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-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

1RP-2689

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 – Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	Jack B 15 4-inch Historical	Facility Type	Pipeline

Surface Owner Bill Grobe	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	15	24S	37E					Lea

Latitude N 32.21729° Longitude W 103.14429°

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: >5 bbls	Volume Recovered: Unknown
Source of Release: 4" Steel Pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: November 2010
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Geoff Leking, voicemail on 02/14/2011 (historical release originally estimated 2-3 bbls, revised volume on 02/14/2011)	
By Whom? Jason Henry	Date and Hour: 02/14/2011 @ 1400	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

HOBBS OCD
AUG 03 2011
RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Landowner reported historic release of crude oil from a 4-inch pipeline owned by Plains Pipeline. The surface stain associated with this release was small in nature and the release was estimated to be <5bbls at the time the landowner reported it. Soil remediation activities commenced during the week of February 7, 2011 and the released volume was revised to >5 bbls on February 14, 2011.

Describe Area Affected and Cleanup Action Taken.*
Please see the attached Nova Safety and Environmental *Remediation Summary and Site Closure Request* for details of remedial activities conducted at the site.

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: Jason Henry	OIL CONSERVATION DIVISION
Printed Name: Jason Henry	Approved by ~~District Supervisor~~ ENVIRONMENTAL ENGINEER: Geoff Leking
Title: Remediation Coordinator	Approval Date: 08/03/11 Expiration Date: —
E-mail Address: jhenry@paalp.com	Conditions of Approval: Attached ☐ IRP-03-11-2689
Date: 08/03/2011 Phone: (575) 441-1099	

* Attach Additional Sheets If Necessary

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
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State of New Mexico
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Form C-141
Revised October 10, 200

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repo

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 – Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	Jack B 15 4-inch Historical	Facility Type	Pipeline

Surface Owner	Mineral Owner	Lease No.
Bill Grobe		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	15	24S	37E					Lea

Latitude N 32.21729° Longitude W 103.14429°

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: >5 bbls	Volume Recovered: Unknown
Source of Release: 4" Steel Pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: November 2010
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Geoff Leking, voicemail on 02/14/2011 (historical release originally estimated 2-3 bbls, revised volume on 02/14/2011)	
By Whom? Jason Henry	Date and Hour: 02/14/2011 @ 1400	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
MAR 08 2011
HOBBSOCD

Describe Cause of Problem and Remedial Action Taken.*
Landowner reported historic release of crude oil from a 4-inch pipeline owned by Plains Pipeline. The surface stain associated with this release was small in nature and the release was estimated to be <5bbls at the time the landowner reported it. Soil remediation activities commenced during the week of February 7, 2011 and the released volume was revised to >5 bbls on February 14, 2011.

Describe Area Affected and Cleanup Action Taken.*
Approximately 1,200 cubic yards of impacted soil and caliche have been transported off-site for disposal at NMOCD permitted facility. Clean backfill will be purchased from the landowner. The impacted area will be remediated per applicable guidelines.

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: Jason Henry	OIL CONSERVATION DIVISION
Printed Name: Jason Henry	Approved by ~~District Supervisor~~ ENVIRONMENTAL ENGINEER: Geoffrey Leking
Title: Remediation Coordinator	Approval Date: 03/08/11 Expiration Date: 05/08/11
E-mail Address: jhenry@paalp.com	Conditions of Approval: SUBMIT FINAL C-141 BY 03/08/11 Attached ☐ IRP-03-11-2689
Date: 03/08/2011 Phone: (575) 441-1099	

* Attach Additional Sheets If Necessary

REMEDIATION SUMMARY

AND SITE

CLOSURE REQUEST

PLAINS PIPELINE, L.P. (231735)
Jack B 15 4-Inch Historical
Lea County, New Mexico
Plains SRS # Jack B 15 4-Inch Historical
UNIT LTR "H" (SE ¼ /NE ¼), Section 15, Township 24 South, Range 37 East
Latitude 32.21729° North, Longitude 103.14429° West
NMOCD Reference # 1RP-2689

NOVA
safety and environmental

Prepared For:

Plains Pipeline, L.P.
333 Clay Street
Suite 1600
Houston, Texas 77002

HOBBS OCD

AUG 0 3 2011

RECEIVED

Prepared By:

NOVA Safety & Environmental
2057 Commerce
Midland, Texas 79703

July 2011

Camille J. Bryant
Project Manager

Brittan K. Byerly, P.G.
President

TABLE OF CONTENTS

1.0 INTRODUCTION

Nova Safety & Environmental (NOVA), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as Jack B 15 4-Inch Historical (SRS # Jack B 15 4-Inch Historical). The legal description of the release site is Unit Letter "H" (SE ¼ NE ¼), Section 15, Township 24 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by Mr. Bill Grobe. The release site GPS coordinates are 32.21729° North and 103.14429° West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site Details Schematic and Confirmation Soil Sample Locations Map. The Release Notification and Corrective Action (Form C-141) is provided as Appendix D.

In November 2010, evidence of a historical release was brought to the attention of Plains by the landowner. The initial site assessment indicated approximately three (3) barrels of crude oil was released from the pipeline and Plains initially classified the release as "non-reportable". On February 7, 2011, excavation of the hydrocarbon impacted soil began at the site. On February 14, 2011, Plains representatives reclassified the release as "reportable", based on the depth of soil impact and visual observations. Plains verbally notified the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office of the release. The release was reported as greater than five (5) barrels to the NMOCD Hobbs District Office. General photographs of the site are provided as Appendix C.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database did not identify the average depth to groundwater information for Section 15, Township 24 South, Range 37 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately 75 to 100 feet below ground surface (bgs). On June 20, 2011, one (1) soil boring (SB-1) was advanced at the release site. The analytical results of the soil samples collected during the advancement of the soil boring indicated hydrocarbon impact exceeding the NMOCD regulatory standard was present at approximately sixty (60) feet bgs. The depth of hydrocarbon impact results in a score of twenty (20) being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The NMOCD guidelines indicate the Jack B 15 4-Inch Historical Release Site has ranking score of twenty (20). Based on this score, the soil remediation levels for a site with a ranking score of twenty (20) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 100 mg/Kg (ppm)

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On February 7, 2011, Nova, at the request of Plains, commenced remediation activities at the Jack B 15 4" Historical Release Site. Impacted soil was excavated from the release site and stockpiled on-site, pending final disposition.

On February 8, 2011, two (2) soil samples (Floor @ 16' and Floor @ 18') were collected from the floor of the excavation. The soil samples were submitted to the laboratory for determination of concentrations of total petroleum hydrocarbons (TPH) using EPA method SW8015M. In addition, soil sample Floor @ 16' was analyzed for chloride concentrations using method E 300. The analytical results indicated the TPH concentrations were 17,436 mg/Kg for soil sample Floor @ 16' and 19,498 mg/Kg for soil sample Floor @ 18'. The chloride concentration was 86.2 mg/Kg for soil sample Floor @ 16'. Table 1 summarizes the Concentrations of BTEX, TPH and Chlorides in Soil. Laboratory analytical reports are provided as Appendix B.

On February 16, 2011, four (4) soil samples (East S/W @ 18', North S/W @ 18', South S/W @ 18' and West S/W @ 18') were collected from the sidewalls of the excavation. The soil samples were submitted to the laboratory for determination of concentrations of benzene, toluene, ethyl-benzene and xylene (BTEX) using EPA SW 846-8021b and TPH. Laboratory analytical results indicated TPH concentrations ranged from 17.1 mg/Kg for soil sample South S/W @ 18' to 729.5 mg/Kg for soil sample North S/W @ 18'. Benzene concentrations were less than the appropriate laboratory detection limit (MDL) for all submitted soil samples. Laboratory analytical results indicated BTEX concentrations ranged from less than the MDL of 0.0105 mg/Kg for soil sample East S/W @ 18' to 0.1704 mg/Kg for soil sample North S/W @ 18'.

On February 16, 2011, a trench (Trench 1) was excavated in the floor of the excavation to investigate the vertical extent of hydrocarbon impacted soil at the site. Selected soil samples were submitted to the laboratory for determination of BTEX and TPH concentrations.

Trench T-1 was located in the floor of the excavation at approximately eighteen (18) feet bgs, directly beneath the previously removed Plains pipeline. The trench was completed to a total depth of approximately thirty-two (32) feet bgs. Four (4) soil samples (Trench 1 @ 20', Trench 1 @ 24', Trench 1 @ 28' and Trench 1 @ 32') were collected from the trench and submitted to the laboratory for analysis. The trench was backfilled after the soil samples were collected. Laboratory analytical results indicated TPH concentrations ranged from 2,659 mg/Kg for soil sample Trench 1 @ 32' to 38,910 mg/Kg for Trench 1 @ 20'. The benzene and BTEX concentrations for soil sample Trench 1 @ 32' were <0.0202 mg/Kg and 25.1 mg/Kg, respectively. Please reference Figure 2, for site details and sample locations.

Approximately 1,188 cubic yards of soil was transported to Doom Land Farm, LLC, (NMOCD Permit # 01-0033) for disposal. The resulting excavation measured approximately fifty-two (52) feet in width, and approximately fifty-five (55) feet in length and ranged in depth from approximately seventeen (17) to eighteen (18) feet bgs. The deeper portion of the excavation measured approximately twenty (20) feet in width and approximately twenty (20) feet in length.

On June 7, 2011, remediation activities resumed at the Jack B 15 4' Historical Release Site. Based on analytical results of the sampling event conducted on February 16, 2011, additional

excavation was conducted on the north sidewall of the excavation. On June 8, 2011, a soil sample (North S/W-A @ 18') was collected from the north sidewall of the excavation and submitted to the laboratory for TPH analysis. Laboratory analytical results indicated a TPH concentration of less than the laboratory MDL of 16.2 mg/Kg (Table 1).

In a correspondence dated May 17, 2011, between Plains and the NMOCD Hobbs District Office representatives, the NMOCD approved excavating the deeper portion of the excavation to approximately twenty-four (24) feet bgs, installing a PVC riser in the floor of the excavation to allow vertical delineation to be conducted, and the installation of a twenty (20) mil liner at the site.

On June 8, 2011, the deeper portion of the floor of the excavation was excavated to approximately twenty-four (24) feet bgs (Figure 2). Approximately two hundred fifty-two (252) cubic yards of soil was transported to Doom Land Farm, LLC, (NMOCD Permit # 01-0033) for disposal. The resulting excavation measured approximately twenty (20) feet in length, approximately twenty-four (24) feet in width and was approximately twenty-four (24) feet in depth. The previously excavated trench (Trench-1) was re-excavated to approximately thirty-four (34) feet bgs. In order to conduct drilling activities to delineate the vertical extent of hydrocarbon impact at the site, an eight (8) inch PVC riser was installed in the floor of the trench at approximately thirty-four (34) feet bgs. The PVC riser was cemented to the floor of the trench and extended vertically to the surface. The trench was backfilled with locally obtained non-impacted soil to approximately twenty (20) feet bgs.

On June 14, 2011, a twenty (20) mil polyurethane liner was installed in the deeper portion of the excavation at approximately twenty (20) feet bgs (Figure 2). The eight (8) inch PVC riser, located within the excavation, was fitted with a forty (40) mil boot, which was chemically welded to the twenty (20) mil liner to protect the impermeability of the liner. The liner was cushioned by a six (6) inch layer of sand above and below the liner to protect the liner from damage during excavation backfilling activities. The excavation was backfilled with locally obtained non-impacted soil and water compacted. On completion of backfilling activities the impacted area was contoured to fit the surrounding topography. The site will be reseeded by the landowner.

On June 20, 2011, one (1) soil boring (SB-1) was advanced through the PVC riser to evaluate the vertical extent of hydrocarbon impacted soil. A soil boring log is provided as Appendix A. Soil samples were collected at five (5) foot drilling intervals and field screened using a Photo-Ionization Detector (PID). Selected soil samples were submitted to the laboratory for determination of concentrations of BTEX and TPH using EPA SW-846 8021b and SW-846 8015M, respectively. The soil boring was advanced to a total depth of approximately sixty-five (65) feet bgs. Soil samples were collected at forty (40), forty-five (45), fifty (50), sixty (60), and sixty-five (65) feet bgs and were submitted to the laboratory for analysis. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL and the NMOCD regulatory standard for all submitted soil samples. The laboratory analytical results indicated BTEX constituent concentrations ranged from less than the laboratory MDL of 0.0022 mg/Kg in the soil sample collected at sixty-five (65) feet to 1.1990 mg/Kg in the soil sample collected at forty (40) feet. The laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL of 16.6 mg/Kg for the soil sample collected at sixty-five (65) feet to 764 mg/Kg in the soil sample collected at forty (40) feet (Table 1).

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil Samples were delivered to Xenco Laboratories, Inc., of Odessa, Texas for BTEX and/or TPH analyses using the methods described below. Soil samples were analyzed for BTEX and/or TPH concentrations within fourteen (14) days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO

4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody (COC) form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

5.0 SITE CLOSURE REQUEST

Based on the analytical results of confirmation soil samples and soil boring data, NOVA recommends Plains provide the NMOCD a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant closure to the Jack B 15 4-Inch Historical Release Site.

6.0 LIMITATIONS

NOVA Safety and Environmental has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

NOVA Safety and Environmental has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA Safety and Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. NOVA Safety and Environmental has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA Safety and Environmental also

notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains Pipeline, L.P. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of NOVA Safety and Environmental and/or Plains Pipeline, L.P.

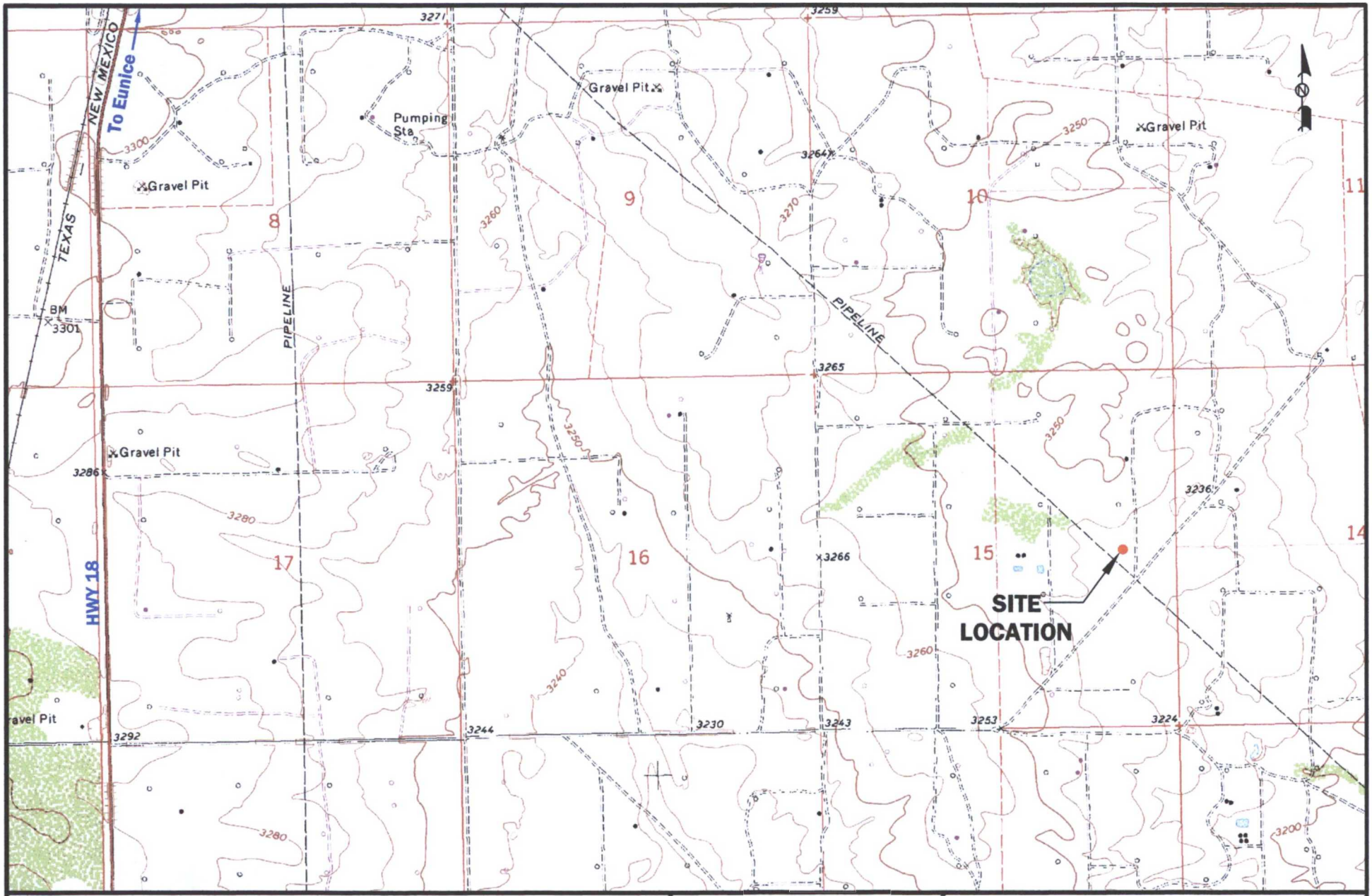
7.0 DISTRIBUTION:

Copy 1: Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 French Drive
Hobbs, New Mexico 88240

Copy 2: Jeff Dann
Plains Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
jpdann@paalp.com

Copy 3: Jason Henry
Plains Pipeline, L.P.
2530 State Highway 214
Denver City, Texas 79323
jhenry@paalp.com

Copy 4: Nova Safety & Environmental
2057 Commerce Street
Midland, Texas 79703



LEGEND:

2000 1000 0 1000 2000

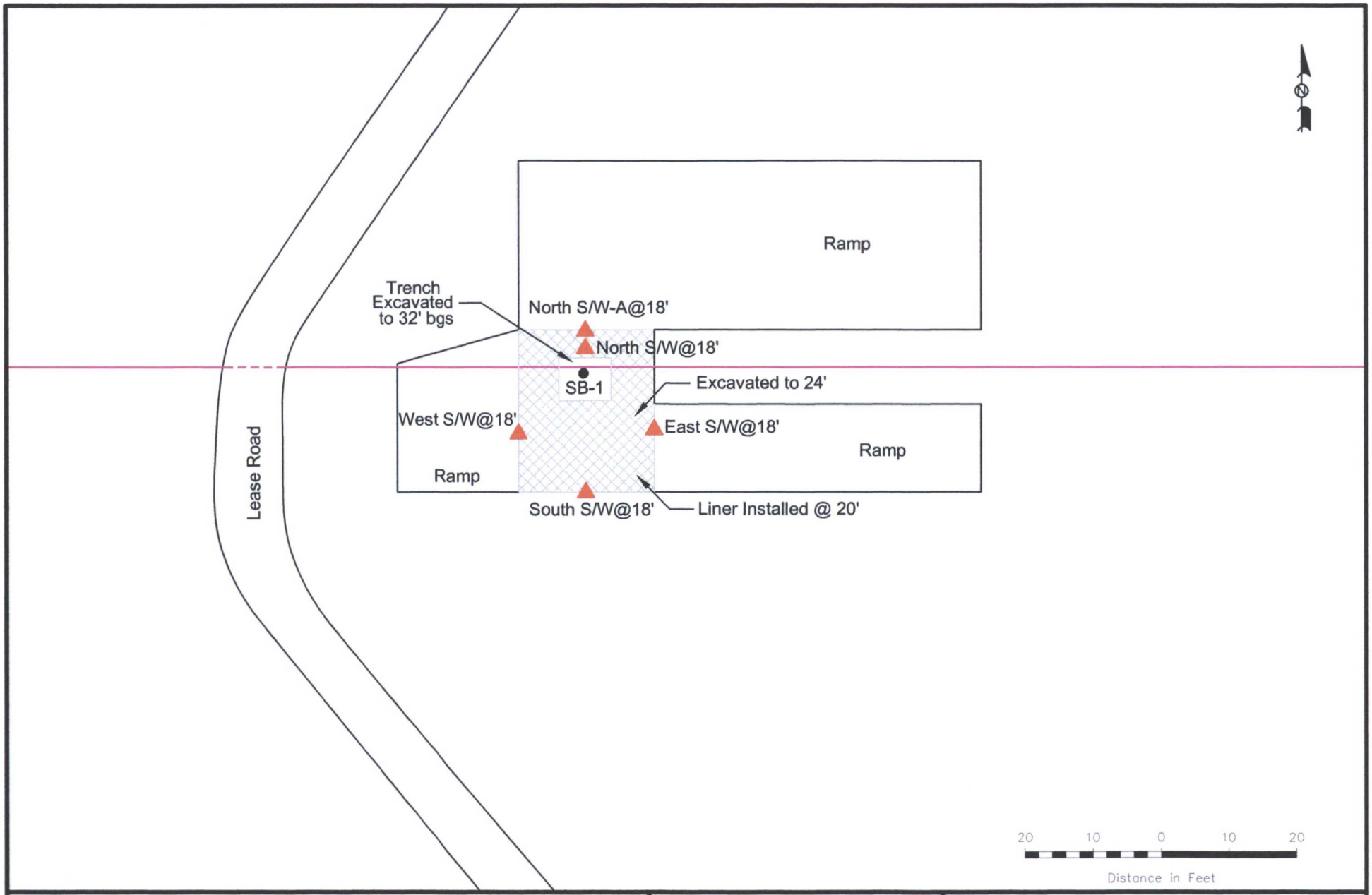
Distance in Feet

Figure 1

Site Location Map
Plains Pipeline, L.P.
Jack B 15 4" Historical
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

January 20, 2011	Scale: 1" = 2000'	CAD By: TA	Checked By: CJB
Lat. N 32.21729°	Long. W 103.14429	SE/NE	Sec 15 T24S R37E



LEGEND:

- Soil Sample Location
- Pipeline
- Soil Boring

Figure 2

Site Details Schematic & Confirmation Soil Sample Locations Map
Plains Pipeline, L.P.
Jack B 15 4" Historical
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

February 25, 2011	Scale: 1" = 20'	CAD By: TA	Checked By: CJB
Lat. N 32.21729° Long. W 103.14429°		SE/NE	Sec 15 T24S R37E

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDE IN SOIL

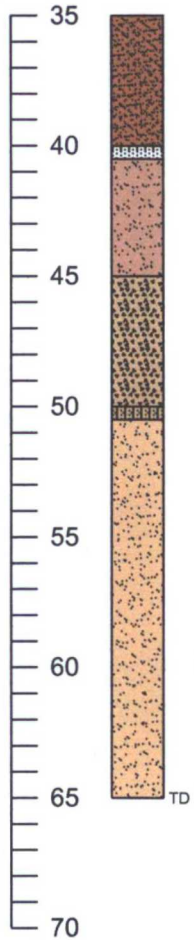
PLAINS PIPELINE, L.P.
JACK B 15 4-INCH HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
PLAINS SRS# JACK B 15 4-INCH HISTORICAL

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
Floor @ 16'	02/08/11	-	-	-	-	-	-	7,250	9,980	206	17,436	86.2
Floor @ 18'	02/08/11	-	-	-	-	-	-	8,220	11,000	278	19,498	-
Trench 1 @ 20'	02/16/11	-	-	-	-	-	-	13,600	22,000	3,310	38,910	-
Trench 1 @ 24'	02/16/11	-	-	-	-	-	-	8,680	13,400	1,840	23,920	-
Trench 1 @ 28'	02/16/11	-	-	-	-	-	-	3,000	5,780	775	9,555	-
Trench 1 @ 32'	02/16/11	<0.0202	2.14	5.80	12.3	4.86	25.1	828	1,620	211	2,659	-
East S/W @ 18'	02/16/11	<0.0052	<0.0105	<0.0052	<0.0105	<0.0052	<0.0105	<15.7	117	<15.7	117	-
North S/W @ 18'	02/16/11	<0.0011	0.0159	0.0267	0.0819	0.0459	0.1704	137	521	71.5	729.5	-
South S/W @ 18'	02/16/11	<0.0011	<0.0022	<0.0011	0.0024	<0.0011	0.0024	17.1	<16.2	<16.2	17.1	-
West S/W @ 18'	02/16/11	<0.0011	<0.0022	0.00109	0.00275	0.00132	0.00516	<16.2	63.6	<16.2	63.6	-
North S/W-A @ 18'	06/08/11	-	-	-	-	-	-	<16.2	<16.2	<16.2	<16.2	-
SB-1 @ 40'	06/20/11	<0.0052	0.0710	0.2410	0.6160	0.2710	1.1990	90.4	649	25	764	-
SB-1 @ 45'	06/20/11	<0.0051	<0.0101	0.00997	0.0207	0.0106	0.0413	<15.2	176	<15.2	176	-
SB-1 @ 50'	06/20/11	<0.0010	<0.0021	<0.0010	0.00392	0.00284	0.00676	<15.4	109	<15.4	109	-
SB-1 @ 60'	06/20/11	<0.0010	<0.0020	<0.0010	<0.0020	0.00102	0.00102	<15.1	124	<15.1	124	-
SB-1 @ 65'	06/20/11	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	-

Soil Boring Log SB-1

Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain
40	345.0	Heavy	None
45	58.0	Slight	None
50	100.0	Slight	None
60	21.0	Slight	None
TD 65	0.8	None	None



Soil Description

35' - 40' - Reddish tan Medium to Fine Stained sand.

40' - 40.5' - Hard White Sandy Caliche.

40.5' - 45' - Reddish Tan Fine Grained sand. Sand Damp @ 45'.

45' - 50' - Tan Fine to Very Fine Quartz Sand.

50' - 50.5' - Tan Hard Sand Stone Layer.

50.5' - 65' - Tan Fine to Very Fine Quartz Sand.

Soil Boring Details

Date Drilled 06-20-11

Depth of Exploratory Well 65 ft

Depth to Water N/A

Completion Notes

1. Soil boring was plugged same day. Using Air Rotary drilling Technique.
2. Soil Boring was Backfill for first 35' bgs.
3. 24 bags of Bentonite and 1 bag of Cement.
3. 2' Concrete seal at top.

Soil Boring Log Details

SB - 1

Plains Pipeline, L.P. Jack B 15 4 Inch Historical Lea County, NM

NOVA Safety and Environmental

NOVA safety and environmental

Scale: NTS	Prep By: TA	Checked By: MKG
July 6, 2011		

Analytical Report 406034

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Jack B 15 4 " Historical

Jack B 15 4" Historical

21-FEB-11

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

21-FEB-11

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **406034**
Jack B 15 4 " Historical
Project Address: Lea Co., NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 406034. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 406034 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 406034

PLAINS ALL AMERICAN EH&S, Midland, TX

Jack B 15 4 " Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Floor @ 16'	S	Feb-08-11 08:00		406034-001
Floor @ 18'	S	Feb-08-11 10:00		406034-002

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jack B 15 4 " Historical

Project ID:	*Jack B 15 4" Historical*	*Report Date:*	*21-FEB-11*
Work Order Number:	*406034*	*Date Received:*	*02/08/2011*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-842886 TPH by SW8015 Mod
TX1005

Batch 842886, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 406034-002, -001.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-842891 Inorganic Anions In Soil by E300

Certificate of Analysis Summary 406034

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jack B 15 4 " Historical

Project Id: Jack B 15 4" Historical
Contact: Jason Henry
Project Location: Lea Co., NM

Date Received in Lab: Tue Feb-08-11 01:05 pm
Report Date: 21-FEB-11
Project Manager: Brent Barron, II

Analysis Requested												
	Lab Id:	406034-001		406034-002								
	Field Id:	Floor @ 16'		Floor @ 18'								
	Depth:											
	Matrix:	SOIL		SOIL								
	Sampled:	Feb-08-11 08:00		Feb-08-11 10:00								
Inorganic Anions In Soil by E300	*Extracted:*											
	Analyzed:	Feb-08-11 16:27										
	Units/RL:	mg/kg	RL									
Chloride		86.2	5.44									
Percent Moisture	*Extracted:*											
	Analyzed:	Feb-08-11 17:00		Feb-08-11 17:00								
	Units/RL:	%	RL	%	RL							
Percent Moisture		8.10	1.00	7.68	1.00							
TPH by SW8015 Mod	*Extracted:*	Feb-08-11 13:30		Feb-08-11 13:30								
	Analyzed:	Feb-09-11 01:24		Feb-09-11 01:42								
	Units/RL:	mg/kg	RL	mg/kg	RL							
C6-C12 Gasoline Range Hydrocarbons		7250	136	8220	136							
C12-C28 Diesel Range Hydrocarbons		9980	136	11000	136							
C28-C35 Oil Range Hydrocarbons		206	136	278	136							
Total TPH 1005		17400	136	19500	136							

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4 " Historical

Work Orders : 406034, **Project ID:** Jack B 15 4" Historical

Lab Batch #: 842886 **Sample:** 595181-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/08/11 20:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	46.8	50.2	93	70-135	

Lab Batch #: 842886 **Sample:** 595181-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/08/11 20:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	41.3	50.1	82	70-135	

Lab Batch #: 842886 **Sample:** 595181-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/08/11 20:44

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.4	100	84	70-135	
o-Terphenyl	42.7	50.2	85	70-135	

Lab Batch #: 842886 **Sample:** 406034-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/09/11 01:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.7	123	70-135	
o-Terphenyl	44.9	49.9	90	70-135	

Lab Batch #: 842886 **Sample:** 406034-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/09/11 01:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	46.2	50.2	92	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4 " Historical

Work Orders : 406034,

Project ID: Jack B 15 4" Historical

Lab Batch #: 842886 **Sample:** 406027-013 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/09/11 02:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-135	
o-Terphenyl	43.6	50.1	87	70-135	

Lab Batch #: 842886 **Sample:** 406027-013 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/09/11 02:37

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	43.9	50.1	88	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Jack B 15 4 " Historical

Work Order #: 406034 **Project ID:** Jack B 15 4" Historical

Analyst: LATCOR **Date Prepared:** 02/08/2011 **Date Analyzed:** 02/08/2011

Lab Batch ID: 842891 **Sample:** 842891-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Inorganic Anions In Soil by E300 **Analytes**	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	10.1	101	10.0	10.2	102	1	75-125	20	

Analyst: BEV **Date Prepared:** 02/08/2011 **Date Analyzed:** 02/08/2011

Lab Batch ID: 842886 **Sample:** 595181-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod **Analytes**	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<25.1	1000	985	99	1000	955	96	3	75-125	20	
C12-C28 Diesel Range Hydrocarbons	<25.1	1000	908	91	1000	936	94	3	75-125	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Jack B 15 4 " Historical

Work Order #: 406034
Lab Batch #: 842891
Project ID: Jack B 15 4" Historical
Date Analyzed: 02/08/2011
Date Prepared: 02/08/2011
Analyst: LATCOR
QC- Sample ID: 406034-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	86.2	109	191	96	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Jack B 15 4 " Historical

Work Order # : 406034 **Project ID:** Jack B 15 4" Historical

Lab Batch ID: 842886 **QC- Sample ID:** 406027-013 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/09/2011 **Date Prepared:** 02/08/2011 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<28.1	1120	1050	94	1120	1050	94	0	75-125	20	
C12-C28 Diesel Range Hydrocarbons	<28.1	1120	825	74	1120	839	75	2	75-125	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Jack B 15 4 " Historical

Work Order #: 406034

Lab Batch #: 842891 **Project ID:** Jack B 15 4" Historical

Date Analyzed: 02/08/2011 16:27 **Date Prepared:** 02/08/2011 **Analyst:** LATCOR

QC- Sample ID: 406034-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	86.2	86.3	0	20	

Lab Batch #: 842890

Date Analyzed: 02/08/2011 17:00 **Date Prepared:** 02/08/2011 **Analyst:** WRU

QC- Sample ID: 406027-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.54	3.67	4	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Nora Hefty Env
Company Address: 2057 Commerce
City/State/Zip: Midland, TX
Telephone No: 432-520-7720 Fax No: 432-520-7701
Sampler Signature: Camille Bryant
e-mail: CBryant@Noratraining.cc
Jhenry@paalp.com

Project Name: JACKBIS 4" Historical
Project #: JACKBIS 4" Historical
Project Loc: Lea Co, NM
SO#
PO#:

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 406034

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled (2011)	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TOTAL: TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	TRUSH TAT (PS Schedule) (24, 48, 72 hrs)	Standard TAT
01	Floor @ 16'			2/8	0800		1	X								Soil	X											X	
02	Floor @ 18'			2/8	1000		1	X								Soil	X											X	

Special Instructions: Please hold for BTEX analysis

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	2/8/11	1305			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	2-8-11	13:05

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star
4 02 glass
Temperature Upon Receipt: 4.1 °C

XENCO Laboratories	XENCO Laboratories Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa	Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 8/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova / Plains

Date/Time: 2.8.11 13:05

Lab ID #: 406034

Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	

18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 4.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

Analytical Report 407057

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Jack B 15 4" Historical

Jack B 15 4" Historical

25-FEB-11

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

25-FEB-11

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **407057**
Jack B 15 4" Historical
Project Address: Lea County, New Mexico

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 407057. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 407057 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 407057

PLAINS ALL AMERICAN EH&S, Midland, TX

Jack B 15 4" Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Trench 1 @ 20'	S	Feb-16-11 08:15		407057-001
Trench 1 @ 24'	S	Feb-16-11 08:45		407057-002
Trench 1 @ 28'	S	Feb-16-11 09:25		407057-003
Trench 1 @ 32'	S	Feb-16-11 11:10		407057-004
East S/W 18'	S	Feb-16-11 09:55		407057-005
North S/W @ 18'	S	Feb-16-11 10:00		407057-006
South S/W @ 18'	S	Feb-16-11 10:05		407057-007
West S/W @ 18'	S	Feb-16-11 10:10		407057-008

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jack B 15 4" Historical

ACCREDITED IN ACCORDANCE WITH nelac

Project ID:	*Jack B 15 4" Historical*	*Report Date:*	*25-FEB-11*
Work Order Number:	*407057*	*Date Received:*	*02/17/2011*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-844266 TPH by SW8015 Mod
SW8015MOD_NM

Batch 844266, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 407057-001.
o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 407057-002.

Batch: LBA-845275 BTEX by EPA 8021
SW8021BM

Batch 845275, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 407057-004.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 407057-004.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 407057-006.

Certificate of Analysis Summary 407057

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jack B 15 4" Historical

Project Id: Jack B 15 4" Historical
Contact: Jason Henry
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Feb-17-11 09:10 am
Report Date: 25-FEB-11
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	407057-001		407057-002		407057-003		407057-004		407057-005		407057-006	
	Field Id:	Trench 1 @ 20'		Trench 1 @ 24'		Trench 1 @ 28'		Trench 1 @ 32'		East S/W 18'		North S/W @ 18'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-16-11 08:15		Feb-16-11 08:45		Feb-16-11 09:25		Feb-16-11 11:10		Feb-16-11 09:55		Feb-16-11 10:00	
BTEX by EPA 8021	*Extracted:*							Feb-24-11 07:58		Feb-24-11 07:58		Feb-24-11 07:58	
	Analyzed:							Feb-24-11 14:33		Feb-24-11 16:05		Feb-24-11 19:55	
	Units/RL:							mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene								ND	0.0202	ND	0.0052	ND	0.0011
Toluene								2.14	0.0405	ND	0.0105	0.0159	0.0022
Ethylbenzene								5.80	0.0202	ND	0.0052	0.0267	0.0011
m_p-Xylenes								12.3	0.0405	ND	0.0105	0.0819	0.0022
o-Xylene								4.86	0.0202	ND	0.0052	0.0459	0.0011
Xylenes, Total								17.2	0.0202	ND	0.0052	0.128	0.0011
Total BTEX								25.1	0.0202	ND	0.0052	0.170	0.0011
Percent Moisture	*Extracted:*												
	Analyzed:	Feb-17-11 17:00		Feb-17-11 17:00		Feb-17-11 17:00		Feb-17-11 17:00		Feb-17-11 17:00		Feb-17-11 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		6.34	1.00	4.72	1.00	2.44	1.00	1.82	1.00	4.65	1.00	8.85	1.00
TPH by SW8015 Mod	*Extracted:*	Feb-17-11 10:45		Feb-17-11 10:45		Feb-17-11 10:45		Feb-17-11 10:45		Feb-17-11 10:45		Feb-17-11 10:45	
	Analyzed:	Feb-18-11 04:34		Feb-18-11 04:53		Feb-18-11 10:19		Feb-18-11 05:31		Feb-18-11 05:50		Feb-18-11 06:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		13600	159	8680	78.8	3000	76.7	828	15.3	ND	15.7	137	16.4
C12-C28 Diesel Range Hydrocarbons		22000	159	13400	78.8	5780	76.7	1620	15.3	117	15.7	521	16.4
C28-C35 Oil Range Hydrocarbons		3310	159	1840	78.8	775	76.7	211	15.3	ND	15.7	71.5	16.4
Total TPH		38900	159	23900	78.8	9560	76.7	2660	15.3	117	15.7	730	16.4

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 407057

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jack B 15 4" Historical

Project Id: Jack B 15 4" Historical
Contact: Jason Henry
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Feb-17-11 09:10 am
Report Date: 25-FEB-11
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	407057-007		407057-008					
	Field Id:	South S/W @ 18'		West S/W @ 18'					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Feb-16-11 10:05		Feb-16-11 10:10					
BTEX by EPA 8021	*Extracted:*	Feb-24-11 07:58		Feb-24-11 07:58					
	Analyzed:	Feb-24-11 16:28		Feb-24-11 16:52					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0011	ND	0.0011				
Toluene		ND	0.0022	ND	0.0022				
Ethylbenzene		ND	0.0011	0.00109	0.0011				
m_p-Xylenes		0.00240	0.0022	0.00275	0.0022				
o-Xylene		ND	0.0011	0.00132	0.0011				
Xylenes, Total		0.00240	0.0011	0.00407	0.0011				
Total BTEX		0.00240	0.0011	0.00516	0.0011				
Percent Moisture	*Extracted:*								
	Analyzed:	Feb-17-11 17:00		Feb-17-11 17:00					
	Units/RL:	%	RL	%	RL				
Percent Moisture		7.09	1.00	7.46	1.00				
TPH by SW8015 Mod	*Extracted:*	Feb-17-11 10:45		Feb-17-11 10:45					
	Analyzed:	Feb-18-11 06:29		Feb-18-11 06:49					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		17.1	16.2	ND	16.2				
C12-C28 Diesel Range Hydrocarbons		ND	16.2	63.6	16.2				
C28-C35 Oil Range Hydrocarbons		ND	16.2	ND	16.2				
Total TPH		17.1	16.2	63.6	16.2				

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4" Historical

Work Orders : 407057,

Project ID: Jack B 15 4" Historical

Lab Batch #: 845275 **Sample:** 596534-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/24/11 08:34

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 845275 **Sample:** 596534-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/24/11 08:57

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 845275 **Sample:** 596534-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/24/11 10:06

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 845275 **Sample:** 407057-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 14:33

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0224	0.0300	75	80-120	**
4-Bromofluorobenzene	0.0495	0.0300	165	80-120	**

Lab Batch #: 845275 **Sample:** 407057-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 16:05

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4" Historical

Work Orders : 407057,

Project ID: Jack B 15 4" Historical

Lab Batch #: 845275 **Sample:** 407057-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 16:28

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 845275 **Sample:** 407057-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 16:52

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 845275 **Sample:** 407057-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 17:15

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 845275 **Sample:** 407057-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 17:38

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 845275 **Sample:** 407057-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/24/11 19:55

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0423	0.0300	141	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4" Historical

Work Orders : 407057, **Project ID:** Jack B 15 4" Historical

Lab Batch #: 844266 **Sample:** 595974-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/18/11 03:00

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.4	100	92	70-135	
o-Terphenyl	37.0	50.1	74	70-135	

Lab Batch #: 844266 **Sample:** 595974-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/18/11 03:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.7	100	96	70-135	
o-Terphenyl	38.4	50.2	76	70-135	

Lab Batch #: 844266 **Sample:** 595974-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/18/11 03:37

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.7	100	84	70-135	
o-Terphenyl	41.0	50.0	82	70-135	

Lab Batch #: 844266 **Sample:** 407057-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 04:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	260	99.5	261	70-135	*
o-Terphenyl	47.2	49.8	95	70-135	

Lab Batch #: 844266 **Sample:** 407057-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 04:53

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.2	100	85	70-135	
o-Terphenyl	83.7	50.1	167	70-135	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4" Historical

Work Orders : 407057,

Project ID: Jack B 15 4" Historical

Lab Batch #: 844266 **Sample:** 407057-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 05:31

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	36.4	50.1	73	70-135	

Lab Batch #: 844266 **Sample:** 407057-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 05:50

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.1	99.7	80	70-135	
o-Terphenyl	39.8	49.9	80	70-135	

Lab Batch #: 844266 **Sample:** 407057-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 06:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.3	99.8	81	70-135	
o-Terphenyl	43.0	49.9	86	70-135	

Lab Batch #: 844266 **Sample:** 407057-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 06:29

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	37.1	50.2	74	70-135	

Lab Batch #: 844266 **Sample:** 407057-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 06:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	99.9	76	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4" Historical

Work Orders : 407057,

Project ID: Jack B 15 4" Historical

Lab Batch #: 844266 **Sample:** 407057-008 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 07:08

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.5	96	70-135	
o-Terphenyl	38.4	49.8	77	70-135	

Lab Batch #: 844266 **Sample:** 407057-008 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 07:27

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	100	93	70-135	
o-Terphenyl	36.8	50.2	73	70-135	

Lab Batch #: 844266 **Sample:** 407057-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/18/11 10:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.8	123	70-135	
o-Terphenyl	43.3	49.9	87	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Jack B 15 4" Historical

Work Order #: 407057 **Project ID:** Jack B 15 4" Historical

Analyst: ASA **Date Prepared:** 02/24/2011 **Date Analyzed:** 02/24/2011

Lab Batch ID: 845275 **Sample:** 596534-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00500	0.500	0.531	106	0.500	0.511	102	4	70-130	35	
Toluene	<0.0100	0.500	0.530	106	0.500	0.512	102	3	70-130	35	
Ethylbenzene	<0.00500	0.500	0.531	106	0.500	0.514	103	3	71-129	35	
m_p-Xylenes	<0.0100	1.00	1.11	111	1.00	1.08	108	3	70-135	35	
o-Xylene	<0.00500	0.500	0.526	105	0.500	0.513	103	3	71-133	35	

Analyst: BEV **Date Prepared:** 02/17/2011 **Date Analyzed:** 02/18/2011

Lab Batch ID: 844266 **Sample:** 595974-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	950	95	1000	973	97	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	855	86	1000	935	94	9	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Jack B 15 4" Historical

Work Order # : 407057 **Project ID:** Jack B 15 4" Historical

Lab Batch ID: 845275 **QC- Sample ID:** 407057-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/24/2011 **Date Prepared:** 02/24/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00524	0.524	0.439	84	0.524	0.431	82	2	70-130	35	
Toluene	<0.0105	0.524	0.452	86	0.524	0.440	84	3	70-130	35	
Ethylbenzene	<0.00524	0.524	0.452	86	0.524	0.433	83	4	71-129	35	
m_p-Xylenes	<0.0105	1.05	0.943	90	1.05	0.900	86	5	70-135	35	
o-Xylene	<0.00524	0.524	0.455	87	0.524	0.436	83	4	71-133	35	

Lab Batch ID: 844266 **QC- Sample ID:** 407057-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/18/2011 **Date Prepared:** 02/17/2011 **Analyst:** BEV

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.2	1080	1020	94	1080	980	91	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	63.6	1080	966	84	1080	1020	89	5	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Jack B 15 4" Historical

Work Order #: 407057

Lab Batch #: 844215 **Project ID:** Jack B 15 4" Historical

Date Analyzed: 02/17/2011 17:00 **Date Prepared:** 02/17/2011 **Analyst:** WRU

QC- Sample ID: 406981-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	12.0	11.7	3	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc; jhenry@paalp.com

Project Name: Jack B 15 4" Historical

Project #: Jack B 15 4" Historical

Project Loc: Lea County, New Mexico

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 407057

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1	8015M	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	TOTAL: Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Trench 1 @ 20'			2/16/2011	815		1	X								Soil			X														X
02	Trench 1 @ 24'			2/16/2011	845																												
03	Trench 1 @ 28'			2/16/2011	925																												
04	Trench 1 @ 32'			2/16/2011	1110																												
05	East S/W @ 18'			2/16/2011	955																												
06	North S/W @ 18'			2/16/2011	1000																												
07	South S/W @ 18'			2/16/2011	1005																												
08	West S/W @ 18'			2/16/2011	1010		↓	↓								↓			↓														↓

Special Instructions:

Hold for BTEX analysis

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	2/17/11	910			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	2.17.11	9:10

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

4629455

Temperature Upon Receipt: 5.1 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova / Plains

Date/Time: 2.17.11 9:10

Lab ID # : 407057

Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes) AE 2.17.11	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

Check all that apply: ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 419213

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Jack B 15 4" Historical

Jack B 15 4" Historical

09-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

09-JUN-11

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **419213**
Jack B 15 4" Historical
Project Address: Lea Co., NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 419213. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 419213 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 419213

PLAINS ALL AMERICAN EH&S, Midland, TX

Jack B 15 4" Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
North S/W- A@18'	S	Jun-08-11 14:20		419213-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jack B 15 4" Historical

Project ID:	*Jack B 15 4" Historical*	*Report Date:*	*09-JUN-11*
Work Order Number:	*419213*	*Date Received:*	*06/08/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-859265 TPH By SW8015 Mod
Batch 859265

RPD outside QC limits for C28-C35 between sample and sample duplicate. Samples affected are: 419213-001.

Certificate of Analysis Summary 419213

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jack B 15 4" Historical

Project Id: Jack B 15 4" Historical
Contact: Jason Henry
Project Location: Lea Co., NM

Date Received in Lab: Wed Jun-08-11 04:05 pm
Report Date: 09-JUN-11
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	419213-001					
	Field Id:	North S/W- A@18'					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Jun-08-11 14:20					
Percent Moisture	***Extracted:***						
	Analyzed:	Jun-08-11 17:00					
	Units/RL:	%	RL				
Percent Moisture		7.93	1.00				
TPH By SW8015 Mod	***Extracted:***	Jun-08-11 16:30					
	Analyzed:	Jun-08-11 16:34					
	Units/RL:	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	16.2				
C12-C28 Diesel Range Hydrocarbons		ND	16.2				
C28-C35 Oil Range Hydrocarbons		ND	16.2				
Total TPH		ND	16.2				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B 15 4" Historical

Work Orders : 419213,

Project ID: Jack B 15 4" Historical

Lab Batch #: 859265 **Sample:** 604688-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/08/11 12:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.9	112	70-135	
o-Terphenyl	48.8	50.0	98	70-135	

Lab Batch #: 859265 **Sample:** 604688-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/08/11 12:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	47.3	50.2	94	70-135	

Lab Batch #: 859265 **Sample:** 604688-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/08/11 13:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	50.7	50.1	101	70-135	

Lab Batch #: 859265 **Sample:** 419095-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/11 14:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	52.8	50.0	106	70-135	

Lab Batch #: 859265 **Sample:** 419213-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/11 16:34

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.6	117	70-135	
o-Terphenyl	63.3	49.8	127	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Jack B 15 4" Historical

Work Order #: 419213
Analyst: BEV
Lab Batch ID: 859265
Sample: 604688-1-BKS
Units: mg/kg

Date Prepared: 06/08/2011
Batch #: 1

Project ID: Jack B 15 4" Historical
Date Analyzed: 06/08/2011
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	999	771	77	1000	763	76	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	756	76	1000	777	78	3	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Final 1.000

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Jack B 15 4" Historical

Work Order #: 419213

Lab Batch #: 859257 **Project ID:** Jack B 15 4" Historical

Date Analyzed: 06/08/2011 17:00 **Date Prepared:** 06/08/2011 **Analyst:** LATCOR

QC- Sample ID: 419095-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	19.1	20.7	8	20	

Lab Batch #: 859265

Date Analyzed: 06/08/2011 14:28 **Date Prepared:** 06/08/2011 **Analyst:** BEV

QC- Sample ID: 419095-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<92.7	<92.7	0	35	
C12-C28 Diesel Range Hydrocarbons	1390	1360	2	35	
C28-C35 Oil Range Hydrocarbons	163	251	43	35	F

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Nova Safety & Env.
Company Address: 2057 Commerce
City/State/Zip: Midland, TX 79703
Telephone No: 432-520-7720
Fax No: 432-520-7701
Sampler Signature: Camille Bryant
e-mail: CBryant@nova-training.com
shenry@paalp.com

Project Name: Jack B 154" Historical
Project #: Jack B 154" Historical
Project Loc: Lea Co, NM
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 419213

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	North S/W-A @ 18'			6/8/2011	1420		1	X								Soil	X													X	

Special Instructions:
Call w/ verbals

Laboratory Comments:
Sample Containers Intact? Y Y N
VOCs Free of Headspace? Y Y N
Labels on container(s) Y Y N
Custody seals on container(s) Y Y N
Custody seals on cooler(s) Y Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y Y N
by Courier? UPS DHL FedEx Lone Star
4 oz glass
Temperature Upon Receipt: 4.1 °C

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	6/8/11	1600			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	6-9-11	16:05

XENCO Laboratories	XENCO Laboratories Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa	Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova Safety & Env.
Date/Time: 6.8.11 16:05
Lab ID # : 419213
Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	4.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

Analytical Report 420538

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Jack B15 4" Historical

Jack B15 4" Historical

24-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

24-JUN-11

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **420538**
Jack B15 4" Historical
Project Address: Lea Co., N.M.

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 420538. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 420538 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 420538

PLAINS ALL AMERICAN EH&S, Midland, TX

Jack B15 4" Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 40'	S	Jun-20-11 11:00	40 ft	420538-001
SB-1 @ 45'	S	Jun-20-11 11:13	45 ft	420538-002
SB-1 @ 50'	S	Jun-20-11 11:27	50 ft	420538-003
SB-1 @ 60'	S	Jun-20-11 12:37	60 ft	420538-004
SB-1 @ 65'	S	Jun-20-11 13:26	65 ft	420538-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Jack B15 4" Historical

Project ID:	Jack B15 4" Historical	Report Date:	24-JUN-11
Work Order Number:	420538	Date Received:	06/20/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-861013 BTEX by EPA 8021B
SW8021BM

Batch 861013, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420538-002.

SW8021BM

Batch 861013, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 420538-001, -002, -003, -004, -005.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Batch: LBA-861166 TPH By SW8015 Mod
SW8015MOD_NM

Batch 861166, 1-Chlorooctane recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420251-001 D.

Certificate of Analysis Summary 420538

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Jack B15 4" Historical

Project Id: Jack B15 4" Historical
Contact: Jason Henry
Project Location: Lea Co., N.M.

Date Received in Lab: Mon Jun-20-11 04:10 pm
Report Date: 24-JUN-11
Project Manager: Brent Barron, II

Analysis Requested												
	Lab Id:	420538-001		420538-002		420538-003		420538-004		420538-005		
	Field Id:	SB-1 @ 40'		SB-1 @ 45'		SB-1 @ 50'		SB-1 @ 60'		SB-1 @ 65'		
	Depth:	40 ft		45 ft		50 ft		60 ft		65 ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-20-11 11:00		Jun-20-11 11:13		Jun-20-11 11:27		Jun-20-11 12:37		Jun-20-11 13:26		
BTEX by EPA 8021B	*Extracted:*	Jun-21-11 09:02		Jun-21-11 09:02		Jun-21-11 09:02		Jun-21-11 09:02		Jun-21-11 09:02		
	Analyzed:	Jun-21-11 17:17		Jun-21-11 21:01		Jun-21-11 20:17		Jun-21-11 19:54		Jun-21-11 20:39		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene		ND	0.0052	ND	0.0051	ND	0.0010	ND	0.0010	ND	0.0011	
Toluene		0.0710	0.0104	ND	0.0101	ND	0.0021	ND	0.0020	ND	0.0022	
Ethylbenzene		0.241	0.0052	0.00997	0.0051	ND	0.0010	ND	0.0010	ND	0.0011	
m_p-Xylenes		0.616	0.0104	0.0207	0.0101	0.00392	0.0021	ND	0.0020	ND	0.0022	
o-Xylene		0.271	0.0052	0.0106	0.0051	0.00284	0.0010	0.00102	0.0010	ND	0.0011	
Total Xylenes		0.887	0.0052	0.0313	0.0051	0.00676	0.0010	0.00102	0.0010	ND	0.0011	
Total BTEX		1.20	0.0052	0.0413	0.0051	0.00676	0.0010	0.00102	0.0010	ND	0.0011	
Percent Moisture	*Extracted:*											
	Analyzed:	Jun-21-11 17:00		Jun-21-11 17:00		Jun-21-11 17:00		Jun-21-11 17:00		Jun-21-11 17:00		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		3.18	1.00	1.17	1.00	3.06	1.00	1.16	1.00	9.34	1.00	
TPH By SW8015 Mod	*Extracted:*	Jun-21-11 16:00		Jun-21-11 16:00		Jun-21-11 16:00		Jun-21-11 16:00		Jun-21-11 10:30		
	Analyzed:	Jun-23-11 11:18		Jun-23-11 11:47		Jun-23-11 12:16		Jun-23-11 12:45		Jun-23-11 13:15		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		90.4	15.5	ND	15.2	ND	15.4	ND	15.1	ND	16.6	
C12-C28 Diesel Range Hydrocarbons		649	15.5	176	15.2	109	15.4	124	15.1	ND	16.6	
C28-C35 Oil Range Hydrocarbons		25.0	15.5	ND	15.2	ND	15.4	ND	15.1	ND	16.6	
Total TPH		764	15.5	176	15.2	109	15.4	124	15.1	ND	16.6	

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B15 4" Historical

Work Orders : 420538,

Project ID: Jack B15 4" Historical

Lab Batch #: 861013 **Sample:** 605682-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 09:37

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 861013 **Sample:** 605682-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 09:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 861013 **Sample:** 605682-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 11:06

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 861013 **Sample:** 420538-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 17:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 861013 **Sample:** 420538-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 17:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B15 4" Historical

Work Orders : 420538,

Project ID: Jack B15 4" Historical

Lab Batch #: 861013 **Sample:** 420538-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 18:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 861013 **Sample:** 420538-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:54

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 861013 **Sample:** 420538-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 20:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 861013 **Sample:** 420538-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 20:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 861013 **Sample:** 420538-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 21:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0249	0.0300	83	80-120	
4-Bromofluorobenzene	0.0235	0.0300	78	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B15 4" Historical

Work Orders : 420538,

Project ID: Jack B15 4" Historical

Lab Batch #: 861166 **Sample:** 605781-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/23/11 01:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	101	119	70-135	
o-Terphenyl	56.8	50.3	113	70-135	

Lab Batch #: 861166 **Sample:** 605781-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/23/11 02:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	101	116	70-135	
o-Terphenyl	60.6	50.3	120	70-135	

Lab Batch #: 861166 **Sample:** 605781-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/23/11 02:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.9	113	70-135	
o-Terphenyl	66.2	50.0	132	70-135	

Lab Batch #: 861166 **Sample:** 420538-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/11 11:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	99.9	94	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 861166 **Sample:** 420538-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/11 11:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	59.0	50.1	118	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Jack B15 4" Historical

Work Orders : 420538,

Project ID: Jack B15 4" Historical

Lab Batch #: 861166 **Sample:** 420538-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/11 12:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.7	110	70-135	
o-Terphenyl	59.3	49.9	119	70-135	

Lab Batch #: 861166 **Sample:** 420538-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/11 12:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.5	113	70-135	
o-Terphenyl	61.3	49.8	123	70-135	

Lab Batch #: 861166 **Sample:** 420538-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/11 13:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	101	97	70-135	
o-Terphenyl	54.4	50.3	108	70-135	

Lab Batch #: 861166 **Sample:** 420251-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/11 13:44

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	137	201	68	70-135	*
o-Terphenyl	76.4	100	76	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Jack B15 4" Historical

Work Order #: 420538 **Project ID:** Jack B15 4" Historical

Analyst: ASA **Date Prepared:** 06/21/2011 **Date Analyzed:** 06/21/2011

Lab Batch ID: 861013 **Sample:** 605682-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.102	102	0.100	0.106	106	4	70-130	35	
Toluene	<0.00200	0.100	0.0966	97	0.100	0.0975	98	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.105	105	0.100	0.108	108	3	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.206	103	0.200	0.210	105	2	70-135	35	
o-Xylene	<0.00100	0.100	0.102	102	0.100	0.105	105	3	71-133	35	

Analyst: BEV **Date Prepared:** 06/21/2011 **Date Analyzed:** 06/23/2011

Lab Batch ID: 861166 **Sample:** 605781-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	1010	819	81	1010	805	80	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.1	1010	820	81	1010	805	80	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Final 1.000

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Jack B15 4" Historical

Work Order # : 420538 **Project ID:** Jack B15 4" Historical

Lab Batch ID: 861013 **QC- Sample ID:** 420538-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/21/2011 **Date Prepared:** 06/21/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00101	0.101	0.0900	89	0.101	0.0704	70	24	70-130	35	
Toluene	<0.00202	0.101	0.0812	80	0.101	0.0634	63	25	70-130	35	X
Ethylbenzene	<0.00101	0.101	0.0864	86	0.101	0.0675	67	25	71-129	35	X
m_p-Xylenes	<0.00202	0.202	0.169	84	0.202	0.130	64	26	70-135	35	X
o-Xylene	0.00102	0.101	0.0805	79	0.101	0.0639	62	23	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Jack B15 4" Historical

Work Order #: 420538

Lab Batch #: 860957 **Project ID:** Jack B15 4" Historical

Date Analyzed: 06/21/2011 17:00 **Date Prepared:** 06/21/2011 **Analyst:** WRU

QC- Sample ID: 420316-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	9.42	9.27	2	20	

Lab Batch #: 861166

Date Analyzed: 06/23/2011 13:44 **Date Prepared:** 06/21/2011 **Analyst:** BEV

QC- Sample ID: 420251-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.2	16.0	NC	35	
C12-C28 Diesel Range Hydrocarbons	2790	3490	22	35	
C28-C35 Oil Range Hydrocarbons	<15.2	19.1	NC	35	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Nova Safety & Env.
Company Address: 2057 Commerce
City/State/Zip: Midland, Tx 79705
Telephone No: 432-520-7720 Fax No: 432-520 7701
Sampler Signature: Camille Bryant
e-mail: cbryant@novatraining.cc
jhenry@paalp.com

Project Name: JackB154" Historical
Project #: JackB154" Historical
Project Loc: Lea Co. NM
PO #:
Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 420538

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge / GW=Groundwater S=Soil/Solid / NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 (8015M) 8015B	TOTAL: TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
001	SB-1 @ 40'			6/20/2011	1100		1	X								Soil	X								X				X
002	SB-1 @ 45'			6/20	1113		1	X								Soil	X								X				X
003	SB-1 @ 50'			6/20	1127		1	X								Soil	X								X				X
004	SB-1 @ 60'			6/20	1237		1	X								Soil	X								X				X
005	SB-1 @ 65'			6/20	1326		1	X								Soil	X								X				X

Special Instructions:

Relinquished by: Camille Bryant	Date 6/20/11	Time 1610	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Lisa Murdock	Date 6-20-11	Time 16:10

Laboratory Comments:
Sample Containers Intact? (Y) N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
4 oz glc
Temperature Upon Receipt: 3.6 °C

Final 1.000

XENCO Laboratories		
XENCO Laboratories Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa	Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1	

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova Safety & Env.
Date/Time: 6-20-11 16:10
Lab ID # : 420538
Initials: LM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	Yes	No	(N/A)	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	3.6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

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Photographic Documentation

Client: Plains Pipeline, L.P.
Location: Lea County, New Mexico

Prepared by: NOVA
Project Name: Jack B 15 4" Historical

Photograph No. 1

Direction:
View West

Description:
View of initial release.

Photograph No. 2

Direction:
View East

Description:
View of excavation and ramp.

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Photographic Documentation

Client: Plains Pipeline, L.P.
Location: Lea County, New Mexico

Prepared by: NOVA
Project Name: Jack B 15 4" Historical

Photograph No. 3

Direction:
View East

Description:
View of trench in floor of excavation.

Photograph No. 4

Direction:
View North.

Description:
View of excavation activities to twenty-four feet bgs.

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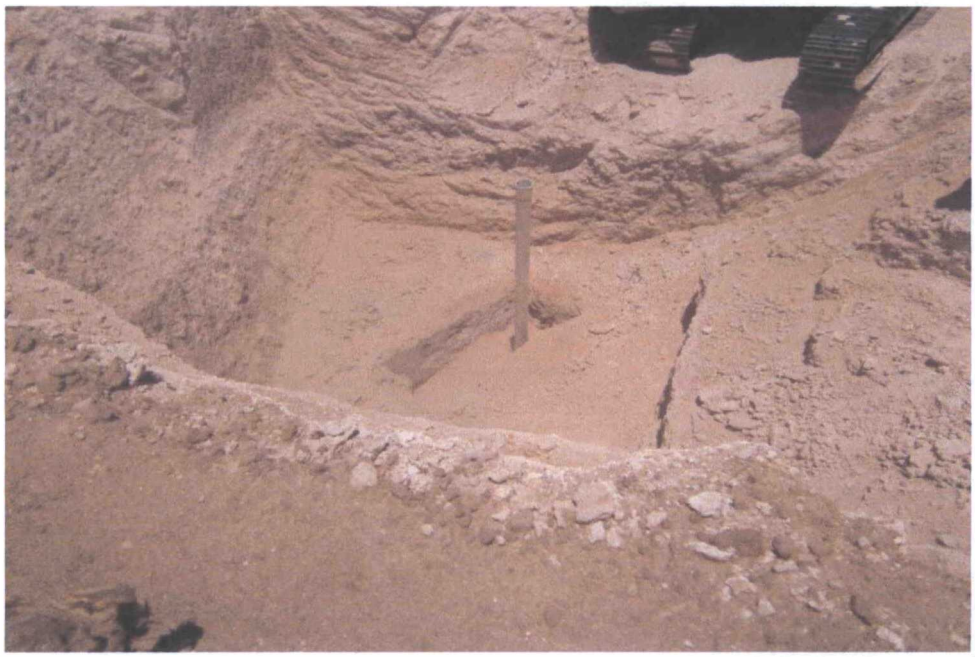
Photographic Documentation

Client: Plains Pipeline, L.P.
Location: Lea County, New Mexico

Prepared by: NOVA
Project Name: Jack B 15 4" Historical

Photograph No. 5

Direction:
View North



Description:
View of PVC riser installed in trench.

Photograph No. 6

Direction:
View North

Description:
View of backfilling around PVC riser.

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Photographic Documentation

Client: Plains Pipeline, L.P.
Location: Lea County, New Mexico

Prepared by: NOVA
Project Name: Jack B 15 4" Historical

Photograph No. 7

Direction:
View East

Description:
View of installation of liner and boot around PVC riser.

Photograph No. 8

Direction:
View Northeast

Description:
View of backfilling activities.

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Photographic Documentation

Client: Plains Pipeline, L.P.
Location: Lea County, New Mexico

Prepared by: NOVA
Project Name: Jack B 15 4" Historical

Photograph No. 9

Direction:
View Northeast

Description:
View of site upon completion of remediation activities.

Photograph No. 10

Direction:
View West

Description:
View of advancement of soil boring SB-1.