening results summaries can be found in Table 5. Petroflag total petroleum hydrocarbon results ranged from 112 to 670 mg/kg with the highest reading located on south wall of the excavation. Laboratory soil samples were not collected due to the unexpected spike in

contamination. SMA and IMI made plans to return with rubber tire backhoes to remove all remaining contamination.

SMA and IMI returned to the site on December 31, 2014. IMI continued excavating the south portion of the excavation using two rubber tire back hoers, and SMA oversaw excavation activities. During excavation activities, soil samples were collected and field screened using a properly calibrated PID and a Petroflag soil testing kit for total petroleum hydrocarbons. PID results ranged from 1.2 to 6.6 ppm with the highest reading located in the base section of the excavation. Field screening results summaries can be found in Table 5. Petroflag total petroleum hydrocarbon result for the south wall was 30 mg/kg, no other samples were tested with the Petroflag as PID readings were low. Laboratory soil samples were collected from the base, west wall, east wall and south wall. Analysis confirmed the excavation extents are below NMOCD soil remediation standards.

The final excavation measured approximately 50 feet long, by 5 to 8 feet wide with depths ranging from 2.0 to 6.5 feet bgs, covering an area of approximately 291 square feet. The several stages of excavation resulted in the southern portion having the largest and deepest dimensions, finally measuring 8 feet wide, 14.5 feet long and 6.5 feet deep. Approximately 42.5 cubic yards of contaminated soil was removed and disposed of at Envirotech, a permitted landfarm facility, located near Crouch Mesa, NM. Disposal documentation can be found in Appendix D.

5.0 Conclusions and Recommendations

As noted in Section 3.0 of this report, the absence of JAEPO regulations related to oil and gas releases, this release defaults to the most stringent NMOCD soil remediation standard. This release location has been assigned a NMOCD ranking of 40.

Laboratory analytical results for all final extent samples collected were at/or below NMOCD remediation soil standards of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons, based on the site ranking. Soil contaminant concentrations are illustrated in Figure 3. A summary of laboratory analysis is included in Table 3. Laboratory reports are included in Appendix C

SMA recommends no further action at the Chacon Jicarilla Apache D #102 pipeline release location.

6.0 Closure and Limitations

The scope of our services consisted of the performance of a preliminary spill assessment and stabilization, regulatory liaison, oversight and control of remediation operations, disposal arrangements and documentation, project management, monitoring and preparation of this summary report. All work has been performed in accordance with generally accepted professional environmental consulting practices.

If there are any questions regarding this report, please contact either Steve Moskal or Reid Allan at 505-325-7535.

SOUDER, MILLER & ASSOCIATES

Submitted by:



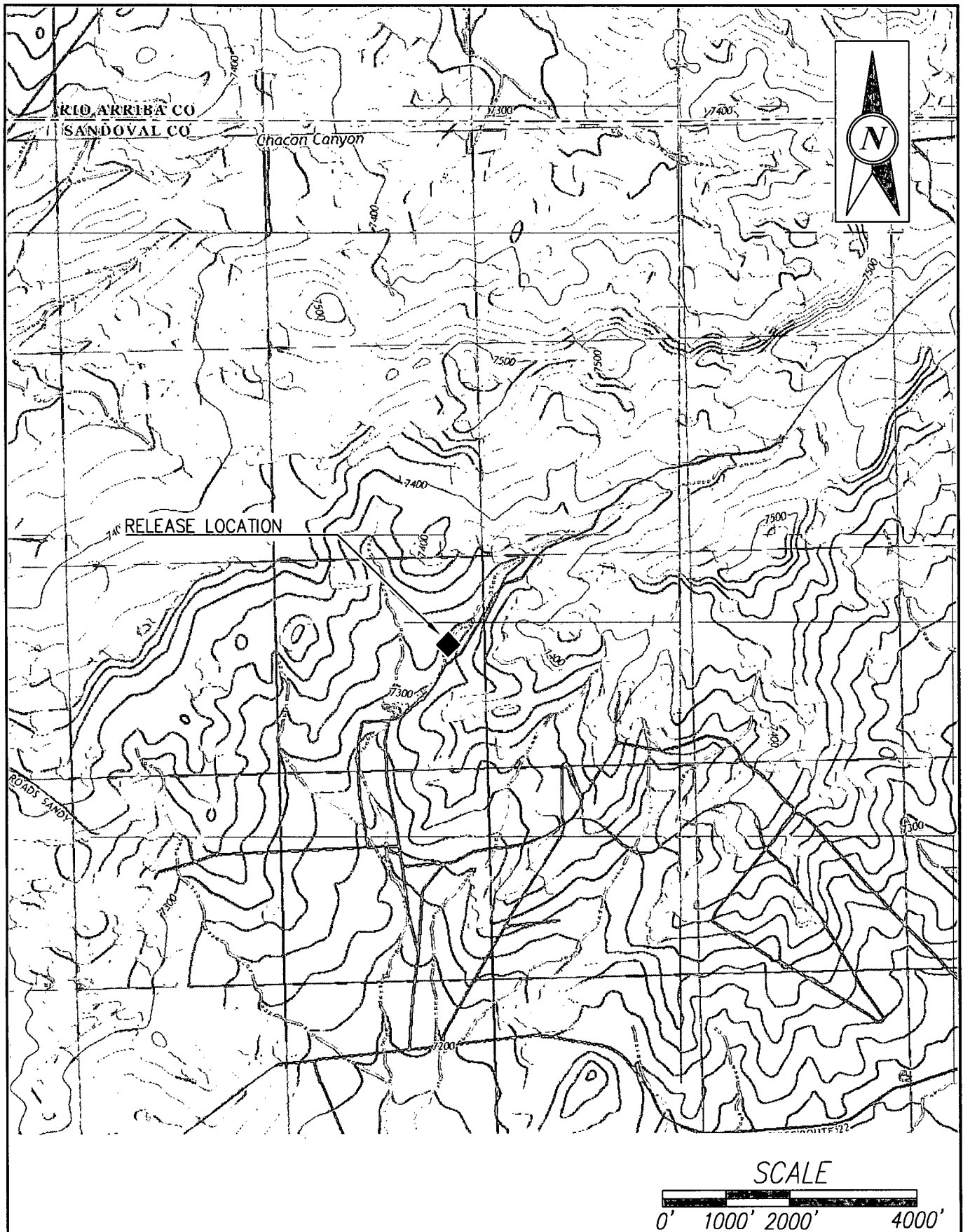
Jesse Sprague
Staff Scientist

Reviewed by:



Reid S. Allan, PG
Principal Scientist

Figures



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ENTERPRISE

FARMINGTON, NEW MEXICO


VICINITY MAP
CHACON JICARILLA APACHE D #102
SECTION 26, T23N, R3W

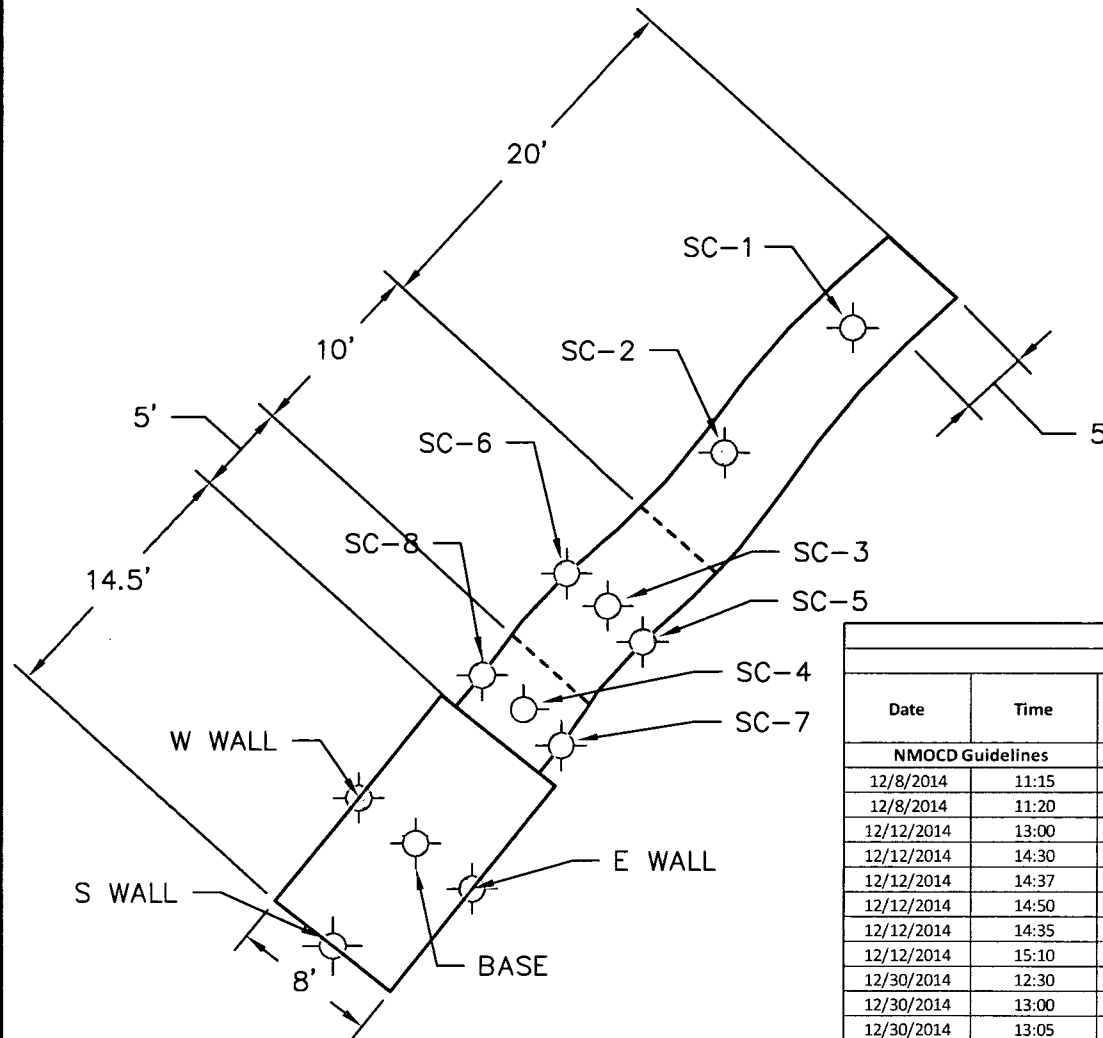
SANDOVAL COUNTY, NEW MEXICO

Designed SM	Drawn DJB	Checked RSA
Date: JANUARY, 2015		
Scale: Horiz: 1" = 2000'		
Vert: NA		
Project No: 5122855		
Sheet: 1		

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS APPROVED BY THE ENGINEER AND DATED



	 <i>Engineering Environmental Surveying</i>	SOUDER, MILLER & ASSOCIATES 401 West Broadway Avenue Farmington, NM 87401-5907 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 326-0045 www.soudermiller.com Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Center - Grand Junction - Montrose, CO - Safford, AZ - Moab, UT	ENTERPRISE	FARMINGTON, NEW MEXICO	Designed SM	Drawn DJB	Checked RSA	
			SITE LOCATION MAP CHACON JICARILLA APACHE D #102 SECTION 26, T23N, R3W			Date: JANUARY, 2015		
						Scale: Horiz: 1"=40' Vert: N/A		
						Project No: 5122855		
						SANDOVAL COUNTY, NEW MEXICO		



LEGEND

⊗ SOIL SAMPLE LOCATION

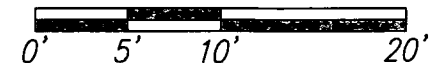
SOIL RESULTS IN mg/kg REPORTED 12/22/14

LABORATORY ANALYTICAL SUMMARY

Soil Samples

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Guidelines				100 ppm		10 ppm	50 ppm
12/8/2014	11:15	SC-1 N Base	2	24	16	<0.027	0.12
12/8/2014	11:20	SC-2 N Center Base	2	13	28	<0.027	0.07
12/12/2014	13:00	SC-3 S Center Base	2	9	53	<0.030	<0.059
12/12/2014	14:30	SC-4 S Base #1	6.5	<2.4	<9.9	<0.024	<0.049
12/12/2014	14:37	SC-5 NE Wall	0-3.0	32	<9.9	<0.027	0.23
12/12/2014	14:50	SC-6 NW Wall	0-3.0	14	82	<0.022	0.11
12/12/2014	14:35	SC-7 Center E Wall	0-6.5	<2.9	<10	<0.029	<0.058
12/12/2014	15:10	SC-8 Center W Wall	0-6.5	<2.1	<10	<0.021	<0.042
12/30/2014	12:30	S Wall	0-6.5	<2.4	<9.8	<0.024	<0.047
12/30/2014	13:00	E wall	0-6.5	<2.6	<10	<0.026	<0.051
12/30/2014	13:05	W Wall	0-6.5	<3.1	<10	<0.031	<0.061
12/30/2014	13:10	Base	0-6.5	<3.2	<9.9	<0.032	<0.063

SCALE



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FARMINGTON, NEW MEXICO

SOIL CONTAMINANT CONCENTRATION MAP CHACON JICARILLA APACHE D #102 SECTION 26, T23N, R3W

SANDOVAL COUNTY, NEW MEXICO

Designed SM	Drawn DJB	Checked RSA
Date: JANUARY, 2015		
Scale: Horiz: 1"=10' Vert: N/A		
Project No: 5122855		
Sheet: 3		

Tables

Enterprise Products
Table 2: Site Ranking Criteria

Chacon Jicarilla Apache D#102
Pipeline Release
1/8/2015

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20	20	Topographic Maps and Field Verification	Groundwater estimated to be <50 feet at the Chacon Jicarilla D#102 site.
50' to 99' = 10			
>100' = 0			
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20	20	Topographic Maps and Field Verification	Release is located in an unnamed tributary of Valles Arroyo Wash
200'-1000' = 10			
>1000'			
Ranking Criteria for Horizontal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' for a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0		NM State Engineer Water Well Database	No recorded water wells located within 1,000 feet or within a 1 mile radius
Total Site Ranking	40		
Soil Remedation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	5000 PPM	1000 PPM	100 PPM



Table 3: Summary of Petroflag Field Screening Results

PETROFLAG FIELD SCREENING RESULTS SUMMARY					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	TPH (Mg/Kg)	Lab Sample Collected Y/N
12/3/2014	11:15	SC-1 S End Base	1.5	1865.0	Y
12/8/2014	11:15	SC-1 N Base	2.0	121.0	Y
12/8/2014	11:20	SC-2 N Center Base	2.0	248.8	Y
12/8/2014	11:25	SC-3 S Center Base	2.0	339.0	Y
12/8/2014	11:35	SC-4 S Base	4.0	1118.0	N
12/12/2014	13:00	SC-3 S Center Base	2.0	79.0	N
12/12/2014	14:30	SC-4 S Base	6.5	15.0	N
12/23/2014	12:00	E Wall	0-6.5	112.0	N
12/23/2014	13:15	W Wall	0-6.5	728.0	N
12/23/2014	13:30	S Wall	0-6.5	873.0	N
12/30/2014	12:30	S Wall	0-6.5	30.0	Y

Enterprise Products
Table 3: Laboratory Results Summary
(mg/kg)

Chacon Jicarilla Apache D #102
Pipeline Release
1/8/2015

LABORATORY ANALYTICAL SUMMARY							
Soil Samples							
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Guidelines		NMOCD Site Ranking: 40		100 ppm		10 ppm	50 ppm
1/14/2012	15:20	SC-1	0.33	7300	4000	9.6	1022.6
1/18/2013	12:39	SB-1	6	7.2	47	<0.047	<0.095
1/18/2013	12:45	SB-2	6	<4.9	23	<0.049	<0.099
1/18/2013	12:35	SB-3	6	<4.9	26	<0.049	<0.098
1/18/2013	12:28	SB-4	4	<4.7	21	<0.047	<0.095
1/18/2013	12:58	SB-5	4	<4.8	16	<0.048	<0.096
1/18/2013	13:07	SB-6	5	<4.7	15	<0.047	<0.093
1/18/2013	13:16	SB-7	5	<4.7	<10	<0.047	<0.095
10/17/2014	10:59	SB-1 @ 5'	5'	<4.8	<10	<0.048	<0.095
10/17/2014	11:09	SB-3 @ 2'	2'	56	160	<0.048	<0.27
10/17/2014	11:13	SB-2 @ 5'	5'	<5.0	<10	<0.050	<0.1
10/17/2014	11:17	SB-4 @ 1'	1'	370	570	<0.050	2.2
10/17/2014	11:27	SB-5 @ 1'	1'	2700	750	<0.25	92
10/17/2014	11:45	SB-6 @ 5'	5'	<4.9	<10	<0.049	<0.097
10/17/2014	11:50	SB-7 @ 5'	5'	<4.8	<10	<0.048	<0.096
10/17/2014	12:02	SB-8 @ 2'	2'	<4.9	<10	<0.049	<0.097
10/17/2014	12:40	SB-5 @ 10'	10'	<4.8	<10	<0.048	<0.096
12/3/2014	11:15	SC-1 South Base	1.5	2700	760	<0.96	132.1
12/8/2014	11:15	SC-1 N Base	2	24	16	<0.027	0.12
12/8/2014	11:20	SC-2 N C. Base	2	13	28	<0.027	0.07
12/8/2014	11:25	SC-3 S C. Base	2	520	140	<0.13	7.7
12/12/2014	13:00	SC-3 S C. Base	2	9	53	<0.030	<0.059
12/12/2014	14:30	SC-4 S Base #1	6.5	<2.4	<9.9	<0.024	<0.049
12/12/2014	14:37	SC-5 NE Wall	0-3.0	32	<9.9	<0.027	0.23
12/12/2014	14:50	SC-6 NW Wall	0-3.0	14	82	<0.022	0.11
12/12/2014	14:35	SC-7 C. E Wall	0-6.5	<2.9	<10	<0.029	<0.058
12/12/2014	15:10	SC-8 C. W Wall	0-6.5	<2.1	<10	<0.021	<0.042
12/12/2014	14:43	SC-9 SE Wall	0-6.5	740	88	0.23	11
12/12/2014	14:46	SC-10 SW Wall	0-6.5	110	34	<0.031	0.99
12/12/2014	16:48	SC-11 S Base #2	0-6.5	3.36	<10	<0.028	0.096
12/12/2014	14:50	SC-12 S Wall	0-6.5	150	130	0.035	0.92
12/30/2014	12:30	S Wall	0-6.5	<2.4	<9.8	<0.024	<0.047
12/30/2014	13:00	E wall	0-6.5	<2.6	<10	<0.026	<0.051
12/30/2014	13:05	W Wall	0-6.5	<3.1	<10	<0.031	<0.061
12/30/2014	13:10	Base	0-6.5	<3.2	<9.9	<0.032	<0.063



Table 4: Summary of Initial Field Screening Results

FIELD SCREENING RESULTS SUMMARY						
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading (ppm)	Petroflag Reading (mg/kg)	Lab Sample Collected Y/N
1/18/2013	11:24	SB-1 @1'	1.0	1475.0		
1/18/2013	11:28	SB-1 @2'	2.0	1606.0		
1/18/2013	11:32	SB-1 @3'	3.0	1623.0		
1/18/2013	11:34	SB-1 @4'	4.0	1328.0		
1/18/2013	11:35	SB-2 @1'	1.0	846.0		
1/18/2013	11:37	SB-2 @2'	2.0	1391.0		
1/18/2013	11:39	SB-2 @3'	3.0	1812.0		
1/18/2013	11:41	SB-2 @ 4'	4.0	1312.0		
1/18/2013	11:43	SB-3 @1'	1.0	1152.0		
1/18/2013	11:45	SB-3 @2'	2.0	1349.0		
1/18/2013	11:48	SB-3 @3'	3.0	542.0		
1/18/2013	11:50	SB-3 @4'	4.0	556.0		
1/18/2013	11:52	SB-4 @1'	1.0	538.0		
1/18/2013	12:37	SB-1 @5'	5.0	867.0		
1/18/2013	12:39	SB-1 @6'	6.0	625.0		Y
1/18/2013	12:42	SB-2 @5'	5.0	340.0		
1/18/2013	12:45	SB-2 @6'	6.0	610.0		Y
1/18/2013	12:33	SB-3 @5'	5.0	305.0		
1/18/2013	12:35	SB-3 @6'	6.0	245.0		Y
1/18/2013	12:18	SB-4 @2'	2.0	94.0		
1/18/2013	12:23	SB-4 @3'	3.0	243.0		
1/18/2013	12:28	SB-4 @ 4'	4.0	247.0		Y
1/18/2013	12:50	SB-5 @1'	1.0	148.0		
1/18/2013	12:52	SB-5 @2'	1.0	158.0		
1/18/2013	12:55	SB-5 @3'	3.0	72.0		
1/18/2013	12:58	SB-5 @4'	2.0	224.0		Y
1/18/2013	13:00	SB-6 @1'	1.0	1388.0		
1/18/2013	13:02	SB-6 @2'	2.0	733.0		
1/18/2013	13:04	SB-6 @3'	3.0	617.0		
1/18/2013	13:05	SB-6 @4'	4.0	300.0		
1/18/2013	13:07	SB-6 @5'	5.0	617.0		Y
1/18/2013	13:08	SB-7 @1'	1.0	45.0		
1/18/2013	13:10	SB-7 @2'	2.0	30.0		
1/18/2013	13:12	SB-7 @3'	3.0	31.0		
1/18/2013	13:14	SB-7 @4'	4.0	65.0		
1/18/2013	13:16	SB-7 @5'	5.0	30.0		Y



Enterprise Productions
Table 5: Summary of Field Screening Results

Chacon Jicarilla Apache D#102
Pipeline Release
1/8/2015

FIELD SCREENING RESULTS SUMMARY						
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading (ppm)	Petroflag Reading (mg/kg)	Lab Sample Collected Y/N
Soil Borings						
6/18/2013	11:10	SB-1	1.0	3039.0	NA	N
6/18/2013	11:12	SB-1	2.0	4058.0	NA	N
6/18/2013	11:14	SB-1	3.0	1630.0	NA	N
6/18/2013	11:15	SB-1	4.0	1591.0	NA	N
6/18/2013	11:16	SB-2	1.0	55.0	NA	N
6/18/2013	11:18	SB-2	2.0	4580.0	NA	N
6/18/2013	11:20	SB-2	3.0	4884.0	NA	N
6/18/2013	11:57	SB-2	4.0	3743.0	NA	N
6/18/2013	11:25	SB-3	1.0	785.0	NA	N
6/18/2013	11:27	SB-3	2.0	267.0	NA	N
6/18/2013	11:29	SB-3	3.0	113.0	NA	N
6/18/2013	11:59	SB-3	4.0	69.0	NA	N
SVE Hydrocarbon Vapor Removal						
6/18/2013	11:44	SVE-1	Vent Fan	64.0	NA	NA
6/18/2013	11:45	SVE-1	Vent Fan	66.0	NA	NA
6/18/2013	11:46	SVE-1	Vent Fan	63.0	NA	NA
6/18/2013	11:47	SVE-1	Vent Fan	61.0	NA	NA
6/18/2013	11:48	SVE-1	Vent Fan	59.0	NA	NA
6/18/2013	11:49	SVE-2	Vent Fan	54.0	NA	NA
6/18/2013	11:50	SVE-2	Vent Fan	57.0	NA	NA
6/18/2013	11:51	SVE-2	Vent Fan	51.0	NA	NA
6/18/2013	11:52	SVE-2	Vent Fan	61.0	NA	NA
6/18/2013	11:53	SVE-2	Vent Fan	58.0	NA	NA
Soil Borings						
9/20/2013	11:04	SB-1	1.0	11.0	NA	N
9/20/2013	11:05	SB-1	2.0	72.0	NA	N
9/20/2013	11:06	SB-1	3.0	18.0	NA	N
9/20/2013	11:07	SB-1	4.0	82.0	NA	N
9/20/2013	11:08	SB-1	5.0	31.0	NA	N
9/20/2013	11:09	SB-1	6.0	22.0	NA	N
9/20/2013	11:14	SB-2	1.0	311.0	NA	N
9/20/2013	11:15	SB-2	2.0	440.0	NA	N
9/20/2013	11:16	SB-2	3.0	158.0	NA	N
9/20/2013	11:17	SB-2	4.0	156.0	NA	N
9/20/2013	11:18	SB-2	5.0	31.0	NA	N
9/20/2013	11:19	SB-2	6.0	22.0	NA	N
9/20/2013	11:27	SB-3	1.0	0.0	NA	N



Enterprise Productions
Table 5: Summary of Field Screening Results

Chacon Jicarilla Apache D#102
Pipeline Release
1/8/2015

FIELD SCREENING RESULTS SUMMARY						
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading (ppm)	Petroflag Reading (mg/kg)	Lab Sample Collected Y/N
9/20/2013	11:28	SB-3	2.0	34.0	NA	N
9/20/2013	11:29	SB-3	3.0	31.0	NA	N
9/20/2013	11:30	SB-3	4.0	27.0	NA	N
9/20/2013	11:31	SB-3	5.0	0.0	NA	N
9/20/2013	11:32	SB-3	6.0	0.0	NA	N
9/20/2013	11:41	SB-4	1.0	0.0	NA	N
9/20/2013	11:42	SB-4	2.0	0.0	NA	N
9/20/2013	11:43	SB-4	3.0	4963.0	NA	N
9/20/2013	11:44	SB-4	4.0	4731.0	NA	N
9/20/2013	11:45	SB-4	5.0	3659.0	NA	N
9/20/2013	11:46	SB-4	6.0	2453.0	NA	N
SVE Hydrocarbon Vapor Removal						
9/20/2013	10:49	SVE-1	Vent Fan	0.0	NA	NA
9/20/2013	10:51	SVE-1	Vent Fan	0.0	NA	NA
9/20/2013	10:53	SVE-2	Vent Fan	0.0	NA	NA
9/20/2013	10:55	SVE-2	Vent Fan	0.0	NA	NA
Soil Borings						
10/17/2014	10:55	SB-1 just below pipeline	1.0	0.7	N	N
10/17/2014	10:57		2.0	0.6	N	N
10/17/2014	10:57		3.0	0.6	N	N
10/17/2014	10:58		4.0	1.6	N	N
10/17/2014	10:59		5.0	2.1	N	Y
10/17/2014	11:04	SB-2 hillside SW of PL	1.0	0.3	N	N
10/17/2014	11:05		2.0	0.5	N	N
10/17/2014	11:09		3.0	0.7	N	N
10/17/2014	11:10		4.0	0.7	N	N
10/17/2014	11:13		5.0	0.8	N	Y
10/17/2014	11:08	SB-3 N bank @ PL	1.0	231.0	N	N
10/17/2014	11:09		2.0	2064.0	N	Y
10/17/2014	11:11		3.0	23.5	N	N
10/17/2014	11:13		4.0	23.2	N	N
10/17/2014	11:15		5.0	17.6	N	N
10/17/2014	11:17	SB-4 Downstream in wash 15'	1.0	2127.0	N	Y
10/17/2014	11:19		2.0	140.9	N	N
10/17/2014	11:21		3.0	72.6	N	N
10/17/2014	11:23		4.0	87.9	N	N
10/17/2014	11:26		5.0	58.7	N	N
10/17/2014	11:27	SB-5 Downstream 30'	1.0	2514.0	N	Y
10/17/2014	11:30		2.0	1850.0	N	N
10/17/2014	11:31		3.0	1957.0	N	N
10/17/2014	11:32		4.0	2272.0	N	N



Table 5: Summary of Field Screening Results

FIELD SCREENING RESULTS SUMMARY						
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading (ppm)	Petroflag Reading (mg/kg)	Lab Sample Collected Y/N
10/17/2014	11:33		5.0	2453.0	N	N
10/17/2014	12:13		6.0	2512.0	N	N
10/17/2014	12:14		7.0	517.0	N	N
10/17/2014	12:16		8.0	354.0	N	N
10/17/2014	12:35		9.0	150.6	N	N
10/17/2014	12:40		10.0	351.7	N	Y
10/17/2014	11:36	SB-6 Downstream 55'	1.0	8.5	N	N
10/17/2014	11:38		2.0	7.2	N	N
10/17/2014	11:40		3.0	6.3	N	N
10/17/2014	11:42		4.0	227.0	N	N
10/17/2014	11:45		5.0	28.0	N	N
10/17/2014	11:45	On Bank between SB-5 and SB-6	1.0	3.0	N	N
10/17/2014	11:47		2.0	3.6	N	N
10/17/2014	11:48		3.0	2.9	N	N
10/17/2014	11:49		4.0	5.2	N	N
10/17/2014	11:50		5.0	10.2	N	Y
10/17/2014	12:00	SB-8 Upstream of release point	1.0	6.8	N	N
10/17/2014	12:02		2.0	177.4	N	Y
10/17/2014	12:04		3.0	6.8	N	N
10/17/2014	12:06		4.0	10.5	N	N
10/17/2014	12:08		5.0	5.3	N	N
12/3/2014	11:15	South End Base	1.5	1707.0	1865.0	Y
12/8/2014	11:15	SC-1 N Base	2.0	499.9	121.0	Y
12/8/2014	11:20	SC-2 N Center Base	2.0	248.8	248.8	Y
12/8/2014	11:25	SC-3 S Center Base	2.0	2932.0	339.0	Y
12/8/2014	11:35	SC-4 S Base Test Pit	4.0	1452.0	1118.0	N
12/12/2014	13:00	SC-3 S. Center Base	2.0	514.0	79.0	Y
12/12/2014	14:30	SC-4 S. Base	6.5	9.4	15.0	Y
12/12/2014	14:37	SC-5 NE Base (area 3)	0-3.0	354.7	N	Y
12/12/2014	15:17	SC-6 NW Wall (area 3)	0-3.0	234.5	N	Y
12/12/2014	14:35	SC-7 SE Wall (area 4)	0-6.5	18.3	N	Y
12/12/2014	15:10	SC-8 SW Wall (area 4)	0-6.5	6.2	N	Y
12/23/2014	12:00	E Wall	0-6.5	631.0	112.0	N
12/23/2014	13:15	W Wall	0-6.5	728.0	728.0	N
12/23/2014	13:30	S Wall	0-6.5	873.0	873.0	N
12/30/2014	12:30	S Wall	0-6.5	3.0	30.0	Y
12/30/2014	13:00	E Wall	0-6.5	1.2	N	Y
12/30/2014	13:05	W Wall	0-6.5	3.0	N	Y
12/30/2014	13:10	Base	6.5	6.6	N	Y



Appendix A

Photographic Documentation

Site Photographs
Enterprise Products Chacon Jicarilla Apache D #102

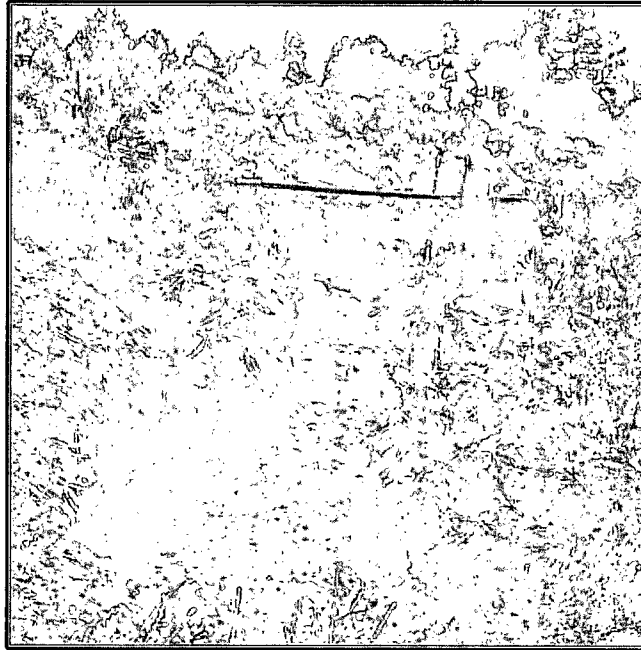


Photo 1: Manual excavation at the Chacon Jicarilla Apache D #102 pipeline release at a depth of approximately 1.5' bgs. Moderate hydrocarbon odor in base near south end (foreground) 12/3/2014.

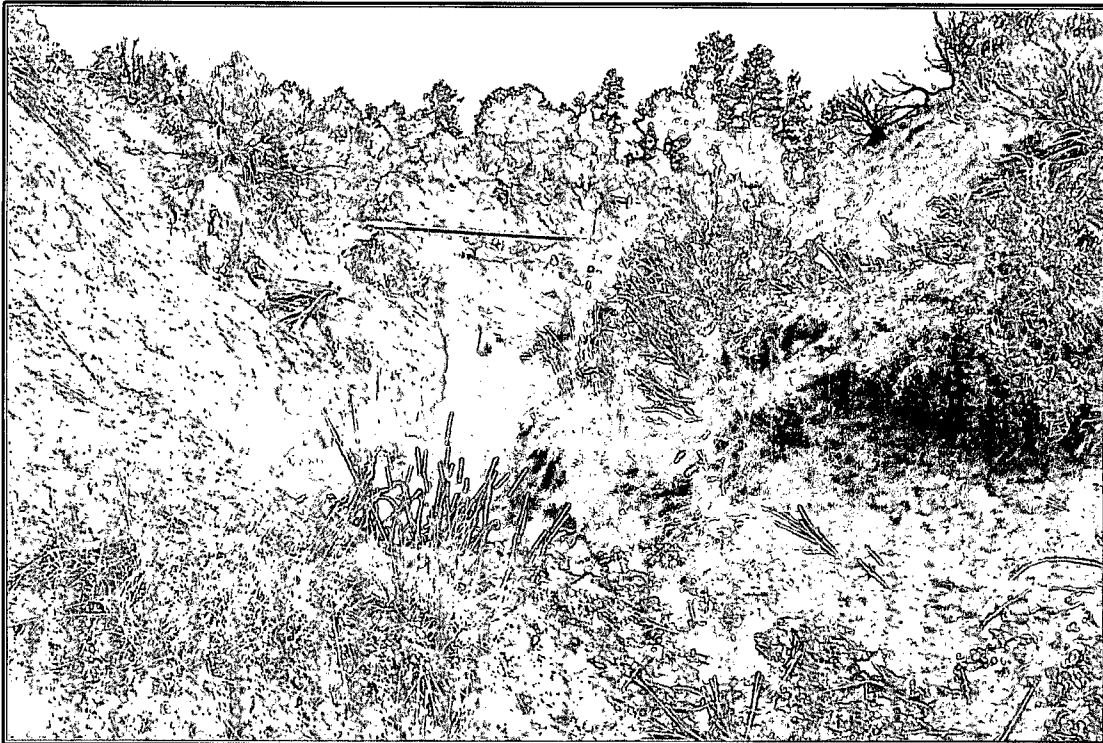


Photo 2: South end of excavation increased to ~2ft bgs , odor and PID screening above NMOCD standards.

Site Photographs
Enterprise Products Chacon Jicarilla Apache D #102

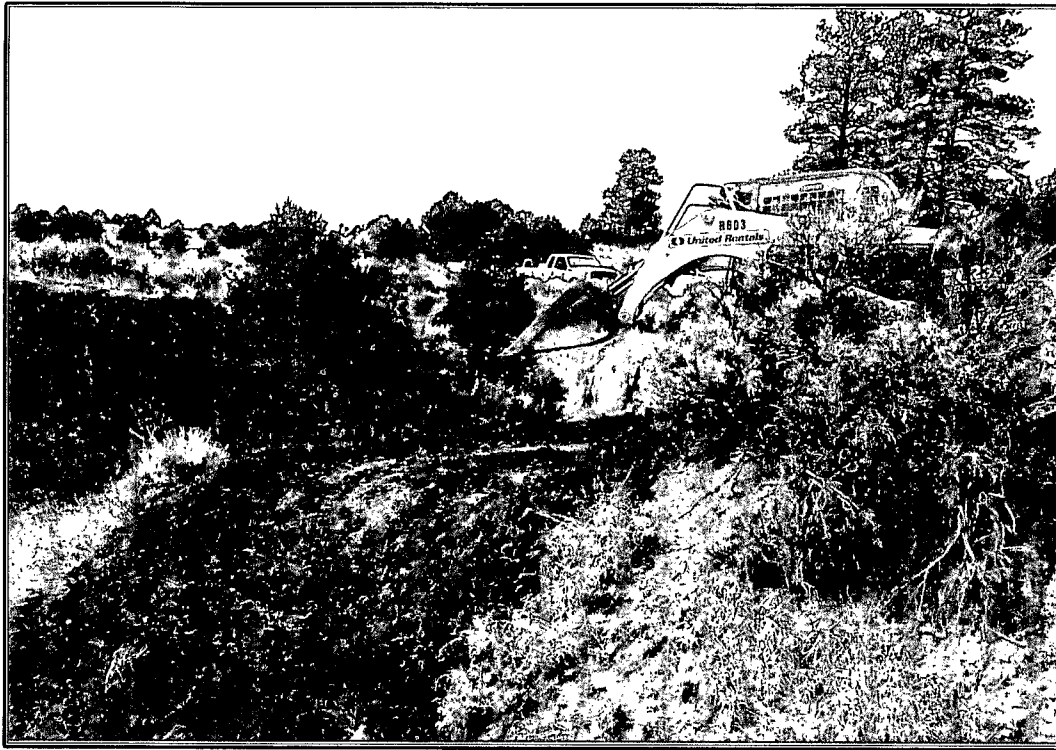


Photo 3: Skidsteer making access ramp for mini-excavator.

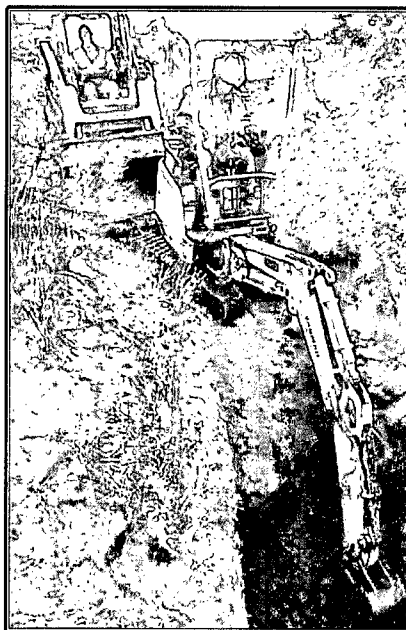


Photo 4: Mini-excavator loading contaminated soil by the bucket into the skidsteer bucket. Skidsteer then hauls each bucket to dump truck for removal.

Site Photographs
Enterprise Products Chacon Jicarilla Apache D #102



Photo 5: Rubber-tire backhoe excavating the southern portion of excavation on 12/30/2015.

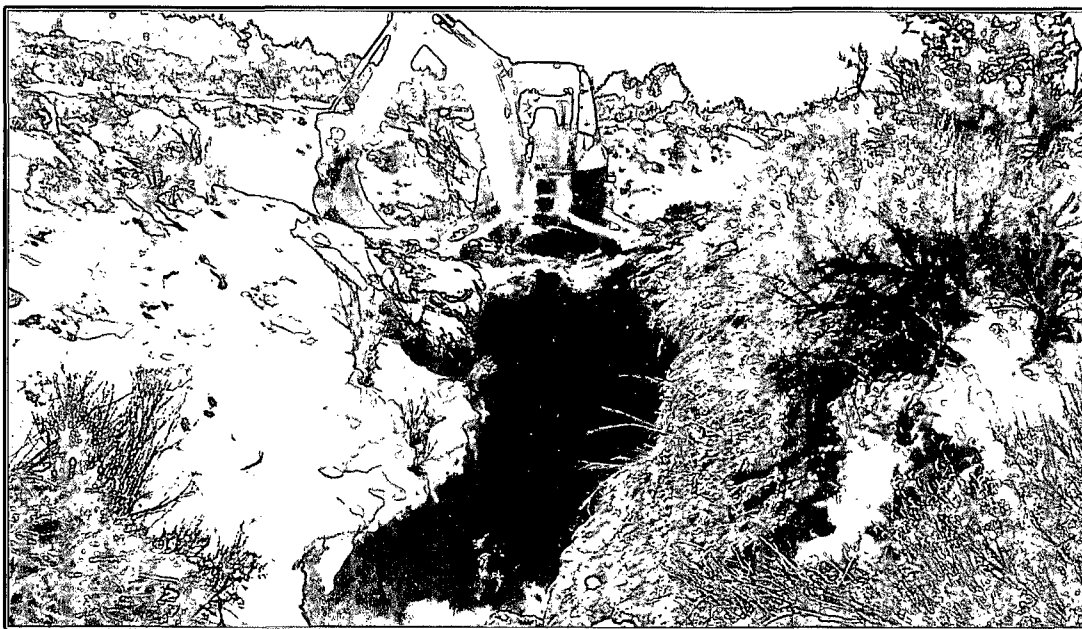


Photo 6: Completed excavation extent. 12/30/2014. Southern section dimension are now 8' wide, 6.5' below grade, and 14.5' in length.

Appendix B
Soil Disposal Documentation

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

97057-0676 Form C-138
Revised 08/01/11
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Rellly Ave, Farmington NM 87401

Dec 2014

2. Originating Site:
Chacon Jicarilla Apache D#102

3. Location of Material (Street Address, City, State or ULSTR):
UL K Section 26, T23N, R3W; 36.19759, -107.13412

4. Source and Description of Waste:

Source: Water and Sludge from Steaming Cleaning Vessels.

Description: Soil impacted with Natural Gas Liquids (Condensate and Water)

Estimated Volume 20 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 42.5 yd³ bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 12-2-14, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, *Kendra Lunung* representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: ~~EDS~~ IMI, HGL Services

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011

Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Kendra Lunung

SIGNATURE: *Kendra Lunung*
Surface Waste Management Facility Authorized Agent

TITLE: waste coordinator
~~Land Farm Administrator~~

TELEPHONE NO.: 505-632-0615

DATE: 12-2-14

Appendix C

Laboratory Analytical Results



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

October 23, 2014

Steve Moskal
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Jic Chicon D # 102

OrderNo.: 1410932

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 9 sample(s) on 10/21/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

CLIENT: Souder, Miller and Associates

Client Sample ID: SB-4 @ 1'

Project: Jic Chicon D # 102

Collection Date: 10/17/2014 11:17:00 AM

Lab ID: 1410932-001

Matrix: SOIL

Received Date: 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	570	9.9		mg/Kg	1	10/22/2014 10:06:43 AM	16008
Surr: DNOP	124	63.5-128		%REC	1	10/22/2014 10:06:43 AM	16008
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	370	50		mg/Kg	10	10/23/2014 1:31:51 AM	16008
Surr: BFB	322	80-120	S	%REC	10	10/23/2014 1:31:51 AM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/22/2014 2:34:48 PM	16008
Toluene	ND	0.050		mg/Kg	1	10/22/2014 2:34:48 PM	16008
Ethylbenzene	ND	0.050		mg/Kg	1	10/22/2014 2:34:48 PM	16008
Xylenes, Total	2.2	0.10		mg/Kg	1	10/22/2014 2:34:48 PM	16008
Surr: 4-Bromofluorobenzene	409	80-120	S	%REC	1	10/22/2014 2:34:48 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SB-5 @ 1'**Project:** Jic Chicon D # 102**Collection Date:** 10/17/2014 11:27:00 AM**Lab ID:** 1410932-002**Matrix:** SOIL**Received Date:** 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	750	10		mg/Kg	1	10/22/2014 10:36:59 AM	16006
Surr: DNOP	111	63.5-128		%REC	1	10/22/2014 10:36:59 AM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2700	49		mg/Kg	10	10/22/2014 1:08:54 PM	16008
Surr: BFB	1220	80-120	S	%REC	10	10/22/2014 1:08:54 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.25		mg/Kg	10	10/22/2014 1:08:54 PM	16008
Toluene	ND	0.49		mg/Kg	10	10/22/2014 1:08:54 PM	16008
Ethylbenzene	ND	0.49		mg/Kg	10	10/22/2014 1:08:54 PM	16008
Xylenes, Total	92	0.99		mg/Kg	10	10/22/2014 1:08:54 PM	16008
Surr: 4-Bromofluorobenzene	177	80-120	S	%REC	10	10/22/2014 1:08:54 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SB-5 @ 10'**Project:** Jic Chicon D # 102**Collection Date:** 10/17/2014 12:40:00 PM**Lab ID:** 1410932-003**Matrix:** SOIL**Received Date:** 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 3:45:02 PM	16006
Surr: DNOP	91.9	63.5-128		%REC	1	10/22/2014 3:45:02 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/22/2014 4:29:06 PM	16008
Surr: BFB	99.1	80-120		%REC	1	10/22/2014 4:29:06 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	10/22/2014 4:29:06 PM	16008
Toluene	ND	0.048		mg/Kg	1	10/22/2014 4:29:06 PM	16008
Ethylbenzene	ND	0.048		mg/Kg	1	10/22/2014 4:29:06 PM	16008
Xylenes, Total	ND	0.096		mg/Kg	1	10/22/2014 4:29:06 PM	16008
Surr: 4-Bromofluorobenzene	90.0	80-120		%REC	1	10/22/2014 4:29:06 PM	16008

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

Qualifiers:

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

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

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SB-1 @ 5'**Project:** Jic Chicon D # 102**Collection Date:** 10/17/2014 10:59:00 AM**Lab ID:** 1410932-004**Matrix:** SOIL**Received Date:** 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 4:16:18 PM	16006
Surr: DNOP	101	63.5-128		%REC	1	10/22/2014 4:16:18 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/22/2014 4:57:48 PM	16008
Surr: BFB	96.8	80-120		%REC	1	10/22/2014 4:57:48 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	10/22/2014 4:57:48 PM	16008
Toluene	ND	0.048		mg/Kg	1	10/22/2014 4:57:48 PM	16008
Ethylbenzene	ND	0.048		mg/Kg	1	10/22/2014 4:57:48 PM	16008
Xylenes, Total	ND	0.095		mg/Kg	1	10/22/2014 4:57:48 PM	16008
Surr: 4-Bromofluorobenzene	92.4	80-120		%REC	1	10/22/2014 4:57:48 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SB-2 @ 5'**Project:** Jic Chicon D # 102**Collection Date:** 10/17/2014 11:13:00 AM**Lab ID:** 1410932-005**Matrix:** SOIL**Received Date:** 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 4:47:34 PM	16006
Surr: DNOP	101	63.5-128		%REC	1	10/22/2014 4:47:34 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/22/2014 5:26:28 PM	16008
Surr: BFB	95.7	80-120		%REC	1	10/22/2014 5:26:28 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	10/22/2014 5:26:28 PM	16008
Toluene	ND	0.050		mg/Kg	1	10/22/2014 5:26:28 PM	16008
Ethylbenzene	ND	0.050		mg/Kg	1	10/22/2014 5:26:28 PM	16008
Xylenes, Total	ND	0.10		mg/Kg	1	10/22/2014 5:26:28 PM	16008
Surr: 4-Bromofluorobenzene	94.1	80-120		%REC	1	10/22/2014 5:26:28 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

CLIENT: Souder, Miller and Associates

Client Sample ID: SB-3 @ 2'

Project: Jic Chicon D # 102

Collection Date: 10/17/2014 11:09:00 AM

Lab ID: 1410932-006

Matrix: SOIL

Received Date: 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	160	10		mg/Kg	1	10/22/2014 5:18:54 PM	16006
Surr: DNOP	109	63.5-128		%REC	1	10/22/2014 5:18:54 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	56	4.8		mg/Kg	1	10/22/2014 10:11:55 PM	16008
Surr: BFB	394	80-120	S	%REC	1	10/22/2014 10:11:55 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	10/22/2014 10:11:55 PM	16008
Toluene	ND	0.048		mg/Kg	1	10/22/2014 10:11:55 PM	16008
Ethylbenzene	ND	0.048		mg/Kg	1	10/22/2014 10:11:55 PM	16008
Xylenes, Total	0.27	0.097		mg/Kg	1	10/22/2014 10:11:55 PM	16008
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	10/22/2014 10:11:55 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

CLIENT: Souder, Miller and Associates

Client Sample ID: SB-6 @ 5'

Project: Jic Chicon D # 102

Collection Date: 10/17/2014 11:45:00 AM

Lab ID: 1410932-007

Matrix: SOIL

Received Date: 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 5:50:11 PM	16006
Surr: DNOP	97.0	63.5-128		%REC	1	10/22/2014 5:50:11 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/22/2014 10:40:29 PM	16008
Surr: BFB	96.1	80-120		%REC	1	10/22/2014 10:40:29 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	10/22/2014 10:40:29 PM	16008
Toluene	ND	0.049		mg/Kg	1	10/22/2014 10:40:29 PM	16008
Ethylbenzene	ND	0.049		mg/Kg	1	10/22/2014 10:40:29 PM	16008
Xylenes, Total	ND	0.097		mg/Kg	1	10/22/2014 10:40:29 PM	16008
Surr: 4-Bromofluorobenzene	93.5	80-120		%REC	1	10/22/2014 10:40:29 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 7 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SB-7 @ 5'**Project:** Jic Chicon D # 102**Collection Date:** 10/17/2014 11:50:00 AM**Lab ID:** 1410932-008**Matrix:** SOIL**Received Date:** 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 6:21:32 PM	16006
Surr: DNOP	99.5	63.5-128		%REC	1	10/22/2014 6:21:32 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/22/2014 11:08:59 PM	16008
Surr: BFB	94.0	80-120		%REC	1	10/22/2014 11:08:59 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	10/22/2014 11:08:59 PM	16008
Toluene	ND	0.048		mg/Kg	1	10/22/2014 11:08:59 PM	16008
Ethylbenzene	ND	0.048		mg/Kg	1	10/22/2014 11:08:59 PM	16008
Xylenes, Total	ND	0.096		mg/Kg	1	10/22/2014 11:08:59 PM	16008
Surr: 4-Bromofluorobenzene	94.3	80-120		%REC	1	10/22/2014 11:08:59 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 8 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1410932

Date Reported: 10/23/2014

CLIENT: Souder, Miller and Associates

Client Sample ID: SB-8 @ 2'

Project: Jic Chicon D # 102

Collection Date: 10/17/2014 12:02:00 PM

Lab ID: 1410932-009

Matrix: SOIL

Received Date: 10/21/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 6:52:33 PM	16006
Surr: DNOP	100	63.5-128		%REC	1	10/22/2014 6:52:33 PM	16006
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/22/2014 11:37:30 PM	16008
Surr: BFB	92.9	80-120		%REC	1	10/22/2014 11:37:30 PM	16008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	10/22/2014 11:37:30 PM	16008
Toluene	ND	0.049		mg/Kg	1	10/22/2014 11:37:30 PM	16008
Ethylbenzene	ND	0.049		mg/Kg	1	10/22/2014 11:37:30 PM	16008
Xylenes, Total	ND	0.097		mg/Kg	1	10/22/2014 11:37:30 PM	16008
Surr: 4-Bromofluorobenzene	93.1	80-120		%REC	1	10/22/2014 11:37:30 PM	16008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 12
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410932

23-Oct-14

Client: Souder, Miller and Associates

Project: Jic Chicon D # 102

Sample ID	MB-16006	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	16006	RunNo:	22037					
Prep Date:	10/21/2014	Analysis Date:	10/21/2014	SeqNo:	647997	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.0	63.5	128			

Sample ID	LCS-16006	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	16006	RunNo:	22037					
Prep Date:	10/21/2014	Analysis Date:	10/21/2014	SeqNo:	647999	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	42	10	50.00	0	83.7	68.6	130			
Surr: DNOP	4.2		5.000		84.9	63.5	128			

Sample ID	MB-16000	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	16000	RunNo:	22037					
Prep Date:	10/20/2014	Analysis Date:	10/21/2014	SeqNo:	648092	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	8.3		10.00		83.4	63.5	128			
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Sample ID	LCS-16000	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	16000	RunNo:	22037					
Prep Date:	10/20/2014	Analysis Date:	10/21/2014	SeqNo:	648093	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	5.4		5.000		108	63.5	128			
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Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410932

23-Oct-14

Client: Souder, Miller and Associates

Project: Jic Chicon D # 102

Sample ID	MB-16008 MK		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: R22067		RunNo: 22067					
Prep Date:			Analysis Date: 10/22/2014		SeqNo: 649563		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		90.7	80	120			

Sample ID	LCS-16008 MK		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	R22067		RunNo:	22067				
Prep Date:			Analysis Date:	10/22/2014		SeqNo:	649564		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB	1100		1000		115	80	120				

Sample ID	MB-16008	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	16008	RunNo:	22067					
Prep Date:	10/21/2014	Analysis Date:	10/22/2014	SeqNo:	649565	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.7	80	120			

Sample ID	LCS-16008		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	16008		RunNo:	22067				
Prep Date:	10/21/2014		Analysis Date:	10/22/2014		SeqNo:	649566		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	30	5.0	25.00	0	121	65.8	139				
Surr: BFB	1100		1000		115	80	120				

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1410932

23-Oct-14

Client: Souder, Miller and Associates

Project: Jic Chicon D # 102

Sample ID	MB-16008 MK		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS		Batch ID:	R22067		RunNo:	22067				
Prep Date:			Analysis Date:	10/22/2014		SeqNo:	649639		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.94		1.000		94.5	80	120				

Sample ID	LCS-16008 MK		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS		Batch ID:	R22067		RunNo:	22067				
Prep Date:			Analysis Date:	10/22/2014		SeqNo:	649640		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120				

Sample ID	MB-16008	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS	Batch ID: 16008		RunNo: 22067						
Prep Date:	10/21/2014	Analysis Date: 10/22/2014		SeqNo: 649641		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.94		1.000		94.5	80	120			

Sample ID	LCS-16008		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 16008		RunNo: 22067					
Prep Date:	10/21/2014		Analysis Date: 10/22/2014		SeqNo: 649642		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	99.1	80	120			
Toluene	1.0	0.050	1.000	0	99.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Qualifiers:

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

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



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

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1410932

RcptNo: 1

Received by/date:

Logged By:

Lindsay Mangin

10/21/2014 7:00:00 AM

Completed By:

Lindsay Mangin

10/21/2014 7:21:57 AM

Reviewed By:

Ar 10/21/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:

Jesse Sprague

Date:

By Whom:

Ar

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Sample ID is SB5C.10'

Client Instructions:

17. Additional remarks:

Ar 10/21/14

18. Cooler Information

Cooler No.	Temp. $^{\circ}\text{C}$	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway

Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: stacey.moskal@soundmill.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Jic Chicon D#102

Project #:

5122855 BG55

Project Manager:

Steve Moskal

Sampler:

Jesse Sprague

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + THMs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO DRO / #80)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10/17/14	1117	Soil	SB-4 e 1'	1 4oz	—	-001	X		X									
	1127		SB-5 e 1'			-002	X		X									
	1240		SB-5 e 10' ^{10/21/14}			-003	X		X									
	1059		SB-1 e 5'			-004	X		X									
	1113		SB-2 e 5'			-005	X		X									
	1109		SB-3 e 2'			-006	X		X									
	1145		SB-6 e 5'			-007	X		X									
	1150		SB-7 e 5'			-008	X		X									
	1202		SB-8 e 2'			-009	X		X									

Date: 10/20/14 Time: 1643 Relinquished by: [Signature]

Received by: [Signature] Date: 10/20/14 Time: 1643

Date: 10/20/14 Time: 1730 Relinquished by: [Signature]

Received by: [Signature] Date: 10/21/14 Time: 0700

Remarks: Invoice Enterprise

Please copy Alicia.patterson@soundmill.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

December 08, 2014

Steve Moskal

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Jic Chacon D 102

OrderNo.: 1412209

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1412209

RcptNo: 1

Received by/date: AT 12/04/14

Logged By: Anne Thorne 12/4/2014 7:55:00 AM

Completed By: Anne Thorne 12/4/2014

Reviewed By: [Signature] 12/04/14

[Signature]

[Signature]

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

☐ EDD (Type) _____

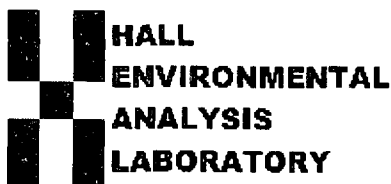
Sample Temperature: 1.2

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

Remarks: Pls Invoice Enterprise,
Pls copy Jose.sprague@soudemiller.com
Alicia.Pattosane@soudemiller.com

11/17 1730 Ph. F. 11/17 1730 12/04/14

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



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

December 10, 2014

Steve Moskal

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX

RE: Jicarilla Chacon D #102

OrderNo.: 1412386

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/9/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1412386

Date Reported: 12/10/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-2 N Center Base**Project:** Jicarilla Chacon D #102**Collection Date:** 12/8/2014 11:20:00 AM**Lab ID:** 1412386-002**Matrix:** MEOH (SOIL)**Received Date:** 12/9/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	28	9.8		mg/Kg	1	12/9/2014 10:40:45 AM	16735
Surr: DNOP	84.4	63.5-128		%REC	1	12/9/2014 10:40:45 AM	16735
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	13	2.7		mg/Kg	1	12/9/2014 11:46:46 AM	R23008
Surr: BFB	261	80-120	S	%REC	1	12/9/2014 11:46:46 AM	R23008
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.027		mg/Kg	1	12/9/2014 11:46:46 AM	R23008
Toluene	ND	0.027		mg/Kg	1	12/9/2014 11:46:46 AM	R23008
Ethylbenzene	ND	0.027		mg/Kg	1	12/9/2014 11:46:46 AM	R23008
Xylenes, Total	0.070	0.054		mg/Kg	1	12/9/2014 11:46:46 AM	R23008
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	12/9/2014 11:46:46 AM	R23008

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		



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

December 16, 2014

Steve Moskal
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Jicarilla Chacon D #102

OrderNo.: 1412641

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 10 sample(s) on 12/13/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-3 @ 2'**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 1:00:00 PM**Lab ID:** 1412641-001**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	53	10		mg/Kg	1	12/15/2014 9:43:47 AM	16816
Surr: DNOP	87.3	63.5-128		%REC	1	12/15/2014 9:43:47 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	9.0	3.0		mg/Kg	1	12/15/2014 10:32:16 AM	16795
Surr: BFB	270	80-120	S	%REC	1	12/15/2014 10:32:16 AM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.030		mg/Kg	1	12/15/2014 10:32:16 AM	16795
Toluene	ND	0.030		mg/Kg	1	12/15/2014 10:32:16 AM	16795
Ethylbenzene	ND	0.030		mg/Kg	1	12/15/2014 10:32:16 AM	16795
Xylenes, Total	ND	0.059		mg/Kg	1	12/15/2014 10:32:16 AM	16795
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	12/15/2014 10:32:16 AM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-4 S Base #1**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 2:30:00 PM**Lab ID:** 1412641-002**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/15/2014 10:13:50 AM	16816
Surr: DNOP	83.0	63.5-128		%REC	1	12/15/2014 10:13:50 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.4		mg/Kg	1	12/15/2014 11:01:00 AM	16795
Surr: BFB	98.0	80-120		%REC	1	12/15/2014 11:01:00 AM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/15/2014 11:01:00 AM	16795
Toluene	ND	0.024		mg/Kg	1	12/15/2014 11:01:00 AM	16795
Ethylbenzene	ND	0.024		mg/Kg	1	12/15/2014 11:01:00 AM	16795
Xylenes, Total	ND	0.049		mg/Kg	1	12/15/2014 11:01:00 AM	16795
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	12/15/2014 11:01:00 AM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 13
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **1412641**Date Reported: **12/16/2014****CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-5 NE Wall**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 2:37:00 PM**Lab ID:** 1412641-003**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/15/2014 10:43:38 AM	16816
Surr: DNOP	80.9	63.5-128		%REC	1	12/15/2014 10:43:38 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	32	2.7		mg/Kg	1	12/15/2014 11:29:37 AM	16795
Surr: BFB	364	80-120	S	%REC	1	12/15/2014 11:29:37 AM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.027		mg/Kg	1	12/15/2014 11:29:37 AM	16795
Toluene	ND	0.027		mg/Kg	1	12/15/2014 11:29:37 AM	16795
Ethylbenzene	ND	0.027		mg/Kg	1	12/15/2014 11:29:37 AM	16795
Xylenes, Total	0.23	0.053		mg/Kg	1	12/15/2014 11:29:37 AM	16795
Surr: 4-Bromofluorobenzene	122	80-120	S	%REC	1	12/15/2014 11:29:37 AM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 13
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-6 NW Wall**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 2:50:00 PM**Lab ID:** 1412641-004**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	82	10		mg/Kg	1	12/15/2014 11:13:47 AM	16816
Surr: DNOP	84.1	63.5-128		%REC	1	12/15/2014 11:13:47 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	14	2.2		mg/Kg	1	12/15/2014 11:58:14 AM	16795
Surr: BFB	301	80-120	S	%REC	1	12/15/2014 11:58:14 AM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	12/15/2014 11:58:14 AM	16795
Toluene	ND	0.022		mg/Kg	1	12/15/2014 11:58:14 AM	16795
Ethylbenzene	ND	0.022		mg/Kg	1	12/15/2014 11:58:14 AM	16795
Xylenes, Total	0.11	0.044		mg/Kg	1	12/15/2014 11:58:14 AM	16795
Surr: 4-Bromofluorobenzene	117	80-120		%REC	1	12/15/2014 11:58:14 AM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-7 Center East Wall**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 2:35:00 PM**Lab ID:** 1412641-005**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/15/2014 11:43:50 AM	16816
Surr: DNOP	82.1	63.5-128		%REC	1	12/15/2014 11:43:50 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	12/15/2014 12:26:57 PM	16795
Surr: BFB	107	80-120		%REC	1	12/15/2014 12:26:57 PM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.029		mg/Kg	1	12/15/2014 12:26:57 PM	16795
Toluene	ND	0.029		mg/Kg	1	12/15/2014 12:26:57 PM	16795
Ethylbenzene	ND	0.029		mg/Kg	1	12/15/2014 12:26:57 PM	16795
Xylenes, Total	ND	0.058		mg/Kg	1	12/15/2014 12:26:57 PM	16795
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	12/15/2014 12:26:57 PM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-8 Center West Wall**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 3:10:00 PM**Lab ID:** 1412641-006**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/15/2014 9:52:33 AM	16816
Surr: DNOP	74.1	63.5-128		%REC	1	12/15/2014 9:52:33 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.1		mg/Kg	1	12/15/2014 12:55:42 PM	16795
Surr: BFB	96.7	80-120		%REC	1	12/15/2014 12:55:42 PM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	12/15/2014 12:55:42 PM	16795
Toluene	ND	0.021		mg/Kg	1	12/15/2014 12:55:42 PM	16795
Ethylbenzene	ND	0.021		mg/Kg	1	12/15/2014 12:55:42 PM	16795
Xylenes, Total	ND	0.042		mg/Kg	1	12/15/2014 12:55:42 PM	16795
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	12/15/2014 12:55:42 PM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-9 South East Wall

Project: Jicarilla Chacon D #102

Collection Date: 12/12/2014 4:43:00 PM

Lab ID: 1412641-007

Matrix: SOIL

Received Date: 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	88	9.9		mg/Kg	1	12/15/2014 10:14:01 AM	16816
Surr: DNOP	80.9	63.5-128		%REC	1	12/15/2014 10:14:01 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	740	29		mg/Kg	10	12/15/2014 1:24:26 PM	16795
Surr: BFB	483	80-120	S	%REC	10	12/15/2014 1:24:26 PM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.23	0.15		mg/Kg	10	12/15/2014 1:24:26 PM	16795
Toluene	ND	0.29		mg/Kg	10	12/15/2014 1:24:26 PM	16795
Ethylbenzene	ND	0.29		mg/Kg	10	12/15/2014 1:24:26 PM	16795
Xylenes, Total	11	0.58		mg/Kg	10	12/15/2014 1:24:26 PM	16795
Surr: 4-Bromofluorobenzene	126	80-120	S	%REC	10	12/15/2014 1:24:26 PM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-10 South West Wall**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 4:46:00 PM**Lab ID:** 1412641-008**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	34	10		mg/Kg	1	12/15/2014 10:35:24 AM	16816
Surr: DNOP	73.3	63.5-128		%REC	1	12/15/2014 10:35:24 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	110	3.1		mg/Kg	1	12/15/2014 1:53:04 PM	16795
Surr: BFB	1600	80-120	S	%REC	1	12/15/2014 1:53:04 PM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.031		mg/Kg	1	12/15/2014 1:53:04 PM	16795
Toluene	ND	0.031		mg/Kg	1	12/15/2014 1:53:04 PM	16795
Ethylbenzene	ND	0.031		mg/Kg	1	12/15/2014 1:53:04 PM	16795
Xylenes, Total	0.99	0.063		mg/Kg	1	12/15/2014 1:53:04 PM	16795
Surr: 4-Bromofluorobenzene	208	80-120	S	%REC	1	12/15/2014 1:53:04 PM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 8 of 13
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-11 S Base #2**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 4:48:00 PM**Lab ID:** 1412641-009**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/15/2014 10:56:51 AM	16816
Surr: DNOP	79.2	63.5-128		%REC	1	12/15/2014 10:56:51 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3.6	2.8		mg/Kg	1	12/15/2014 2:21:46 PM	16795
Surr: BFB	126	80-120	S	%REC	1	12/15/2014 2:21:46 PM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.028		mg/Kg	1	12/15/2014 2:21:46 PM	16795
Toluene	ND	0.028		mg/Kg	1	12/15/2014 2:21:46 PM	16795
Ethylbenzene	ND	0.028		mg/Kg	1	12/15/2014 2:21:46 PM	16795
Xylenes, Total	0.096	0.056		mg/Kg	1	12/15/2014 2:21:46 PM	16795
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	12/15/2014 2:21:46 PM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412641

Date Reported: 12/16/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** SC-12 South Wall**Project:** Jicarilla Chacon D #102**Collection Date:** 12/12/2014 4:50:00 PM**Lab ID:** 1412641-010**Matrix:** SOIL**Received Date:** 12/13/2014 6:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	130	9.9		mg/Kg	1	12/15/2014 11:18:21 AM	16816
Surr: DNOP	84.5	63.5-128		%REC	1	12/15/2014 11:18:21 AM	16816
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	150	2.9		mg/Kg	1	12/15/2014 2:50:20 PM	16795
Surr: BFB	1470	80-120	S	%REC	1	12/15/2014 2:50:20 PM	16795
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.035	0.029		mg/Kg	1	12/15/2014 2:50:20 PM	16795
Toluene	ND	0.029		mg/Kg	1	12/15/2014 2:50:20 PM	16795
Ethylbenzene	ND	0.029		mg/Kg	1	12/15/2014 2:50:20 PM	16795
Xylenes, Total	0.92	0.058		mg/Kg	1	12/15/2014 2:50:20 PM	16795
Surr: 4-Bromofluorobenzene	213	80-120	S	%REC	1	12/15/2014 2:50:20 PM	16795

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 10 of 13
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412641

16-Dec-14

Client: Souder, Miller and Associates

Project: Jicarilla Chacon D #102

Sample ID	MB-16816	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	16816	RunNo:	23131					
Prep Date:	12/15/2014	Analysis Date:	12/15/2014	SeqNo:	683125	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.6		10.00		75.8	63.5	128			

Sample ID	LCS-16816	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	16816	RunNo:	23131					
Prep Date:	12/15/2014	Analysis Date:	12/15/2014	SeqNo:	683126	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.2	68.6	130			
Surr: DNOP	3.8		5.000		76.3	63.5	128			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412641

16-Dec-14

Client: Souder, Miller and Associates

Project: Jicarilla Chacon D #102

Sample ID	MB-16795	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	16795	RunNo:	23146					
Prep Date:	12/12/2014	Analysis Date:	12/15/2014	SeqNo:	683854	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.6	80	120			

Sample ID	LCS-16795	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	16795	RunNo:	23146					
Prep Date:	12/12/2014	Analysis Date:	12/15/2014	SeqNo:	683855	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.6	65.8	139			
Surr: BFB	1100		1000		109	80	120			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412641

16-Dec-14

Client: Souder, Miller and Associates

Project: Jicarilla Chacon D #102

Sample ID	MB-16795		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	16795		RunNo:	23146			
Prep Date:	12/12/2014		Analysis Date:	12/15/2014		SeqNo:	683878		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	LCS-16795		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	16795		RunNo:	23146			
Prep Date:	12/12/2014		Analysis Date:	12/15/2014		SeqNo:	683879		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	90.1	80	120			
Toluene	0.92	0.050	1.000	0	91.6	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.5	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1412641

RcptNo: 1

Received by/date: AF 12/13/14

Logged By: Anne Thorne 12/13/2014 6:50:00 PM Anne Thorne

Completed By: Anne Thorne 12/15/2014 Anne Thorne

Reviewed By: AT / [Signature] 12/15/14

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: Steven.moskal@SundriLL.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn Around Time:
☐ Standard ☒ Rush Same Day

Project Name: Jicarilla Clincon D#102

Project #: 5122855

Project Manager: Steve Moskal

Sampler: J. Sprague

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2°C



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

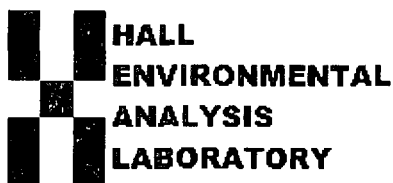
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
1/12	1300	Soil	SC-3 @ 2'	1402	Mod K	1412/141	-C01	X	X	X												
	1430		SC-4 S. Base #1				-C02	X	X	X												
	1437		SC-5 NE well				-C03	X	X	X												
	1450		SC-6 NW well				-C04	X	X	X												
	1435		SC-7 Center East well				-C05	X	X	X												
	1510		SC-8 Center West well				-C06	X	X	X												
	1643		SC-9 South East well				-C07	X	X	X												
	1646		SC-10 South West well				-C08	X	X	X												
	1648		SC-11 S. Base #2				-C09	X	X	X												
	1650		SC-12 South well				-C10	X	X	X												

Date:	Time:	Relinquished by:	Received by:	Date:	Time:	Remarks: <u>Invoice Enterprise,</u> <u>1/15 copy</u> <u>Jesse.Sprague@sundriLL.com</u>
		<u>[Signature]</u>	<u>[Signature]</u>	<u>12/15/14</u>	<u>6:50 PM</u>	
Date:	Time:	Relinquished by:	Received by:	Date:	Time:	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

January 02, 2015

Steve Moskal
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Chacon D 102

OrderNo.: 1412B90

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/31/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **1412B90**Date Reported: **1/2/2015****CLIENT:** Souder, Miller and Associates**Client Sample ID:** S Wall**Project:** Chacon D 102**Collection Date:** 12/30/2014 12:30:00 PM**Lab ID:** 1412B90-001**Matrix:** SOIL**Received Date:** 12/31/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/31/2014 11:39:59 AM	17041
Surr: DNOP	94.2	63.5-128		%REC	1	12/31/2014 11:39:59 AM	17041
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.4		mg/Kg	1	12/31/2014 11:02:49 AM	R23436
Surr: BFB	88.4	80-120		%REC	1	12/31/2014 11:02:49 AM	R23436
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/31/2014 11:02:49 AM	R23436
Toluene	ND	0.024		mg/Kg	1	12/31/2014 11:02:49 AM	R23436
Ethylbenzene	ND	0.024		mg/Kg	1	12/31/2014 11:02:49 AM	R23436
Xylenes, Total	ND	0.047		mg/Kg	1	12/31/2014 11:02:49 AM	R23436
Surr: 4-Bromofluorobenzene	94.5	80-120		%REC	1	12/31/2014 11:02:49 AM	R23436

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1412B90

Date Reported: 1/2/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller and Associates**Client Sample ID:** E Wall**Project:** Chacon D 102**Collection Date:** 12/30/2014 1:00:00 PM**Lab ID:** 1412B90-002**Matrix:** SOIL**Received Date:** 12/31/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/31/2014 12:09:46 PM	17041
Surr: DNOP	89.0	63.5-128		%REC	1	12/31/2014 12:09:46 PM	17041
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.6		mg/Kg	1	12/31/2014 11:31:27 AM	R23436
Surr: BFB	90.3	80-120		%REC	1	12/31/2014 11:31:27 AM	R23436
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.026		mg/Kg	1	12/31/2014 11:31:27 AM	R23436
Toluene	ND	0.026		mg/Kg	1	12/31/2014 11:31:27 AM	R23436
Ethylbenzene	ND	0.026		mg/Kg	1	12/31/2014 11:31:27 AM	R23436
Xylenes, Total	ND	0.051		mg/Kg	1	12/31/2014 11:31:27 AM	R23436
Surr: 4-Bromofluorobenzene	93.9	80-120		%REC	1	12/31/2014 11:31:27 AM	R23436

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **1412B90**

Date Reported: 1/2/2015

CLIENT: Souder, Miller and Associates**Client Sample ID:** W Wall**Project:** Chacon D 102**Collection Date:** 12/30/2014 1:05:00 PM**Lab ID:** 1412B90-003**Matrix:** SOIL**Received Date:** 12/31/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/31/2014 11:38:37 AM	17041
Surr: DNOP	94.1	63.5-128		%REC	1	12/31/2014 11:38:37 AM	17041
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	12/31/2014 12:00:00 PM	R23436
Surr: BFB	90.5	80-120		%REC	1	12/31/2014 12:00:00 PM	R23436
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.031		mg/Kg	1	12/31/2014 12:00:00 PM	R23436
Toluene	ND	0.031		mg/Kg	1	12/31/2014 12:00:00 PM	R23436
Ethylbenzene	ND	0.031		mg/Kg	1	12/31/2014 12:00:00 PM	R23436
Xylenes, Total	ND	0.061		mg/Kg	1	12/31/2014 12:00:00 PM	R23436
Surr: 4-Bromofluorobenzene	95.0	80-120		%REC	1	12/31/2014 12:00:00 PM	R23436

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1412B90

Date Reported: 1/2/2015

CLIENT: Souder, Miller and Associates

Client Sample ID: Base

Project: Chacon D 102

Collection Date: 12/30/2014 1:10:00 PM

Lab ID: 1412B90-004

Matrix: SOIL

Received Date: 12/31/2014 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/31/2014 11:59:57 AM	17041
Surr: DNOP	92.5	63.5-128		%REC	1	12/31/2014 11:59:57 AM	17041
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	12/31/2014 12:28:48 PM	R23436
Surr: BFB	91.1	80-120		%REC	1	12/31/2014 12:28:48 PM	R23436
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.032		mg/Kg	1	12/31/2014 12:28:48 PM	R23436
Toluene	ND	0.032		mg/Kg	1	12/31/2014 12:28:48 PM	R23436
Ethylbenzene	ND	0.032		mg/Kg	1	12/31/2014 12:28:48 PM	R23436
Xylenes, Total	ND	0.063		mg/Kg	1	12/31/2014 12:28:48 PM	R23436
Surr: 4-Bromofluorobenzene	95.4	80-120		%REC	1	12/31/2014 12:28:48 PM	R23436

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412B90

02-Jan-15

Client: Souder, Miller and Associates

Project: Chacon D 102

Sample ID	MB-17041	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17041	RunNo:	23412					
Prep Date:	12/31/2014	Analysis Date:	12/31/2014	SeqNo:	692482	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.0		10.00		79.9	63.5	128			

Sample ID	LCS-17041	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17041	RunNo:	23412					
Prep Date:	12/31/2014	Analysis Date:	12/31/2014	SeqNo:	692503	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	83.2	67.8	130			
Surr: DNOP	4.1		5.000		81.8	63.5	128			

Sample ID	1412B90-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	S Wall	Batch ID:	17041	RunNo:	23412					
Prep Date:	12/31/2014	Analysis Date:	12/31/2014	SeqNo:	692553	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	49.75	0	94.7	29.2	176			
Surr: DNOP	4.8		4.975		97.5	63.5	128			

Sample ID	1412B90-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	S Wall	Batch ID:	17041	RunNo:	23412					
Prep Date:	12/31/2014	Analysis Date:	12/31/2014	SeqNo:	692554	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.9	49.46	0	98.3	29.2	176	3.17	23	
Surr: DNOP	4.9		4.946		98.1	63.5	128	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412B90

02-Jan-15

Client: Souder, Miller and Associates

Project: Chacon D 102

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692699	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		86.8	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692700	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.7	65.8	139			
Surr: BFB	970		1000		97.3	80	120			

Sample ID	1412B90-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S Wall	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692703	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	11	2.4	11.79	0	97.4	47.9	144			
Surr: BFB	460		471.5		97.7	80	120			

Sample ID	1412B90-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	S Wall	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692704	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	11	2.4	11.79	0	94.1	47.9	144	3.47	29.9	
Surr: BFB	460		471.5		97.9	80	120	0	0	

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1412B90

02-Jan-15

Client: Souder, Miller and Associates

Project: Chacon D 102

Sample ID	5ML RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: R23436			RunNo: 23436					
Prep Date:		Analysis Date: 12/31/2014			SeqNo: 692710		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.0	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692711	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.8	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	80	120			

Sample ID	1412B90-002AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	E Wall	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692714	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.53	0.026	0.5139	0	104	69.2	126			
Toluene	0.52	0.026	0.5139	0.009353	100	65.6	128			
Ethylbenzene	0.54	0.026	0.5139	0	104	65.5	138			
Xylenes, Total	1.6	0.051	1.542	0.01653	101	63	139			
Surr: 4-Bromofluorobenzene	0.52		0.5139		101	80	120			

Sample ID	1412B90-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	E Wall	Batch ID:	R23436	RunNo:	23436					
Prep Date:		Analysis Date:	12/31/2014	SeqNo:	692715	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.54	0.026	0.5139	0	105	69.2	126	1.44	18.5	
Toluene	0.53	0.026	0.5139	0.009353	101	65.6	128	1.03	20.6	
Ethylbenzene	0.54	0.026	0.5139	0	106	65.5	138	1.42	20.1	
Xylenes, Total	1.6	0.051	1.542	0.01653	101	63	139	0.315	21.1	
Surr: 4-Bromofluorobenzene	0.51		0.5139		99.4	80	120	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1412B90

RcptNo: 1

Received by/date:

Logged By: Anne Thorne 12/31/2014 7:30:00 AM

Completed By: Anne Thorne 12/31/2014

Reviewed By:

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp. $^{\circ}\text{C}$	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway

Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: Steve Moskal@SandsMiller.com

QA/QC Package:

☐ Standard

☐ Level 4 (Full Validation)

Accreditation

☐ NELAP

☐ Other _____

☐ EDD (Type)

Turn-Around Time:

☐ Standard

☒ Rush Same Day

Project Name:

Chacon D 102

Project #:

5122855

Project Manager:

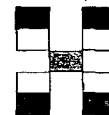
Steve Moskal

Sampler:

J. Sprague

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX (8021)	MTBE + TPB (Gas only)	TPH 8015B (8021)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
12/30	1230	Soil	S wall	1 4oz Meck kit	- Meck	1412390	X	X	X									
	1300		E wall	1 4oz Meck kit	- Meck	1412390	X	X	X									
	1305		W wall	1 4oz Meck kit	- Meck	1412390	X	X	X									
	1310	✓	Base	1 4oz Meck kit	- Meck	1412390	X	X	X									

Date: 12/30/14 Time: 1717 Relinquished by: [Signature]

Received by: [Signature] Date: 12/30/14 Time: 1717

Date: 12/30/14 Time: 1740 Relinquished by: [Signature]

Received by: [Signature] Date: 12/31/14 Time: 0730

Remarks: Invoice Enterprise
Pls copy Alicia.patterson@SandsMiller.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

OIL CONS. DIV DIST. 3

Form C-141
Revised August 8, 2011

MAR 30 2015
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: Enterprise Field Services LLC	Contact: Thomas Long	
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286	
Facility Name: Lateral K-36; San Juan 28-7 Unit #3	Facility Type: Natural Gas Gathering Line Valve	
Surface Owner: BLM	Mineral Owner: BLM	API No.

LOCATION OF RELEASE

Unit Letter N	Section 6	Township 27N	Range 7W	Feet from the 1255	North South Line	Feet from the 1367	East West Line	County Rio Arriba
------------------	--------------	-----------------	-------------	--------------------------	--------------------------------	--------------------------	------------------------------	----------------------

Latitude 36.599037 Longitude -107.619455

NATURE OF RELEASE

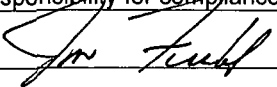
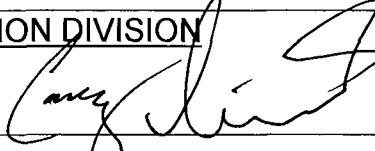
Type of Release: Natural Gas Liquids	Volume of Release 3-5 BBLS Fluids	Volume Recovered: NONE
Source of Release: Leaking Valve on meter stem	Date and Hour of Occurrence: 12/15/2014 @ 4:40 p.m.	Date and Hour of Discovery: 12/15/2014 @ 5:40 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification Cory Smith - NMOCD; Shari Ketcham - BLM	
By Whom? Thomas Long	Date and Hour. 12/31/2015 @ 10:11 a.m.	
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: On December 16, 2014, a third party reported a valve leaf on the Lateral K-36/San Juan 28-7 Unit #3 well tie. The pipeline was isolated, de-pressurized and lock out tag out was implemented. The release was associated with a faulty four inch valve on a meter stem. Remediation was completed on January 26, 2015.

Describe Area Affected and Cleanup Action: Impacted soils were excavated. The final excavation dimensions measured approximately thirty (30) feet long by ranging from thirteen (13) to sixteen (16) feet wide ranging from three (3) to seven (7) feet deep. Approximately 120 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD approved land farm facility. A third party environmental contractor corrective action report is included with this "Final" C-141.

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: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 4/30/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3-24-2015	Phone: (713)381-6684	

* Attach Additional Sheets If Necessary

#NCS 1503738901

38

**Lateral K-36/San Juan 28-7 Unit #3 P/A
Release Report
Section 6, Township 27N, Range 7W
N36.59906, W107.61945
Rio Arriba County, New Mexico
February 23, 2015**

Prepared for:

Enterprise Products Operating, LLC
614 Reilly Avenue
Farmington, New Mexico 87401

Prepared by:

Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

**Enterprise Products Operating, LLC
Lateral K-36/San Juan 28-7 Unit #3 P/A
Release Report**

Prepared for:

Enterprise Products Operating, LLC
614 Reilly Avenue
Farmington, New Mexico 87401

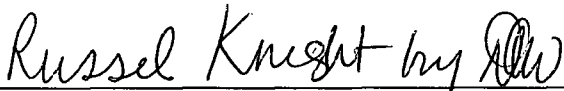
Prepared by:

Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401



Deborah Watson, PG, Geologist

Reviewed by:



Russell Knight, PG, Principal Hydrogeologist

February 23, 2015

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Table 2 Soil Sampling Results-VOCs, Benzene, Total BTEX, and TPH

Figures

Figure 1 Topographic Map

Figure 2 Aerial Site Map

Figure 3 Soil Analytical Map

Appendices

Appendix A Executed C-138 Solid Waste Acceptance Form

Appendix B Photograph Log

Appendix C Analytical Laboratory Reports

1 Introduction

The Enterprise Products Operating, LLC (Enterprise) Lateral K-36/San Juan 28-7 Unit #3 P/A release site is located in Unit Letter N, Section 6, Township 27N, Range 7W in rural Rio Arriba County, New Mexico. The Lateral K-36 release occurred at an abandoned meter stem associated with the plugged and abandoned San Juan 28-7 Unit #3 well. The release was reported on December 15, 2014, by a third party working in the area.

On December 15, 2014, Enterprise personnel repaired the leak and tightened the valve at the abandoned meter stem. The release consisted of three to five barrels (bbl) of condensate mix based on impacted surface soil extent. Remedial activities which included excavation of the hydrocarbon impacted soils began on January 7, 2015, at which time a historic release was encountered at the site. Remedial work was concluded on January 26, 2015.

A topographic map of the location is included as Figure 1, and an aerial site map is included as Figure 2.

2 Release Summary

Site Name – Lateral K-36/San Juan 28-7 Unit #3 P/A

Location – Unit Letter N (SE/SW), Section 6, Township 27N, Range 7W

Release Latitude/Longitude – N36.59906 and W107.61945, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Date Release Discovered – December 15, 2014

Agency Notification – BLM and New Mexico Oil Conservation Division (NMOCD)

Agency Jurisdiction – BLM

Diameter of Pipeline – 4-inch

Source of Release – Valve leak on the San Juan 28-7 Unit #3 P/A abandoned meter stem, old meter #70-480-01

Release Contents – condensate mix

Release Volume – 3 to 5 bbl

NMOCD Ranking – 10

Date of Rule Engineering, LLC (Rule) Field Work – December 16, 2014, and January 7, 9, and 23, 2015

Subcontractor – West States Energy Contractors, Inc. (West States)

Disposal Facility – Envirotech Land Farm (Permit #NM-01-011)

Amount of Contaminated Soil Excavated/Disposed – 120 cubic yards

3 NMOCD Ranking

In accordance with NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 10 documented in Table 1. Based on the ranking score of 10, action levels for remediated soils at the site are as follows: 10 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH).

Depth to groundwater at the site was estimated to be greater than 100 feet below ground surface (bgs), based on the elevation differential (547 feet) between the release location and the wash in Stove Canyon.

A review was completed of the New Mexico Office of the State Engineer online New Mexico Water Rights Reporting System and no water wells were identified within a 1,000 feet radius of the location.

The nearest surface water, an unnamed wash which ultimately drains to the wash located in Stove Canyon is located approximately 570 feet southeast of the release location.

4 Field Activities

Enterprise, West States, and Rule personnel were onsite for the initiation of remediation activities on January 7, 2015. West States provided heavy equipment operation and excavated the petroleum impacted materials from within the release area. Rule personnel provided excavation oversight and conducted field screening during remediation activities. On January 7, 2015, based on visual observation and field screening results, the excavation was halted, and BLM and NMOCD were extended an invitation to the confirmation sampling event scheduled for January 9, 2015.

On January 9, 2015, Enterprise and Rule personnel collected five confirmation samples (SC-1 through SC-5) from each of the sidewalls and base of the excavation. BLM and NMOCD were not in attendance during confirmation sampling.

Excavation continued along the northeast sidewall on January 23, 2015, following receipt of analytical results which reported TPH and total BTEX above NMOCD action levels in soil sample SC-1. A final composite sample was collected on January 23, 2015, from the northeast sidewall and submitted for laboratory analysis. Approximately 120 cubic yards of hydrocarbon impacted soils and sandstone were removed from an area of excavation measuring approximately 30.5 feet x 13 (to 16) feet x 3 (to 7) feet in depth. The base of the excavation was terminated by a competent sandstone layer. Figure 3 provides the locations and results of the soil samples collected.

A copy of the executed C-138 Solid Waste Acceptance Form is included in Appendix A. A photograph log is included in Appendix B.

5 Soil Sampling

Rule collected six soil composite samples from the sidewall and base of the excavation. Confirmation samples SC-1 through SC-5 were collected on January 9, 2015, and confirmation sample SC-6 was collected on January 23, 2015, following additional excavation along the northeast sidewall.

All soil samples were field screened for volatile organic compounds (VOCs). Field screening for VOC vapors was conducted with a photo-ionization detector (PID). Before

beginning field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field screening results are summarized in Table 2.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B and TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015D. Laboratory analytical results are summarized in Table 2, and the analytical laboratory reports are included in Appendix C.

6 Conclusions

The release of three to five bbl of condensate mix occurred from a valve on the San Juan 28-7 Unit #3 P/A abandoned meter stem along the Lateral K-36 pipeline. During remedial activities, historic contamination was encountered at the site. Five confirmation samples were collected from the sidewalls and base of the excavation on January 9, 2015, for laboratory analysis of total BTEX and TPH. Analytical results for the northeast sidewall (SC-1) exceeded NMOCD action levels for total BTEX and TPH. Excavation continued along the northeast sidewall on January 23, 2015, followed by the collection of confirmation sample SC-6 on the same day. The final excavation measured approximately 30.5 feet x 13 (to 16) feet x 3 (to 7) feet in depth.

Laboratory analytical results for final confirmation samples (SC-2 through SC-6) reported benzene and total BTEX concentrations below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. All final confirmation samples reported TPH concentrations below the NMOCD action level of 1,000 mg/kg. Action levels are based on a NMOCD site ranking of 10.

On January 26, 2015, Enterprise received approval to backfill the excavation from Shari Ketcham of BLM. The excavation was backfilled with clean imported fill and contoured to the surrounding grade.

Based on laboratory analytical results, no further work is recommended.

7 Closure and Limitations

This report has been prepared for the exclusive use of Enterprise and is subject to the terms, conditions and limitations stated in Rule's proposal, the report, and Rule's Service Agreement with Enterprise. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Tables

Table 1. NMOCD Site Ranking Determination
Lateral K-36/San Juan 28-7 Unit #3 P/A
Rio Arriba County, New Mexico
Enterprise Products

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential (547 feet) between the location and the wash in Stove Canyon.	NMOCD Online database NMOSE NMWRRS Google Earth, and Visual Inspection
50-99 feet	10			
>100 feet	0			
Wellhead Protection Area				
<1,000 feet from a water source, or <200 feet from private domestic water source	20 (Yes)	0	No water source or recorded water wells w/in 1,000 ft.	NMOSE NMWRRS Gould Pass Quadrangle Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	Unnamed wash which drains to wash in Stove Canyon is located approximately 570 feet southeast of the site.	Gould Pass Quadrangle Visual Inspection Google Earth
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		10		

Table 2. Soil Sampling Results-VOCs, Benzene, Total BTEX, and TPH
Lateral K-36/San Juan 28-7 Unit #3 P/A
Rio Arriba County, New Mexico
Enterprise Products

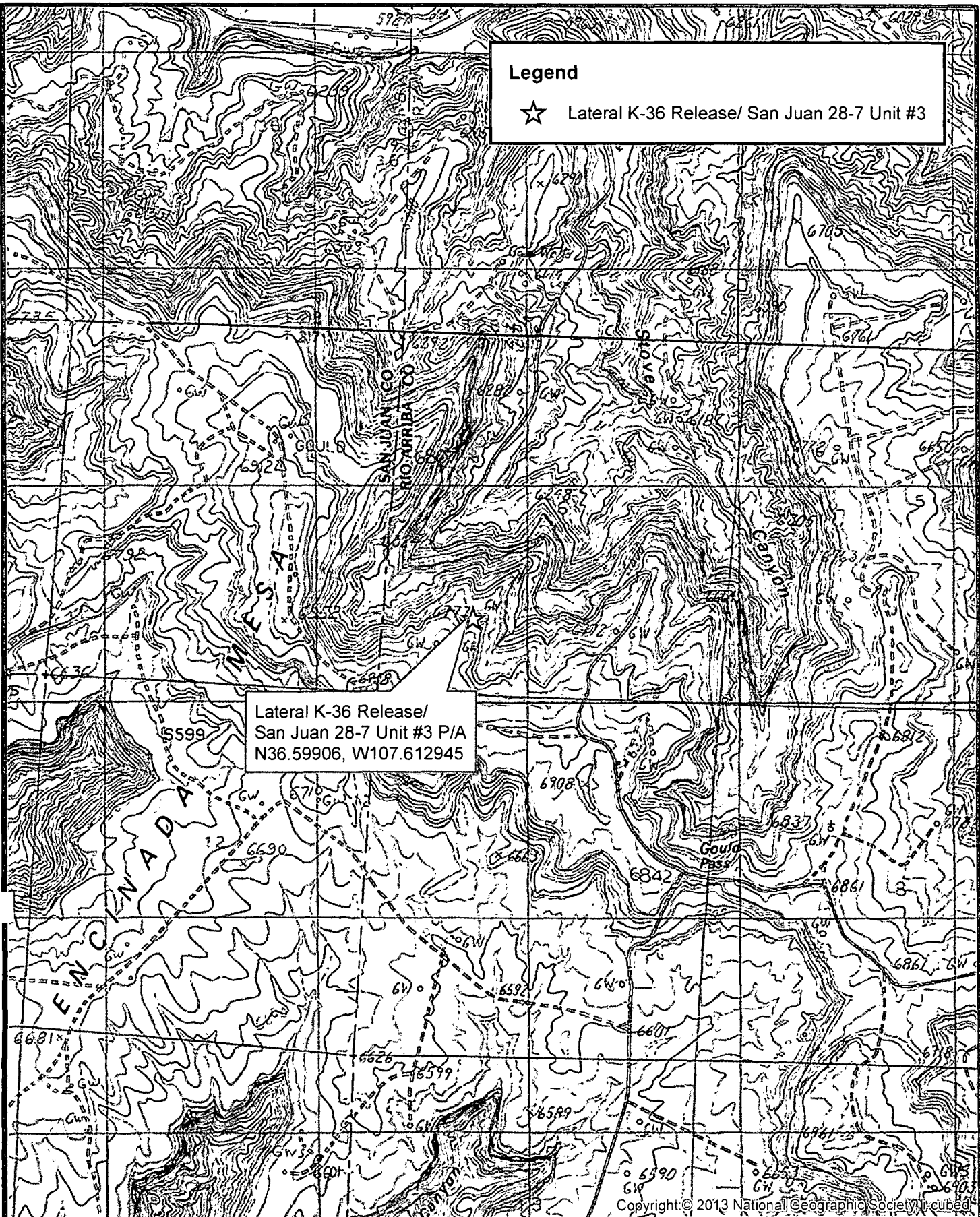
Sample ID	Date	Location	Sample Depth (ft bgs)	VOCs (PID) (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO	TPH-DRO
							(mg/kg)	
NMOCD Action Levels*				100	10	50	1,000	
SC-1	Jan 09, 15	Northeast Wall	0 to 7	1,129	0.60	87	1,000	180
SC-2	Jan 09, 15	Southwest Wall	0 to 7	287	<0.030	0.32	9.0	20
SC-3	Jan 09, 15	Southeast Wall	0 to 7	315	<0.031	<0.155	<3.1	<9.9
SC-4	Jan 09, 15	Northwest Wall	0 to 7	676	0.041	3.6	71	170
SC-5	Jan 09, 15	Base	3 to 7	1,310	0.50	16	220	28
SC-6	Jan 23, 15	Northeast Wall	0 to 5	270	<0.033	0.57	11	33

Notes: ft bgs - feet below ground surface
VOCs - volatile organic compounds
PID - photo-ionization detector
ppm - parts per million
BTEX - benzene, toluene, ethylbenzene, and xylenes
TPH-GRO - total petroleum hydrocarbons-gasoline range organics
TPH-DRO - total petroleum hydrocarbons-diesel range organics
mg/kg - milligrams/kilograms
*NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993)

Figures

Legend

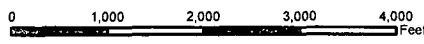
★ Lateral K-36 Release/ San Juan 28-7 Unit #3



Lateral K-36 Release/
San Juan 28-7 Unit #3 P/A
N36.59906, W107.612945

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Rule Engineering, LLC
Solutions to Regulations for Industry



Location
N(SE/SW)-6-27N-R7W
N36.59906, W107.61945
Rio Arriba County, New Mexico

Topographic Map
Enterprise Products
Lateral K-36
San Juan 28-7 Unit #3 P/A

Date: 2/16/2015 File: 150129 Topo Map.pdf

Figure: 1

Legend

- ☆ San Juan 28-7 Unit #3 Monument
- Release Location

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

Rule Engineering, LLC
Solutions to Regulations for Industry

0 25 50 75 100
Feet



Location

N(SE/SW)-6-27N-R7W
N36.59906, W107.61945
Rio Arriba County, New Mexico

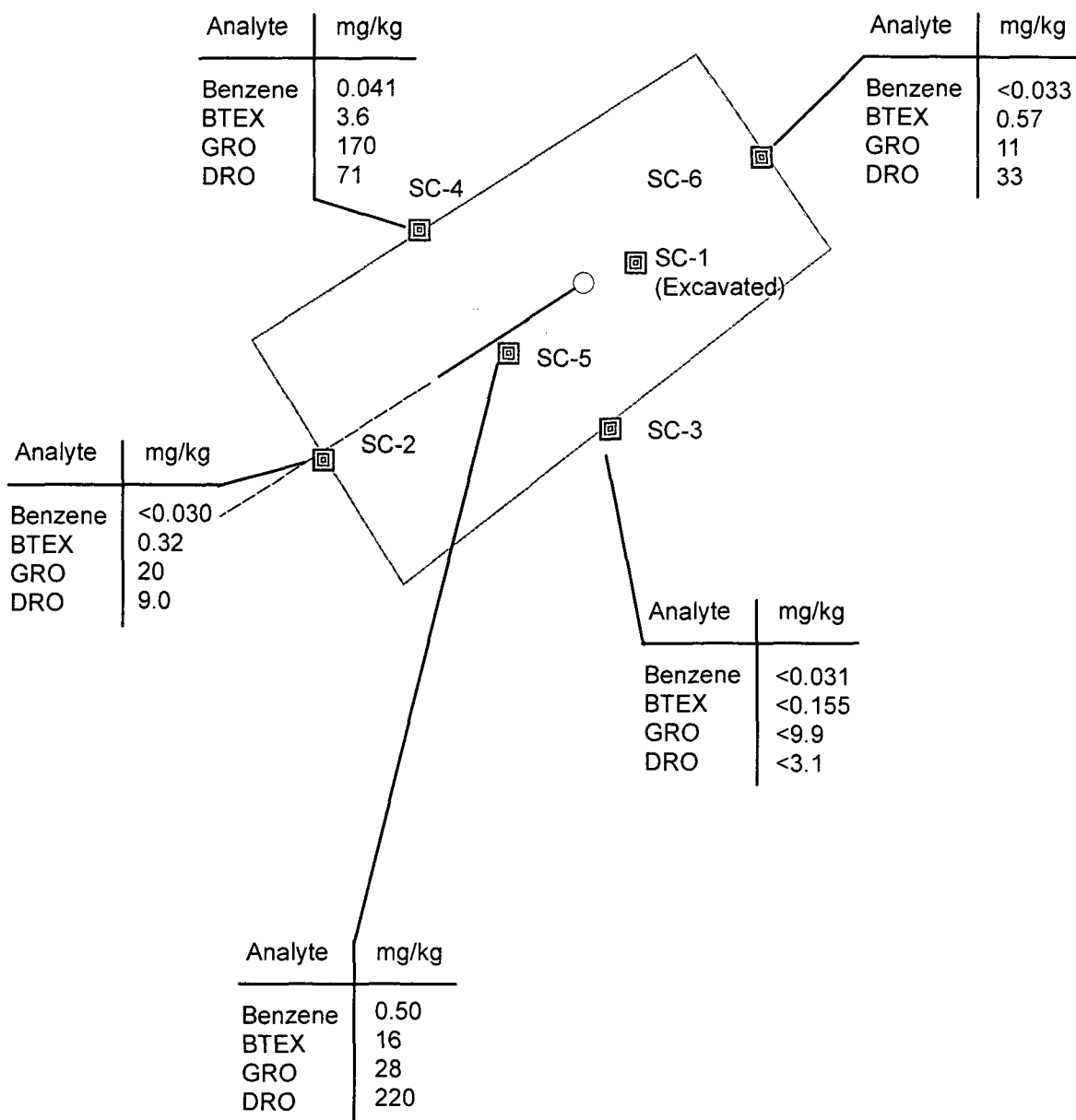
Aerial Map

Enterprise Products
Lateral K-36
San Juan 28-7 Unit #3 P/A

Date: 2/12/2015

File: 150129 Aerial Site Map.pdf

Figure: 2



Legend

- Release Location
- ▣ Soil Sample
- Buried Pipeline
- Exposed Pipeline

Notes:

BTEX= Benzene, Toluene, Ethylbenzene, and Xylenes
 GRO= Gasoline Range Organics
 DRO= Diesel Range Organics

All samples are composite samples.

Samples SC-1 through SC-5 were collected on January 9, 2015.
 Sample SC-6 was collected on January 9, 2015

Location

N(SE/SW)-6-27N-R7W
 N36.59906, W107.61945
 Rio Arriba County, New Mexico

Soil Analytical Map

Enterprise Products
 Lateral K-36
 San Juan 28-7 Unit #3 P/A

Appendix A
Executed C-138 Solid Waste
Acceptance Form

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-138
Revised August 1, 2011
97057-0681
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401	Jan. 2015
2. Originating Site: San Juan 28-7 Unit #3 P/A Pipeline	
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter N, Section 6, T27N, R7W; 36.599.37, -107.619455	
4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline.	
5. Estimated Volume 20 yd ³ bbls Known Volume (to be entered by the operator at the end of the haul) 130 yd ³ bbls	

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only Waste Acceptance Frequency: ☐ Monthly ☐ Weekly ☐ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 1-6-15, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to
Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Envirotech, Inc. do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

6. Transporter: West State Entergy Contractors, HBL, Doug Fontz, 4 States

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011
Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Kendra R. Rinney

TITLE: Waste Coordinator DATE: 1/7/15

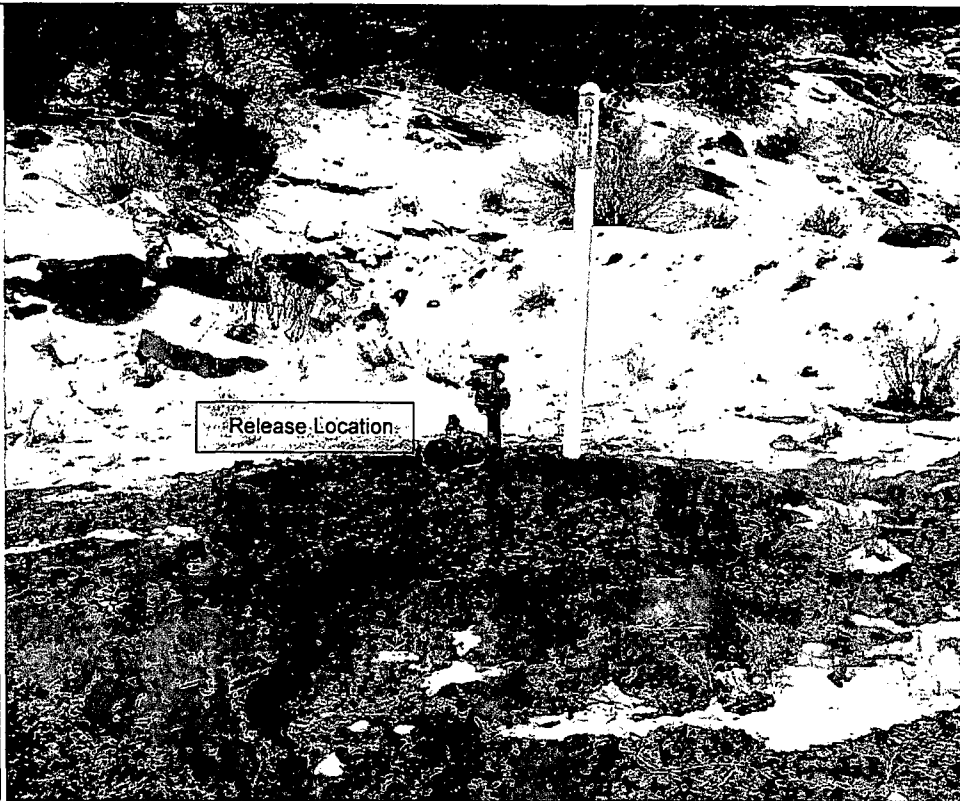
SIGNATURE: Kendra Rinney
Surface Waste Management Facility Authorized Agent

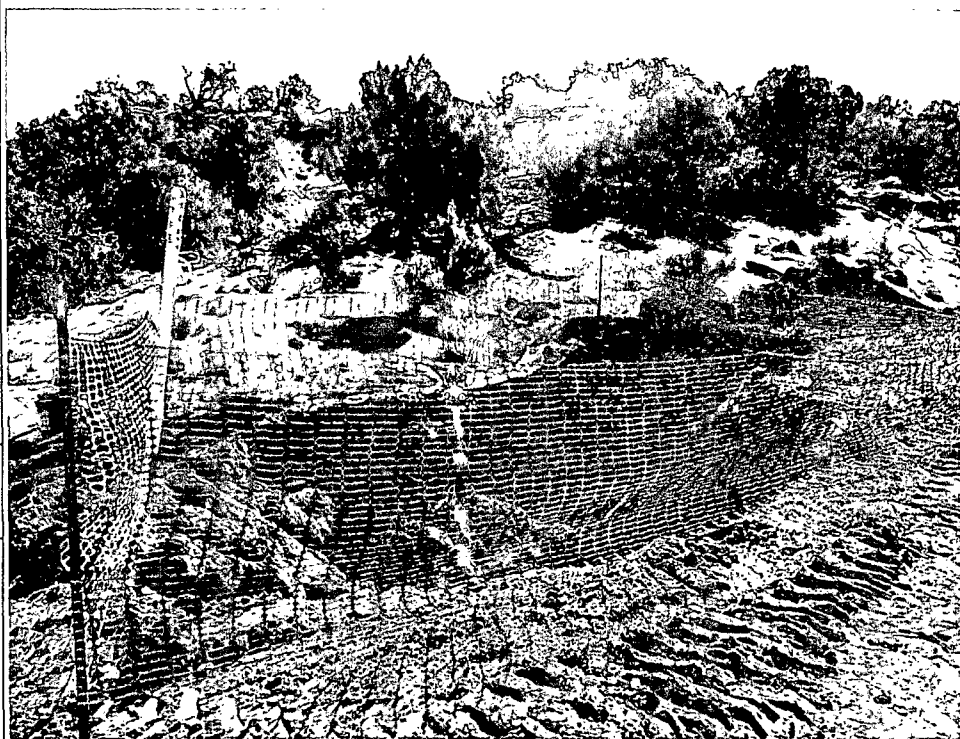
TELEPHONE NO.: 505-632-0615

Appendix B

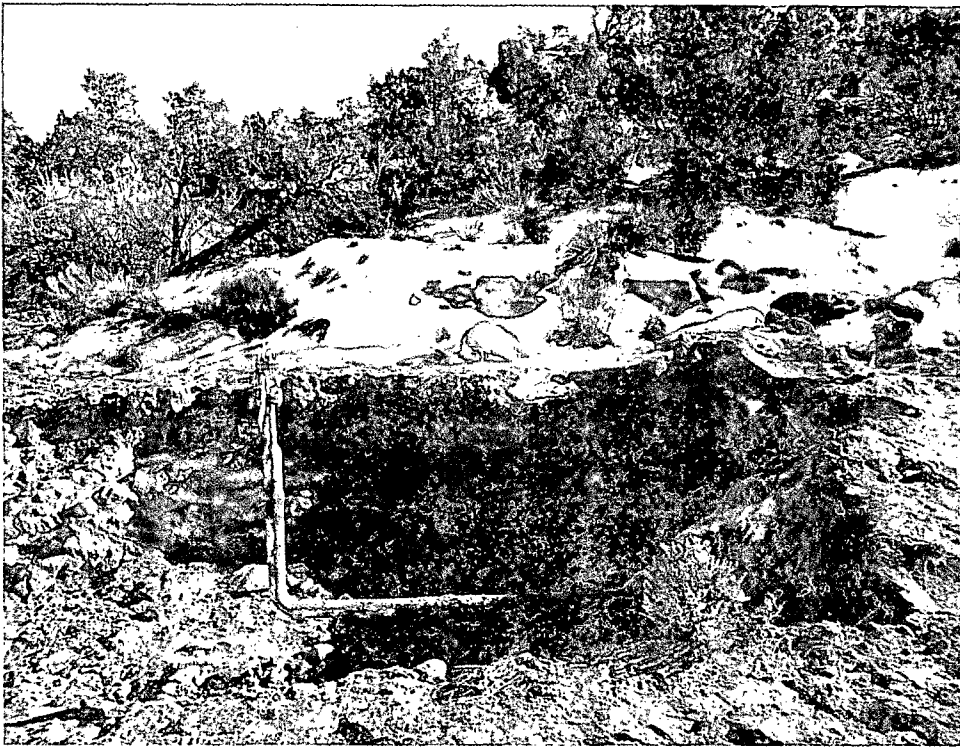
Photograph Log

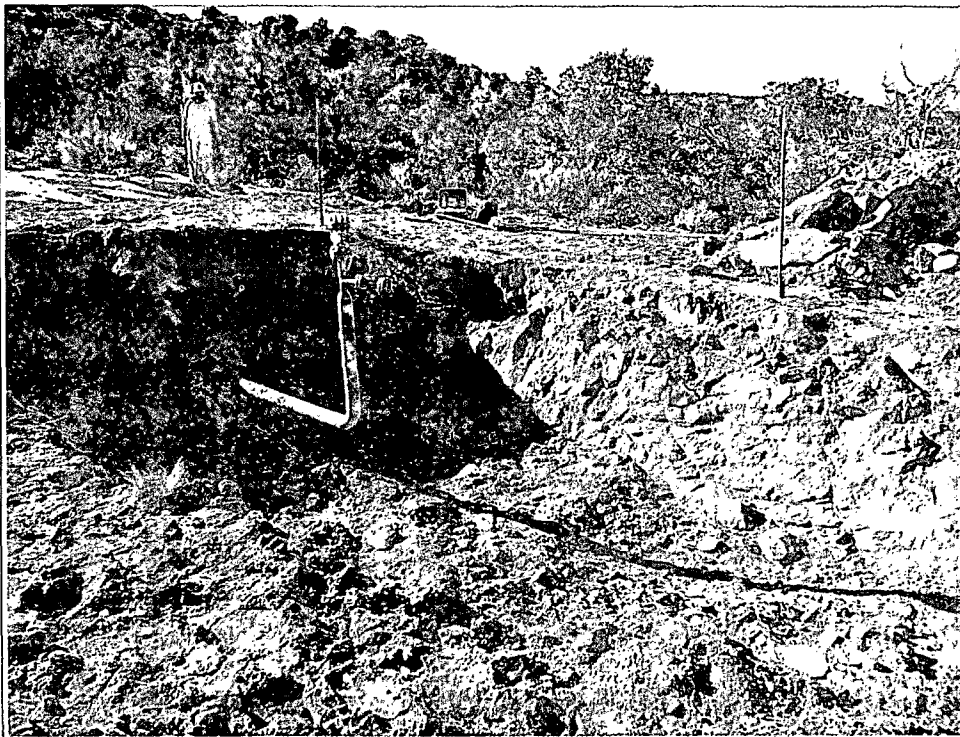
Photograph Log
Lateral K-36/San Juan 28-7 Unit #3 P/A
Enterprise Products

Photograph #1	
Client: Enterprise Products	
Site Name: Lateral K-36/ San Juan 28-7 Unit #3 P/A	
Date Photo Taken: December 16, 2014	
Release Location: N36.59906, W107.61945 N-06-27N-07W Rio Arriba County, New Mexico	
Photo Taken by: Deborah Watson	Description: Facing S, looking at the San Juan 28-7 Unit #3 P/A abandoned meter stem, along Lateral K-36 pipeline. Photo shows surface extent of release reported on December 15, 2014.

Photograph #2	
Client: Enterprise Products	
Site Name: Lateral K-36/ San Juan 28-7 Unit #3 P/A	
Date Photo Taken: January 9, 2015	
Release Location: N36.59906, W107.61945 N-06-27N-07W Rio Arriba County, New Mexico	
Photo Taken by: Deborah Watson	Description: Facing SE, looking at excavation following remediation on January 7, 2015. Excavation measured approximately 19 feet x 16 feet x 6 (to 7) feet in depth.

Photograph Log
Lateral K-36/San Juan 28-7 Unit #3 P/A
Enterprise Products

Photograph #3	
Client: Enterprise Products	
Site Name: Lateral K-36/ San Juan 28-7 Unit #3 P/A	
Date Photo Taken: January 23, 2015	
Release Location: N36.59906, W107.61945 N-06-27N-07W Rio Arriba County, New Mexico	
Photo Taken by: Deborah Watson	Description: Facing SE, looking at exposed Lateral K-36 pipeline and San Juan 28-7 Unit #3 P/A abandoned meter stem. Final area of excavation measured 30.5 feet x 13 (to 16) feet x 3 (to 7) feet in depth

Photograph #4	
Client: Enterprise Products	
Site Name: Lateral K-36/ San Juan 28-7 Unit #3 P/A	
Date Photo Taken: January 23, 2015	
Release Location: N36.59906, W107.61945 N-06-27N-07W Rio Arriba County, New Mexico	
Photo Taken by: Deborah Watson	Description: Facing SW, looking at exposed Lateral K-36 pipeline and San Juan 28-7 Unit #3 P/A abandoned meter stem.

Appendix C

Analytical Laboratory Reports



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

January 14, 2015

Deborah Watson
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 860-2712
FAX

RE: Lateral K-36/San Juan 28-7 Unit #3

OrderNo.: 1501338

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/10/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501338

Date Reported: 1/14/2015

CLIENT: Rule Engineering LLC

Client Sample ID: SC-1

Project: Lateral K-36/San Juan 28-7 Unit #3

Collection Date: 1/9/2015 1:38:00 PM

Lab ID: 1501338-001

Matrix: SOIL

Received Date: 1/10/2015 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	180	9.9		mg/Kg	1	1/14/2015 4:27:37 AM	17169
Surr: DNOP	97.0	63.5-128		%REC	1	1/14/2015 4:27:37 AM	17169
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1000	35		mg/Kg	10	1/12/2015 10:47:45 AM	R23589
Surr: BFB	408	80-120	S	%REC	10	1/12/2015 10:47:45 AM	R23589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.60	0.35		mg/Kg	10	1/12/2015 10:47:45 AM	R23589
Toluene	16	0.35		mg/Kg	10	1/12/2015 10:47:45 AM	R23589
Ethylbenzene	5.1	0.35		mg/Kg	10	1/12/2015 10:47:45 AM	R23589
Xylenes, Total	65	0.71		mg/Kg	10	1/12/2015 10:47:45 AM	R23589
Surr: 4-Bromofluorobenzene	132	80-120	S	%REC	10	1/12/2015 10:47:45 AM	R23589

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501338

Date Reported: 1/14/2015

CLIENT: Rule Engineering LLC

Client Sample ID: SC-2

Project: Lateral K-36/San Juan 28-7 Unit #3

Collection Date: 1/9/2015 1:33:00 PM

Lab ID: 1501338-002

Matrix: SOIL

Received Date: 1/10/2015 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	20	10		mg/Kg	1	1/14/2015 4:57:56 AM	17169
Surr: DNOP	96.7	63.5-128		%REC	1	1/14/2015 4:57:56 AM	17169
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	9.0	3.0		mg/Kg	1	1/12/2015 11:15:03 AM	R23589
Surr: BFB	138	80-120	S	%REC	1	1/12/2015 11:15:03 AM	R23589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.030		mg/Kg	1	1/12/2015 11:15:03 AM	R23589
Toluene	0.075	0.030		mg/Kg	1	1/12/2015 11:15:03 AM	R23589
Ethylbenzene	0.043	0.030		mg/Kg	1	1/12/2015 11:15:03 AM	R23589
Xylenes, Total	0.20	0.061		mg/Kg	1	1/12/2015 11:15:03 AM	R23589
Surr: 4-Bromofluorobenzene	115	80-120		%REC	1	1/12/2015 11:15:03 AM	R23589

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1501338

Date Reported: 1/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-3

Project: Lateral K-36/San Juan 28-7 Unit #3

Collection Date: 1/9/2015 1:29:00 PM

Lab ID: 1501338-003

Matrix: SOIL

Received Date: 1/10/2015 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/14/2015 5:27:35 AM	17169
Surr: DNOP	94.1	63.5-128		%REC	1	1/14/2015 5:27:35 AM	17169
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	1/12/2015 11:42:27 AM	R23589
Surr: BFB	94.8	80-120		%REC	1	1/12/2015 11:42:27 AM	R23589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.031		mg/Kg	1	1/12/2015 11:42:27 AM	R23589
Toluene	ND	0.031		mg/Kg	1	1/12/2015 11:42:27 AM	R23589
Ethylbenzene	ND	0.031		mg/Kg	1	1/12/2015 11:42:27 AM	R23589
Xylenes, Total	ND	0.062		mg/Kg	1	1/12/2015 11:42:27 AM	R23589
Surr: 4-Bromofluorobenzene	118	80-120		%REC	1	1/12/2015 11:42:27 AM	R23589

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1501338

Date Reported: 1/14/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Rule Engineering LLC**Client Sample ID:** SC-4**Project:** Lateral K-36/San Juan 28-7 Unit #3**Collection Date:** 1/9/2015 1:35:00 PM**Lab ID:** 1501338-004**Matrix:** SOIL**Received Date:** 1/10/2015 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	170	9.9		mg/Kg	1	1/14/2015 5:57:42 AM	17169
Surr: DNOP	109	63.5-128		%REC	1	1/14/2015 5:57:42 AM	17169
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	71	3.3		mg/Kg	1	1/12/2015 12:09:54 PM	R23589
Surr: BFB	430	80-120	S	%REC	1	1/12/2015 12:09:54 PM	R23589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.041	0.033		mg/Kg	1	1/12/2015 12:09:54 PM	R23589
Toluene	0.15	0.033		mg/Kg	1	1/12/2015 12:09:54 PM	R23589
Ethylbenzene	ND	0.033		mg/Kg	1	1/12/2015 12:09:54 PM	R23589
Xylenes, Total	3.4	0.066		mg/Kg	1	1/12/2015 12:09:54 PM	R23589
Surr: 4-Bromofluorobenzene	139	80-120	S	%REC	1	1/12/2015 12:09:54 PM	R23589

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1501338

Date Reported: 1/14/2015

CLIENT: Rule Engineering LLC**Client Sample ID:** SC-5**Project:** Lateral K-36/San Juan 28-7 Unit #3**Collection Date:** 1/9/2015 1:27:00 PM**Lab ID:** 1501338-005**Matrix:** SOIL**Received Date:** 1/10/2015 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	28	10		mg/Kg	1	1/14/2015 6:27:59 AM	17169
Surr: DNOP	90.9	63.5-128		%REC	1	1/14/2015 6:27:59 AM	17169
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	220	3.2		mg/Kg	1	1/12/2015 3:16:38 PM	17155
Surr: BFB	348	80-120	S	%REC	1	1/12/2015 3:16:38 PM	17155
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.50	0.032		mg/Kg	1	1/12/2015 3:16:38 PM	17155
Toluene	4.1	0.32		mg/Kg	10	1/12/2015 9:01:25 PM	17155
Ethylbenzene	0.51	0.032		mg/Kg	1	1/12/2015 3:16:38 PM	17155
Xylenes, Total	11	0.64		mg/Kg	10	1/12/2015 9:01:25 PM	17155
Surr: 4-Bromofluorobenzene	145	80-120	S	%REC	1	1/12/2015 3:16:38 PM	17155

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501338

14-Jan-15

Client: Rule Engineering LLC
Project: Lateral K-36/San Juan 28-7 Unit #3

Sample ID	MB-17169	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17169	RunNo:	23580					
Prep Date:	1/12/2015	Analysis Date:	1/12/2015	SeqNo:	696520	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.6		10.00		86.2	63.5	128			

Sample ID	LCS-17169	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17169	RunNo:	23634					
Prep Date:	1/12/2015	Analysis Date:	1/13/2015	SeqNo:	697804	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	67.8	130			
Surr: DNOP	4.4		5.000		87.8	63.5	128			

Sample ID	LCS-17189	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17189	RunNo:	23634					
Prep Date:	1/13/2015	Analysis Date:	1/14/2015	SeqNo:	697805	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		74.1	63.5	128			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501338

14-Jan-15

Client: Rule Engineering LLC
Project: Lateral K-36/San Juan 28-7 Unit #3

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R23589	RunNo:	23589					
Prep Date:		Analysis Date:	1/12/2015	SeqNo:	697022	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.1	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R23589	RunNo:	23589					
Prep Date:		Analysis Date:	1/12/2015	SeqNo:	697023	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.4	65.8	139			
Surr: BFB	910		1000		90.6	80	120			

Sample ID	MB-17155	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	17155	RunNo:	23591					
Prep Date:	1/9/2015	Analysis Date:	1/12/2015	SeqNo:	697041	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		93.9	80	120			

Sample ID	LCS-17155	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	17155	RunNo:	23591					
Prep Date:	1/9/2015	Analysis Date:	1/12/2015	SeqNo:	697042	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	65.8	139			
Surr: BFB	1100		1000		108	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501338

14-Jan-15

Client: Rule Engineering LLC
Project: Lateral K-36/San Juan 28-7 Unit #3

Sample ID	5ML RB		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	R23589		RunNo:	23589			
Prep Date:			Analysis Date:	1/12/2015		SeqNo:	697028		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	100NG BTEX LCS		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	R23589		RunNo:	23589			
Prep Date:			Analysis Date:	1/12/2015		SeqNo:	697029		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	MB-17155		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	17155		RunNo:	23591			
Prep Date:	1/9/2015		Analysis Date:	1/12/2015		SeqNo:	697081		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	LCS-17155		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	17155		RunNo:	23591			
Prep Date:	1/9/2015		Analysis Date:	1/12/2015		SeqNo:	697082		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	80	120			
Toluene	1.1	0.050	1.000	0	112	80	120			
Ethylbenzene	1.1	0.050	1.000	0	114	80	120			
Xylenes, Total	3.4	0.10	3.000	0	112	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		118	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1501338

RcptNo: 1

Received by/date: AT 01/10/15

Logged By: Anne Thorne 1/10/2015 12:40:00 PM

Completed By: Anne Thorne 1/12/2015

Reviewed By: JB 1/12/15

Anne Thorne

Anne Thorne

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			



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

January 26, 2015

Deborah Watson
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 860-2712
FAX

RE: Lateral K-36/San Juan 28-7 Unit 3

OrderNo.: 1501864

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/24/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical ReportLab Order **1501864**Date Reported: **1/26/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Rule Engineering LLC**Client Sample ID:** SC-6**Project:** Lateral K-36/San Juan 28-7 Unit 3**Collection Date:** 1/23/2015 1:15:00 PM**Lab ID:** 1501864-001**Matrix:** SOIL**Received Date:** 1/24/2015 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: WL
Diesel Range Organics (DRO)	33	10		mg/Kg	1	1/26/2015 11:11:06 AM	17390
Surr: DNOP	80.3	63.5-128		%REC	1	1/26/2015 11:11:06 AM	17390
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	11	3.3		mg/Kg	1	1/24/2015 3:35:56 PM	17377
Surr: BFB	172	80-120	S	%REC	1	1/24/2015 3:35:56 PM	17377
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.033		mg/Kg	1	1/24/2015 3:35:56 PM	17377
Toluene	ND	0.033		mg/Kg	1	1/24/2015 3:35:56 PM	17377
Ethylbenzene	ND	0.033		mg/Kg	1	1/24/2015 3:35:56 PM	17377
Xylenes, Total	0.57	0.065		mg/Kg	1	1/24/2015 3:35:56 PM	17377
Surr: 4-Bromofluorobenzene	114	80-120		%REC	1	1/24/2015 3:35:56 PM	17377

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501864

26-Jan-15

Client: Rule Engineering LLC

Project: Lateral K-36/San Juan 28-7 Unit 3

Sample ID	MB-17390	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17390	RunNo:	23871					
Prep Date:	1/26/2015	Analysis Date:	1/26/2015	SeqNo:	704287	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.4		10.00		73.7	63.5	128			

Sample ID	LCS-17390	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17390	RunNo:	23871					
Prep Date:	1/26/2015	Analysis Date:	1/26/2015	SeqNo:	704288	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	76.3	67.8	130			
Surr: DNOP	4.3		5.000		85.3	63.5	128			

Sample ID	1501864-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	SC-6	Batch ID:	17390	RunNo:	23871					
Prep Date:	1/26/2015	Analysis Date:	1/26/2015	SeqNo:	704532	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	10	49.95	32.62	62.9	29.2	176			
Surr: DNOP	5.2		4.995		103	63.5	128			

Sample ID	1501864-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	SC-6	Batch ID:	17390	RunNo:	23871					
Prep Date:	1/26/2015	Analysis Date:	1/26/2015	SeqNo:	704535	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	69	9.9	49.70	32.62	72.8	29.2	176	7.20	23	
Surr: DNOP	5.2		4.970		104	63.5	128	0	0	

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501864

26-Jan-15

Client: Rule Engineering LLC
Project: Lateral K-36/San Juan 28-7 Unit 3

Sample ID	MB-17377		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	17377		RunNo:	23862				
Prep Date:	1/23/2015		Analysis Date:	1/24/2015		SeqNo:	704138		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	880		1000		88.4	80	120				

Sample ID	LCS-17377		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 17377		RunNo: 23862					
Prep Date:	1/23/2015		Analysis Date: 1/24/2015		SeqNo: 704139		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.6	65.8	139			
Surr: BFB	970		1000		97.5	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501864

26-Jan-15

Client: Rule Engineering LLC

Project: Lateral K-36/San Juan 28-7 Unit 3

Sample ID	MB-17377		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 17377		RunNo: 23862					
Prep Date:	1/23/2015		Analysis Date: 1/24/2015		SeqNo: 704149		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	80	120			

Sample ID	LCS-17377		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 17377		RunNo: 23862					
Prep Date:	1/23/2015		Analysis Date: 1/24/2015		SeqNo: 704150		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	0.96	0.050	1.000	0	95.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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

Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1501864

ReptNo: 1

Received by/date:	AT 01/24/15		
Logged By:	Anne Thorne	1/24/2015 11:30:00 AM	Anne Thorne
Completed By:	Anne Thorne	1/24/2015	Anne Thorne
Reviewed By:	AT 01/24/15		

Chain of Custody

- | | | | |
|--|---|-----------------------------|---|
| 1. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 2. Is Chain of Custody complete? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 3. How was the sample delivered? | Courier | | |

Log In

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

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

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp. C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.2	Good	Yes			

Client: Rule Engineering

Client: Rule Engineering

Mailing Address: 501 Airport Drive Suite 205
Farmington NM 87401

Phone #: 505 860 2712

mail or Fax#:

IA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

accreditation

☒ NELAP ☐ Other _____

☐ EDD (Type) _____

☐ Standard ☒ Rush Same day

Project Name: _____

Lateral K-36 / San Juan 28-7 Unit

Project #:

Project Manager:

D Watson

Sampler: D. L. Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: _____

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
-------	-------	------------------	--------------	------	------

23/15/1735 Deborah Watson (Mother) nee 1/23/15 1735

Date:	Time:	Relinquished by:	Received by:	Date	Time
-------	-------	------------------	--------------	------	------

13/15/1815 Christopher Wotton

Remarks:	B. & F. Enterprise
----------	--------------------

Area 3000 KWh Time/Day

Area size
3-1087

Ash Tomcat

WD: 96728 1
Relchey Code: 166-1150

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

OIL CONS. DIV DIST. 3

MAR 30 2015

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: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: San Juan 29-5 #214	Facility Type: Natural Gas Gather Pipeline
Surface Owner: Private	Mineral Owner: BLM
API No.	

LOCATION OF RELEASE

Unit Letter G	Section 27	Township 29N	Range 10W	Feet from the 1401	North South Line	Feet from the 1350	East West Line	County Rio Arriba
------------------	---------------	-----------------	--------------	--------------------------	---------------------	--------------------------	-------------------	----------------------

Latitude 36.699905 Longitude -107.340519

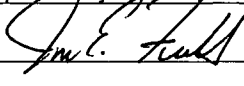
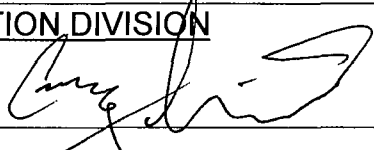
NATURE OF RELEASE

Type of Release: Natural Gas Liquids	Volume of Release 3-5 BBLs of Liquids	Volume Recovered: None
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 1/26/2015@ 1:45 p.m.	Date and Hour of Discovery: 1/26/2015@ 3:30 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification - Cory Smith - NMOCD	
By Whom? Thomas Long	Date and Hour 2/9/2015 @ 8:20 a.m.	
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: On January 26, 2015, a leak was discovered approximately two feet from the downstream end of the meter run on the SJ 29-5 #214 well location. The single well tie line was isolated, de-pressured and lock out tag out was applied. The contaminant mass was removed by excavation. A third party environmental contractor oversaw excavation activities and collected closure samples.

Describe Area Affected and Cleanup Action: Repairs and remediation were completed on February 9, 2015. An area approximately twenty-six (26) feet long by thirteen (13) feet wide by nine (9) feet deep was excavated. Approximately 108 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD approved land farm facility. A third party corrective action report is included with this "Final" C-141.

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: Jon E. Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 5/6/15	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3-24-2015	Phone: (713)381-6684	

* Attach Additional Sheets If Necessary

#NCS 1507249522



OIL CONS. DIV DIST. 3

MAR 30 2015

CORRECTIVE ACTION REPORT

Property:

**San Juan 29-5 #214 Well Tie Pipeline Release
NE 1/4, S27 T29N R5W
Rio Arriba County, New Mexico**

February 26, 2015
Apex Project No. 7250415G003

Prepared for:

**Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long**

Prepared by:


Ranee Deechilly
Environmental Scientist

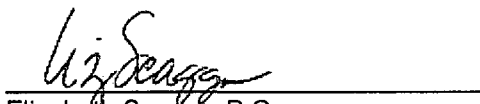

Elizabeth Scaggs, P.G.
Division Manager

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CORRECTIVE ACTION REPORT

San Juan 29-5 #214 Well Tie Pipeline Release

NE 1/4, S27 T29N R5W

Rio Arriba County, New Mexico

Apex Project No. 7250415G003

1.0 INTRODUCTION

1.1 Site Description & Background

The San Juan 29-5 #214 Well Tie Pipeline Release Site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 27 in Township 29 North and Range 5 West in rural Rio Arriba County, New Mexico (36.69990N, 107.34051W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land managed by the United States Forest Service (USFS). The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

Beginning on February 5, 2015, Enterprise initiated corrective action activities at the Site in an effort to locate and repair the subsurface leak, and remediate potential hydrocarbon impact. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

2.0 SITE RANKING

In accordance with the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of the State Engineer (OSE) to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	0
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	20
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			20

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "20". This ranking is based on the following:

- Depth to groundwater is anticipated to be greater than 100 feet below grade surface (bgs). One water well, located approximately 3,100 feet to the west of the Site, was identified on the Office of the State Engineer (OSE) website database with a depth to water of 120 feet. Additionally, a cathodic well report for the San Juan 29-5 #214 indicates a depth to water of 150 feet, resulting in a depth to groundwater ranking of "0".
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site. These proximities result in a wellhead protection area ranking of "0".
- The release point is located less than 100 feet from a small ephemeral wash that drains to an arroyo northwest of the Site, resulting in a distance to surface water ranking of "20".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

Beginning on February 5, 2015, Enterprise initiated corrective action activities at the Site in an effort to locate and repair the subsurface leak, and remediate potential hydrocarbon impact. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Heather Woods and Ranee Deechilly, Apex environmental professionals, provided environmental support.

Subsequent to the completion of pipeline repairs, the hydrocarbon affected soils were excavated from the Site, resulting in an initial excavation of approximately 16 feet long by eight (8) feet wide, with a total depth of approximately six (6) feet bgs. Confirmation composite samples C-1 and C-2 were collected from the floor and sidewalls of the excavation to evaluate soils remaining in place and composite sample SP-1 was collected from the soil stockpile to determine the potential to reuse these soils as excavation backfill. Subsequent analytical results indicated that the floor of the excavation (C-1) and the sidewalls (C-2) near the release still exhibited evidence of hydrocarbon impact.

The Site was over-excavated on February 9, 2015, to remove material from the sidewalls and excavation floor near the point of release. Analytical results from confirmation samples C-3

through C-7 indicate that the sidewalls and floor no longer show evidence of hydrocarbon impact above New Mexico EMNRD OCD *Remediation Action Levels* (RALs).

The surface expression of the final excavation related to corrective action measured approximately 26 feet long by 13 feet wide at the maximum width, with a total depth of approximately nine (9) feet bgs. The repair excavation was extended north, beyond these dimensions, to facilitate the replacement of a full section of pipe.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silt with clay and weathered shale.

A total of approximately 108 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

Figure 3 is a site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to aid in determining the excavation limits.

Apex's soil sampling program included the collection of a total of seven (7) confirmation samples (C-1 through C-7) from the resulting excavation for laboratory analysis. Additionally, one (1) composite sample (SP-1) was collected from the stockpiled soils to determine the potential to reuse these soils as excavation backfill. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for rush analysis.

3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing Environmental Protection Agency (EPA) SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-of-custody form and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically

New Mexico Administrative Code 19.15.29 *Remediation Plan*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits associated with the final confirmation samples (C-3 through C-7) for soils remaining in place to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "20". Soils associated with C-1 and C-2 were removed by excavation and are not included in the following discussion.

- The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD *Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above the laboratory reporting limits, which are below the OCD *Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 13 milligrams per kilogram (mg/kg), which are below the OCD *Remediation Action Level* for a Site ranking of "20".

The laboratory analyses of the stockpile composite sample (SP-1) indicated TPH GRO/DRO concentrations above the OCD *Remediation Action Level* for a Site ranking of "20". The stockpiled soils resulting from the excavation were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation.

Confirmation sample results are provided in Table 1 in Appendix D.

5.0 FINDINGS AND RECOMMENDATIONS

The San Juan 29-5 #214 Well Tie Pipeline Release Site is located within the Enterprise ROW in the NE ¼ of Section 27 in Township 29 North and Range 5 West in rural Rio Arriba County, New Mexico. The Site is located on land managed by the USFS. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

Beginning on February 5, 2015, Enterprise initiated corrective action activities at the Site in an effort to locate and repair the subsurface leak, and remediate potential hydrocarbon impact. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD *RALs* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silt with clay and weathered shale.

- The surface expression of the final remedial action excavation measured approximately 26 feet long by 13 feet wide at the maximum width, with a total depth of approximately nine (9) feet bgs. The repair excavation was extended north, beyond these dimensions, to facilitate the replacement of a full section of pipe.
- Prior to backfilling, seven (7) confirmation samples were collected from the resulting excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the *OCD Remediation Action Levels* for a Site ranking of "20".
- A total of approximately 108 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

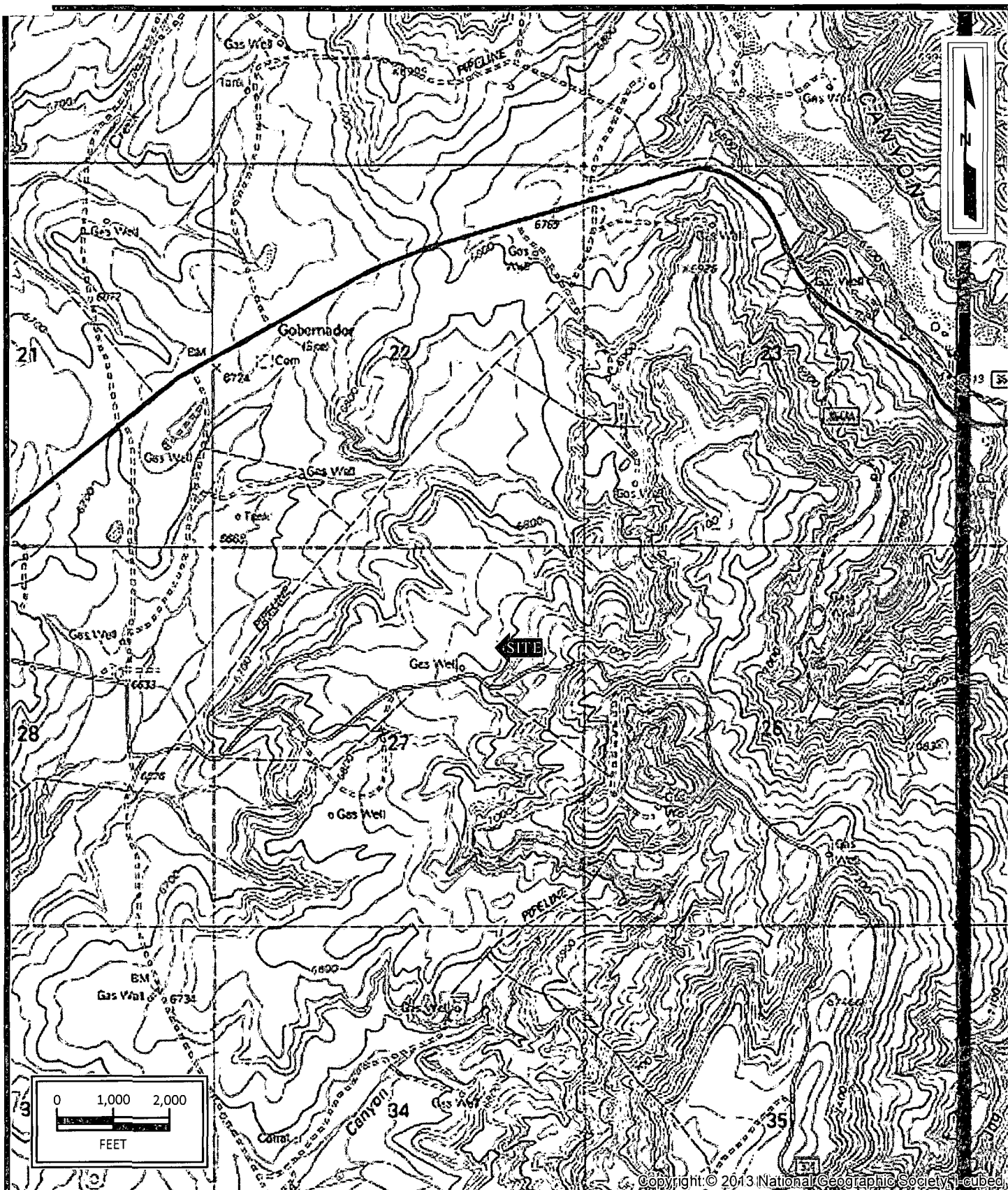
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of 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 expressed written authorization of Enterprise and Apex. 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 proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.



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San Juan 29-5 #214 Well Tie
Pipeline Release
NE1/4 Sec27 T29N R5W
Rural Rio Arriba County, New Mexico
36.6999N, 107.3405W

Project No. 7250415G003



Apex TITAN, Inc.

606 South Rio Grande, Suite A

Aztec, NM 87410

Phone: (505) 334-5200

www.apexcos.com

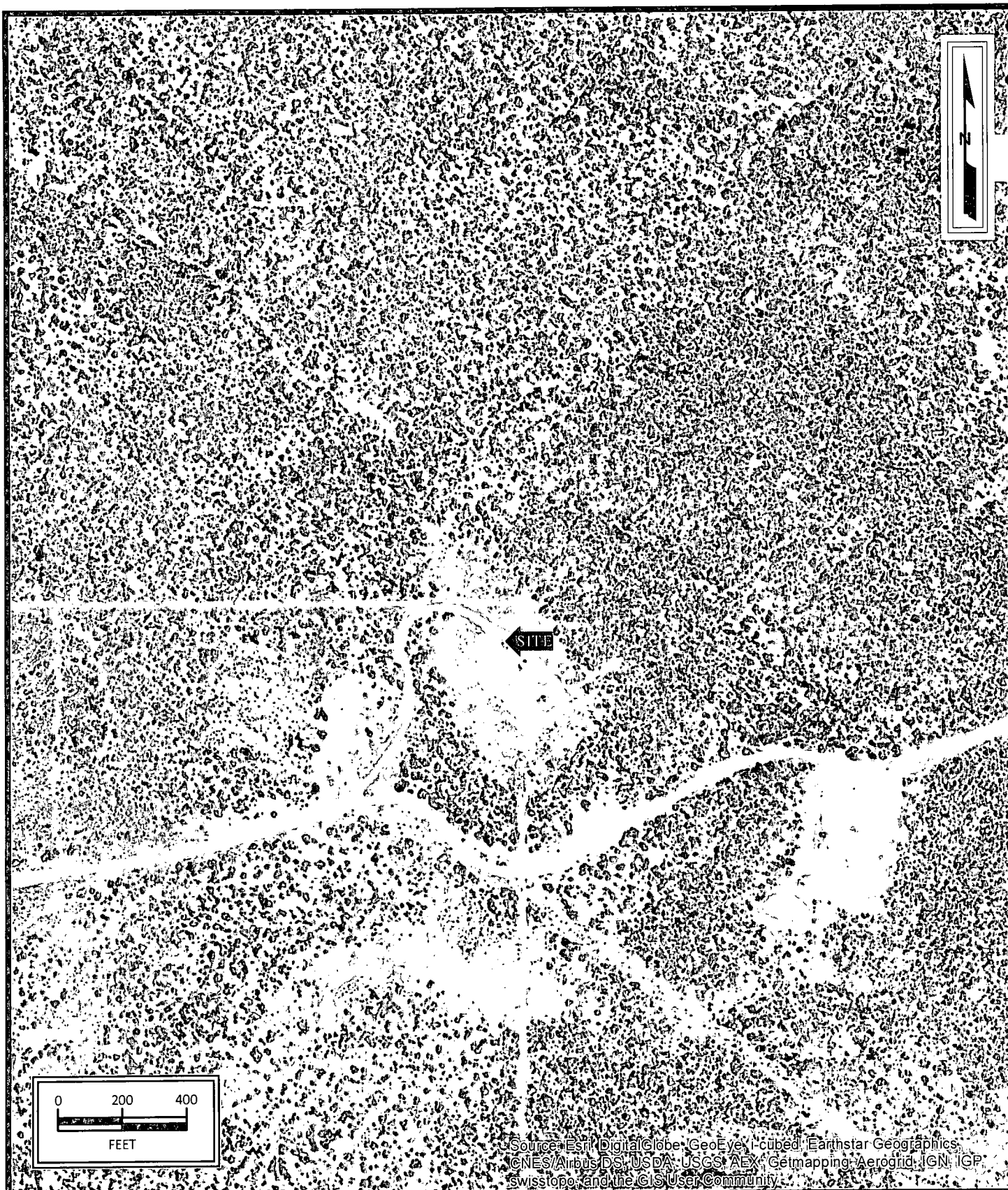
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

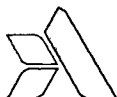
Gobernador, NM Quadrangle

1963



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**San Juan 29-5 #214 Well Tie
Pipeline Release**
NE1/4 Sec27 T29N R5W
Rural Rio Arriba County, New Mexico
36.6999N, 107.3405W



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FIGURE 2
Site Vicinity Map

Project No. 7250415G003



EXCAVATED AREA FOR
PIPELINE REPAIR ACCESS

<u>C-7</u> <u>2/9/2015</u>	
Benzene:	<0.030
Toluene:	<0.030
Ethylbenzene:	<0.030
Xylenes:	<0.061
Total BTEX:	ND
GRO:	<3.0
DRO:	13

<u>C-3</u> <u>2/9/2015</u>	
Benzene:	<0.033
Toluene:	<0.033
Ethylbenzene:	<0.033
Xylenes:	<0.065
Total BTEX:	ND
GRO:	<3.3
DRO:	12

<u>C-4</u> <u>2/9/2015</u>	
Benzene:	<0.031
Toluene:	<0.031
Ethylbenzene:	<0.031
Xylenes:	<0.061
Total BTEX:	ND
GRO:	<3.1
DRO:	<9.9

<u>C-6</u> <u>2/9/2015</u>	
Benzene:	<0.033
Toluene:	<0.033
Ethylbenzene:	<0.033
Xylenes:	<0.055
Total BTEX:	ND
GRO:	<2.8
DRO:	<9.9

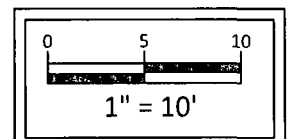
<u>C-5</u> <u>2/9/2015</u>	
Benzene:	<0.026
Toluene:	<0.026
Ethylbenzene:	<0.026
Xylenes:	<0.052
Total BTEX:	ND
GRO:	<2.6
DRO:	<10

METER
HOUSE

LEGEND:

- · — PIPELINE
- SAMPLE LOCATION
- ▲ RELEASE POINT
- ▨ EXTENT OF EXCAVATION
(APPROX. 9 FT DEEP)

NOTE: ALL VALUES ARE REPRESENTED IN mg/kg



**San Juan 29-5 #214 Well Tie
Pipeline Release**
NE1/4 Sec27 T29N R5W
Rural Rio Arriba County, New Mexico
36.6999N, 107.3405W

Project No. 7250415G003



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FIGURE 3
Site Map with
Sample Locations

I ct1
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

97057-0686 Form C-138
Revised August 1, 2011
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. Originating Site: SJ 29-5#214 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter G, Section 27, T29N, R10W; 36.699905, -107.340519
4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline.
5. Estimated Volume <u>50</u> <u>yd</u> ³ bbls Known Volume (to be entered by the operator at the end of the haul) <u>108</u> <u>yd</u> ³ bbls

Feb 2015

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)
☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-
exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load
☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261,
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check
the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 2-9-15, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to
Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.

I, Kendra Running, representative for Envirotech, Inc. do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of
19.15.36 NMAC.

6. Transporter: West State Entergy Contractors + Doug Forte

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011
Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME

Kendra Running

TITLE:

Waste Coordinator DATE: 2-9-15

SIGNATURE:

Kendra Running

TELEPHONE NO.: 505-632-0615

Surface Waste Management Facility Authorized Agent

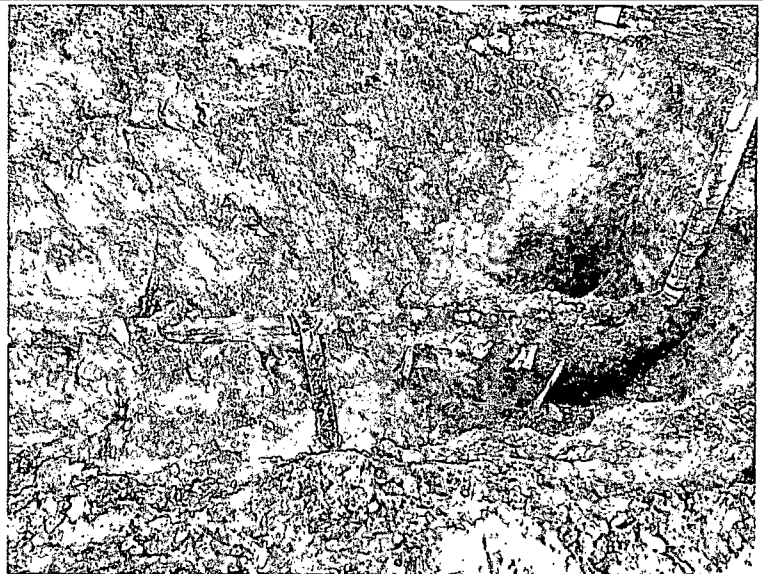
Photograph 1

View of the Site at the beginning of corrective action activities, facing north.



Photograph 2

View of partially completed excavation, facing east.



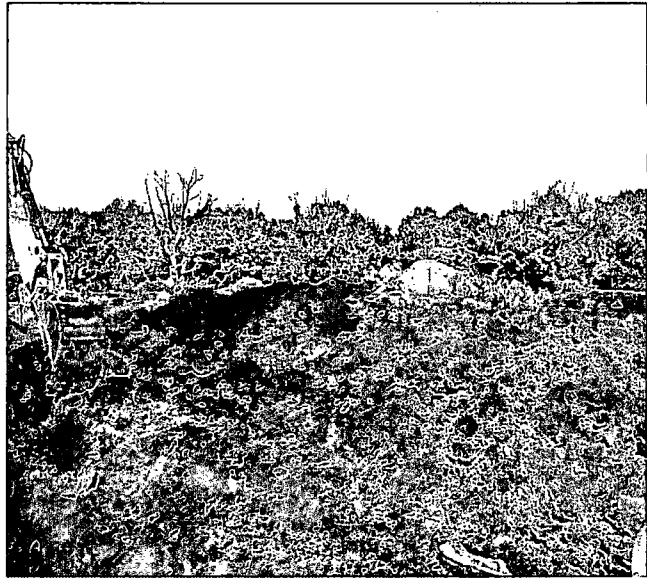
Photograph 3

View of partially completed excavation, facing northwest.



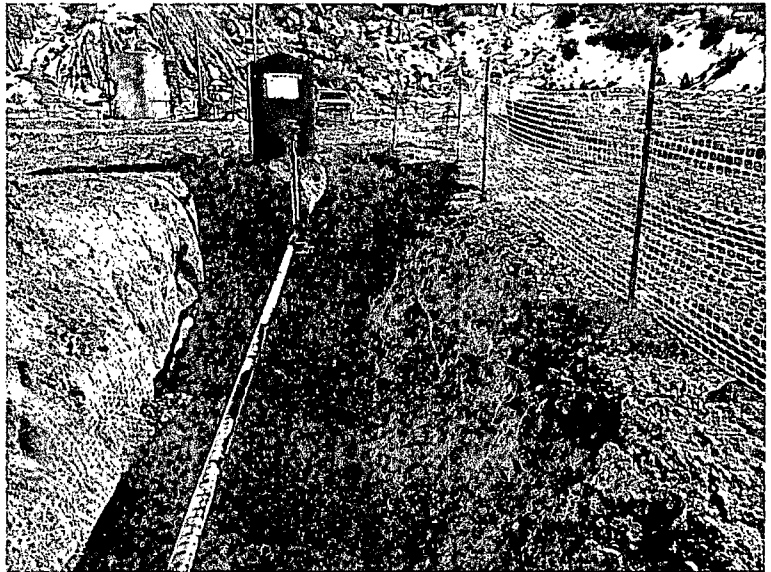
Photograph 4

View of stockpile, facing north.



Photograph 5

View of the final excavation at the completion of corrective action activities, facing southeast.



Photograph 6

View of the final excavation at the completion of corrective action activities, facing north.



TABLE 1
San Juan 29-5 #214 Well Tie Pipeline Release
SOIL ANALYTICAL SUMMARY

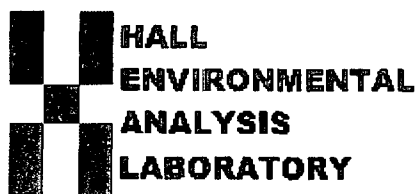
Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
Stockpile Sample Removed to Landfarm									
SP-1	2/5/2015	2 to 9	0.21	3.1	0.88	11	15	140	740
Confirmation Samples Removed by Excavation									
C-1	2/5/2015	2 to 9	4.0	36	7.9	100	148	950	8,400
C-2	2/5/2015	2 to 9	1.1	12	4.0	56	73	570	3,200
Excavation Confirmation Samples									
C-3	2/9/2015	2 to 9	<0.033	<0.033	<0.033	<0.065	ND	<3.3	12
C-4	2/9/2015	2 to 9	<0.031	<0.031	<0.031	<0.061	ND	<3.1	<9.9
C-5	2/9/2015	2 to 9	<0.026	<0.026	<0.026	<0.052	ND	<2.6	<10
C-6	2/9/2015	2 to 9	<0.033	<0.033	<0.033	<0.055	ND	<2.8	<9.9
C-7	2/9/2015	9	<0.030	<0.030	<0.030	<0.061	ND	<3.0	13

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

ND = Not Detected above the Laboratory Reporting Limits

NA = Not analyzed

NE = Not established



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

February 09, 2015

Heather Woods

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (505) 716-2787

FAX

RE: Enterprise SJ 29-5 #214

OrderNo.: 1502256

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/6/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1502256**Date Reported: **2/9/2015****CLIENT:** APEX TITAN**Client Sample ID:** SP-1**Project:** Enterprise SJ 29-5 #214**Collection Date:** 2/5/2015 12:45:00 PM**Lab ID:** 1502256-001**Matrix:** MEOH (SOIL)**Received Date:** 2/6/2015 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	740	9.9		mg/Kg	1	2/6/2015 10:00:46 AM	17601
Surr: DNOP	105	63.5-128		%REC	1	2/6/2015 10:00:46 AM	17601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	140	13		mg/Kg	5	2/6/2015 9:51:42 AM	17580
Surr: BFB	274	80-120	S	%REC	5	2/6/2015 9:51:42 AM	17580
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.21	0.13		mg/Kg	5	2/6/2015 9:51:42 AM	17580
Toluene	3.1	0.13		mg/Kg	5	2/6/2015 9:51:42 AM	17580
Ethylbenzene	0.88	0.13		mg/Kg	5	2/6/2015 9:51:42 AM	17580
Xylenes, Total	11	0.26		mg/Kg	5	2/6/2015 9:51:42 AM	17580
Surr: 4-Bromofluorobenzene	125	80-120	S	%REC	5	2/6/2015 9:51:42 AM	17580

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502256

09-Feb-15

Client: APEX TITAN

Project: Enterprise SJ 29-5 #214

Sample ID	MB-17601	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17601	RunNo:	24136					
Prep Date:	2/6/2015	Analysis Date:	2/6/2015	SeqNo:	711775	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.5		10.00		84.7	63.5	128			

Sample ID	LCS-17601	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17601	RunNo:	24136					
Prep Date:	2/6/2015	Analysis Date:	2/6/2015	SeqNo:	711776	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.7	67.8	130			
Surr: DNOP	4.9		5.000		98.1	63.5	128			

Sample ID	MB-17564	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17564	RunNo:	24136					
Prep Date:	2/4/2015	Analysis Date:	2/6/2015	SeqNo:	712630	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		89.7	63.5	128			

Sample ID	LCS-17564	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17564	RunNo:	24136					
Prep Date:	2/4/2015	Analysis Date:	2/6/2015	SeqNo:	712631	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.2	63.5	128			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502256

09-Feb-15

Client: APEX TITAN

Project: Enterprise SJ 29-5 #214

Sample ID	MB-17580	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712397	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.0	80	120			

Sample ID	LCS-17580		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	17580		RunNo:	24152				
Prep Date:	2/5/2015		Analysis Date:	2/6/2015		SeqNo:	712398		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	64	130				
Surr: BFB	1000		1000		103	80	120				

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502256

09-Feb-15

Client: APEX TITAN

Project: Enterprise SJ 29-5 #214

Sample ID	MB-17580	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
benzene	ND	0.050								
toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	LCS-17580	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712442	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
benzene	1.0	0.050	1.000	0	102	80	120			
toluene	0.96	0.050	1.000	0	95.7	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: **APEX AZTEC**

Work Order Number: **1502256**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

02/06/15
2/6/2015 7:10:00 AM

Completed By: **Lindsay Mangin**

2/6/2015 7:29:13 AM

Reviewed By:

AS 02/06/15

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☐

No ☐

No VOA Vials ☒

11. Were any sample containers received broken?

Yes ☐

No ☒

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

12. Does paperwork match bottle labels?

(Note discrepancies on chain of custody)

Yes ☒

No ☐

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

Adjusted?

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

(If no, notify customer for authorization.)

Yes ☒

No ☐

Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person


Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u>		ANALYSIS REQUESTED <div style="transform: rotate(-90deg); transform-origin: center;"> 8021 BTEX 8015 TPH GRO/DEO </div>		Lab use only Due Date:								
		Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: <u>7250415004</u>				Temp. of coolers when received (C°): <u>1.6</u> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> </table> Page <u>1</u> of <u>1</u>		1	2	3	4	5		
1	2	3	4	5										
Project Manager <u>Heather Woods</u>		Sampler's Name _____		Sampler's Signature _____										
Proj. No. <u>7250415004</u>		Project Name <u>Enterprise SJ 29-S #214</u>		No/Type of Containers _____										
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only) <u>1502256-001</u>	
S	2/5/15	1245			SP-1						1	1		X X
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same Day</u>														
Relinquished by (Signature) <u>Heather Woods</u>		Date: <u>2/5/15</u>		Time: <u>1510</u>		Received by (Signature) <u>Christine Wale</u>		Date: <u>2/5/15</u>		Time: <u>1510</u>		NOTES: Direct bill to Enterprise Attn: Tom Long		
Relinquished by (Signature) <u>Christine Wale</u>		Date: <u>2/5/15</u>		Time: <u>1824</u>		Received by (Signature) <u>[Signature]</u>		Date: <u>02/06/15</u>		Time: <u>0710</u>				
Relinquished by (Signature) _____		Date: _____		Time: _____		Received by (Signature) _____		Date: _____		Time: _____				
Relinquished by (Signature) _____		Date: _____		Time: _____		Received by (Signature) _____		Date: _____		Time: _____				

Matrix Container

WW - Wastewater
VOA - 40 ml vialW - Water
A/G - Amber / Or Glass 1 Liter

S - Soil

SD - Solid

L - Liquid
250 ml - Glass wide mouth

A - Air Bag

C - Charcoal tube
P/O - Plastic or other

SL - sludge

O - Oil



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

February 09, 2015

Heather Woods

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (505) 716-2787

FAX

RE: Enterprise SJ 29-5 #214

OrderNo.: 1502257

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/6/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** C-1**Project:** Enterprise SJ 29-5 #214**Collection Date:** 2/5/2015 1:00:00 PM**Lab ID:** 1502257-001**Matrix:** MEOH (SOIL)**Received Date:** 2/6/2015 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	8400	100		mg/Kg	10	2/6/2015 10:22:14 AM	17601
Surr: DNOP	0	63.5-128	S	%REC	10	2/6/2015 10:22:14 AM	17601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	950	13		mg/Kg	5	2/6/2015 10:20:30 AM	17580
Surr: BFB	929	80-120	S	%REC	5	2/6/2015 10:20:30 AM	17580
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	4.0	0.13		mg/Kg	5	2/6/2015 10:20:30 AM	17580
Toluene	36	1.3		mg/Kg	50	2/6/2015 12:15:23 PM	17580
Ethylbenzene	7.9	0.13		mg/Kg	5	2/6/2015 10:20:30 AM	17580
Xylenes, Total	100	2.5		mg/Kg	50	2/6/2015 12:15:23 PM	17580
Surr: 4-Bromofluorobenzene	210	80-120	S	%REC	5	2/6/2015 10:20:30 AM	17580

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** C-2**Project:** Enterprise SJ 29-5 #214**Collection Date:** 2/5/2015 1:05:00 PM**Lab ID:** 1502257-002**Matrix:** MEOH (SOIL)**Received Date:** 2/6/2015 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	3200	100		mg/Kg	10	2/6/2015 11:40:14 AM	17601
Surr: DNOP	0	63.5-128	S	%REC	10	2/6/2015 11:40:14 AM	17601
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	570	49		mg/Kg	20	2/6/2015 12:44:12 PM	17580
Surr: BFB	252	80-120	S	%REC	20	2/6/2015 12:44:12 PM	17580
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	1.1	0.49		mg/Kg	20	2/6/2015 12:44:12 PM	17580
Toluene	12	0.49		mg/Kg	20	2/6/2015 12:44:12 PM	17580
Ethylbenzene	4.0	0.49		mg/Kg	20	2/6/2015 12:44:12 PM	17580
Xylenes, Total	56	0.98		mg/Kg	20	2/6/2015 12:44:12 PM	17580
Surr: 4-Bromofluorobenzene	131	80-120	S	%REC	20	2/6/2015 12:44:12 PM	17580

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1502257

09-Feb-15

Client: APEX TITAN
Project: Enterprise SJ 29-5 #214

Sample ID	MB-17601	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17601	RunNo:	24136					
Prep Date:	2/6/2015	Analysis Date:	2/6/2015	SeqNo:	711775	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.5		10.00		84.7	63.5	128			

Sample ID	LCS-17601	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17601	RunNo:	24136					
Prep Date:	2/6/2015	Analysis Date:	2/6/2015	SeqNo:	711776	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.7	67.8	130			
Surr: DNOP	4.9		5.000		98.1	63.5	128			

Sample ID	MB-17564	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17564	RunNo:	24136					
Prep Date:	2/4/2015	Analysis Date:	2/6/2015	SeqNo:	712630	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		89.7	63.5	128			

Sample ID	LCS-17564	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17564	RunNo:	24136					
Prep Date:	2/4/2015	Analysis Date:	2/6/2015	SeqNo:	712631	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.2	63.5	128			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502257

09-Feb-15

Client: APEX TITAN

Project: Enterprise SJ 29-5 #214

Sample ID	MB-17580	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712397	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.0	80	120			

Sample ID	LCS-17580	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712398	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	64	130			
Surr: BFB	1000		1000		103	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502257

09-Feb-15

Client: APEX TITAN

Project: Enterprise SJ 29-5 #214

Sample ID	MB-17580	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
benzene	ND	0.050								
toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	LCS-17580	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	17580	RunNo:	24152					
Prep Date:	2/5/2015	Analysis Date:	2/6/2015	SeqNo:	712442	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
benzene	1.0	0.050	1.000	0	102	80	120			
toluene	0.96	0.050	1.000	0	95.7	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Qualifiers:

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

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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1502257

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

2/6/2015 7:10:00 AM

Completed By: Lindsay Mangin

2/6/2015 7:32:53 AM

Reviewed By:

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:


Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location: <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: <u>7250415004</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); display: inline-block;"> 8021 BTX 8015 TPH GRO/PRO </div>										Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>1.6</u> <div style="display: flex; justify-content: space-around;"> 12345 </div> Page <u>1</u> of <u>1</u>										
		Project Manager <u>H. Woods</u> Sampler's Name <u>Heather Woods / Rance Duchilly</u> Sampler's Signature <u>Heather Woods</u>																						
Proj. No. <u>7250415004</u> 7250415004		Project Name <u>Enterprise SJ 29-5 # 214</u>				No/Type of Containers																		
Matrix	Date	Time	Coed	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only) <u>1502557-001</u> <u>2-002</u> <u>02/02/16</u>											
S	2/5/15	1300			C-1						1	1											X	X
S	2/5/15	1305			C-2						1	1	X	X										
NEC HW																								
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same Day</u>																								
Relinquished by (Signature)			Date:		Time:		Received by (Signature)			Date:		Time:		NOTES: Direct bill to Enterprise Attn: Tom Long										
Relinquished by (Signature)			Date:		Time:		Received by (Signature)			Date:		Time:												
Relinquished by (Signature)			Date:		Time:		Received by (Signature)			Date:		Time:												
Relinquished by (Signature)			Date:		Time:		Received by (Signature)			Date:		Time:												

Matrix Container WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil
 VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other MeOH



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

February 13, 2015

Heather Woods

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (505) 716-2787

FAX

RE: Enterprise San Juan 29-5 #214

OrderNo.: 1502361

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/10/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** C-3**Project:** Enterprise San Juan 29-5 #214**Collection Date:** 2/9/2015 1:38:00 PM**Lab ID:** 1502361-001**Matrix:** SOIL**Received Date:** 2/10/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	12	9.9		mg/Kg	1	2/10/2015 9:24:57 AM	17655
Surr: DNOP	102	63.5-128		%REC	1	2/10/2015 9:24:57 AM	17655
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	2/10/2015 10:04:17 AM	R24212
Surr: BFB	91.0	80-120		%REC	1	2/10/2015 10:04:17 AM	R24212
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.033		mg/Kg	1	2/12/2015 1:25:30 PM	17626
Toluene	ND	0.033		mg/Kg	1	2/12/2015 1:25:30 PM	17626
Ethylbenzene	ND	0.033		mg/Kg	1	2/12/2015 1:25:30 PM	17626
Xylenes, Total	ND	0.065		mg/Kg	1	2/12/2015 1:25:30 PM	17626
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	2/12/2015 1:25:30 PM	17626

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1502361

Date Reported: 2/13/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** C-4**Project:** Enterprise San Juan 29-5 #214**Collection Date:** 2/9/2015 12:45:00 PM**Lab ID:** 1502361-002**Matrix:** SOIL**Received Date:** 2/10/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/10/2015 9:52:01 AM	17655
Surr: DNOP	106	63.5-128		%REC	1	2/10/2015 9:52:01 AM	17655
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	2/10/2015 10:33:02 AM	R24212
Surr: BFB	92.0	80-120		%REC	1	2/10/2015 10:33:02 AM	R24212
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.031		mg/Kg	1	2/12/2015 1:54:49 PM	17626
Toluene	ND	0.031		mg/Kg	1	2/12/2015 1:54:49 PM	17626
Ethylbenzene	ND	0.031		mg/Kg	1	2/12/2015 1:54:49 PM	17626
Xylenes, Total	ND	0.061		mg/Kg	1	2/12/2015 1:54:49 PM	17626
Surr: 4-Bromofluorobenzene	88.3	80-120		%REC	1	2/12/2015 1:54:49 PM	17626

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1502361

Date Reported: 2/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-5

Project: Enterprise San Juan 29-5 #214

Collection Date: 2/9/2015 2:40:00 PM

Lab ID: 1502361-003

Matrix: SOIL

Received Date: 2/10/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/10/2015 10:19:03 AM	17655
Surr: DNOP	109	63.5-128		%REC	1	2/10/2015 10:19:03 AM	17655
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.6		mg/Kg	1	2/10/2015 11:01:46 AM	R24212
Surr: BFB	91.5	80-120		%REC	1	2/10/2015 11:01:46 AM	R24212
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.026		mg/Kg	1	2/12/2015 2:24:04 PM	17626
Toluene	ND	0.026		mg/Kg	1	2/12/2015 2:24:04 PM	17626
Ethylbenzene	ND	0.026		mg/Kg	1	2/12/2015 2:24:04 PM	17626
Xylenes, Total	ND	0.052		mg/Kg	1	2/12/2015 2:24:04 PM	17626
Surr: 4-Bromofluorobenzene	91.6	80-120		%REC	1	2/12/2015 2:24:04 PM	17626

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1502361

Date Reported: 2/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-6

Project: Enterprise San Juan 29-5 #214

Collection Date: 2/9/2015 1:35:00 PM

Lab ID: 1502361-004

Matrix: SOIL

Received Date: 2/10/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/10/2015 10:45:54 AM	17655
Surr: DNOP	102	63.5-128		%REC	1	2/10/2015 10:45:54 AM	17655
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	2/10/2015 11:30:30 AM	R24212
Surr: BFB	92.6	80-120		%REC	1	2/10/2015 11:30:30 AM	R24212
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.033		mg/Kg	1	2/12/2015 2:53:18 PM	17626
Toluene	ND	0.033		mg/Kg	1	2/12/2015 2:53:18 PM	17626
Ethylbenzene	ND	0.033		mg/Kg	1	2/12/2015 2:53:18 PM	17626
Xylenes, Total	ND	0.055		mg/Kg	1	2/12/2015 2:53:18 PM	17626
Surr: 4-Bromofluorobenzene	81.4	80-120		%REC	1	2/12/2015 2:53:18 PM	17626

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** C-7**Project:** Enterprise San Juan 29-5 #214**Collection Date:** 2/9/2015 12:39:00 PM**Lab ID:** 1502361-005**Matrix:** SOIL**Received Date:** 2/10/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	13	9.9		mg/Kg	1	2/10/2015 9:46:11 AM	17655
Surr: DNOP	93.8	63.5-128		%REC	1	2/10/2015 9:46:11 AM	17655
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	2/10/2015 11:59:20 AM	R24212
Surr: BFB	91.4	80-120		%REC	1	2/10/2015 11:59:20 AM	R24212
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.030		mg/Kg	1	2/12/2015 3:22:32 PM	17626
Toluene	ND	0.030		mg/Kg	1	2/12/2015 3:22:32 PM	17626
Ethylbenzene	ND	0.030		mg/Kg	1	2/12/2015 3:22:32 PM	17626
Xylenes, Total	ND	0.061		mg/Kg	1	2/12/2015 3:22:32 PM	17626
Surr: 4-Bromofluorobenzene	92.7	80-120		%REC	1	2/12/2015 3:22:32 PM	17626

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 8
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1502361

13-Feb-15

Client: APEX TITAN

Project: Enterprise San Juan 29-5 #214

Sample ID	MB-17655	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17655	RunNo:	24202					
Prep Date:	2/10/2015	Analysis Date:	2/10/2015	SeqNo:	713456	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.5		10.00		84.6	63.5	128			

Sample ID	LCS-17655	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17655	RunNo:	24202					
Prep Date:	2/10/2015	Analysis Date:	2/10/2015	SeqNo:	713458	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	67.8	130			
Surr: DNOP	4.0		5.000		80.8	63.5	128			

Sample ID	1502361-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	C-3	Batch ID:	17655	RunNo:	24202					
Prep Date:	2/10/2015	Analysis Date:	2/10/2015	SeqNo:	713552	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.9	49.31	11.94	79.4	29.2	176			
Surr: DNOP	4.8		4.931		97.7	63.5	128			

Sample ID	1502361-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	C-3	Batch ID:	17655	RunNo:	24202					
Prep Date:	2/10/2015	Analysis Date:	2/10/2015	SeqNo:	713633	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.9	49.41	11.94	79.6	29.2	176	0.288	23	
Surr: DNOP	4.8		4.941		97.7	63.5	128	0	0	

Sample ID	MB-17621	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	17621	RunNo:	24202					
Prep Date:	2/9/2015	Analysis Date:	2/10/2015	SeqNo:	713699	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.4		10.00		93.7	63.5	128			

Sample ID	LCS-17621	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	17621	RunNo:	24202					
Prep Date:	2/9/2015	Analysis Date:	2/10/2015	SeqNo:	713700	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.3	63.5	128			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1502361

13-Feb-15

Client: APEX TITAN
Project: Enterprise San Juan 29-5 #214

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R24212	RunNo:	24212					
Prep Date:		Analysis Date:	2/10/2015	SeqNo:	714075	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.8	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R24212	RunNo:	24212					
Prep Date:		Analysis Date:	2/10/2015	SeqNo:	714076	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.9	64	130			
Surr: BFB	980		1000		98.1	80	120			

Sample ID	MB-17626	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	17626	RunNo:	24212					
Prep Date:	2/9/2015	Analysis Date:	2/10/2015	SeqNo:	714085	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.8	80	120			

Sample ID	LCS-17626	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	17626	RunNo:	24212					
Prep Date:	2/9/2015	Analysis Date:	2/10/2015	SeqNo:	714086	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		99.1	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1502361

13-Feb-15

Client: APEX TITAN

Project: Enterprise San Juan 29-5 #214

Sample ID	MB-17626		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 17626		RunNo: 24279					
Prep Date:	2/9/2015		Analysis Date: 2/12/2015		SeqNo: 715392		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
benzene	ND	0.050								
toluene	ND	0.050								
ethylbenzene	ND	0.050								
xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

Sample ID	LCS-17626			SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS			Batch ID:	17626		RunNo:	24279			
Prep Date:	2/9/2015			Analysis Date:	2/12/2015		SeqNo:	715393		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
benzene	1.1	0.050	1.000	0	111	80	120				
toluene	1.1	0.050	1.000	0	107	80	120				
Ethylbenzene	1.1	0.050	1.000	0	106	80	120				
xylenes, Total	3.2	0.10	3.000	0	107	80	120				
Surr: 4-Bromofluorobenzene	1.2		1.000		121	80	120			S	

Qualifiers:

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

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1502361

RcptNo: 1

Received by/date: AT 02/10/15

Logged By: Anne Thorne 2/10/2015 7:00:00 AM

Completed By: Anne Thorne 2/10/2015

Reviewed By: A / [Signature] 02/10/15

Chain of Custody

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

Log In

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

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

Special Handling (If applicable)


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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.0	Good	Yes			

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: <u>Direct bill to Enterprise</u>		ANALYSIS REQUESTED <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8021 BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BOLIS TPH GAO/DAO</div> </div>										Lab use only Due Date: _____ Temp. of coolers when received (C°): <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 20px;">1</td> <td style="width: 20px;">2</td> <td style="width: 20px;">3</td> <td style="width: 20px;">4</td> <td style="width: 20px;">5</td> </tr> </table> Page <u>1</u> of <u>1</u>					1	2	3	4	5								
		1	2											3	4	5															
Project Manager <u>Heather Woods</u>		Sampler's Name <u>Heather Woods / Renee Daechilly</u>		Sampler's Signature <u>Heather Woods / Renee Daechilly</u>																											
Proj. No. <u>7250415003</u>		Project Name <u>Enterprise San Juan 29-5 # 214</u>				No/Type of Containers <u>402 Jar / MUDH Kit</u>				<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8021 BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BOLIS TPH GAO/DAO</div> </div>																					
Matrix <u>S</u>		Date <u>2/9/15</u>		Time <u>1338</u>		Identifying Marks of Sample(s) <u>C-3</u>		Start Depth <u></u>												End Depth <u></u>		VOA <u></u>		A/G 1 L. <u></u>		250 ml <u></u>		Glass Jar <u>1</u>		P/O <u>1</u>	
<u>S</u>		<u>2/9/15</u>		<u>1245</u>		<u>C-4</u>		<u></u>		<u></u>		<u></u>		<u></u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>									
<u>S</u>		<u>2/9/15</u>		<u>1440</u>		<u>C-5</u>		<u></u>		<u></u>		<u></u>		<u></u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>									
<u>S</u>		<u>2/9/15</u>		<u>1335</u>		<u>C-6</u>		<u></u>		<u></u>		<u></u>		<u></u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>									
<u>S</u>		<u>2/9/15</u>		<u>1239</u>		<u>C-7</u>		<u></u>		<u></u>		<u></u>		<u></u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>									
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