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

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	**Chevron Grayburg 6-inch**	Facility Type	**Pipeline**

Surface Owner **NMSLO**	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
B	**2**	**18S**	**34E**					**Lea**

Latitude N 32.78043° Longitude W 103.52933°

NATURE OF RELEASE

Type of Release **Crude Oil**	Volume of Release **15 bbls**	Volume Recovered **0 bbls**
Source of Release **6" Steel Pipeline**	Date and Hour of Occurrence **07/08/2009**	Date and Hour of Discovery **07/08/2009 @ 13:40**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? **Larry Johnson (leak was originally estimated to be 1 bbl, revised to 15 bbls on 07/30/2009)**	
By Whom? **Jason Henry**	Date and Hour **07/30/2009 @ 09:00**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
JUL 29 2009
HOBBSOCD

Describe Cause of Problem and Remedial Action Taken.*

External corrosion of Chevron Grayburg 6" pipeline caused a release of crude oil.. Throughput for the subject line is 1,750 bbls/day and the operating pressure of the pipeline is 60 psi. The depth of the pipeline at the release point is approximately <1' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 36.

Describe Area Affected and Cleanup Action Taken.*

The released crude resulted in a surface stain that measured approximately 4' x 4'. 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: Larry Johnson ENVIRONMENTAL ENGINEER
Title: **Remediation Coordinator**	Approval Date: 7.30.09 Expiration Date: 10.1.09
E-mail Address: **jhenry@paalp.com**	Conditions of Approval: Attached ☐
Date: 07-30-2009 Phone: **(575) 441-1099**	IRP# 09.7.2243

Attach Additional Sheets If Necessary

Basin Environmental Consulting, LLC

2800 Plains Highway
P. O. Box 381
Lovington, New Mexico 88260
cjbryant@basin-consulting.com
Office: (505) 396-2378 Fax: (505) 396-1429

Effective Solutions

REMEDIATION SUMMARY

AND

SITE CLOSURE PROPOSAL

PLAINS PIPELINE, L.P. (231735)
Chevron Grayburg 6-Inch
Lea County, New Mexico
Plains SRS# 2009-163
UNIT B (NW/NE), Section 2, Township 18 South, Range 34 East
Latitude 32.78043° North, Longitude 103.52933° West
NMOCD Reference # 1RP-2243

Prepared For:

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

Prepared By:
Basin Environmental Consulting, LLC

approved 08/26/09
Geoffrey Leking
Environmental Engineer
NMOCD - Hobbs

August 2009

Camille J. Bryant
Project Manager

Curt D. Stanley
Project Manager

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as Chevron Grayburg 6-Inch (SRS# 2009-163). The site is located in Unit Letter B (NW ¼ NE ¼), Section 2, Township 18 South, Range 34 East, in Lea County, New Mexico. The property is owned by the State of New Mexico and administered by the New Mexico State Land Office (SLO). A Right-of-Entry permit (ROE #1831) was granted by the SLO, Santa Fe Office. The site latitude is 32.78043° North, and the longitude is 103.52933° West. The Site Location and Site and Sample Location Map are provided as Figure 1 and Figure 2, respectively. The Release Notification and Corrective Action (NMOCD Form C-141) indicated approximately fifteen (15) barrels of crude oil was released from the Plains pipeline and zero (0) barrels were recovered during the initial response activities. The Release Notification and Corrective Action is provided as Appendix C.

On July 10, 2009, Basin on behalf of Plains, responded to a pipeline release located on the Chevron Grayburg 6-Inch pipeline. Plains operations personnel had previously mitigated the crude oil release by installing a temporary clamp on the pipeline. The crude oil release was initially deemed non-reportable; however, upon further excavation it was apparent the release volume was greater than initially estimated. Plains opted to reclassify the crude oil release as a reportable quantity. The impacted soil excavated during initial response activities was stockpiled on a six (6) mil poly liner adjacent to the excavation. The initial visually stained area covered an area measuring approximately four (4) feet in width and four (4) feet in length.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database indicates average depth to groundwater is approximately 102 feet below ground surface (bgs) in the section. The depth to groundwater at the Chevron Grayburg 6-Inch release site results in a score of ten (10) points being assigned to the site, based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are two (2) water wells located less than 1,000 feet from the release, resulting in twenty (20) 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 Chevron Grayburg 6-Inch release site has a ranking score of thirty (30). Based on this score, the soil remediation levels for a site with a ranking score of thirty (30) points are as follows:

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

3.0 SUMMARY OF FIELD ACTIVITIES

During July and August 2009, hydrocarbon impacted soil was excavated at the release site. Approximately 2,100 cubic yards (cy) of impacted soil was stockpiled adjacent to the excavation pending final disposition. The final dimensions of the excavation were approximately seventy-six (76) feet in length and eighty (80) feet in width and ranging from approximately five (5) to fourteen (14) feet in depth.

On July 30, 2009, four (4) sidewall soil samples (WSW @ 6.5', ESW @ 5.5', SSW @ 4.5' and NSW @ 5.5') were collected from the excavation and submitted to the laboratory for analysis. The soil samples were analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) using method EPA 8021b and concentrations of total petroleum hydrocarbons (TPH) using method SW-8015 modified. A summary of the analytical results are included in Table 1, Concentrations of BTEX and TPH in Soil. Laboratory analytical results are provided as Appendix A and soil sample locations are depicted on Figure 2, Site and Sample Location Map. Photographs of the site are provided as Appendix B.

The laboratory analytical result indicated benzene concentrations ranged from less than the appropriate laboratory method detection limit (MDL) for soil samples ESW @ 5.5', SSW @ 4.5' and NSW @ 5.5' to 0.0154 mg/Kg in soil sample WSW @ 6.5'. BTEX concentrations ranged from less than the appropriate laboratory MDL to 4.692 mg/Kg for soil sample WSW @ 6.5'. TPH concentrations ranged from less than the laboratory MDL for soil samples ESW @ 5.5', SSW @ 4.5' and NSW @ 5.5' to 3,151 mg/Kg for soil sample WSW @ 6.5'. Based on the analytical results of sidewall soil samples, additional excavation was required on the west sidewall of the excavation.

On July 30, 2009, an excavation floor sample was collected beneath the release point and submitted to the laboratory for analysis. The analytical results indicated benzene, BTEX and TPH concentrations were less than the laboratory MDL of 0.0012 mg/Kg, 0.0023 mg/Kg and 17.5 mg/Kg, respectively.

On July 30, 2009, a "baseline" stockpile soil sample was collected from the onsite stockpile and submitted to the laboratory for analysis. The analytical results indicated the benzene concentration was less than the laboratory MDL of 0.0555 mg/Kg, The BTEX concentration was 54.24 mg/Kg and the TPH concentration was 2,789 mg/Kg.

On August 10, 2009, following receipt of the above referenced analytical results, additional excavation activities were conducted along the west sidewall of the excavation to remove impacted soil represented by soil sample WSW @ 6.5'. Following excavation activities a soil sample (WSW-1 @ 6.5') was collected and submitted to the laboratory. The analytical results indicated the benzene and BTEX concentrations were less than the laboratory MDL of 0.0010 mg/Kg and 0.0021 mg/Kg, respectively and the TPH concentration was 137 mg/Kg.

Based on these analytical results of soil sample "Stockpile" and due to limited open space adjacent to the excavation for soil blending activities, Plains opted to request NMOCD approval to mechanically separate the rock from the impacted soil and transport the impacted soil to the Plains Lea Station Land Farm (GW-351).

On August 13, 2009, Plains presented the analytical results of soil sample WSW-1 @ 6.5' to the NMOCD Hobbs District Office. Plains requested and received NMOCD verbal approval to leave in-situ soil represented by soil sample WSW-1 @ 6.5', which exhibited a TPH concentration marginally exceeding the NMOCD regulatory standard of 100 mg/Kg. In additional, Plains requested and received NMOCD verbal approval to mechanically separate the rock from the impacted soil and transport the impacted soil to the Plains Lea Station Land Farm.

4.0 PROPOSED ACTIONS

Following mechanical separation of the rock and impacted soil, approximately 1,600 cy of impacted soil is stockpiled onsite pending transportation to Plains Lea Station Land Farm (GW-351). In the course of the mechanical separation activities, the rock was placed in the excavation. Additional backfill material will be purchased from a local landowner and transported to the site. The excavation will be backfilled with the non-impacted soil and contoured to fit the surrounding topography. Following restoration activities, the site will be seeded with vegetation specified by the NMSLO.

5.0 REPORTING

Upon review and approval of this proposal by the NMOCD, Plains is prepared to begin field activities and perform the final corrective actions summarized in this Remediation Summary and Site Closure Proposal. Upon completion of the field activities summarized in this proposal, Plains will submit a Site Closure Request to the NMOCD, documenting the results of confirmation soil samples, and final topography restoration activities.

6.0 QA/QC PROCEDURES

6.1 Soil Sampling

Soil samples will be delivered to Environmental Lab of Texas, Inc. in Odessa, Texas for BTEX and/or TPH analyses using the methods described below. Soil samples will be analyzed for BTEX and/or TPH within fourteen days following the collection date.

The soil samples will be analyzed as follows:

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

6.2 Decontamination of Equipment

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

6.3 Laboratory Protocol

The laboratory will be responsible for proper QA/QC procedures after signing the chain-of-custody form. These procedures will be either transmitted with the laboratory reports or will be on file at the laboratory.

7.0 LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Proposal to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC 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. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC 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 Basin Environmental Consulting, LLC and/or Plains Pipeline, L.P.

8.0 DISTRIBUTION:

Copy 1: Larry Johnson
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 French Drive
Hobbs, New Mexico 88240
larry.johnson@state.nm.us

Copy 2: Thaddeus Kostrubala
New Mexico State Land Office
310 Old Santa Fe Trail
P. O. Box 1148
Santa Fe, New Mexico 87504-1148
tkostrubala@slo.state.nm.us

Copy 3: Jeff Dann
Plains Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
jpdann@paalp.com

Copy 4: Jason Henry
Plains Pipeline, L.P.
2530 State Highway 214
Denver City, Texas 79323
jhenry@paalp.com

Copy 5: Basin Environmental Consulting, LLC
P.O. Box 381
Lovington, New Mexico 88260
cjbryant@basin-consulting.com

Figures

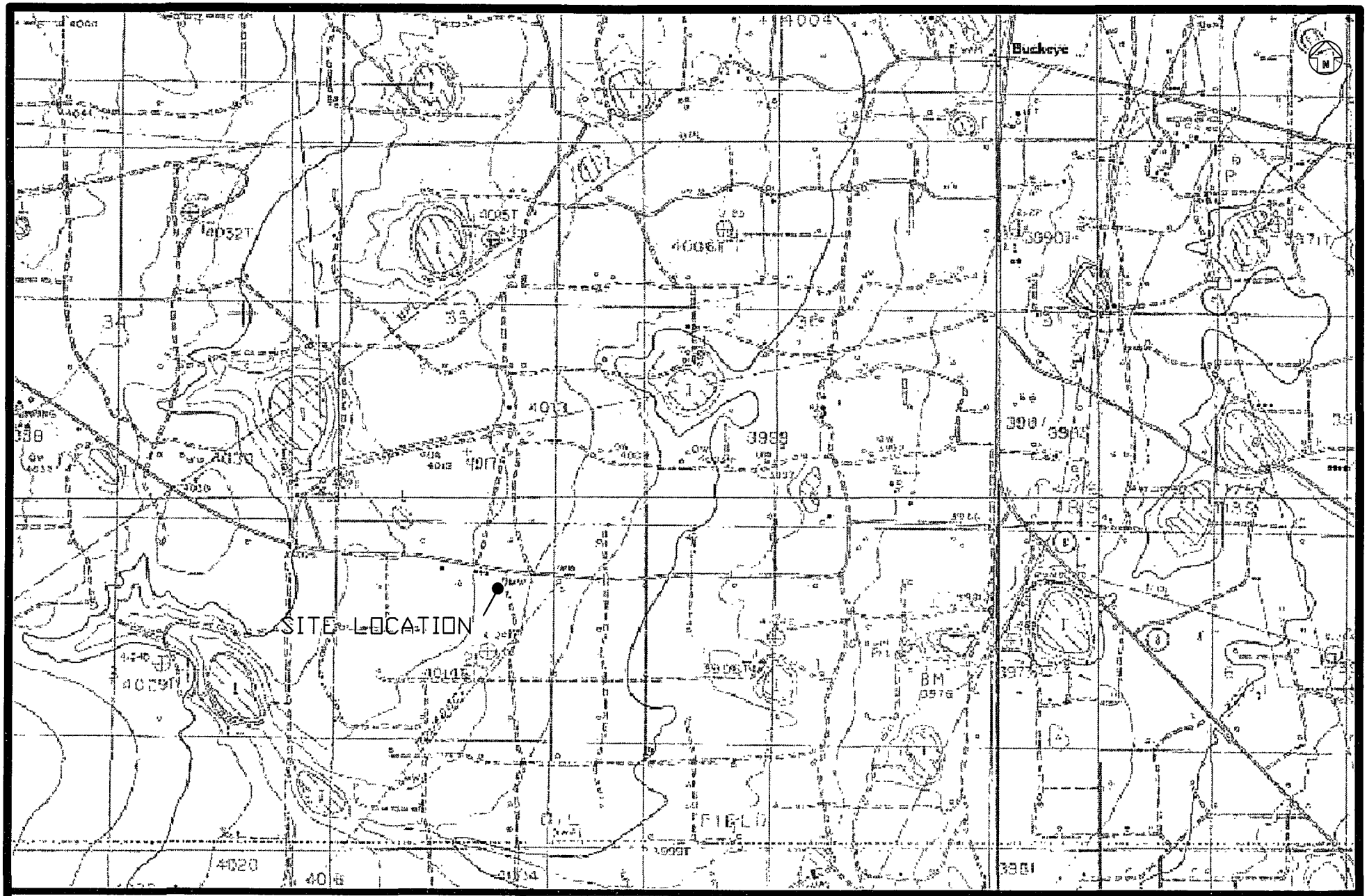
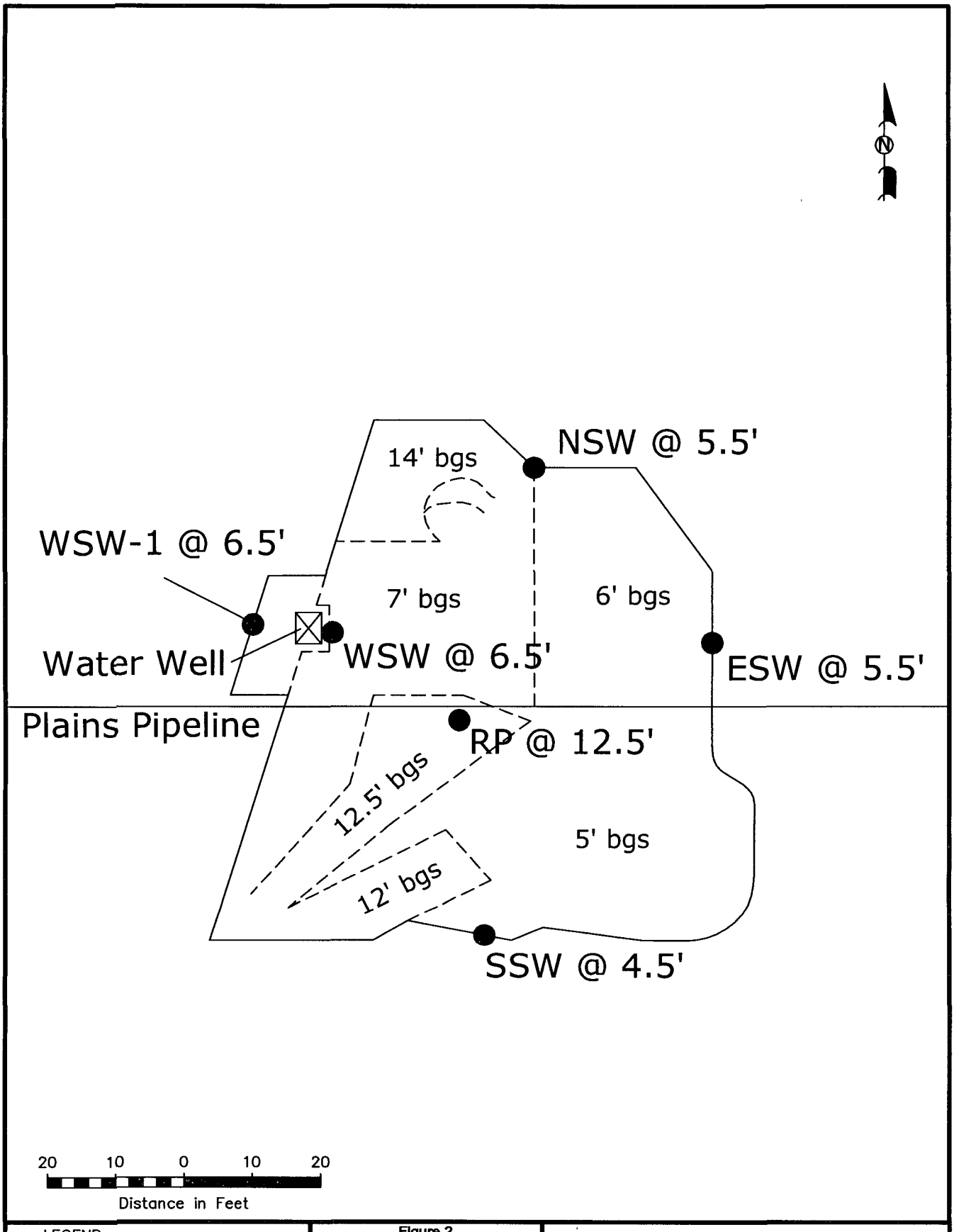


Figure 1
Site Location Map
Plains Pipeline, L.P.
Chevron Grayburg 6-Inch
Lea County, New Mexico
SRS# 2009-163
NMOCD Ref 1RP-2243

Basin Environmental Services

Prep By CDS	Checked By CDS
August 20, 2009	Scale 1"=1,000'



LEGEND:
- Soil Sample Location
- Pipeline
- Excavation Extent

Figure 2
Site and Sample Location Map
Plains Pipeline, L.P.
Chevron Grayburg 6-Inch
Lea County, NM
SRS # 2009-163
1RP-2243

Basin Environmental Consulting

Scale 1" = 20'	Drawn By CDS	Prepared By CDS
August 20, 2009		

Tables

TABLE 1

CONCENTRATIONS OF BTEX AND TPH IN SOIL

PLAINS PIPELINE, L.P.
CHEVRON GRAYBURG 6-INCH
LEA COUNTY, NEW MEXICO
SRS#2009-163
NMOCD REF. # 2243

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 848-8015M			
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)
Stockpile	-	07/30/09	-	<0.0555	2.831	16.17	24.09	11.15	**54.24**	600	2,010	179	**2,789**
WSW @ 6.5'	6.5'	07/30/09	Excavated	0.0154	0.0628	0.0792	2.746	1.789	4.692	589	2,380	182	**3,151**
ESW @ 5.5'	5.5'	07/30/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3
SSW @ 4.5'	4.5'	07/30/09	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4
NSW @ 5.5'	5.5'	07/30/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6
RP @ 12.5'	12.5'	07/30/09	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.5	<17.5	<17.5	<17.5
WSW-1 @ 6.5'	6.5'	08/10/09	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	117	20	137
NMOCD REGULATORY STANDARD				**10**					**50**				**100**

Appendices

Appendix A
Laboratory Analytical Reports

Analytical Report 339438

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Chevron Grayburg 6"

2009-163

06-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), 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-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

06-AUG-09

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

Reference: XENCO Report No: **339438**
Chevron Grayburg 6"
Project Address: Lea County, 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 339438. 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. 339438 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

Sample Cross Reference 339438

PLAINS ALL AMERICAN EH&S, Midland, TX

Chevron Grayburg 6"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stockpile	S	Jul-30-09 12:30		339438-001
WSW @ 6.5'	S	Jul-30-09 12:45		339438-002
ESW @ 5.5'	S	Jul-30-09 13:00		339438-003
SSW @ 4.5'	S	Jul-30-09 13:15		339438-004
NSW @ 5.5'	S	Jul-30-09 13:30		339438-005
RP @ 12.5	S	Jul-30-09 13:45		339438-006

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Chevron Grayburg 6"

Project ID: 2009-163
Work Order Number: 339438

Report Date: 06-AUG-09
Date Received: 07/31/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-767303 Percent Moisture
None

Batch: LBA-767466 BTEX-MTBE EPA 8021B
SW8021BM

Batch 767466, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 534776-1-BLK,339438-005,339438-006.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are 339438-003 S, 339438-003 SD.
Matrix interferences is suspected.

Batch: LBA-767471 TPH by SW8015 Mod
None

Batch: LBA-767681 BTEX-MTBE EPA 8021B
SW8021BM

Batch 767681, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 339703-001 D,339438-001,339438-002.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 534902-1-BLK.
4-Bromofluorobenzene recovered above QC limits data confirmed by re-analysis, samples affected are: 339438-001, 339438-002, 339703-001D.

Certificate of Analysis Summary 339438

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Chevron Grayburg 6"

Project Id: 2009-163
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jul-31-09 01:45 pm
Report Date: 06-AUG-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	339438-001		339438-002		339438-003		339438-004		339438-005		339438-006	
	Field Id:	Stockpile		WSW @ 6.5'		ESW @ 5.5'		SSW @ 4.5'		NSW @ 5.5'		RP @ 12.5	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-30-09 12:30		Jul-30-09 12:45		Jul-30-09 13:00		Jul-30-09 13:15		Jul-30-09 13:30		Jul-30-09 13:45	
BTEX by EPA 8021B	*Extracted:*	Aug-05-09 10:00		Aug-05-09 10:00		Aug-03-09 10:00		Aug-03-09 10:00		Aug-03-09 10.00		Aug-03-09 10.00	
	Analyzed:	Aug-05-09 11:47		Aug-05-09 12:05		Aug-03-09 17:08		Aug-03-09 17:27		Aug-03-09 18:22		Aug-03-09 18:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0555	0.0154	0.0114	ND	0.0011	ND	0.0012	ND	0.0011	ND	0.0012
Toluene		2.831	0.1109	0.0628	0.0228	ND	0.0022	ND	0.0023	ND	0.0022	ND	0.0023
Ethylbenzene		16.17	0.0555	0.0792	0.0114	ND	0.0011	ND	0.0012	ND	0.0011	ND	0.0012
m,p-Xylenes		24.09	0.1109	2 746	0.0228	ND	0.0022	ND	0.0023	ND	0.0022	ND	0.0023
o-Xylene		11.15	0.0555	1.789	0.0114	ND	0.0011	ND	0.0012	ND	0.0011	ND	0.0012
Total Xylenes		35.24	0.0555	4.535	0.0114	ND	0.0011	ND	0.0012	ND	0.0011	ND	0.0012
Total BTEX		54.24	0.0555	4.692	0.0114	ND	0.0011	ND	0.0012	ND	0.0011	ND	0.0012
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-03-09 08:45		Aug-03-09 08:45		Aug-03-09 08:45		Aug-03-09 08:45		Aug-03-09 08:45		Aug-03-09 08:45	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.86	1.00	12.15	1 00	7.99	1.00	14.11	1.00	10.06	1.00	14.07	1.00
TPH By SW8015 Mod	*Extracted:*	Aug-03-09 14:19		Aug-03-09 14:19		Aug-03-09 14:19		Aug-03-09 14:19		Aug-03-09 14:19		Aug-03-09 14:19	
	Analyzed:	Aug-03-09 17:27		Aug-03-09 17·51		Aug-03-09 18.16		Aug-03-09 18.40		Aug-03-09 19:05		Aug-03-09 19.30	
	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		600	82.8	589	85.1	ND	16.3	ND	17.4	ND	16.6	ND	17.5
C12-C28 Diesel Range Hydrocarbons		2010	82.8	2380	85.1	ND	16.3	ND	17.4	ND	16.6	ND	17.5
C28-C35 Oil Range Hydrocarbons		179	82.8	182	85.1	ND	16.3	ND	17.4	ND	16.6	ND	17.5
Total TPH		2789	82.8	3151	85.1	ND	16.3	ND	17.4	ND	16.6	ND	17.5

Brent Barron, II
Odessa Laboratory Manager

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

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 339438,

Project ID: 2009-163

Lab Batch #: 767466 **Sample:** 534776-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 09:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0361	0.0300	120	80-120	

Lab Batch #: 767466 **Sample:** 534776-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 09:46

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 767466 **Sample:** 534776-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 10:23

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0102	0.0300	34	80-120	*

Lab Batch #: 767466 **Sample:** 339438-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 17:08

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 0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 767466 **Sample:** 339438-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 17:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0243	0.0300	81	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.

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 339438,

Project ID: 2009-163

Lab Batch #: 767466 **Sample:** 339438-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 18:22

BTEX by EPA 8021B	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	0.0200	0.0300	67	80-120	*

Lab Batch #: 767466 **Sample:** 339438-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 18:41

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0227	0.0300	76	80-120	*

Lab Batch #: 767466 **Sample:** 339438-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 21:08

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0384	0.0300	128	80-120	*

Lab Batch #: 767466 **Sample:** 339438-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 21:27

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0388	0 0300	129	80-120	*

Lab Batch #: 767681 **Sample:** 534902-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 09:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	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.

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 339438, **Project ID:** 2009-163

Lab Batch #: 767681 **Sample:** 534902-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 09:31

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 767681 **Sample:** 534902-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 10:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0167	0.0300	56	80-120	**

Lab Batch #: 767681 **Sample:** 339438-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 11:47

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0218	0.0300	73	80-120	**
4-Bromofluorobenzene	0.0574	0.0300	191	80-120	**

Lab Batch #: 767681 **Sample:** 339438-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 12:05

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0207	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0468	0.0300	156	80-120	**

Lab Batch #: 767681 **Sample:** 339703-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 17:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0208	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0467	0.0300	156	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.

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 339438,

Project ID: 2009-163

Lab Batch #: 767471 **Sample:** 534782-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 14:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.2	100	95	70-135	
o-Terphenyl	39.4	50.0	79	70-135	

Lab Batch #: 767471 **Sample:** 534782-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 14:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96 2	100	96	70-135	
o-Terphenyl	38.9	50.0	78	70-135	

Lab Batch #: 767471 **Sample:** 534782-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 15:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.5	100	84	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 767471 **Sample:** 339438-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 17:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	99.5	89	70-135	
o-Terphenyl	41.9	49.8	84	70-135	

Lab Batch #: 767471 **Sample:** 339438-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 17:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	99.7	95	70-135	
o-Terphenyl	44.5	49.9	89	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.

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 339438,

Project ID: 2009-163

Lab Batch #: 767471 **Sample:** 339438-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 18:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	99.7	86	70-135	
o-Terphenyl	44.1	49.9	88	70-135	

Lab Batch #: 767471 **Sample:** 339438-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 18:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	99.9	85	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 767471 **Sample:** 339438-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 19:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	99.8	83	70-135	
o-Terphenyl	43.6	49.9	87	70-135	

Lab Batch #: 767471 **Sample:** 339438-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 19:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	100	85	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 767471 **Sample:** 339513-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 21:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.0	100	89	70-135	
o-Terphenyl	46.2	50.0	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.

BS / BSD Recoveries

Project Name: Chevron Grayburg 6"

Work Order #: 339438 **Project ID:** 2009-163

Analyst: ASA **Date Prepared:** 08/03/2009 **Date Analyzed:** 08/03/2009

Lab Batch ID: 767466 **Sample:** 534776-1-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	ND	0.1000	0.0990	99	0.1	0.1019	102	3	70-130	35	
Toluene	ND	0.1000	0.0942	94	0.1	0.0966	97	3	70-130	35	
Ethylbenzene	ND	0.1000	0.1055	106	0.1	0.1071	107	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2134	107	0.2	0.2192	110	3	70-135	35	
o-Xylene	ND	0 1000	0.1032	103	0.1	0.1053	105	2	71-133	35	

Analyst: ASA **Date Prepared:** 08/05/2009 **Date Analyzed:** 08/05/2009

Lab Batch ID: 767681 **Sample:** 534902-1-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	ND	0.1000	0.0923	92	0.1	0.1062	106	14	70-130	35	
Toluene	ND	0.1000	0.0879	88	0.1	0.1005	101	13	70-130	35	
Ethylbenzene	ND	0.1000	0.0969	97	0.1	0.1101	110	13	71-129	35	
m,p-Xylenes	ND	0.2000	0.1976	99	0.2	0.2232	112	12	70-135	35	
o-Xylene	ND	0.1000	0.0949	95	0.1	0.1066	107	12	71-133	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

BS / BSD Recoveries

Project Name: Chevron Grayburg 6"

Work Order #: 339438
Analyst: ANL
Lab Batch ID: 767471
Sample: 534782-1-BKS
Units: mg/kg

Date Prepared: 08/03/2009
Batch #: 1

Project ID: 2009-163
Date Analyzed: 08/03/2009
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	ND	1000	830	83	1000	855	86	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1000	100	1000	1010	101	1	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

Form 3 - MS / MSD Recoveries

Project Name: Chevron Grayburg 6"

Work Order # : 339438 **Project ID:** 2009-163

Lab Batch ID: 767466 **QC- Sample ID:** 339438-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/03/2009 **Date Prepared:** 08/03/2009 **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	ND	0.1087	0.0796	73	0.1087	0.0777	71	2	70-130	35	
Toluene	ND	0.1087	0.0791	73	0.1087	0.0781	72	1	70-130	35	
Ethylbenzene	ND	0.1087	0.0929	85	0.1087	0.0942	87	1	71-129	35	
m,p-Xylenes	ND	0.2174	0.1916	88	0.2174	0.1944	89	1	70-135	35	
o-Xylene	ND	0.1087	0.0910	84	0.1087	0.0915	84	1	71-133	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

Sample Duplicate Recovery

Project Name: Chevron Grayburg 6"

Work Order #: 339438

Lab Batch #: 767681 **Project ID:** 2009-163

Date Analyzed: 08/05/2009 **Date Prepared:** 08/05/2009 **Analyst:** ASA

QC- Sample ID: 339703-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	0.1419	0.1201	17	35	
Toluene	0.4279	0.3764	13	35	
Ethylbenzene	2.805	2.796	0	35	
m,p-Xylenes	7.319	7.375	1	35	
o-Xylene	1.726	1.743	1	35	
a,a,a-Trifluorotoluene	1.72	1.72	0	35	

Lab Batch #: 767303

Date Analyzed: 08/03/2009 **Date Prepared:** 08/03/2009 **Analyst:** BEV

QC- Sample ID: 339340-001 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	6.16	5.94	4	20	

Lab Batch #: 767471

Date Analyzed: 08/03/2009 **Date Prepared:** 08/03/2009 **Analyst:** ANL

QC- Sample ID: 339513-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	24.1	25.5	6	35	
C12-C28 Diesel Range Hydrocarbons	1130	1230	8	35	
C28-C35 Oil Range Hydrocarbons	98.9	114	14	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

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: Basin Environmental Consulting, LLC
Company Address: P. O. Box 381
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210 Fax No: (505) 396-1429
Sampler Signature:

Project Name: Chevron Grayburg 6"
Project #: SRS# 2009-163
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES
e-mail: cjbryant@basin-consulting.com

(lab use only)
ORDER #: 339439

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: GW = Groundwater S = Soil/Sed SL = Sludge DW = Drinking Water OW = Other Water NP = Non-Potable Specify Other	Analyze For: TCLP: 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	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.					RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	Stockpile			07/30/09	1230		1	X								Soil	X								X								X
02	WSW @ 6.5'			30-Jul-09	1245		1	X								Soil	X								X								X
03	ESW @ 5.5'			30-Jul-09	1300		1	X								Soil	X								X								X
04	SSW @ 4.5'			30-Jul-09	1315		1	X								Soil	X								X								X
05	NSW @ 5.5'			30-Jul-09	1330		1	X								Soil	X								X								X
06	RP @ 12.5'			30-Jul-09	1345		1	X								Soil	X								X								X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	7-31-09	1:45			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Cynthia Parr	7-31-09	13:45

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
Temperature Upon Receipt 1.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains

Date/ Time: 7.31.09 13:45

Lab ID #: 339438

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	1.5 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 340489

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Chevron Grayburg 6"

2009-163

13-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), 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-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

13-AUG-09

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

Reference: XENCO Report No: **340489**
Chevron Grayburg 6"
Project Address: Lea County, 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 340489. 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. 340489 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

Sample Cross Reference 340489

PLAINS ALL AMERICAN EH&S, Midland, TX

Chevron Grayburg 6"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WSW-1 @ 6.5'	S	Aug-10-09 13:00		340489-001

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Chevron Grayburg 6"

Project ID:	*2009-163*	*Report Date:*	*13-AUG-09*
Work Order Number:	*340489*	*Date Received:*	*08/10/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-768265 TX1005
None

Batch: LBA-768270 Percent Moisture
None

Batch: LBA-768368 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768368, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 340488-001.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 768368, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 535290-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 535290-1-BKS, 535290-1-BSD

Certificate of Analysis Summary 340489

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Chevron Grayburg 6"

Project Id: 2009-163
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Mon Aug-10-09 05:13 pm
Report Date: 13-AUG-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	340489-001					
	Field Id:	WSW-1 @ 6.5'					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Aug-10-09 13:00					
BTEX by EPA 8021B	*Extracted:*	Aug-12-09 17:00					
	Analyzed:	Aug-12-09 20:08					
	Units/RL:	mg/kg RL					
Benzene		ND 0.0010					
Toluene		ND 0.0021					
Ethylbenzene		ND 0.0010					
m,p-Xylenes		ND 0.0021					
o-Xylene		ND 0.0010					
Total Xylenes		ND 0.0010					
Total BTEX		ND 0.0010					
Percent Moisture	*Extracted:*						
	Analyzed:	Aug-12-09 10:03					
	Units/RL:	% RL					
Percent Moisture		4.55 1.00					
TPH By SW8015 Mod	*Extracted:*	Aug-11-09 13:33					
	Analyzed:	Aug-11-09 19.49					
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 15.7					
C12-C28 Diesel Range Hydrocarbons		117 15.7					
C28-C35 Oil Range Hydrocarbons		20.0 15.7					
Total TPH		137 15.7					

Brent Barron, II
Odessa Laboratory Manager

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

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 340489, **Project ID:** 2009-163

Lab Batch #: 768368 **Sample:** 535290-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 18:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 768368 **Sample:** 535290-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 18:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

Lab Batch #: 768368 **Sample:** 535290-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 19:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0135	0.0300	45	80-120	*

Lab Batch #: 768368 **Sample:** 340489-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 20:08

BTEX by EPA 8021B	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	0.0266	0.0300	89	80-120	

Lab Batch #: 768368 **Sample:** 340660-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 02:55

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	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: Chevron Grayburg 6"

Work Orders : 340489,

Project ID: 2009-163

Lab Batch #: 768368 **Sample:** 340660-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 03:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 768265 **Sample:** 535219-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 14:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	40.7	50.0	81	70-135	

Lab Batch #: 768265 **Sample:** 535219-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 15:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	41.1	50.0	82	70-135	

Lab Batch #: 768265 **Sample:** 535219-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 15:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	100	84	70-135	
o-Terphenyl	44.3	50.0	89	70-135	

Lab Batch #: 768265 **Sample:** 340489-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 19:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.7	99.8	71	70-135	
o-Terphenyl	36.7	49.9	74	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.

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6"

Work Orders : 340489, **Project ID:** 2009-163

Lab Batch #: 768265 **Sample:** 340373-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 22:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.8	99.9	99	70-135	
o-Terphenyl	39.6	50.0	79	70-135	

Lab Batch #: 768265 **Sample:** 340373-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 23:12

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	40.9	50.0	82	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: Chevron Grayburg 6"

Work Order #: 340489 **Project ID:** 2009-163

Analyst: ASA **Date Prepared:** 08/12/2009 **Date Analyzed:** 08/12/2009

Lab Batch ID: 768368 **Sample:** 535290-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	ND	0.1000	0.1102	110	0.1	0.1092	109	1	70-130	35	
Toluene	ND	0.1000	0.1058	106	0.1	0.1046	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1193	119	0.1	0.1179	118	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2451	123	0.2	0.2420	121	1	70-135	35	
o-Xylene	ND	0.1000	0.1151	115	0.1	0.1139	114	1	71-133	35	

Analyst: BHW **Date Prepared:** 08/11/2009 **Date Analyzed:** 08/11/2009

Lab Batch ID: 768265 **Sample:** 535219-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	ND	1000	905	91	1000	923	92	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1120	112	1000	1130	113	1	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

Form 3 - MS / MSD Recoveries

Project Name: Chevron Grayburg 6"

Work Order # : 340489 **Project ID:** 2009-163

Lab Batch ID: 768368 **QC- Sample ID:** 340660-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/13/2009 **Date Prepared:** 08/12/2009 **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	ND	0.1111	0.0806	73	0.1111	0.0821	74	2	70-130	35	
Toluene	ND	0.1111	0.0662	60	0.1111	0.0663	60	0	70-130	35	X
Ethylbenzene	ND	0.1111	0.0729	66	0.1111	0.0716	64	2	71-129	35	X
m,p-Xylenes	ND	0.2222	0.1467	66	0.2222	0.1433	64	2	70-135	35	X
o-Xylene	ND	0.1111	0.0696	63	0.1111	0.0685	62	2	71-133	35	X

Lab Batch ID: 768265 **QC- Sample ID:** 340373-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/11/2009 **Date Prepared:** 08/11/2009 **Analyst:** BHW

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	ND	1170	1090	93	1170	1100	94	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1170	1310	112	1170	1350	115	3	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

Sample Duplicate Recovery

Project Name: Chevron Grayburg 6"

Work Order #: 340489

Lab Batch #: 768270 **Project ID:** 2009-163

Date Analyzed: 08/12/2009 **Date Prepared:** 08/12/2009 **Analyst:** BEV

QC- Sample ID: 340491-001 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	5.49	6.71	20	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

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 — PAGE 01 OF 03 — Project Name: Chevron Grayburg 6"

Company Name: Basin Environmental Service Technologies, LLC — Project #: 2009-163

Company Address: 2800 Plains Hwy — Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260 — PO #: PAA - J. Henry

Telephone No.: (575) 605-7210 — Fax No.: (505) 396-1429 — Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: C Bryant - EB Taylor — e-mail: cjbryant@basin-consulting.com

(lab use only) ORDER #: 340489

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 (VOA x 2)	H2SO4	NaOH	Na2S2O3	None (PAH)	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	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	HLD RLM	PAH	EPA Plant Filter Test	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	WSW-1@6.5'			8/10/2009	1300		1	X								Soil	X									X							X

Special Instructions:

Relinquished by:	Date: 8/10/09	Time: 1713	Received by:		Date	Time
Relinquished by:	Date	Time	Received by		Date	Time
Relinquished by	Date	Time	Received by ELOT:		Date: 08/10/09	Time: 1713

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

Temperature Upon Receipt: 5.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env

Date/ Time: 08/10/09 17:13

Lab ID #: 340489

Initials: QMW

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	5.1 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

_____

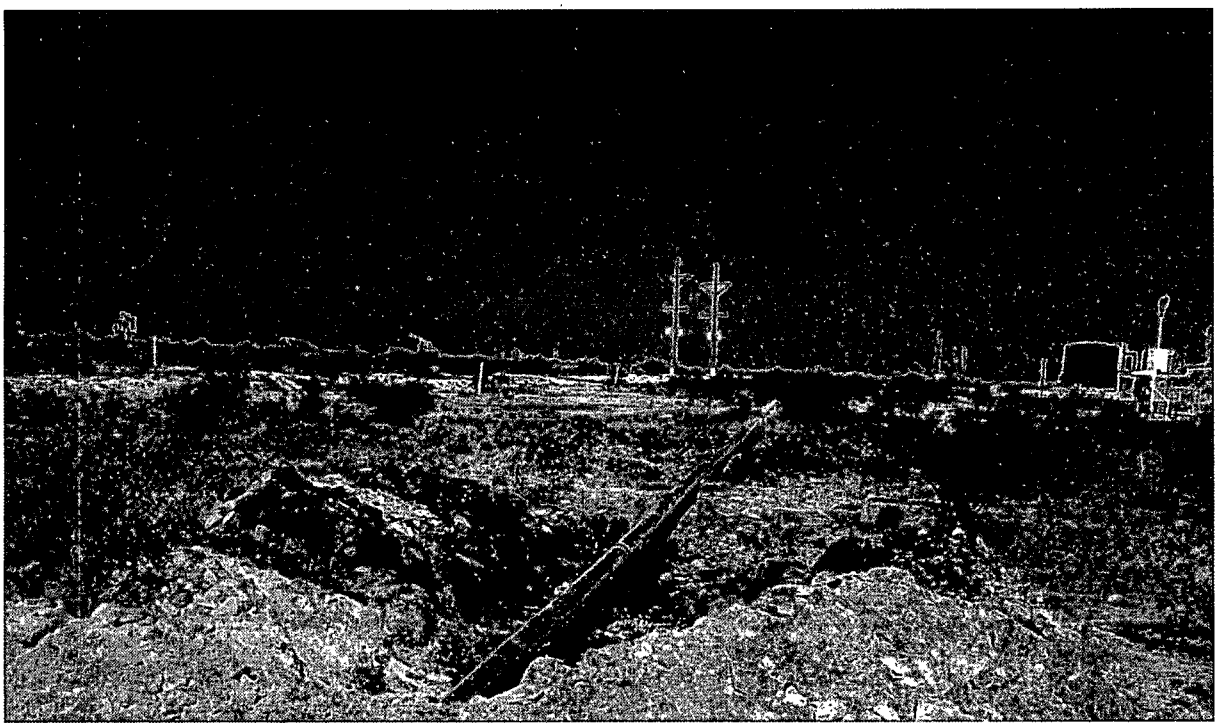
_____

_____

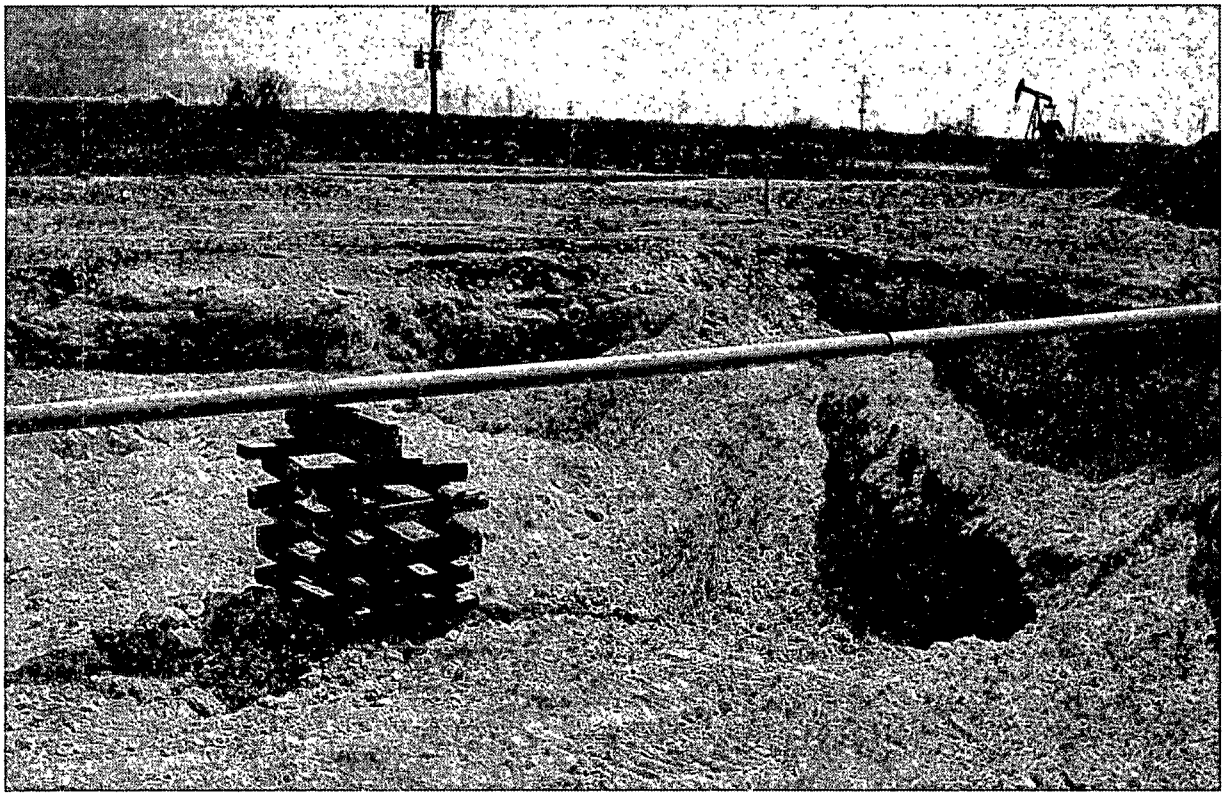
Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

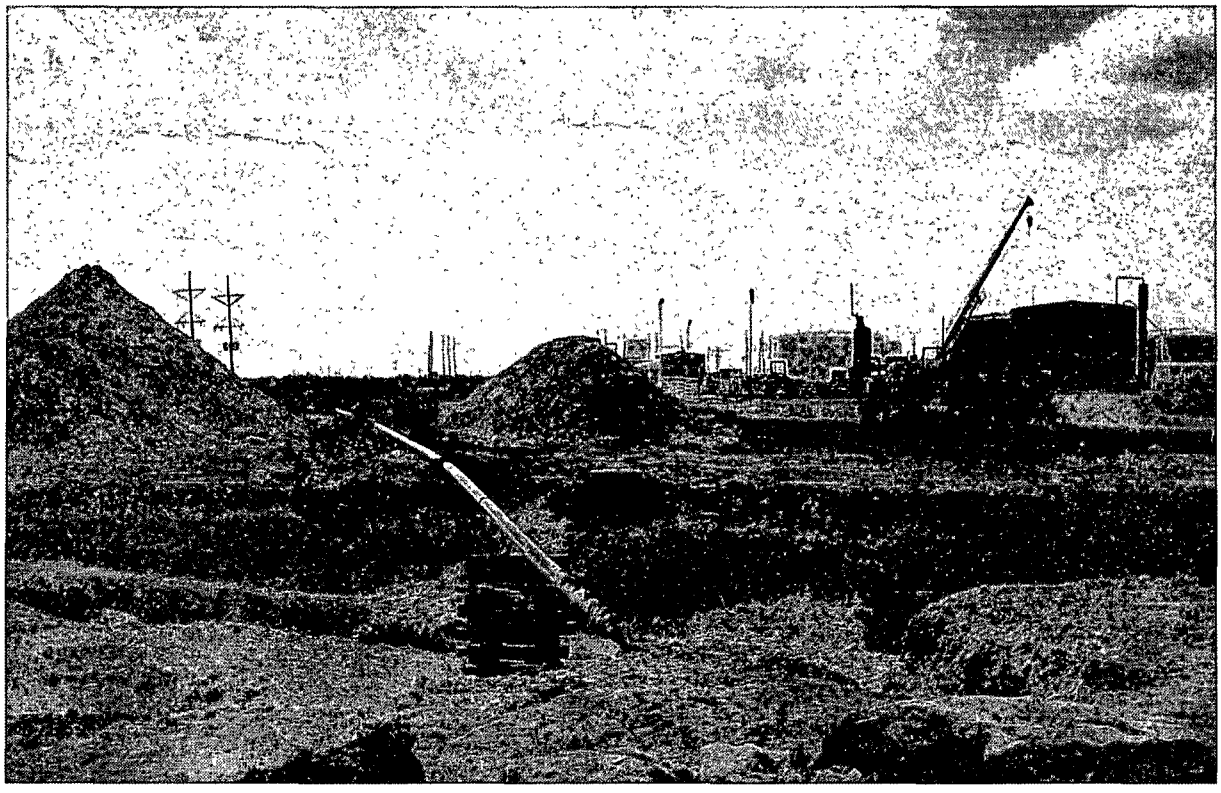
Appendix B
Photographs



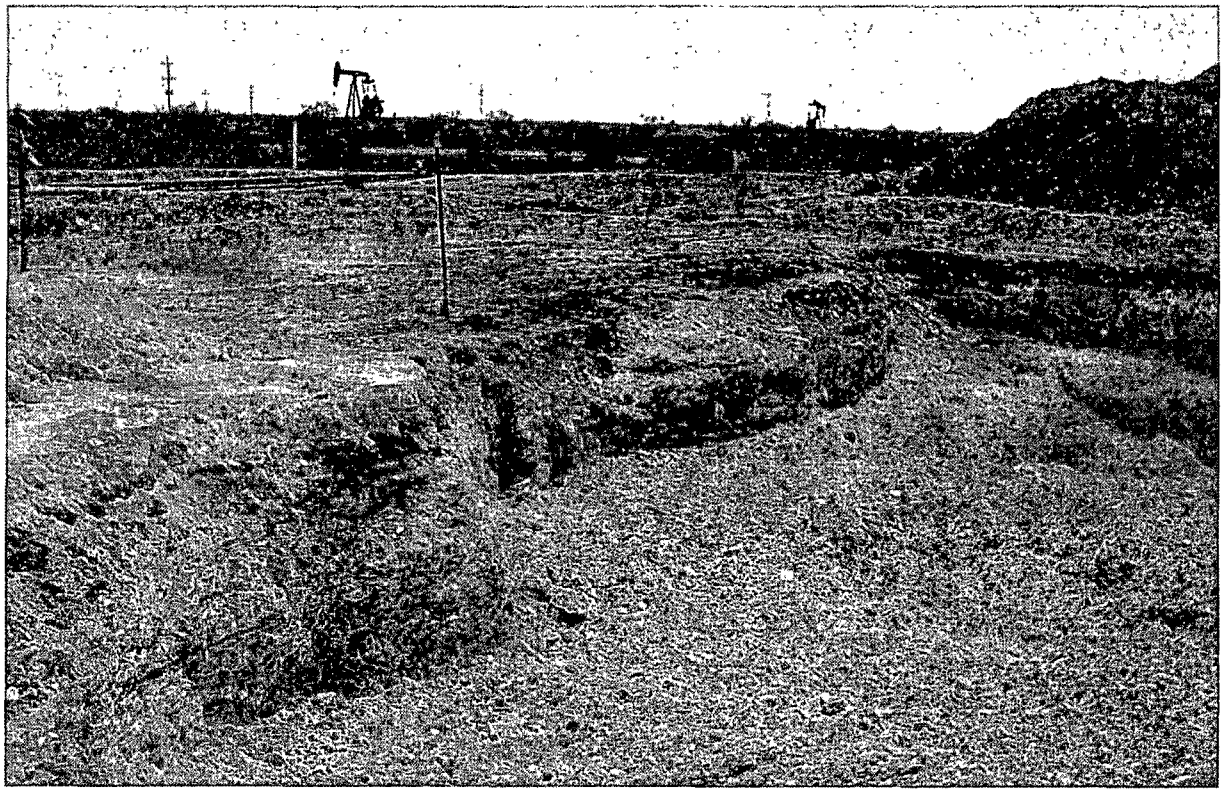
Chevron Grayburg 6-Inch Initial Release (Looking West)



Chevron Grayburg 6-Inch Excavation (Looking Southwest)



Chevron Grayburg 6-Inch Excavation (Looking West)



Chevron Grayburg 6-Inch Excavation (Looking Southwest)