

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 Marketing, LP	Contact	Daniel Bryant
Address	6 Desta Drive Ste. 6600 Midland, Tx 79705	Telephone No.	(432) 557-5865
Facility Name	Scharb Station Overflow	Facility Type	Tank Battery

Surface Owner	Chris Northcutt	Mineral Owner		Lease No.	
---------------	-----------------	---------------	--	-----------	--

**LOCATION OF RELEASE**

API 30-025-12803

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	5	19S	35E					Lea

Latitude N 32.68700000° Longitude W 103.47095000°

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	18 bbls	Volume Recovered	3 bbls
Source of Release	Tank at Scharb Truck Station	Date and Hour of Occurrence	08/09/2008	Date and Hour of Discovery	08/09/2008 @ 01:00
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson (left message)		
By Whom?	Daniel Bryant	Date and Hour	08/11/2008 @ 09:30		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

RECEIVED  
OCT 27 2010

Describe Cause of Problem and Remedial Action Taken.\*

Crude oil was released when the tank was overfilled by a transport unloading at the facility.

HOBBSDOCD

Describe Area Affected and Cleanup Action Taken.\*

Please see the attached Basin Environmental Service Technologies Remediation Summary and Site Closure Request for details of the 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:	<i>Daniel Bryant</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name:	Daniel Bryant	<i>Larry Johnson</i> Approved by District Supervisor <b>ENVIRONMENTAL ENGINEER</b>	
Title:	Environmental R/C Specialist	Approval Date:	10-27-10
E-mail Address:	dmbryant@paal.com	Expiration Date:	
Date:	10/27/10	Conditions of Approval:	
Phone:	(432) 557-5865	Attached:	<input type="checkbox"/>

\* Attach Additional Sheets If Necessary

1RP-1936

nLWS 103/633132  
PLWS 103/1633373

# *Basin Environmental Service Technologies, LLC*

2800 Plains Highway  
P. O. Box 301  
Lovington, New Mexico 88260  
Office: (575) 396-2378 Fax: (575) 396-1429



## **REMEDIATION SUMMARY AND SITE CLOSURE REQUEST**

**PLAINS MARKETING, L.P. (231735)  
Scharb Station Overflow  
Lea County, New Mexico  
Plains SRS # 2008-210  
UNIT LTR "P" (SE ¼ /SE ¼ ), Section 5, Township 19 South, Range 35 East  
Latitude 32.6870000° North, Longitude 103.47095000° West  
NMOCD Reference # 1RP-1936**

Prepared For:

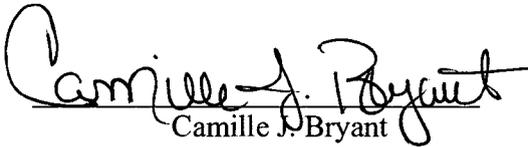
Plains Marketing, L.P.  
333 Clay Street  
Suite 1600  
Houston, Texas 77002

**RECEIVED**  
OCT 27 2010  
HOBBSUCD

Prepared By:

Basin Environmental Service Technologies, LLC  
2800 Plains Highway  
Lovington, New Mexico 88260

October 2010

  
Camille J. Bryant

Project Manager

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## **1.0 INTRODUCTION AND BACKGROUND INFORMATION**

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Marketing, L.P. (Plains), has prepared this Remediation Summary Site Closure Request for the release site known as Scharb Station Overflow (SRS # 2008-210). The legal description of the release site is Unit Letter "P" (SE ¼ SE ¼), Section 5, Township 19 South, Range 35 East, in Lea County, New Mexico. The landowner of the affected property is Mr. Chris Northcutt. The release site GPS coordinates are 32.68700000° North and 103.47095000° West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. General photographs of the site are provided as Appendix C.

On August 9, 2008, Plains discovered a crude oil release had occurred at the Plains Scharb Station. A five hundred (500) barrel tank was overfilled by a transport truck unloading at the facility. The release was reported to the New Mexico Oil Conservation Division (NMOCD) on August 11, 2008. The release was contained inside the secondary containment at the facility. Approximately eighteen (18) barrels of crude oil was released with approximately three (3) barrels recovered. The Release Notification a Corrective Action Form is provided as Appendix E.

## **2.0 NMOCD SITE CLASSIFICATION**

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), depth to groundwater is estimated to be sixty-seven (67) feet below ground surface (bgs). Four (4) groundwater monitor wells (MW-1, MW-2, MW-3 and MW-4) were installed by Plains to evaluate the status of the underlying groundwater at the site. Groundwater was encountered at approximately thirty-five (35) to thirty-seven (37) feet bgs in the on-site monitor wells. The analytical results of the soil samples collected during the advancement of groundwater monitor well MW-4, indicated hydrocarbon impact exceeding the NMOCD regulatory standard, was present at approximately twenty (20) feet bgs. The depth of hydrocarbon impact results in a score of twenty (20) 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 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 Scharb Station Overflow release site has an initial 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 ACTIVITIES

On August 11, 2008, excavation of the hydrocarbon impacted soil began at the site. Excavated soil was stockpiled on-site pending final disposition. Final dimensions of the excavation were approximately sixty (60) feet in length, approximately fifteen (15) feet in width and ranging in depth from approximately two (2) feet bgs to seventeen (17) feet bgs north to south and approximately fifty-five (55) feet in length, approximately fifteen (15) feet in width and ranging in depth from approximately five (5) feet bgs to seventeen (17) feet bgs east to west.

On August 12, 2008, one (1) soil sample (Floor @ 6') was collected from the floor of the excavation at approximately six (6) feet bgs. The soil sample was submitted to the laboratory for determination of concentrations of benzene, toluene, ethyl-benzene and xylene (BTEX) and total petroleum hydrocarbons (TPH) concentrations using EPA SW-846 8021b and SW-846 8015M, respectively. The analytical results indicated a benzene concentration of 16.94 mg/Kg, a BTEX concentration of 2,445.02 mg/Kg and a TPH concentration of 2,465 mg/Kg. Table 1 summarizes the Concentrations of Benzene, BTEX and TPH in Soil. Laboratory analytical reports are provided as Appendix B.

On March 9, 2010, four (4) groundwater monitor wells (MW-1, MW-2, MW-3 and MW-4) were installed at the Scharb Station Overflow release site. The groundwater monitor wells were installed to evaluate the status of the underlying groundwater. Soil boring logs are 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.

Monitor well MW-1 was located north of the release point and was advanced to a total depth of approximately forty-five (45) feet bgs. Soil samples collected at five (5) feet, ten (10) feet, twenty-five (25) feet and thirty (30) feet bgs were submitted to the laboratory for analysis. The laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory method detection limit (MDL) in each of the submitted soil samples.

Monitor well MW-2 was located east of the release point and was advanced to a total depth of approximately forty-five (45) feet bgs. Soil samples collected at surface, five (5) feet, ten (10) feet, and thirty (30) feet bgs were submitted to the laboratory for analysis. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory method detection limit (MDL) for the soil samples collected at five (5) feet, ten (10) feet and thirty (30) feet bgs to 0.005 mg/Kg for the soil sample collected at surface. BTEX concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at ten (10) feet and thirty (30) feet bgs to 0.0553 mg/Kg for the soil sample collected at the surface. TPH concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at ten (10) feet and thirty (30) feet bgs to 449 mg/Kg for the soil sample collected at the surface.

Monitor well MW-3 was located southeast of the release point and was advanced to a total depth of approximately forty-five (45) feet bgs. Soil samples collected at five (5) feet, ten (10) feet and thirty (30) feet bgs were submitted to the laboratory for analysis. The laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for each submitted soil sample.

Monitor well MW-4 was advanced adjacent to the release point to a total depth of approximately forty-three (43) feet bgs. Soil samples collected at the surface, five (5) feet, ten (10) feet, fifteen (15) feet, twenty (20) feet, twenty-five (25) feet and thirty (30) feet bgs were submitted to the laboratory for analysis. The laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples, with the exception of the soil sample collected at the surface, which exhibited a concentration of 0.0024 mg/Kg. BTEX concentrations ranged from less than the appropriate laboratory MDL for the soil samples collected at ten (10) feet, fifteen (15) feet, twenty (20) feet, twenty-five (25) feet and thirty (30) feet bgs to 0.2045 mg/Kg for the soil sample collected at the surface. TPH concentrations ranged from less than the appropriate laboratory MDL for the soil sample collected at twenty-five (25) feet bgs to 9,590 mg/Kg for the soil sample collected at the surface.

On April 14, 2010, the NMOCD Hobbs District Office directed Plains to conduct limited excavation activities to remove impacted soils at the site. Since the release location occurred inside an active facility and analytical results indicated groundwater had not been impacted, it was agreed excavation activities would be limited in scope to the readily accessible impacted soils that could be safely removed without compromising the integrity of the active facility.

On May 14, 2010, seven (7) soil samples (NSW-1, ESW-1, NSW-2, ESW-2, SSW-1, WSW-2 and WSW-1) were collected from the sidewalls of the excavation. The soil samples were submitted to the laboratory for determination of concentrations of benzene, BTEX and TPH. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil samples NSW-1, NSW-2, ESE-2 and WSW-2 to 52.29 mg/Kg for soil sample ESW-1. TPH concentrations ranged from less than the laboratory MDL for soil sample NSW-1 to 8,526 mg/Kg for soil sample ESW-1. Based on the analytical results further excavation was conducted in the areas of soil samples ESW-1 and WSW-1.

Three (3) soil samples (Floor-1, Floor-2 and Floor-3) were collected from the floor of the excavation, at depths ranging from two and half (2.5) feet bgs to four (4) feet bgs, and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. BTEX concentrations ranged from 0.004 mg/Kg for soil sample Floor-1 to 20.61 mg/Kg for soil sample Floor-3. TPH concentrations ranged from 71 mg/Kg for soil sample Floor-1 to 4,379 mg/Kg for soil sample Floor-3. Based on the analytical results further excavation was conducted in the areas of soil samples Floor-2 and Floor-3.

On June 7, 2010, four (4) soil samples (WSW-1A, ESW-1A, Floor-2A and Floor-3A) were collected from the excavation and submitted to the laboratory for TPH analysis. Soil sample ESW-1A was also analyzed for BTEX concentrations. Laboratory analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL for soil sample ESW-1A. TPH concentrations ranged from 90 mg/Kg for soil sample WSW-1A to 2,249 mg/Kg for soil sample Floor-2A. Based on the analytical results further excavation was conducted in the area of soil sample Floor-2A.

On June 21, 2010, one (1) soil sample (Floor-2B) was collected from the excavation and submitted to the laboratory for analysis. The laboratory analytical results indicated a TPH

concentration of 2,084 mg/Kg for the soil sample Floor-2B. Based on the analytical results further excavation was conducted in the area of soil sample Floor-2B.

On August 4, 2010, one (1) soil sample (Floor-2C) was collected from the excavation and submitted to the laboratory for analysis. The laboratory analytical results indicated a TPH concentration of 184 mg/Kg for soil sample Floor-2C.

During May and July 2010, approximately eight hundred thirty-four (834) cubic yards of impacted material was transported to the Plains Lea Station Landfarm (NMOCD Permit # GW-351), near Monument, New Mexico. The excavation was backfilled with locally purchased soil and compacted in twelve (12) inch lifts. Following backfilling activities the impacted area was contoured to fit the surrounding topography.

#### **4.0 SUMMARY OF GROUNDWATER ACTIVITIES**

On March 30, 2010, the on-site monitor wells (MW-1 through MW-4) were gauged and purged of a minimum of three (3) well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer mounted polystyrene tank and disposed of at an approved disposal in Monument, New Mexico.

The analytical results of the March 30, 2010, groundwater sampling event indicate all BTEX constituent concentrations were less than the laboratory MDL in all four (4) on-site monitor wells. The analytical results indicate chloride concentrations ranged from 24.4 mg/L in monitor well MW-1 to 157 mg/L in monitor well MW-3. The results further indicate total dissolved solids (TDS) concentrations ranged from 476 mg/L in monitor well MW-1 to 802 mg/L in monitor well MW-3.

On April 14, 2010, the NMOCD Hobbs District Office granted verbal approval to plug and abandon the four (4) on-site monitor wells. On April 31, 2010, monitor wells MW-1, MW-2, MW-3 and MW-4 were plugged and abandoned by a State of New Mexico licensed water well driller. The plugging reports are provided as Appendix D.

#### **5.0 QA/QC PROCEDURES**

##### **5.1 Soil Sampling**

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

The soil samples were analyzed as follows:

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

## **5.2 Groundwater Sampling**

The groundwater monitor wells were developed utilizing the Environmental Protection Agency (EPA) protocol of nine (9) well volumes of groundwater or until the monitoring wells are dry using an electrical Grundfos Pump. Within forty-eight hours of development and during subsequent quarterly groundwater sampling events, the monitor wells were measured and purged of approximately three (3) well volumes utilizing an electrical Grundfos Pump. Groundwater samples were collected using a disposable Teflon sampler and the groundwater samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of at an NMOCD approved disposal facility. Groundwater samples were delivered to Xenco Laboratories in Odessa, Texas, for analysis of BTEX concentrations using the method described below. All samples were analyzed within approved holding times following the collection date.

The groundwater samples are analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030

## **5.3 Decontamination of Equipment**

Cleaning of drilling equipment is the responsibility of the drilling company. In general, the cleaning procedures consist of using high-pressure steam to wash the drilling and sampling equipment prior to drilling and prior to starting each boring. Prior to use, the sampling equipment is cleaned with Liqui-Nox detergent and rinsed with distilled water.

## **5.4 Laboratory Protocol**

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

## **6.0 SITE CLOSURE REQUEST**

Based on the remediation activities conducted at the site, Basin recommends Plains provide the NMOCD a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant site closure to the Scharb Station Overflow release site.

## **7.0 LIMITATIONS**

Basin Environmental Service Technologies, LLC, 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.

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

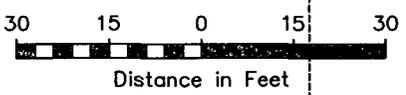
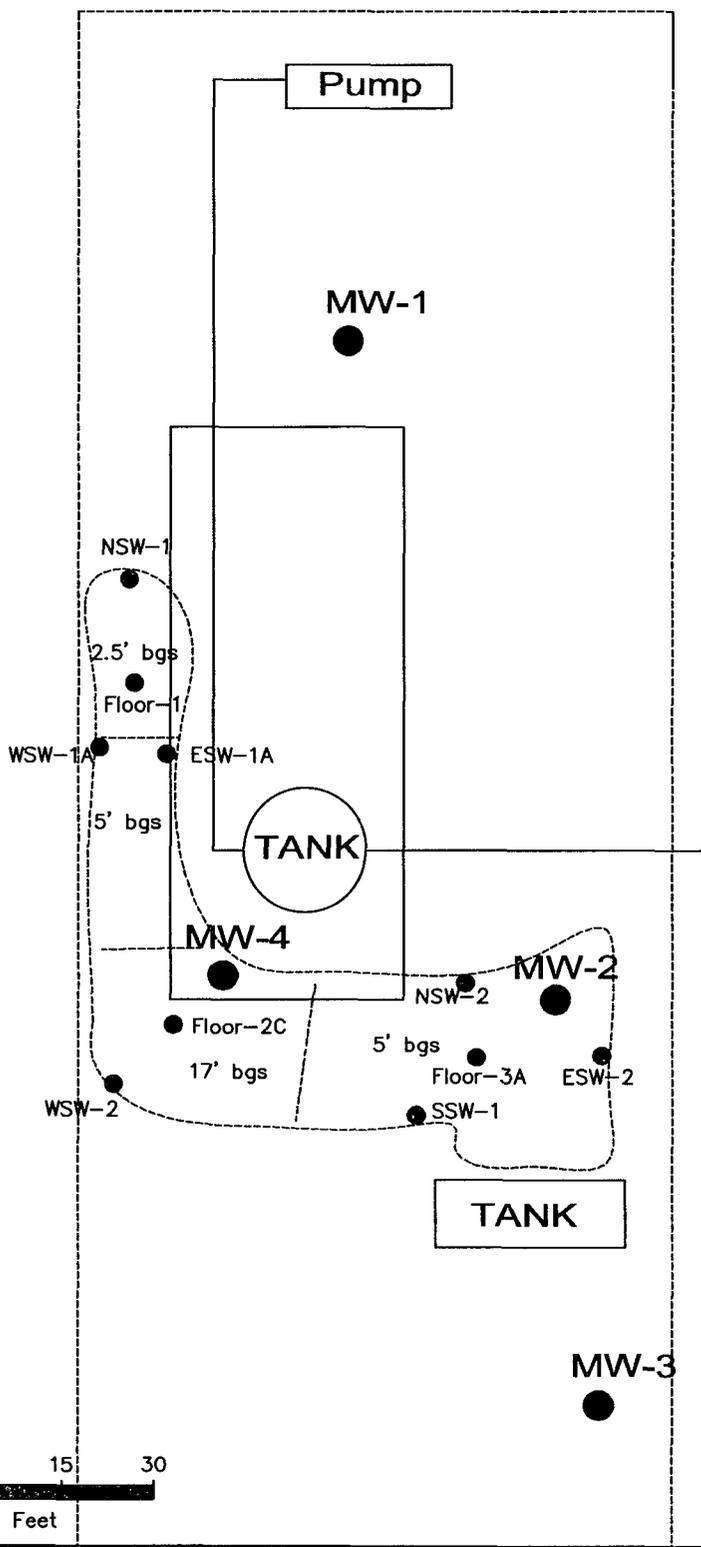
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Lovington, New Mexico 88260

## **Figures**





**LEGEND:**

- Excavation Extent
- Fire Wall
- Pipeline
- Sample Location
- Monitor Well Location

Figure 2  
Site Location Map  
Plains Marketing LP  
Scharb Station Overflow  
Lea County, NM  
NMOCD Ref # 1RP-1936

**Basin Environmental Service Technologies**

Scale: 1" = 50'	Drawn By: JWL	Checked By: CJB
October 18, 2010		

## **Tables**

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

PLAINS MARKETING, L.P.  
 SCHARB STATION OVERFLOW  
 LEA COUNTY, NEW MEXICO  
 SRS: 2008-210  
 NMOCD REFERENCE NO: 1RP-1936

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	
Floor @ 6'	6 Feet	08/12/08	In-Situ	16.94	123.100	73.88	1690	541.1	2,445.02	854	1,490	121	2,465
MW-1 @ 5'	5 Feet	03/09/10	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<17.5	<17.5	<17.5	<17.5
MW-1 @ 10'	10 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<17.2	<17.2	<17.2	<17.2
MW-1 @ 25'	25 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.5	<15.5	<15.5	<15.5
MW-1 @ 30'	30 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<16.6	<16.6	<16.6	<16.6
MW-2 @ Surface	Surface	3/9/2010	In-Situ	0.005	0.0039	0.0157	0.0213	0.0094	0.0553	138	286	25	449
MW-2 @ 5'	5 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	0.0047	0.0097	0.0083	0.0227	<16.6	37	<16.6	37
MW-2 @ 10'	10 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<19.1	<19.1	<19.1	<19.1
MW-2 @ 30'	30 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<18.1	<18.1	<18.1	<18.1
MW-3 @ 5'	5 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<16.3	<16.3	<16.3	<16.3
MW-3 @ 10'	10 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<16.7	<16.7	<16.7	<16.7
MW-3 @ 30'	30 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<16.0	<16.0	<16.0	<16.0
MW-4 @ Surface	Surface	3/9/2010	In-Situ	0.0024	0.007	0.1343	0.0099	0.0509	0.2045	995	8,020	575	9,590
MW-4 @ 5'	5 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	0.017	<0.0020	0.0088	0.0258	114	561	33.1	708.1
MW-4 @ 10'	10 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	22.1	336	17.2	375.3
MW-4 @ 15'	15 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.5	215	<15.5	215
MW-4 @ 20'	20 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.9	131	<15.9	131
MW-4 @ 25'	25 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.8	<15.8	<15.8	<15.8
MW-4 @ 30'	30 Feet	3/9/2010	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<16.7	41.7	<16.7	41.7
NSW-1	2 Feet	5/14/2010	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7
ESW-1	3 Feet	5/14/2010	Excavated	<0.5379	1.076	8.257	38.62	5.412	52.29	3,310	4,460	756	8,526
NSW-2	3.5 Feet	5/14/2010	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<93.3	521.0	114	635.0
ESW-2	3 Feet	5/14/2010	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	108.0	32	140.0
SSW-1	3 Feet	5/14/2010	In-Situ	<0.0012	<0.0023	<0.0012	0.0037	<0.0012	0.0037	<17.5	34.4	<17.5	34.4
WSW-2	3.5 Feet	5/14/2010	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	241	46.6	287.6
WSW-1	2 Feet	5/14/2010	Excavated	<0.0110	0.1384	0.3897	4.723	1.265	6.516	602	1,230	72.1	1,904.1
Floor-1	2.5 Feet	5/14/2010	In-Situ	<0.0011	<0.0022	<0.0011	0.0025	0.0015	0.004	<16.8	71	<16.8	71
Floor-2	4 Feet	5/14/2010	Excavated	<0.0234	0.1633	2.132	9.211	2.216	13.722	848	725	<87.4	1,573
Floor-3	3.5 Feet	5/14/2010	Excavated	<0.5533	1.107	3.591	14.56	2.462	20.61	1,280	2,800	299	4,379
WSW-1A	2 Feet	6/7/2010	In-Situ	-	-	-	-	-	-	<15.9	90	<15.9	90
ESW-1A	3 Feet	6/7/2010	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0020	<15.6	767	93	860
Floor -2A	6 Feet	6/7/2010	Excavated	-	-	-	-	-	-	561	1,580	108	2,249

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

PLAINS MARKETING, L.P.  
 SCHARB STATION OVERFLOW  
 LEA COUNTY, NEW MEXICO  
 SRS: 2008-210  
 NMOCD REFERENCE NO: 1RP-1936

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	
Floor-3A	5 Feet	6/7/2010	In-Situ	-	-	-	-	-	-	118	781	66	965
Floor-2B	10 Feet	6/21/2010	Excavated	-	-	-	-	-	-	385	1,600	99	2,084
Floor-2C	17 feet	8/4/2010	In-Situ	-	-	-	-	-	-	22	162	<16.5	184

TABLE 2

CONCENTRATIONS OF BENZENE, BTEX, CHLORIDES AND TOTAL DISSOLVED SOLIDS IN GROUNDWATER

PLAINS MARKETING, L.P.  
 SCHARB STATION OVERFLOW  
 LEA COUNTY, NEW MEXICO  
 PLAINS SRS NO. 2008-210  
 NMOCD REFERENCE NO: 1RP-1936

SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B, 5030						CHLORIDES (mg/L)	TDS (mg/L)
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)	TOTAL BTEX (mg/L)		
MW-1	03/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	24.4	476
MW-2	03/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	82.4	764
MW-3	03/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	157	802
MW-4	03/30/10	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	32.5	502
<b>NMOCD CRITERIA</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>TOTAL XYLENES 0.62</b>			<b>250</b>	<b>10,000</b>

TABLE 3

2010 GROUNDWATER ELEVATION DATA

PLAINSMARKETING, L.P.  
SCHARB STATION OVERFLOW  
LEA COUNTY, NEW MEXICO

PLAINS SRS NO:  
NMOCD REF NO: 1RP

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	03/30/10			37.19	0.00	
MW-2	03/30/10		-	35.62	0.00	
MW-3	03/30/10		-	35.75	0.00	
MW-4	03/30/10		-	35.11	0.00	

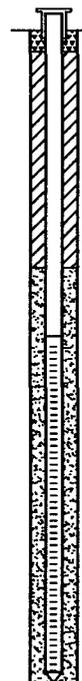
# **Appendices**

**Appendix A**  
**Soil Boring and Monitor Well Logs**

# Monitor Well MW-1

## Monitor Well MW-1

Drilling Depth	Soil Columns	PID Field Screen	Petroleum Odor	Petroleum Stain	Soil Description
0			Slight	None	0-4' - Sand with caliche nodules, slightly moist
5		4.9	None	None	4-14' - Caliche, tannish yellow, poorly sorted, dry
10		5.3	None	None	
15		3.4	None	None	14-25' - Sand, brown, very fine grained, moderate silt, moist
20		7.0	None	None	
25		8.4	None	None	25-45' - Sand, light-brown, very fine grained, moderate clay, moderate pebble sized clast, damp
30		5.1	None	None	
35			None	None	
40			None	None	
45			None	None	



Date Drilled March 9, 2010  
 Thickness of Bentonite Seal 18 Ft  
 Depth of Exploratory Boring 45 Ft bgs  
 Depth to Groundwater 30 Ft bgs  
 Ground Water Elevation \_\_\_\_\_

▼ Indicates the PSH level measured on \_\_\_\_\_  
 ▼ Indicates the groundwater level measured on March 9, 2010  
 ○ Indicates samples selected for Laboratory Analysis.  
 PID Head-space reading in ppm obtained with a photo-ionization detector.

- Grout Surface Seal
- Bentonite Pellet Seal
- Sand Pack
- Screen

### Notes

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Boring Log Details  
 Monitor Well MW-1  
 Scharb Station Overflow  
 Lea County, New Mexico  
 Plains Marketing

Basin Environmental Service Technologies

Prep By: JWL	Checked By: CJB
June 21, 2010	

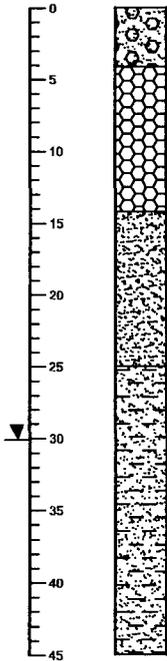
# Monitor Well MW-2

Drilling Depth  
Soil Columns  
PID Field Screen

Petroleum Odor  
Petroleum Stain

## Soil Description

## Monitor Well MW-2



(71)  
(12.6)  
21.6  
16.1  
25  
(13)

Moderate Moderate  
Slight Slight  
None None  
None None  
None None  
None None

0-5' - Sand with caliche nodules, slightly moist

5-14' - Caliche, tannish yellow, poorly sorted, dry

14-25' - Sand, brown, very fine grained, moderate silt, moist

25-45' - Sand, light-brown, very fine grained, moderate clay, damp



Date Drilled March 9, 2010  
Thickness of Bentonite Seal 18 Ft  
Depth of Exploratory Boring 45 Ft bgs  
Depth to Groundwater 30 Ft bgs  
Ground Water Elevation \_\_\_\_\_

▼ Indicates the PSH level measured on \_\_\_\_\_  
▼ Indicates the groundwater level measured on March 9, 2010  
○ Indicates samples selected for Laboratory Analysis.  
PID Head-space reading in ppm obtained with a photo-ionization detector.

- Grout Surface Seal
- Bentonite Pellet Seal
- Sand Pack
- Screen

### Notes

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Boring Log Details  
Monitor Well MW-2  
Scharb Station Overflow  
Lea County, New Mexico  
Plains Marketing

Basin Environmental Service Technologies

Prep By: .JWL  
Checked By: CJB  
June 21, 2010

# Monitor Well MW-3

## Monitor Well MW-3

Drilling Depth	Soil Columns	PID Field Screen	Petroleum Odor	Petroleum Stain	Soil Description
0		(39)	Slight	Moderate	0-3' - Sand with caliche nodules, slightly moist
5		(16)	Slight	Slight	3-13' - Caliche, tannish yellow, poorly sorted, dry
10		13	None	None	13-25' - Sand, brown, very fine grained, moderate silt, moist
15		5.7	None	None	25-45' - Sand, light-brown, very fine grained, moderate clay, damp
20		11.6	None	None	
25		(13.2)	None	None	
30		--	None	None	
35			None	None	
40			None	None	
45			None	None	

Date Drilled March 9, 2010  
 Thickness of Bentonite Seal 18 Ft  
 Depth of Exploratory Boring 45 Ft bgs  
 Depth to Groundwater 30 Ft bgs  
 Ground Water Elevation \_\_\_\_\_

▼ Indicates the PSH level measured on \_\_\_\_\_  
 ▼ Indicates the groundwater level measured on March 9, 2010  
 ○ Indicates samples selected for Laboratory Analysis.  
 PID Head-space reading in ppm obtained with a photo-ionization detector.

- Grout Surface Seal
- Bentonite Pellet Seal
- Sand Pack
- Screen

### Notes

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Boring Log Details  
 Monitor Well MW-3  
 Scharb Station Overflow  
 Lea County, New Mexico  
 Plains Marketing

Basin Environmental Service Technologies

Prep By: JWL  
 Checked By: CJB  
 June 21, 2010

# Monitor Well MW-4

## Monitor Well MW-4

Drilling Depth	Soil Columns	PID Field Screen	Petroleum Odor	Petroleum Stain	Soil Description	
0					0-4' - Sand with caliche nodules, slightly moist	
5		4.9	Strong	Heavy		
10		5.3	Slight	None	4-14' - Caliche, tannish yellow, poorly sorted, dry	
15		3.4	Slight	None		
20		7.0	Slight	None	14-25' - Sand, brown, very fine grained, moderate silt, moderate pebble sized clast, moist	
25		8.4	None	None		
30		5.1	Faint	None		
35					25-43' - Sand, light-brown, very fine grained, moderate clay, damp	
40						
45						

Date Drilled March 9, 2010  
 Thickness of Bentonite Seal 18 Ft  
 Depth of Exploratory Boring 43.5 Ft bgs  
 Depth to Groundwater 30 Ft bgs  
 Ground Water Elevation \_\_\_\_\_

▼ Indicates the PSH level measured on \_\_\_\_\_  
 ▼ Indicates the groundwater level measured on March 9, 2010  
 ○ Indicates samples selected for Laboratory Analysis.  
 PID Head-space reading in ppm obtained with a photo-ionization detector.

- Grout Surface Seal
- Bentonite Pellet Seal
- Sand Pack
- Screen

### Notes

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Boring Log Details  
 Monitor Well MW-4  
 Scharb Station Overflow  
 Lea County, New Mexico  
 Plains Marketing

Basin Environmental Service Technologies

Prep By: JWL	Checked By: CJB
June 21, 2010	

**Appendix B**  
**Analytical Reports**

# **Analytical Report 310165**

**for**

## **PLAINS ALL AMERICAN EH&S**

**Project Manager: Daniel Bryant**

**Scharb Station Overflow**

**2008-210**

**18-AUG-08**



**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:

Houston, TX T104704215 - Odessa/Midland, TX T104704215-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675  
Norcross(Atlanta), GA E87429

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

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



18-AUG-08

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

Reference: XENCO Report No: **310165**  
**Scharb Station Overflow**  
Project Address: Lea County, NM

**Daniel Bryant:**

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 310165. 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. 310165 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

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*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 310165**



**PLAINS ALL AMERICAN EH&S, Midland, TX**

Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Floor @ 6 Feet bgs	S	Aug-12-08 14:30		310165-001



# Certificate of Analysis Summary 310165

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Scharb Station Overflow



Project Id: 2008-210

Contact: Daniel Bryant

Project Location: Lea County, NM

Date Received in Lab: Thu Aug-14-08 04:45 pm

Report Date: 18-AUG-08

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	310165-001					
	<i>Field Id:</i>	Floor @ 6 Feet bgs					
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL					
	<i>Sampled:</i>	Aug-12-08 14:30					
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Aug-15-08 15:30					
	<i>Analyzed:</i>	Aug-16-08 01:40					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		16.94 2.871					
Toluene		123.1 5.743					
Ethylbenzene		73.88 2.871					
m,p-Xylenes		1690 5.743					
o-Xylene		541.1 2.871					
Total Xylenes		2231.1					
Total BTEX		2445.02					
<b>Percent Moisture</b>	<i>Extracted:</i>	Aug-15-08 17:00					
	<i>Analyzed:</i>						
	<i>Units/RL:</i>	% RL					
Percent Moisture		12.9					
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Aug-15-08 16:45					
	<i>Analyzed:</i>	Aug-16-08 20:08					
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		854 17.2					
C12-C28 Diesel Range Hydrocarbons		1490 17.2					
C28-C35 Oil Range Hydrocarbons		121 17.2					
Total TPH		2465					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron  
Odessa Laboratory Director



## 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(PQL) and above the SQL(MDL).
  - 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477



# Form 2 - Surrogate Recoveries



Project Name: Scharb Station Overflow

Work Order #: 310165

Project ID: 2008-210

Lab Batch #: 731303

Sample: 310165-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0542	0.0300	181	80-120	**
4-Bromofluorobenzene	0.0962	0.0300	321	80-120	**

Lab Batch #: 731303

Sample: 310166-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0318	0.0300	106	80-120	

Lab Batch #: 731303

Sample: 310166-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 731303

Sample: 514022-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 731303

Sample: 514022-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0350	0.0300	117	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

\*\* 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: Scharb Station Overflow

Work Order #: 310165

Project ID: 2008-210

Lab Batch #: 731303

Sample: 514022-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 731290

Sample: 310165-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	100	92	70-135	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 731290

Sample: 310167-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.4	100	78	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 731290

Sample: 310167-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.0	100	81	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 731290

Sample: 514017-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.4	100	80	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

\*\* 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: Scharb Station Overflow

Work Order #: 310165

Project ID: 2008-210

Lab Batch #: 731290

Sample: 514017-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 731290

Sample: 514017-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.5	100	80	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

\*\* 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: Scharb Station Overflow

Work Order #: 310165

Analyst: ASA

Date Prepared: 08/15/2008

Project ID: 2008-210

Date Analyzed: 08/15/2008

Lab Batch ID: 731303

Sample: 514022-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
<b>Analytes</b>											
Benzene	ND	0.1000	0.1124	112	0.1	0.0997	100	12	70-130	35	
Toluene	ND	0.1000	0.1126	113	0.1	0.0991	99	13	70-130	35	
Ethylbenzene	ND	0.1000	0.1200	120	0.1	0.1084	108	10	71-129	35	
m,p-Xylenes	ND	0.2000	0.2508	125	0.2	0.2234	112	12	70-135	35	
o-Xylene	ND	0.1000	0.1153	115	0.1	0.1020	102	12	71-133	35	

Analyst: IRO

Date Prepared: 08/15/2008

Date Analyzed: 08/16/2008

Lab Batch ID: 731290

Sample: 514017-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	844	84	1000	835	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	851	85	1000	839	84	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: Scharb Station Overflow

Work Order # 310165

Project ID: 2008-210

Lab Batch ID: 731303

QC- Sample ID: 310166-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/16/2008

Date Prepared: 08/15/2008

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
	Benzene	ND	0.1062	0.0828	78	0.1062	0.0873	82	5	70-130	35
Toluene	ND	0.1062	0.0810	76	0.1062	0.0844	79	4	70-130	35	
Ethylbenzene	ND	0.1062	0.0855	81	0.1062	0.0905	85	5	71-129	35	
m,p-Xylenes	ND	0.2124	0.1768	83	0.2124	0.1863	88	6	70-135	35	
o-Xylene	ND	0.1062	0.0781	74	0.1062	0.0832	78	5	71-133	35	

Lab Batch ID: 731290

QC- Sample ID: 310167-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/17/2008

Date Prepared: 08/15/2008

Analyst: IRO

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	ND	1160	915	79	1160	960	83	5	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1160	906	78	1160	954	82	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



Project Name: Scharb Station Overflow

Work Order # 310165

Lab Batch #: 731187

Project ID: 2008-210

Date Analyzed: 08/15/2008

Date Prepared: 08/15/2008

Analyst: JLG

QC- Sample ID: 310167-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

## SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	10.1	9.53	6	20	

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



**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. Plains  
 Date/ Time: 8-14-08 16:45  
 Lab ID #: 310165  
 Initials: oil

**Sample Receipt Checklist**

			Client Initials		
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	<u>3.5</u> °C	
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present	
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#11	Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	No		
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below	
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below	
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> 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 365219

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant**

**Scharb Station Overflow**

**2008-210**

**17-MAR-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (AAL11), 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: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



17-MAR-10

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

Reference: XENCO Report No: **365219**  
**Scharb Station Overflow**  
Project Address: Lea County, NM

**Daniel Bryant:**

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 365219. 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. 365219 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

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**Sample Cross Reference 365219**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-3 @ 5'	S	Mar-09-10 09:00		365219-001
MW-3 @ 10'	S	Mar-09-10 09:10		365219-002
MW-3 @ 30'	S	Mar-09-10 09:25		365219-003
MW-2 @ Surface	S	Mar-09-10 10:40		365219-004
MW-2 @ 5'	S	Mar-09-10 10:50		365219-005
MW-2 @ 10'	S	Mar-09-10 11:00		365219-006
MW-2 @ 30'	S	Mar-09-10 11:40		365219-007
MW-1 @ 5'	S	Mar-09-10 13:00		365219-008
MW-1 @ 10'	S	Mar-09-10 13:10		365219-009
MW-1 @ 25'	S	Mar-09-10 13:45		365219-010
MW-1 @ 30'	S	Mar-09-10 14:00		365219-011
MW-4 Surface	S	Mar-09-10 15:30		365219-012
MW-4 @ 5'	S	Mar-09-10 15:40		365219-013
MW-4 @ 10'	S	Mar-09-10 15:50		365219-014
MW-4 @ 15'	S	Mar-09-10 16:10		365219-015
MW-4 @ 20'	S	Mar-09-10 16:30		365219-016
MW-4 @ 25'	S	Mar-09-10 16:50		365219-017
MW-4 @ 30'	S	Mar-09-10 17:10		365219-018



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Scharb Station Overflow*



*Project ID: 2008-210*

*Work Order Number: 365219*

*Report Date: 17-MAR-10*

*Date Received: 03/11/2010*

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**Sample receipt non conformances and Comments:**

None

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**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-798145 TPH by SW8015 Mod

None

Batch: LBA-798281 BTEX by EPA 8021

SW8021BM

Batch 798281, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 365219-004,365219-012,365219-013,365219-005.

Batch: LBA-798453 Percent Moisture

None



# Certificate of Analysis Summary 365219

## PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2008-210  
**Contact:** Daniel Bryant  
**Project Location:** Lea County, NM

**Project Name:** Scharb Station Overflow

**Date Received in Lab:** Thu Mar-11-10 07:40 am

**Report Date:** 17-MAR-10

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	365219-001	365219-002	365219-003	365219-004	365219-005	365219-006
	<i>Field Id:</i>	MW-3 @ 5'	MW-3 @ 10'	MW-3 @ 30'	MW-2 @ Surface	MW-2 @ 5'	MW-2 @ 10'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-09-10 09:00	Mar-09-10 09:10	Mar-09-10 09:25	Mar-09-10 10:40	Mar-09-10 10:50	Mar-09-10 11:00
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>	Mar-13-10 07:00					
	<i>Analyzed:</i>	Mar-13-10 09:28	Mar-13-10 09:50	Mar-13-10 10:13	Mar-13-10 10:35	Mar-13-10 10:57	Mar-13-10 11:20
	<i>Units/RL:</i>	mg/kg RL					
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	0.0050 0.0010	ND 0.0010	ND 0.0010
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	0.0039 0.0020	ND 0.0020	ND 0.0020
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	0.0157 0.0010	0.0047 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	0.0213 0.0020	0.0097 0.0020	ND 0.0020
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	0.0094 0.0010	0.0083 0.0010	ND 0.0010
Xylenes, Total		ND 0.0010	ND 0.0010	ND 0.0010	0.0307 0.0010	0.0180 0.0010	ND 0.0010
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	0.0553 0.0010	0.0227 0.0010	ND 0.0010
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Mar-16-10 15:16					
	<i>Units/RL:</i>	% RL					
Percent Moisture		8.30 1.00	10.7 1.00	6.22 1.00	15.2 1.00	9.64 1.00	21.7 1.00
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Mar-15-10 15:00					
	<i>Analyzed:</i>	Mar-15-10 17:51	Mar-15-10 18:18	Mar-15-10 18:45	Mar-15-10 19:11	Mar-15-10 19:38	Mar-15-10 20:04
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 16.3	ND 16.7	ND 16.0	138 17.7	ND 16.6	ND 19.1
C12-C28 Diesel Range Hydrocarbons		ND 16.3	ND 16.7	ND 16.0	286 17.7	37.0 16.6	ND 19.1
C28-C35 Oil Range Hydrocarbons		ND 16.3	ND 16.7	ND 16.0	25.4 17.7	ND 16.6	ND 19.1
Total TPH		ND 16.3	ND 16.7	ND 16.0	449 17.7	37.0 16.6	ND 19.1

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**Brent Barron, II**  
 Odessa Laboratory Manager



# Certificate of Analysis Summary 365219

## PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2008-210

**Contact:** Daniel Bryant

**Project Location:** Lea County, NM

**Project Name:** Scharb Station Overflow

**Date Received in Lab:** Thu Mar-11-10 07:40 am

**Report Date:** 17-MAR-10

**Project Manager:** Brent Barron, II

Analysis Requested	Lab Id:	365219-007	365219-008	365219-009	365219-010	365219-011	365219-012
	Field Id:	MW-2 @ 30'	MW-1 @ 5'	MW-1 @ 10'	MW-1 @ 25'	MW-1 @ 30'	MW-4 Surface
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Mar-09-10 11:40	Mar-09-10 13:00	Mar-09-10 13:10	Mar-09-10 13:45	Mar-09-10 14:00	Mar-09-10 15:30
<b>BTEX by EPA 8021</b>	Extracted:	Mar-13-10 07:00					
	Analyzed:	Mar-13-10 11:42	Mar-13-10 12:04	Mar-13-10 12:27	Mar-13-10 12:50	Mar-13-10 14:20	Mar-13-10 16:57
	Units/RL:	mg/kg RL					
Benzene		ND 0.0010	0.0024 0.0010				
Toluene		ND 0.0020	0.0070 0.0020				
Ethylbenzene		ND 0.0010	0.1343 0.0010				
m,p-Xylenes		ND 0.0020	0.0099 0.0020				
o-Xylene		ND 0.0010	0.0509 0.0010				
Xylenes, Total		ND 0.0010	0.0608 0.0010				
Total BTEX		ND 0.0010	0.2045 0.0010				
<b>Percent Moisture</b>	Extracted:						
	Analyzed:	Mar-16-10 15:16					
	Units/RL:	% RL					
Percent Moisture		16.9 1.00	14.6 1.00	13.2 1.00	3.82 1.00	10.0 1.00	6.61 1.00
<b>TPH by SW8015 Mod</b>	Extracted:	Mar-15-10 15:00					
	Analyzed:	Mar-15-10 20:31	Mar-15-10 20:58	Mar-15-10 21:51	Mar-15-10 22:18	Mar-15-10 22:44	Mar-16-10 23:11
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 18.1	ND 17.5	ND 17.2	ND 15.5	ND 16.6	995 161
C12-C28 Diesel Range Hydrocarbons		ND 18.1	ND 17.5	ND 17.2	ND 15.5	ND 16.6	8020 161
C28-C35 Oil Range Hydrocarbons		ND 18.1	ND 17.5	ND 17.2	ND 15.5	ND 16.6	575 161
Total TPH		ND 18.1	ND 17.5	ND 17.2	ND 15.5	ND 16.6	9590 161

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Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 365219

## PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2008-210

**Contact:** Daniel Bryant

**Project Location:** Lea County, NM

**Project Name:** Scharb Station Overflow

**Date Received in Lab:** Thu Mar-11-10 07:40 am

**Report Date:** 17-MAR-10

**Project Manager:** Brent Barron, II

Analysis Requested	Lab Id:	365219-013	365219-014	365219-015	365219-016	365219-017	365219-018
	Field Id:	MW-4 @ 5'	MW-4 @ 10'	MW-4 @ 15'	MW-4 @ 20'	MW-4 @ 25'	MW-4 @ 30'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Mar-09-10 15:40	Mar-09-10 15:50	Mar-09-10 16:10	Mar-09-10 16:30	Mar-09-10 16:50	Mar-09-10 17:10
<b>BTEX by EPA 8021</b>	Extracted:	Mar-13-10 07:00					
	Analyzed:	Mar-13-10 14:42	Mar-13-10 15:05	Mar-13-10 16:34	Mar-13-10 15:27	Mar-13-10 15:49	Mar-13-10 16:12
	Units/RL:	mg/kg RL					
Benzene		ND 0.0010					
Toluene		ND 0.0020					
Ethylbenzene		0.0170 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes		ND 0.0020					
o-Xylene		0.0088 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Xylenes, Total		0.0088 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX		0.0258 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
<b>Percent Moisture</b>	Extracted:						
	Analyzed:	Mar-16-10 15:16					
	Units/RL:	% RL					
Percent Moisture		9.56 1.00	7.03 1.00	3.70 1.00	5.35 1.00	5.44 1.00	10.1 1.00
<b>TPH by SW8015 Mod</b>	Extracted:	Mar-15-10 15:00					
	Analyzed:	Mar-16-10 23:37	Mar-16-10 00:04	Mar-16-10 00:30	Mar-16-10 00:57	Mar-16-10 01:24	Mar-16-10 01:51
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		114 16.5	22.1 16.1	ND 15.5	ND 15.9	ND 15.8	ND 16.7
C12-C28 Diesel Range Hydrocarbons		561 16.5	336 16.1	215 15.5	131 15.9	ND 15.8	41.7 16.7
C28-C35 Oil Range Hydrocarbons		33.1 16.5	17.2 16.1	ND 15.5	ND 15.9	ND 15.8	ND 16.7
Total TPH		708 16.5	375 16.1	215 15.5	131 15.9	ND 15.8	41.7 16.7

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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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.

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# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798281

Sample: 558179-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg		Date Analyzed: 03/13/10 07:34		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0306	0.0300	102	80-120	

Lab Batch #: 798281

Sample: 558179-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg		Date Analyzed: 03/13/10 07:56		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0.0297	0.0300	99	80-120	

Lab Batch #: 798281

Sample: 558179-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg		Date Analyzed: 03/13/10 09:05		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0248	0.0300	83	80-120	
4-Bromofluorobenzene		0.0312	0.0300	104	80-120	

Lab Batch #: 798281

Sample: 365219-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg		Date Analyzed: 03/13/10 09:28		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0246	0.0300	82	80-120	
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	

Lab Batch #: 798281

Sample: 365219-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg		Date Analyzed: 03/13/10 09:50		SURROGATE RECOVERY STUDY		
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0243	0.0300	81	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.



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798281

Sample: 365219-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 10:13

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0248	0.0300	83	80-120	
4-Bromofluorobenzenc	0.0320	0.0300	107	80-120	

Lab Batch #: 798281

Sample: 365219-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 10:35

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0201	0.0300	67	80-120	*
4-Bromofluorobenzenc	0.0324	0.0300	108	80-120	

Lab Batch #: 798281

Sample: 365219-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 10:57

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0226	0.0300	75	80-120	*
4-Bromofluorobenzenc	0.0358	0.0300	119	80-120	

Lab Batch #: 798281

Sample: 365219-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 11:20

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0246	0.0300	82	80-120	
4-Bromofluorobenzenc	0.0323	0.0300	108	80-120	

Lab Batch #: 798281

Sample: 365219-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 11:42

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0241	0.0300	80	80-120	
4-Bromofluorobenzenc	0.0298	0.0300	99	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: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798281

Sample: 365219-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 12:04

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 798281

Sample: 365219-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 12:27

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 798281

Sample: 365219-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 12:50

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 798281

Sample: 365219-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 14:20

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 798281

Sample: 365219-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 14:42

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0358	0.0300	119	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: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798281

Sample: 365219-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 15:05

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0243	0.0300	81	80-120	
4-Bromofluorobenzenc	0.0313	0.0300	104	80-120	

Lab Batch #: 798281

Sample: 365219-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 15:27

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0249	0.0300	83	80-120	
4-Bromofluorobenzenc	0.0354	0.0300	118	80-120	

Lab Batch #: 798281

Sample: 365219-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 15:49

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0249	0.0300	83	80-120	
4-Bromofluorobenzenc	0.0332	0.0300	111	80-120	

Lab Batch #: 798281

Sample: 365219-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 16:12

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0251	0.0300	84	80-120	
4-Bromofluorobenzenc	0.0310	0.0300	103	80-120	

Lab Batch #: 798281

Sample: 365219-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 16:34

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>Analytes</b>					
1,4-Difluorobenzenc	0.0246	0.0300	82	80-120	
4-Bromofluorobenzenc	0.0335	0.0300	112	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: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798281

Sample: 365219-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 16:57

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0178	0.0300	59	80-120	*
4-Bromofluorobenzene	0.0358	0.0300	119	80-120	

Lab Batch #: 798281

Sample: 365219-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 17:19

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 798281

Sample: 365219-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/13/10 17:42

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 798145

Sample: 558095-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/15/10 15:37

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	65.5	50.1	131	70-135	
o-Terphenyl	79.4	100	79	70-135	

Lab Batch #: 798145

Sample: 558095-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03/15/10 16:04

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	62.4	49.9	125	70-135	
o-Terphenyl	76.9	99.7	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.



# Form 2 - Surrogate Recoveries

**Project Name: Scharb Station Overflow**

**Work Orders :** 365219,

**Project ID:** 2008-210

**Lab Batch #:** 798145

**Sample:** 558095-1-BLK / BLK

**Batch:** 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 03/15/10 16:30	SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	43.0	50.2	86	70-135	
o-Terphenyl	83.1	100	83	70-135	

**Lab Batch #:** 798145

**Sample:** 365219-001 / SMP

**Batch:** 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 03/15/10 17:51	SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	43.6	50.0	87	70-135	
o-Terphenyl	84.2	99.9	84	70-135	

**Lab Batch #:** 798145

**Sample:** 365219-002 / SMP

**Batch:** 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 03/15/10 18:18	SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	41.3	49.9	83	70-135	
o-Terphenyl	78.2	99.7	78	70-135	

**Lab Batch #:** 798145

**Sample:** 365219-003 / SMP

**Batch:** 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 03/15/10 18:45	SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	44.2	49.9	89	70-135	
o-Terphenyl	84.6	99.8	85	70-135	

**Lab Batch #:** 798145

**Sample:** 365219-004 / SMP

**Batch:** 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 03/15/10 19:11	SURROGATE RECOVERY STUDY			
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	44.9	49.9	90	70-135	
o-Terphenyl	81.3	99.8	81	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: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798145

Sample: 365219-005 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 03/15/10 19:38	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by SW8015 Mod</b>						
<b>Analytes</b>						
1-Chlorooctane		41.0	50.1	82	70-135	
o-Terphenyl		77.1	100	77	70-135	

Lab Batch #: 798145

Sample: 365219-006 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 03/15/10 20:04	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by SW8015 Mod</b>						
<b>Analytes</b>						
1-Chlorooctane		44.9	49.9	90	70-135	
o-Terphenyl		87.6	99.8	88	70-135	

Lab Batch #: 798145

Sample: 365219-007 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 03/15/10 20:31	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by SW8015 Mod</b>						
<b>Analytes</b>						
1-Chlorooctane		49.1	50.0	98	70-135	
o-Terphenyl		96.8	100	97	70-135	

Lab Batch #: 798145

Sample: 365219-008 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 03/15/10 20:58	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by SW8015 Mod</b>						
<b>Analytes</b>						
1-Chlorooctane		44.6	49.9	89	70-135	
o-Terphenyl		85.7	99.8	86	70-135	

Lab Batch #: 798145

Sample: 365219-009 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 03/15/10 21:51	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by SW8015 Mod</b>						
<b>Analytes</b>						
1-Chlorooctane		42.9	49.8	86	70-135	
o-Terphenyl		81.7	99.5	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.



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798145

Sample: 365219-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/15/10 22:18

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	43.4	49.8	87	70-135	
o-Terphenyl	83.6	99.5	84	70-135	

Lab Batch #: 798145

Sample: 365219-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/15/10 22:44

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	44.0	49.9	88	70-135	
o-Terphenyl	84.2	99.7	84	70-135	

Lab Batch #: 798145

Sample: 365219-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 00:04

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	43.8	49.8	88	70-135	
o-Terphenyl	82.9	99.5	83	70-135	

Lab Batch #: 798145

Sample: 365219-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 00:30

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	43.8	49.9	88	70-135	
o-Terphenyl	83.3	99.7	84	70-135	

Lab Batch #: 798145

Sample: 365219-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 00:57

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	42.6	50.1	85	70-135	
o-Terphenyl	80.8	100	81	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: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798145

Sample: 365219-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 01:24

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	42.7	49.9	86	70-135	
o-Terphenyl	82.3	99.8	82	70-135	

Lab Batch #: 798145

Sample: 365219-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 01:51

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	45.7	50.2	91	70-135	
o-Terphenyl	91.6	100	92	70-135	

Lab Batch #: 798145

Sample: 365219-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 02:18

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	65.2	49.9	131	70-135	
o-Terphenyl	83.5	99.7	84	70-135	

Lab Batch #: 798145

Sample: 365219-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 02:44

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	63.1	49.9	126	70-135	
o-Terphenyl	80.9	99.8	81	70-135	

Lab Batch #: 798145

Sample: 365219-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 23:11

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	52.4	50.0	105	70-135	
o-Terphenyl	94.7	100	95	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: Scharb Station Overflow

Work Orders : 365219,

Project ID: 2008-210

Lab Batch #: 798145

Sample: 365219-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/16/10 23:37

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	48.4	49.8	97	70-135	
o-Tcrphenyl	90.8	99.5	91	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: Scharb Station Overflow**

**Work Order #: 365219**

**Analyst: ASA**

**Date Prepared: 03/13/2010**

**Project ID: 2008-210**

**Date Analyzed: 03/13/2010**

**Lab Batch ID: 798281**

**Sample: 558179-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>BTEX by EPA 8021</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.1000	0.0917	92	0.1	0.0983	98	7	70-130	35	
Toluene	ND	0.1000	0.0874	87	0.1	0.0929	93	6	70-130	35	
Ethylbenzene	ND	0.1000	0.0897	90	0.1	0.0950	95	6	71-129	35	
m,p-Xylenes	ND	0.2000	0.1722	86	0.2	0.1816	91	5	70-135	35	
o-Xylene	ND	0.1000	0.0854	85	0.1	0.0902	90	5	71-133	35	

**Analyst: BEV**

**Date Prepared: 03/15/2010**

**Date Analyzed: 03/15/2010**

**Lab Batch ID: 798145**

**Sample: 558095-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>TPH by SW8015 Mod</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1110	111	997	1050	105	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	862	86	997	884	89	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



# Form 3 - MS / MSD Recoveries



Project Name: Scharb Station Overflow

Work Order #: 365219

Project ID: 2008-210

Lab Batch ID: 798281

QC- Sample ID: 365219-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03/13/2010

Date Prepared: 03/13/2010

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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
	Benzene	ND	0.0990	0.0782	79	0.0990	0.0755	76	4	70-130	35
Toluene	ND	0.0990	0.0753	76	0.0990	0.0719	73	5	70-130	35	
Ethylbenzene	ND	0.0990	0.0771	78	0.0990	0.0736	74	5	71-129	35	
m,p-Xylenes	ND	0.1980	0.1486	75	0.1980	0.1428	72	4	70-135	35	
o-Xylene	ND	0.0990	0.0732	74	0.0990	0.0700	71	4	71-133	35	

Lab Batch ID: 798145

QC- Sample ID: 365219-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03/16/2010

Date Prepared: 03/15/2010

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	ND	1090	1170	107	1090	1130	104	3	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1090	960	88	1090	981	90	2	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



**Project Name: Scharb Station Overflow**

**Work Order #: 365219**

**Lab Batch #: 798453**

**Project ID: 2008-210**

**Date Analyzed: 03/16/2010**

**Date Prepared: 03/16/2010**

**Analyst: JLG**

**QC- Sample ID: 365219-001 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	8.30	8.37	1	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

a XENCO Laboratory Company

## 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 2082

Project Name: Scharb Station Overflow

Company Name: Basin Consulting

Project #: 2008-210

Company Address: PO Box 381

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA-D. Bryant

Telephone No: 575-605-7210

Fax No: (575) 396-1429

Report Format:  Standard  TRRP  NPDES

Sampler Signature: Camille Bryant

e-mail: cibryant@basin-consulting.com

(lab use only)		Analyze For:																																
ORDER #:	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filled	Total # of Containers	Preservation & # of Containers					Matrix	TCLP:	TOTAL:	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs																		
LAB # (lab use only)								Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	None	Other (Specify)	DW - Drinking Water SL - Sludge	GW - Groundwater S - Soil/Soil	NP - Non-Portable Specify (m)	TPH: 418.1	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 802/150/30 or BTEX 8260	PCB	NORM.	CHLORIDES	Standard TAT			
11	MW-1 @ 30'			9-Mar-10	1400	1	1	X								SOIL	X																	
12	MW-4 Surface			9-Mar-10	1530	1	1	X								SOIL	X																	
13	MW-4 @ 5'			9-Mar-10	1540	1	1	X								SOIL	X																	
14	MW-4 @ 10'			9-Mar-10	1550	1	1	X								SOIL	X																	
15	MW-4 @ 15'			9-Mar-10	1610	1	1	X								SOIL	X																	
16	MW-4 @ 20'			9-Mar-10	1630	1	1	X								SOIL	X																	
17	MW-4 @ 25'			9-Mar-10	1650	1	1	X								SOIL	X																	
18	MW-4 @ 30'			9-Mar-10	1710	1	1	X								SOIL	X																	

Special Instructions:						Laboratory Comments:					
Relinquished by: <u>Camille Bryant</u> Date: <u>3/10/10</u> Time: <u>1700</u>						Sample Containers Intact? <u>Y</u> <u>N</u>					
Relinquished by: <u>[Signature]</u> Date: <u>3/11/10</u> Time: <u>0640</u>						VOCs Free of Headspace? <u>Y</u> <u>N</u>					
Relinquished by: <u>[Signature]</u> Date: <u>3/10/10</u> Time: <u>0740</u>						Labels on container(s) <u>Y</u> <u>N</u>					
						Custody seals on container(s) <u>Y</u> <u>N</u>					
						Quality seals on container(s) <u>Y</u> <u>N</u>					
						Sample Hand Delivered <u>Y</u> <u>N</u>					
						by Sampler/Client Rep. ? <u>Y</u> <u>N</u>					
						by Courier? <u>UPS</u> <u>DHL</u> <u>FedEx</u> <u>Lone Star</u>					
						Temperature Upon Receipt: <u>1.1</u> °C					

## Environmental Lab of Texas

### Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains  
 Date/ Time: 3.11.10 0740  
 Lab ID #: 365219  
 Initials: BB / AL

#### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	1.1 °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

# Analytical Report 373107

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry**

**Scharb Station Overflow**

**2008-210**

**24-MAY-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



24-MAY-10

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

Reference: XENCO Report No: **373107**  
**Scharb Station Overflow**  
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 373107. 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. 373107 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

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.*

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



**Sample Cross Reference 373107**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
NSW-1	S	May-14-10 14:00	2 ft	373107-001
ESW-1	S	May-14-10 14:05	3 ft	373107-002
NSW-2	S	May-14-10 14:10	3.5 ft	373107-003
ESW-2	S	May-14-10 14:15	3 ft	373107-004
SSW-1	S	May-14-10 14:20	3 ft	373107-005
WSW-2	S	May-14-10 14:25	3.5 ft	373107-006
WSW-1	S	May-14-10 14:30	2 ft	373107-007
Floor-1	S	May-14-10 14:35	2.5 ft	373107-008
Floor-2	S	May-14-10 14:40	4 ft	373107-009
Floor-3	S	May-14-10 14:45	3.5 ft	373107-010



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Scharb Station Overflow*



*Project ID: 2008-210*  
*Work Order Number: 373107*

*Report Date: 24-MAY-10*  
*Date Received: 05/15/2010*

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### **Sample receipt non conformances and Comments:**

*None*

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### **Sample receipt Non Conformances and Comments per Sample:**

*None*

#### **Analytical Non Conformances and Comments:**

*Batch: LBA-806913 Percent Moisture*  
*None*

*Batch: LBA-807128 TPH by SW8015 Mod*  
*None*

*Batch: LBA-807733 BTEX by EPA 8021*  
*SW8021BM*

*Batch 807733, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.*  
*Samples affected are: 373107-001, -003, -005, -006, -008, -004.*  
*The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits*

*SW8021BM*

*Batch 807733, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis*  
*Samples affected are: 373107-005,373107-008,373107-006.*

*Batch: LBA-807744 BTEX by EPA 8021*  
*SW8021BM*

*Batch 807744, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis*  
*Samples affected are: 372881-006 D,373107-007,373107-002*  
*4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis*  
*Samples affected are: 372881-006 D,373107-007,73107-002.*  
*Samples 373107-009 and -010 were not reanalyzed due to similar matrix interferences with the surrogates noted in other samples from this site.*



# Certificate of Analysis Summary 373107

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2008-210

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Scharb Station Overflow

Date Received in Lab: Sat May-15-10 11:15 am

Report Date: 24-MAY-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	373107-001	373107-002	373107-003	373107-004	373107-005	373107-006
	<i>Field Id:</i>	NSW-1	ESW-1	NSW-2	ESW-2	SSW-1	WSW-2
	<i>Depth:</i>	2- ft	3- ft	3.5- ft	3- ft	3- ft	3.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-14-10 14:00	May-14-10 14:05	May-14-10 14:10	May-14-10 14:15	May-14-10 14:20	May-14-10 14:25
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>	May-19-10 14:58	May-21-10 11:00	May-19-10 14:58	May-19-10 14:58	May-19-10 14:58	May-19-10 14:58
	<i>Analyzed:</i>	May-20-10 18:29	May-21-10 15:49	May-20-10 18:51	May-20-10 19:14	May-20-10 21:06	May-20-10 21:28
	<i>Units/RL:</i>	mg/kg RL					
Benzene		ND 0.0011	ND 0.5379	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0011
Toluene		ND 0.0022	ND 1.076	ND 0.0025	ND 0.0022	ND 0.0023	ND 0.0023
Ethylbenzene		ND 0.0011	8.257 0.5379	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0011
m,p-Xylenes		ND 0.0022	38.62 1.076	ND 0.0025	ND 0.0022	0.0037 0.0023	ND 0.0023
o-Xylene		ND 0.0011	5.412 0.5379	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0011
Xylenes, Total		ND 0.0011	44.03 0.5379	ND 0.0012	ND 0.0011	0.0037 0.0012	ND 0.0011
Total BTEX		ND 0.0011	52.29 0.5379	ND 0.0012	ND 0.0011	0.0037 0.0012	ND 0.0011
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-17-10 17:00					
	<i>Units/RL:</i>	% RL					
Percent Moisture		9.63 1.00	7.05 1.00	19.2 1.00	10.4 1.00	14.3 1.00	11.6 1.00
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	May-17-10 14:00					
	<i>Analyzed:</i>	May-18-10 10:07	May-18-10 10:55	May-18-10 11:24	May-18-10 11:53	May-18-10 12:23	May-18-10 12:53
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 16.7	3310 162	ND 93.3	ND 16.7	ND 17.5	ND 16.9
C12-C28 Diesel Range Hydrocarbons		ND 16.7	4460 162	521 93.3	108 16.7	34.4 17.5	241 16.9
C28-C35 Oil Range Hydrocarbons		ND 16.7	756 162	114 93.3	32.0 16.7	ND 17.5	46.6 16.9
Total TPH		ND 16.7	8526 162	635 93.3	140 16.7	34.4 17.5	288 16.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

  
Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 373107

## PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Id:** 2008-210

**Contact:** Jason Henry

**Project Location:** Lea County, NM

**Project Name:** Scharb Station Overflow

**Date Received in Lab:** Sat May-15-10 11:15 am

**Report Date:** 24-MAY-10

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	373107-007	373107-008	373107-009	373107-010		
	<i>Field Id:</i>	WSW-1	Floor-1	Floor-2	Floor-3		
	<i>Depth:</i>	2- ft	2.5- ft	4- ft	3.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	May-14-10 14:30	May-14-10 14:35	May-14-10 14:40	May-14-10 14:45		
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>	May-21-10 11:00	May-19-10 14:58	May-21-10 11:00	May-21-10 11:00		
	<i>Analyzed:</i>	May-21-10 16:12	May-20-10 22:13	May-21-10 16:35	May-21-10 16:57		
	<i>Units/RL:</i>	mg/kg    RL	mg/kg    RL	mg/kg    RL	mg/kg    RL		
Benzene		ND 0.0110	ND 0.0011	ND 0.0234	ND 0.5533		
Toluene		0.1384 0.0220	ND 0.0022	0.1633 0.0467	ND 1.107		
Ethylbenzene		0.3897 0.0110	ND 0.0011	2.132 0.0234	3.591 0.5533		
m,p-Xylenes		4.723 0.0220	0.0025 0.0022	9.211 0.0467	14.56 1.107		
o-Xylene		1.265 0.0110	0.0015 0.0011	2.216 0.0234	2.462 0.5533		
Xylenes, Total		5.988 0.0110	0.0040 0.0011	11.427 0.0234	17.02 0.5533		
Total BTEX		6.516 0.0110	0.0040 0.0011	13.722 0.0234	20.61 0.5533		
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-17-10 17:00	May-17-10 17:00	May-17-10 17:00	May-17-10 17:00		
	<i>Units/RL:</i>	%    RL	%    RL	%    RL	%    RL		
Percent Moisture		8.98 1.00	11.1 1.00	14.4 1.00	9.63 1.00		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	May-17-10 14:00	May-17-10 14:00	May-17-10 14:00	May-17-10 14:00		
	<i>Analyzed:</i>	May-18-10 13:23	May-18-10 15:02	May-18-10 15:31	May-18-10 16:01		
	<i>Units/RL:</i>	mg/kg    RL	mg/kg    RL	mg/kg    RL	mg/kg    RL		
C6-C12 Gasoline Range Hydrocarbons		602 16.5	ND 16.8	848 87.4	1280 82.9		
C12-C28 Diesel Range Hydrocarbons		1230 16.5	71.0 16.8	725 87.4	2800 82.9		
C28-C35 Oil Range Hydrocarbons		72.1 16.5	ND 16.8	ND 87.4	299 82.9		
Total TPH		1904 16.5	71.0 16.8	1573 87.4	4379 82.9		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

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.

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# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 373107,

Project ID: 2008-210

Lab Batch #: 807733

Sample: 563967-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/20/10 14:22

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 807733

Sample: 563967-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/20/10 14:45

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0306	0.0300	102	80-120	

Lab Batch #: 807733

Sample: 563967-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/20/10 15:52

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 807733

Sample: 373107-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/20/10 18:29

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 807733

Sample: 373107-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/20/10 18:51

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	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: Scharb Station Overflow

Work Orders : 373107,

Project ID: 2008-210

Lab Batch #: 807733

Sample: 373107-004 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 05/20/10 19:14	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>BTEX by EPA 8021</b>						
<b>Analytes</b>						
1,4-Difluorobenzene		0.0243	0.0300	81	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	

Lab Batch #: 807733

Sample: 373107-005 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 05/20/10 21:06	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>BTEX by EPA 8021</b>						
<b>Analytes</b>						
1,4-Difluorobenzene		0.0230	0.0300	77	80-120	*
4-Bromofluorobenzene		0.0288	0.0300	96	80-120	

Lab Batch #: 807733

Sample: 373107-006 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 05/20/10 21:28	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>BTEX by EPA 8021</b>						
<b>Analytes</b>						
1,4-Difluorobenzene		0.0235	0.0300	78	80-120	*
4-Bromofluorobenzene		0.0279	0.0300	93	80-120	

Lab Batch #: 807733

Sample: 373107-008 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 05/20/10 22:13	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>BTEX by EPA 8021</b>						
<b>Analytes</b>						
1,4-Difluorobenzene		0.0232	0.0300	77	80-120	*
4-Bromofluorobenzene		0.0294	0.0300	98	80-120	

Lab Batch #: 807733

Sample: 372870-001 S / MS

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 05/21/10 01:13	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>BTEX by EPA 8021</b>						
<b>Analytes</b>						
1,4-Difluorobenzene		0.0257	0.0300	86	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	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: Scharb Station Overflow

Work Orders : 373107,

Project ID: 2008-210

Lab Batch #: 807733

Sample: 372870-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg		Date Analyzed: 05/21/10 01:35		SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes								
1,4-Difluorobenzene		0.0268	0.0300	89	80-120			
4-Bromofluorobenzene		0.0293	0.0300	98	80-120			

Lab Batch #: 807744

Sample: 563977-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg		Date Analyzed: 05/21/10 13:55		SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes								
1,4-Difluorobenzene		0.0299	0.0300	100	80-120			
4-Bromofluorobenzene		0.0297	0.0300	99	80-120			

Lab Batch #: 807744

Sample: 563977-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg		Date Analyzed: 05/21/10 14:18		SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes								
1,4-Difluorobenzene		0.0299	0.0300	100	80-120			
4-Bromofluorobenzene		0.0301	0.0300	100	80-120			

Lab Batch #: 807744

Sample: 563977-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg		Date Analyzed: 05/21/10 15:26		SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes								
1,4-Difluorobenzene		0.0242	0.0300	81	80-120			
4-Bromofluorobenzene		0.0291	0.0300	97	80-120			

Lab Batch #: 807744

Sample: 373107-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg		Date Analyzed: 05/21/10 15:49		SURROGATE RECOVERY STUDY				
BTEX by EPA 8021		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes								
1,4-Difluorobenzene		0.0201	0.0300	67	80-120	**		
4-Bromofluorobenzene		0.0402	0.0300	134	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: Scharb Station Overflow

Work Orders : 373107,

Project ID: 2008-210

Lab Batch #: 807744

Sample: 373107-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/21/10 16:12

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0166	0.0300	55	80-120	**
4-Bromofluorobenzene	0.2077	0.0300	692	80-120	**

Lab Batch #: 807744

Sample: 373107-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/21/10 16:35

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0150	0.0300	50	80-120	**
4-Bromofluorobenzene	0.1447	0.0300	482	80-120	**

Lab Batch #: 807744

Sample: 373107-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/21/10 16:57

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	**
4-Bromofluorobenzene	0.0399	0.0300	133	80-120	**

Lab Batch #: 807744

Sample: 372881-006 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/10 10:47

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0213	0.0300	71	80-120	**
4-Bromofluorobenzene	0.0519	0.0300	173	80-120	**

Lab Batch #: 807128

Sample: 563591-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/10 17:15

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.0	99.9	88	70-135	
o-Terphenyl	39.4	50.0	79	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: Scharb Station Overflow

Work Orders : 373107,

Project ID: 2008-210

Lab Batch #: 807128

Sample: 563591-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/10 17:44

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	100	88	70-135	
o-Terphenyl	39.6	50.2	79	70-135	

Lab Batch #: 807128

Sample: 563591-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/10 18:15

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.3	100	79	70-135	
o-Terphenyl	44.1	50.1	88	70-135	

Lab Batch #: 807128

Sample: 373107-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 10:07

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.0	101	73	70-135	
o-Terphenyl	40.7	50.3	81	70-135	

Lab Batch #: 807128

Sample: 373107-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 10:55

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	42.5	50.1	85	70-135	

Lab Batch #: 807128

Sample: 373107-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 11:24

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	101	85	70-135	
o-Terphenyl	48.5	50.3	96	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: Scharb Station Overflow**

**Work Orders :** 373107,

**Project ID:** 2008-210

**Lab Batch #:** 807128

**Sample:** 373107-004 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 05/18/10 11:53

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	78.7	99.7	79	70-135	
o-Terphenyl	43.8	49.9	88	70-135	

**Lab Batch #:** 807128

**Sample:** 373107-005 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 05/18/10 12:23

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	71.6	99.7	72	70-135	
o-Terphenyl	38.7	49.9	78	70-135	

**Lab Batch #:** 807128

**Sample:** 373107-006 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 05/18/10 12:53

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	75.7	99.7	76	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

**Lab Batch #:** 807128

**Sample:** 373107-007 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 05/18/10 13:23

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	43.4	50.1	87	70-135	

**Lab Batch #:** 807128

**Sample:** 373107-008 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 05/18/10 15:02

**SURROGATE RECOVERY STUDY**

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	74.1	99.8	74	70-135	
o-Terphenyl	41.6	49.9	83	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: Scharb Station Overflow

Work Orders : 373107,

Project ID: 2008-210

Lab Batch #: 807128

Sample: 373107-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 15:31

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.2	99.7	77	70-135	
o-Terphenyl	36.9	49.9	74	70-135	

Lab Batch #: 807128

Sample: 373107-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 16:01

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.9	94	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 807128

Sample: 373155-002 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 16:32

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	99.6	94	70-135	
o-Terphenyl	42.5	49.8	85	70-135	

Lab Batch #: 807128

Sample: 373155-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/10 17:02

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	100	94	70-135	
o-Terphenyl	42.5	50.0	85	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: Scharb Station Overflow**

**Work Order #: 373107**

**Analyst: ASA**

**Date Prepared: 05/19/2010**

**Project ID: 2008-210**

**Date Analyzed: 05/20/2010**

**Lab Batch ID: 807733**

**Sample: 563967-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>BTEX by EPA 8021</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.1000	0.0991	99	0.1	0.1025	103	3	70-130	35	
Toluene	ND	0.1000	0.0962	96	0.1	0.1005	101	4	70-130	35	
Ethylbenzene	ND	0.1000	0.0956	96	0.1	0.1011	101	6	71-129	35	
m,p-Xylenes	ND	0.2000	0.1882	94	0.2	0.2007	100	6	70-135	35	
o-Xylene	ND	0.1000	0.0947	95	0.1	0.1008	101	6	71-133	35	

**Analyst: ASA**

**Date Prepared: 05/21/2010**

**Date Analyzed: 05/21/2010**

**Lab Batch ID: 807744**

**Sample: 563977-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>BTEX by EPA 8021</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.1000	0.1014	101	0.1	0.1001	100	1	70-130	35	
Toluene	ND	0.1000	0.0998	100	0.1	0.0988	99	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1009	101	0.1	0.1004	100	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.2016	101	0.2	0.2009	100	0	70-135	35	
o-Xylene	ND	0.1000	0.0991	99	0.1	0.0991	99	0	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: Scharb Station Overflow**

**Work Order #: 373107**

**Analyst: BEV**

**Date Prepared: 05/17/2010**

**Project ID: 2008-210**

**Date Analyzed: 05/17/2010**

**Lab Batch ID: 807128**

**Sample: 563591-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
<b>Analytes</b>											
C6-C12 Gasoline Range Hydrocarbons	ND	999	992	99	1000	988	99	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	999	815	82	1000	717	72	13	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: Scharb Station Overflow

Work Order #: 373107

Project ID: 2008-210

Lab Batch ID: 807733

QC- Sample ID: 372870-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/21/2010

Date Prepared: 05/19/2010

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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
Benzene	ND	0.1040	0.0492	47	0.1040	0.0530	51	7	70-130	35	X
Toluene	ND	0.1040	0.0451	43	0.1040	0.0488	47	8	70-130	35	X
Ethylbenzene	0.0014	0.1040	0.0370	34	0.1040	0.0445	41	18	71-129	35	X
m,p-Xylenes	0.0031	0.2081	0.0372	16	0.2081	0.0406	18	9	70-135	35	X
o-Xylene	0.0023	0.1040	0.0551	51	0.1040	0.0600	55	9	71-133	35	X

Lab Batch ID: 807128

QC- Sample ID: 373155-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/18/2010

Date Prepared: 05/17/2010

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	40.5	1240	1320	103	1240	1300	102	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	42.3	1240	1040	80	1240	1240	97	18	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



**Project Name: Scharb Station Overflow**

**Work Order #: 373107**

**Lab Batch #: 807744**

**Project ID: 2008-210**

**Date Analyzed: 05/22/2010**

**Date Prepared: 05/21/2010**

**Analyst: ASA**

**QC- Sample ID: 372881-006 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: mg/kg**

### SAMPLE / SAMPLE DUPLICATE RECOVERY

<b>BTEX by EPA 8021</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Benzene	ND	ND	NC	35	
Toluene	5.107	5.352	5	35	
Ethylbenzene	5.314	5.711	7	35	
m,p-Xylenes	52.63	58.72	11	35	
o-Xylene	14.91	17.14	14	35	

**Lab Batch #: 806913**

**Date Analyzed: 05/17/2010**

**Date Prepared: 05/17/2010**

**Analyst: JLG**

**QC- Sample ID: 373107-001 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

### SAMPLE / SAMPLE DUPLICATE RECOVERY

<b>Percent Moisture</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Percent Moisture	9.63	10.1	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



## Environmental Lab of Texas

### Variance/ Corrective Action Report- Sample Log-In

Client: Bain Environmental  
 Date/ Time: 5/15/10 11:15  
 Lab ID #: 373107  
 Initials: JG

#### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	<u>Yes</u>	No	1.0 °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>	
#4 Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>	
#20 VOC samples have zero headspace?	<u>Yes</u>	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 375792

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry**

**Scharb Station Overflow**

**SRS # 2008-210**

**09-JUN-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



09-JUN-10

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

Reference: XENCO Report No: **375792**  
**Scharb Station Overflow**  
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 375792. 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. 375792 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

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**Sample Cross Reference 375792**



**PLAINS ALL AMERICAN EH&S, Midland, TX**

Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
W-SW-1A	S	Jun-07-10 09:00		375792-001
E-SW-1A	S	Jun-07-10 09:10		375792-002
Floor-2A	S	Jun-07-10 09:15		375792-003
Floor-3A	S	Jun-07-10 09:25		375792-004



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Scharb Station Overflow*



*Project ID: SRS # 2008-210*

*Work Order Number: 375792*

*Report Date: 09-JUN-10*

*Date Received: 06/07/2010*

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**Sample receipt non conformances and Comments:**

None

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**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-809631 Percent Moisture

None

Batch: LBA-809635 Percent Moisture

AD2216A

Batch 809635, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 375792-003, -004.

Batch: LBA-809722 TPH by SW8015 Mod

SW8015MOD\_NM

Batch 809722, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 375792-003, -004, -002, -001.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-809723 BTEX by EPA 8021

SW8021BM

Batch 809723, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 375792-002.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



# Certificate of Analysis Summary 375792

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Scharb Station Overflow



Project Id: SRS # 2008-210

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Jun-07-10 12:25 pm

Report Date: 09-JUN-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	375792-001	375792-002	375792-003	375792-004		
	<i>Field Id:</i>	W-SW-1A	E-SW-1A	Floor-2A	Floor-3A		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jun-07-10 09:00	Jun-07-10 09:10	Jun-07-10 09:15	Jun-07-10 09:25		
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>		Jun-08-10 07:30				
	<i>Analyzed:</i>		Jun-08-10 17:12				
	<i>Units/RL:</i>		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				
Xylenes, Total			ND 0.0010				
Total BTEX			ND 0.0010				
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jun-07-10 17:00	Jun-07-10 17:00	Jun-08-10 10:32	Jun-08-10 10:32		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		5.30 1.00	3.86 1.00	6.49 1.00	10.5 1.00		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Jun-08-10 09:00	Jun-08-10 09:00	Jun-08-10 09:00	Jun-08-10 09:00		
	<i>Analyzed:</i>	Jun-08-10 15:07	Jun-08-10 15:35	Jun-08-10 16:03	Jun-08-10 16:31		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 15.9	ND 15.6	561 16.0	118 16.8		
C12-C28 Diesel Range Hydrocarbons		90.0 15.9	767 15.6	1580 16.0	781 16.8		
C28-C35 Oil Range Hydrocarbons		ND 15.9	93.1 15.6	108 16.0	66.1 16.8		
Total TPH		90.0 15.9	860 15.6	2249 16.0	965 16.8		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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 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.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakcs, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 375792,

Project ID: SRS # 2008-210

Lab Batch #: 809723

Sample: 565180-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/08/10 08:32

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0338	0.0300	113	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 809723

Sample: 565180-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/08/10 09:38

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 809723

Sample: 375775-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 10:32

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0343	0.0300	114	80-120	

Lab Batch #: 809723

Sample: 375775-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 10:54

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 809723

Sample: 375792-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 17:12

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	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: Scharb Station Overflow

Work Orders : 375792,

Project ID: SRS # 2008-210

Lab Batch #: 809722

Sample: 565181-1-BKS / BKS

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 06/08/10 10:59	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		126	100	126	70-135	
o-Terphenyl		49.9	50.2	99	70-135	

Lab Batch #: 809722

Sample: 565181-1-BSD / BSD

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 06/08/10 11:26	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		120	99.6	120	70-135	
o-Terphenyl		47.9	49.8	96	70-135	

Lab Batch #: 809722

Sample: 565181-1-BLK / BLK

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 06/08/10 11:54	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		108	101	107	70-135	
o-Terphenyl		53.9	50.3	107	70-135	

Lab Batch #: 809722

Sample: 375792-001 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 06/08/10 15:07	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		95.5	100	96	70-135	
o-Terphenyl		47.6	50.2	95	70-135	

Lab Batch #: 809722

Sample: 375792-002 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 06/08/10 15:35	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		85.2	99.8	85	70-135	
o-Terphenyl		42.5	49.9	85	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: Scharb Station Overflow

Work Orders : 375792,

Project ID: SRS # 2008-210

Lab Batch #: 809722

Sample: 375792-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 16:03

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 809722

Sample: 375792-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 16:31

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	51.6	50.2	103	70-135	

Lab Batch #: 809722

Sample: 375792-001 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 18:49

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.7	117	70-135	
o-Terphenyl	46.9	49.9	94	70-135	

Lab Batch #: 809722

Sample: 375792-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/08/10 19:17

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	48.5	50.2	97	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.



# Blank Spike Recovery



**Project Name: Scharb Station Overflow**

**Work Order #: 375792**

**Project ID:**

**SRS # 2008-210**

**Lab Batch #: 809723**

**Sample: 565180-1-BKS**

**Matrix: Solid**

**Date Analyzed: 06/08/2010**

**Date Prepared: 06/08/2010**

**Analyst: ASA**

**Reporting Units: mg/kg**

**Batch #: 1**

## BLANK /BLANK SPIKE RECOVERY STUDY

<b>BTEX by EPA 8021</b>	<b>Blank Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>						
Benzene	ND	0.1000	0.0929	93	70-130	
Toluene	ND	0.1000	0.1031	103	70-130	
Ethylbenzene	ND	0.1000	0.1014	101	71-129	
m,p-Xylenes	ND	0.2000	0.2200	110	70-135	
o-Xylene	ND	0.1000	0.1096	110	71-133	

Blank Spike Recovery [D] = 100\*[C]/[B]

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

BRL - Below Reporting Limit



# BS / BSD Recoveries



Project Name: Scharb Station Overflow

Work Order #: 375792

Analyst: BEV

Date Prepared: 06/08/2010

Project ID: SRS # 2008-210

Date Analyzed: 06/08/2010

Lab Batch ID: 809722

Sample: 565181-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1130	113	996	1080	108	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1070	107	996	944	95	13	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: Scharb Station Overflow

Work Order #: 375792

Project ID: SRS # 2008-210

Lab Batch ID: 809723

QC- Sample ID: 375775-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/08/2010

Date Prepared: 06/08/2010

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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
Benzene	ND	0.1163	0.0551	47	0.1156	0.0589	51	7	70-130	35	X
Toluene	ND	0.1163	0.0699	60	0.1156	0.0680	59	3	70-130	35	X
Ethylbenzene	ND	0.1163	0.0708	61	0.1156	0.0719	62	2	71-129	35	X
m,p-Xylenes	ND	0.2327	0.1513	65	0.2313	0.1511	65	0	70-135	35	X
o-Xylene	ND	0.1163	0.0740	64	0.1156	0.0737	64	0	71-133	35	X

Lab Batch ID: 809722

QC- Sample ID: 375792-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/08/2010

Date Prepared: 06/08/2010

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	ND	1050	1090	104	1060	1140	108	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	90.0	1050	1050	91	1060	766	64	31	70-135	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



**Project Name: Scharb Station Overflow**

**Work Order #: 375792**

**Lab Batch #: 809631**

**Project ID: SRS # 2008-210**

**Date Analyzed: 06/07/2010**

**Date Prepared: 06/07/2010**

**Analyst: JLG**

**QC- Sample ID: 375647-001 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	11.6	11.6	0	20	

**Lab Batch #: 809635**

**Date Analyzed: 06/08/2010**

**Date Prepared: 06/08/2010**

**Analyst: JLG**

**QC- Sample ID: 375792-003 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	6.49	8.03	21	20	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**  
 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: Basin Env. / Plains  
 Date/Time: 6-7-10 12:25  
 Lab ID #: 375792  
 Initials: AL

**Sample Receipt Checklist**

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and <u>bottles?</u>	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>4.6</u> °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 378733

for

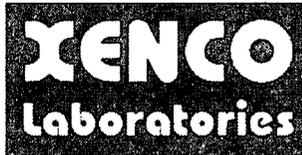
## PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry**

**Scharb Station Overflow**

**SRS # 2008-210**

**25-JUN-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (AAL11), 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: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)  
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)



25-JUN-10

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

Reference: XENCO Report No: **378733**  
**Scharb Station Overflow**  
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 378733. 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. 378733 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

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*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 378733**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Floor 2 B	S	Jun-21-10 12:30		378733-001



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Scharb Station Overflow*



*Project ID: SRS # 2008-210*  
*Work Order Number: 378733*

*Report Date: 25-JUN-10*  
*Date Received: 06/24/2010*

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**Sample receipt non conformances and Comments:**

*None*

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**Sample receipt Non Conformances and Comments per Sample:**

*None*

**Analytical Non Conformances and Comments:**

*Batch: LBA-812155 Percent Moisture*

*None*

*Batch: LBA-812209 TPH by SW8015 Mod*

*None*



# Certificate of Analysis Summary 378733

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Scharb Station Overflow



Project Id: SRS # 2008-210

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Thu Jun-24-10 03:00 pm

Report Date: 25-JUN-10

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b>	378733-001					
	<b>Field Id:</b>	Floor 2 B					
	<b>Depth:</b>						
	<b>Matrix:</b>	SOIL					
	<b>Sampled:</b>	Jun-21-10 12:30					
<b>Percent Moisture</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Jun-25-10 08:28					
	<b>Units/RL:</b>	% RL					
Percent Moisture		20.6 1.00					
<b>TPH by SW8015 Mod</b>	<b>Extracted:</b>	Jun-24-10 15:00					
	<b>Analyzed:</b>	Jun-25-10 09:27					
	<b>Units/RL:</b>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		385 18.8					
C12-C28 Diesel Range Hydrocarbons		1600 18.8					
C28-C35 Oil Range Hydrocarbons		99.0 18.8					
Total TPH		2084 18.8					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

  
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

**MDL** Method Detection Limit

**PQL** Practical Quantitation Limit

\* Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 378733,

Project ID: SRS # 2008-210

Lab Batch #: 812209

Sample: 566654-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/24/10 16:03

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.9	114	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 812209

Sample: 566654-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/24/10 16:30

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.7	109	70-135	
o-Terphenyl	50.8	49.9	102	70-135	

Lab Batch #: 812209

Sample: 566654-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/24/10 16:57

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 812209

Sample: 378733-001 / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/25/10 09:27

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.5	128	70-135	
o-Terphenyl	63.9	49.8	128	70-135	

Lab Batch #: 812209

Sample: 378697-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/25/10 10:01

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	50.6	50.0	101	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: Scharb Station Overflow

Work Orders : 378733,

Project ID: SRS # 2008-210

Lab Batch #: 812209

Sample: 378697-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/25/10 10:28

## SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.9	118	70-135	
o-Terphenyl	52.1	50.0	104	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: Scharb Station Overflow**

**Work Order #: 378733**

**Analyst: BEV**

**Project ID: SRS # 2008-210**

**Date Analyzed: 06/24/2010**

**Lab Batch ID: 812209**

**Sample: 566654-1-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	ND	999	1200	120	997	1150	115	4	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	999	1040	104	997	818	82	24	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: Scharb Station Overflow

Work Order #: 378733

Project ID: SRS # 2008-210

Lab Batch ID: 812209

QC- Sample ID: 378697-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/25/2010

Date Prepared: 06/24/2010

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	ND	1010	1200	119	1010	1250	124	4	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1010	1020	101	1010	1010	100	1	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



**Project Name: Scharb Station Overflow**

**Work Order #: 378733**

**Lab Batch #: 812155**

**Project ID: SRS # 2008-210**

**Date Analyzed: 06/25/2010**

**Date Prepared: 06/25/2010**

**Analyst: JLG**

**QC- Sample ID: 378692-001 D**

**Batch #: 1**

**Matrix: Soil**

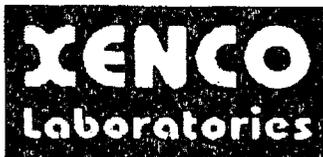
**Reporting Units: %**

## SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	6.25	6.22	0	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**  
 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: Basin Env. / Plains  
 Date/Time: 6.24.10 15:00  
 Lab ID #: 378733  
 Initials: AL

**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

**Analytical Report 384538**  
**for**  
**PLAINS ALL AMERICAN EH&S**

**Project Manager: Jason Henry**

**Scharb Station Overflow**

**SRS# 2008-210**

**09-AUG-10**



**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-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 (AAL11), 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: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)  
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)



09-AUG-10

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

Reference: XENCO Report No: **384538**  
**Scharb Station Overflow**  
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 384538. 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. 384538 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**

Odessa Laboratory Director

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**Sample Cross Reference 384538**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
Floor 2C	S	Aug-04-10 15:30		384538-001



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Scharb Station Overflow*



*Project ID: SRS# 2008-210*  
*Work Order Number: 384538*

*Report Date: 09-AUG-10*  
*Date Received: 08/05/2010*

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**Sample receipt non conformances and Comments:**

None

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**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-817871 Percent Moisture

None

Batch: LBA-817882 TPH by SW8015 Mod

None



# Certificate of Analysis Summary 384538

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Scharb Station Overflow



Project Id: SRS# 2008-210

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Thu Aug-05-10 02:10 pm

Report Date: 09-AUG-10

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<i>Lab Id:</i>	384538-001					
	<i>Field Id:</i>	Floor 2C					
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL					
	<i>Sampled:</i>	Aug-04-10 15:30					
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Aug-07-10 09:24					
	<i>Units/RL:</i>	% RL					
Percent Moisture		9.30 1.00					
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Aug-06-10 13:15					
	<i>Analyzed:</i>	Aug-06-10 23:38					
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		22.2 16.5					
C12-C28 Diesel Range Hydrocarbons		162 16.5					
C28-C35 Oil Range Hydrocarbons		ND 16.5					
Total TPH		184 16.5					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Brent Barron  
Odessa Laboratory Director



# 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.

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lanc, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 384538,

Project ID: SRS# 2008-210

Lab Batch #: 817882

Sample: 570025-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/06/10 21:59

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	63.9	50.0	128	70-135	

Lab Batch #: 817882

Sample: 570025-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/06/10 22:19

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	57.0	50.2	114	70-135	

Lab Batch #: 817882

Sample: 570025-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/06/10 22:39

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	57.2	50.1	114	70-135	

Lab Batch #: 817882

Sample: 384538-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/06/10 23:38

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	58.0	50.0	116	70-135	

Lab Batch #: 817882

Sample: 384564-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/07/10 05:53

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	47.7	50.2	95	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: Scharb Station Overflow

Work Orders : 384538,

Project ID: SRS# 2008-210

Lab Batch #: 817882

Sample: 384564-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/07/10 06:12

## SURROGATE RECOVERY STUDY

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	101	123	70-135	
o-Terphenyl	56.0	50.3	111	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: Scharb Station Overflow**

**Work Order #: 384538**

**Analyst: BEV**

**Date Prepared: 08/06/2010**

**Project ID: SRS# 2008-210**

**Date Analyzed: 08/06/2010**

**Lab Batch ID: 817882**

**Sample: 570025-1-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	ND	1000	1070	107	1000	1120	112	5	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1000	877	88	1000	1000	100	13	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: Scharb Station Overflow

Work Order #: 384538

Project ID: SRS# 2008-210

Lab Batch ID: 817882

QC- Sample ID: 384564-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/07/2010

Date Prepared: 08/06/2010

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	ND	1050	1130	108	1060	1120	106	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1050	956	91	1060	1030	97	7	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



**Project Name: Scharb Station Overflow**

**Work Order #: 384538**

**Lab Batch #: 817871**

**Project ID: SRS# 2008-210**

**Date Analyzed: 08/07/2010**

**Date Prepared: 08/07/2010**

**Analyst: JLG**

**QC- Sample ID: 384538-001 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	9.30	9.69	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

# Analytical Report 367418

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant**

**Scharb Station Overflow**

**2008-210**

**06-APR-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (AAL11), 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: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



06-APR-10

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

Reference: XENCO Report No: **367418**  
**Scharb Station Overflow**  
Project Address: Lea County, NM

**Daniel Bryant:**

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 367418. 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. 367418 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

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**Sample Cross Reference 367418**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
Scharb Station Overflow

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Mar-30-10 08:15		367418-001
MW-2	W	Mar-30-10 09:10		367418-002
MW-3	W	Mar-30-10 09:50		367418-003
MW-4	W	Mar-30-10 10:30		367418-004



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Scharb Station Overflow*

*Project ID: 2008-210*

*Work Order Number: 367418*

*Report Date: 06-APR-10*

*Date Received: 03/31/2010*

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**Sample receipt non conformances and Comments:**

None

---

**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-801032 BTEX by EPA 8021  
SW8021BM

Batch 801032, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis .  
Samples affected are: 367414-002 S.

Batch: LBA-801115 Inorganic Anions by EPA 300  
None

Batch: LBA-801229 TDS by SM2540C  
None



# Certificate of Analysis Summary 367418

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Id: 2008-210

Contact: Daniel Bryant

Project Location: Lea County, NM

Project Name: Scharb Station Overflow

Date Received in Lab: Wed Mar-31-10 09:00 am

Report Date: 06-APR-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	367418-001	367418-002	367418-003	367418-004		
	<i>Field Id:</i>	MW-1	MW-2	MW-3	MW-4		
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER		
	<i>Sampled:</i>	Mar-30-10 08:15	Mar-30-10 09:10	Mar-30-10 09:50	Mar-30-10 10:30		
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>	Apr-02-10 10:00	Apr-02-10 10:00	Apr-02-10 10:00	Apr-02-10 10:00		
	<i>Analyzed:</i>	Apr-02-10 14:52	Apr-02-10 15:12	Apr-02-10 15:33	Apr-02-10 15:54		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010		
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020		
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010		
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020		
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010		
Xylenes, Total		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010		
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010		
<b>Inorganic Anions In Water by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Apr-05-10 10:49	Apr-05-10 10:49	Apr-05-10 10:49	Apr-05-10 10:49		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Chloride		24.4 5.00	82.4 5.00	157 5.00	32.5 5.00		
<b>TDS by SM2540C</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Apr-05-10 16:00	Apr-05-10 16:00	Apr-05-10 16:00	Apr-05-10 16:00		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Total dissolved solids		476 5.00	764 5.00	802 5.00	502 5.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

  
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.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 367418,

Project ID: 2008-210

Lab Batch #: 801032

Sample: 559837-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 11:03

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzenc	0.0303	0.0300	101	80-120	
4-Bromofluorobenzenc	0.0267	0.0300	89	80-120	

Lab Batch #: 801032

Sample: 559837-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 11:24

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzenc	0.0302	0.0300	101	80-120	
4-Bromofluorobenzenc	0.0265	0.0300	88	80-120	

Lab Batch #: 801032

Sample: 559837-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 12:26

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzenc	0.0281	0.0300	94	80-120	
4-Bromofluorobenzenc	0.0263	0.0300	88	80-120	

Lab Batch #: 801032

Sample: 367418-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 14:52

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzenc	0.0279	0.0300	93	80-120	
4-Bromofluorobenzenc	0.0258	0.0300	86	80-120	

Lab Batch #: 801032

Sample: 367418-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 15:12

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzenc	0.0293	0.0300	98	80-120	
4-Bromofluorobenzenc	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.



# Form 2 - Surrogate Recoveries

Project Name: Scharb Station Overflow

Work Orders : 367418,

Project ID: 2008-210

Lab Batch #: 801032

Sample: 367418-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 15:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0262	0.0300	87	80-120	

Lab Batch #: 801032

Sample: 367418-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 15:54

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0278	0.0300	93	80-120	

Lab Batch #: 801032

Sample: 367414-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 20:22

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0204	0.0300	68	80-120	*

Lab Batch #: 801032

Sample: 367414-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 04/02/10 20:42

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0452	0.0300	151	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.



# Blank Spike Recovery



Project Name: Scharb Station Overflow

Work Order #: 367418

Project ID:

2008-210

Lab Batch #: 801115

Sample: 801115-1-BKS

Matrix: Water

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

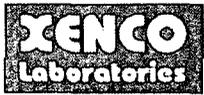
## BLANK/BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Water by E300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	9.95	100	90-110	

Blank Spike Recovery [D] = 100\*[C]/[B]

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

BRL - Below Reporting Limit



# BS / BSD Recoveries



Project Name: Scharb Station Overflow

Work Order #: 367418

Analyst: ASA

Date Prepared: 04/02/2010

Project ID: 2008-210

Date Analyzed: 04/02/2010

Lab Batch ID: 801032

Sample: 559837-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

## BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
<b>Analytes</b>											
Benzene	ND	0.1000	0.0890	89	0.1	0.0982	98	10	70-125	25	
Toluene	ND	0.1000	0.0878	88	0.1	0.0973	97	10	70-125	25	
Ethylbenzene	ND	0.1000	0.0889	89	0.1	0.0986	99	10	71-129	25	
m,p-Xylenes	ND	0.2000	0.1816	91	0.2	0.2020	101	11	70-131	25	
o-Xylene	ND	0.1000	0.0905	91	0.1	0.1003	100	10	71-133	25	

Analyst: WRU

Date Prepared: 04/05/2010

Date Analyzed: 04/05/2010

Lab Batch ID: 801229

Sample: 801229-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

## BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	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
<b>Analytes</b>											
Total dissolved solids	ND	1000	944	94	1000	928	93	2	80-120	30	

Relative Percent Difference RPD =  $200 * \frac{(C-F)}{(C+F)}$

Blank Spike Recovery [D] =  $100 * \frac{(C)}{(B)}$

Blank Spike Duplicate Recovery [G] =  $100 * \frac{(F)}{(E)}$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Scharb Station Overflow

Work Order #: 367418

Lab Batch #: 801115

Project ID: 2008-210

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

Analyst: LATCOR

QC- Sample ID: 366822-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	148	100	239	91	90-110	

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



# Form 3 - MS / MSD Recoveries



Project Name: Scharb Station Overflow

Work Order #: 367418

Project ID: 2008-210

Lab Batch ID: 801032

QC- Sample ID: 367414-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 04/02/2010

Date Prepared: 04/02/2010

Analyst: ASA

Reporting Units: mg/L

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021  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
	Benzene	ND	0.1000	0.0770	77	0.1000	0.0807	81	5	70-125	25
Toluene	ND	0.1000	0.0766	77	0.1000	0.0810	81	6	70-125	25	
Ethylbenzene	ND	0.1000	0.0776	78	0.1000	0.0828	83	6	71-129	25	
m,p-Xylenes	ND	0.2000	0.1566	78	0.2000	0.1665	83	6	70-131	25	
o-Xylene	ND	0.1000	0.0801	80	0.1000	0.0839	84	5	71-133	25	

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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery

Project Name: Scharb Station Overflow

Work Order #: 367418

Lab Batch #: 801115

Project ID: 2008-210

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

Analyst: LATCOR

QC- Sample ID: 366822-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Water by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	148	147	1	20	

Lab Batch #: 801229

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

Analyst: WRU

QC- Sample ID: 367418-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	476	468	2	30	

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**

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Environmental/Plains  
 Date/ Time: 3/31/10 09:00  
 Lab ID #: 367418  
 Initials: AS

**Sample Receipt Checklist**

			Client Initials		
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	No	5.5 °C	
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<input checked="" type="radio"/> Not Present	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="radio"/> Yes	No	Not Present	
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	No	iD written on Cont./ Lid	
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	No		
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	No	See Below	
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	No	See Below	
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	<input checked="" type="radio"/> Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	No	Not Applicable	

**Variance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

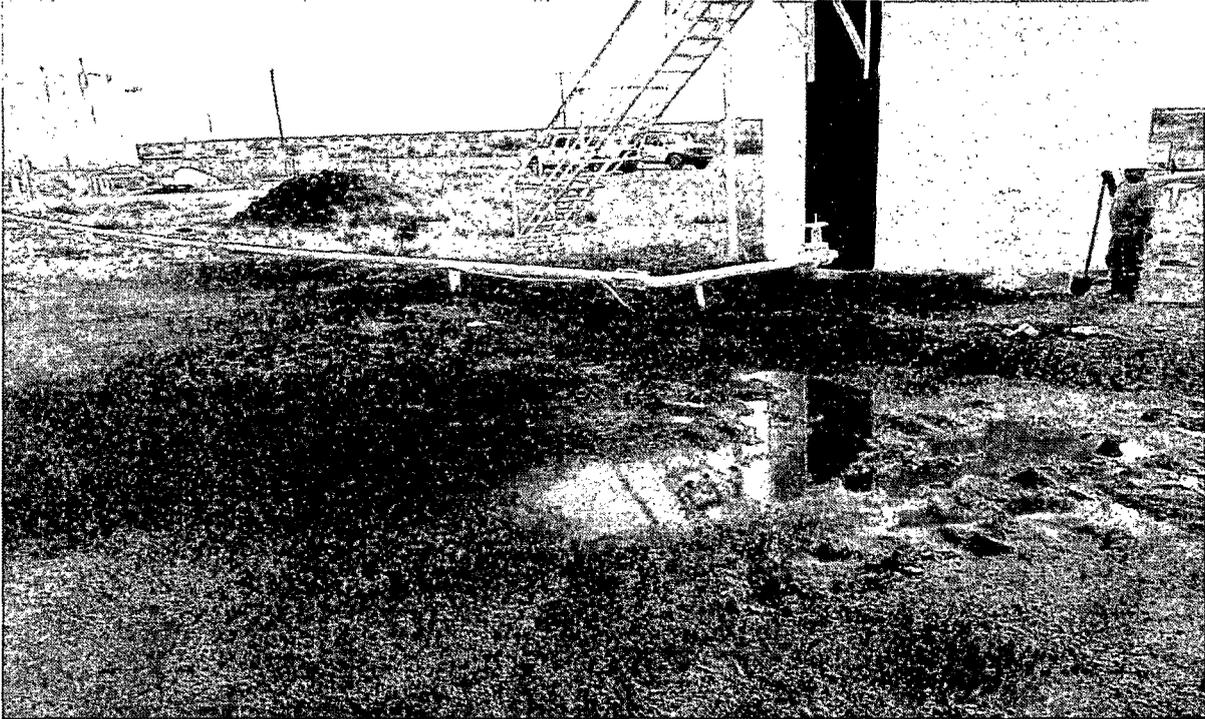
Regarding: \_\_\_\_\_

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 C**

## **Photographs**



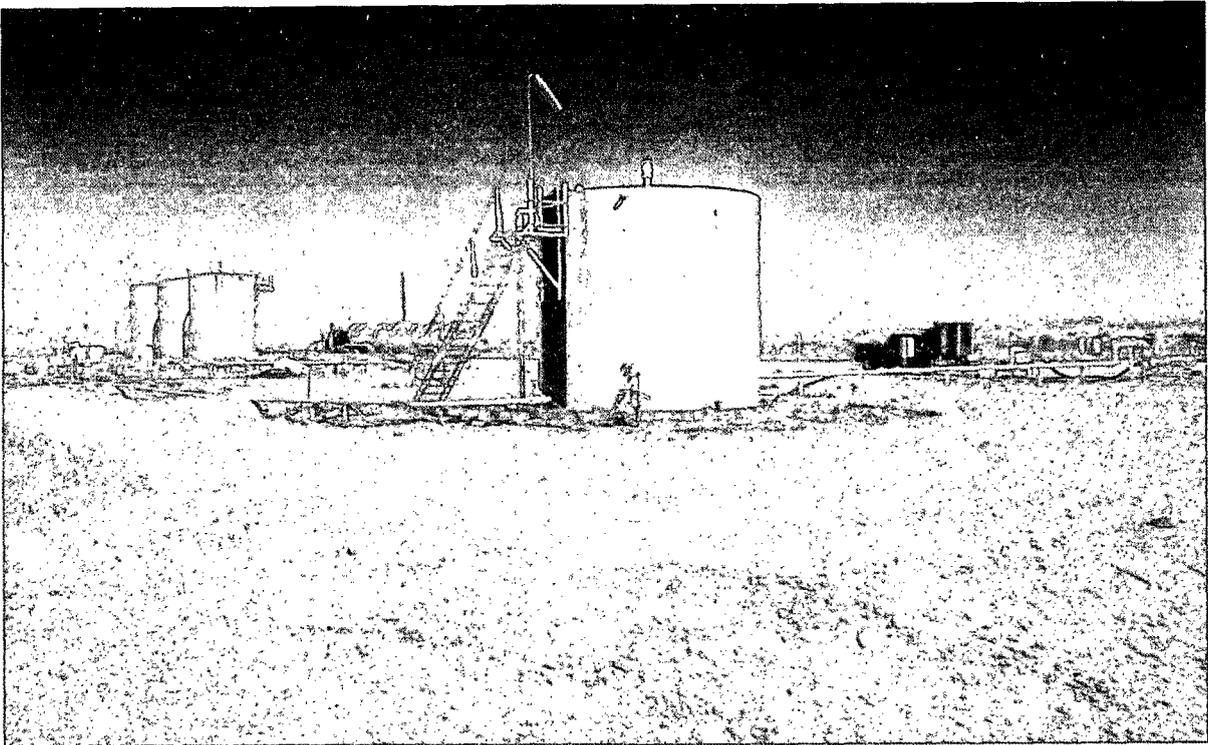
Scharb Station Overflow Initial Release



Excavation Activities at the Scharb Station Overflow Release Site



Plugging of Monitor Wells at the Scharb Station Overflow Release Site



Completion on Remediation Activities at the Scharb Station Overflow Release Site

# **Appendix D**

## **Plugging Reports**



# WELL RECORD & LOG

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<b>1. GENERAL AND WELL LOCATION</b>	POD NUMBER (WELL NUMBER) <b>SCHARB STATION MW-1</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 41	SECONDS 1.00 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED WGS 84			
	LONGITUDE	103	28 17.00 W					
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>PEARL VALLEY ROAD OFF HWY 529 LEA COUNTY. NM</b>								
<b>2. OPTIONAL</b>	(2.5 ACRE) ¼	(10 ACRE) ¼	(40 ACRE) ¼	(160 ACRE) ¼	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY					MAP NUMBER	TRACT NUMBER	
<b>3. DRILLING INFORMATION</b>	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>MARTIN STRAUB</b>			NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>			
	DRILLING STARTED <b>4-31-10</b>	DRILLING ENDED <b>4-31-10</b>	DEPTH OF COMPLETED WELL (FT) <b>45</b>	BORE HOLE DEPTH (FT) <b>45</b>	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT)			
	DRILLING FLUID <input type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (FT)	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)	
	FROM    TO							
<b>4. WATER BEARING STRATA</b>	DEPTH (FT)	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)	
	FROM    TO							
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA					TOTAL ESTIMATED WELL YIELD (GPM)			

5. SEAL AND PUMP	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				
		2	45	2	1.5 BAGS OF 3/8 HOLEPLUG		TOPLOAD
0	2	2	1/4 BAG OF CEMENT		TOPLOAD		

6. GEOLOGIC LOG OF WELL	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING? <input type="checkbox"/> YES <input type="checkbox"/> NO
	FROM	TO			
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.	
	ADDITIONAL STATEMENTS OR EXPLANATIONS: <b>PLUGGING REPORT</b> 1 FT CASING REMOVED	

8. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	<u>Martin Stahl</u> SIGNATURE OF DRILLER	<u>5-5-10</u> DATE



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>SCHARB STATION MW-2</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE <b>32</b>	MINUTES <b>41</b>	SECONDS <b>1.00 N</b>	* ACCURACY REQUIRED. ONE TENTH OF A SECOND			
	LONGITUDE <b>103</b>	<b>28</b>	<b>17.00 W</b>	* DATUM REQUIRED: WGS 84				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>PEARL VALLEY ROAD OFF HWY 529 LEA COUNTY. NM</b>								
2. OPTIONAL	(2.5 ACRE) <b>¼</b>	(10 ACRE) <b>¼</b>	(40 ACRE) <b>¼</b>	(160 ACRE) <b>¼</b>	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY					MAP NUMBER	TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>MARTIN STRAUB</b>			NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>			
	DRILLING STARTED <b>4-31-10</b>	DRILLING ENDED <b>4-31-10</b>	DEPTH OF COMPLETED WELL (FT) <b>45</b>	BORE HOLE DEPTH (FT) <b>45</b>	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (FT) FROM TO		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
4. WATER BEARING STRATA	DEPTH (FT) FROM TO		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA						TOTAL ESTIMATED WELL YIELD (GPM)		

FOR OSE INTERNAL USE			WELL RECORD & LOG (Version 6/9/08)		
FILE NUMBER	POD NUMBER	TRN NUMBER			
LOCATION				PAGE 1 OF 2	

<b>5. SEAL AND PUMP</b>	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				
		2	45	2	1.5 BAGS OF 3/8 HOLEPLUG		TOPLOAD
0	2	2	1/4 BAG OF CEMENT		TOPLOAD		

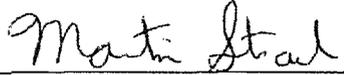
  

<b>6. GEOLOGIC LOG OF WELL</b>	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
	FROM	TO			
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL					

<b>7. TEST &amp; ADDITIONAL INFO</b>	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
		TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	ADDITIONAL STATEMENTS OR EXPLANATIONS <b>PLUGGING REPORT</b> <b>1 FT CASING REMOVED</b>	

<b>8. SIGNATURE</b>	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 _____ SIGNATURE OF DRILLER	5-5-10 _____ DATE



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>SCHARB STATION MW-3</b>				OSE FILE NUMBER(S)							
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)							
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>		STATE <b>TX</b>		ZIP <b>77078</b>			
	WELL LOCATION (FROM GPS)		DEGREES LATITUDE <b>32</b>		MINUTES <b>41</b>		SECONDS <b>1.00 N</b>		* ACCURACY REQUIRED. ONE TENTH OF A SECOND			
			LONGITUDE <b>103</b>		<b>28</b>		<b>17.00 W</b>		* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>PEARL VALLEY ROAD OFF HWY 529 LEA COUNTY, NM</b>												
2. OPTIONAL	(2.5 ACRE) $\frac{1}{4}$		(10 ACRE) $\frac{1}{4}$		(40 ACRE) $\frac{1}{4}$		(160 ACRE) $\frac{1}{4}$		SECTION			
	SUBDIVISION NAME				LOT NUMBER		BLOCK NUMBER		UNIT/TRACT			
	HYDROGRAPHIC SURVEY						MAP NUMBER		TRACT NUMBER			
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>		NAME OF LICENSED DRILLER <b>MARTIN STRAUB</b>				NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>					
	DRILLING STARTED <b>4-31-10</b>		DRILLING ENDED <b>4-31-10</b>		DEPTH OF COMPLETED WELL (FT) <b>45</b>		BORE HOLE DEPTH (FT) <b>45</b>		DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT)					
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:											
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:											
	DEPTH (FT)		BORE HOLE DIA. (IN)		CASING MATERIAL		CONNECTION TYPE (CASING)		INSIDE DIA. CASING (IN)		CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	FROM	TO										
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)		FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)					YIELD (GPM)		
	FROM	TO										
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA							TOTAL ESTIMATED WELL YIELD (GPM)					

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER		POD NUMBER		TRN NUMBER	
LOCATION					PAGE 1 OF 2

<b>5. SEAL AND PUMP</b>	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				
		2	45	2	1.5 BAGS OF 3/8 HOLEPLUG		TOPLOAD
0	2	2	1/4 BAG OF CEMENT		TOPLOAD		

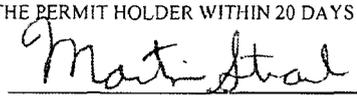
  

<b>6. GEOLOGIC LOG OF WELL</b>	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
	FROM	TO			
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL					

<b>7. TEST &amp; ADDITIONAL INFO</b>	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.	
	ADDITIONAL STATEMENTS OR EXPLANATIONS: <b>PLUGGING REPORT</b> <b>1 FT CASING REMOVED</b>	

<b>8. SIGNATURE</b>	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 _____ SIGNATURE OF DRILLER	5-5-10 _____ DATE



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>SCHARB STATION MW-4</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE <b>32</b>	MINUTES <b>41</b>	SECONDS <b>1.00 N</b>	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
	LONGITUDE <b>103</b>	<b>28</b>	<b>17.00 W</b>					
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>PEARL VALLEY ROAD OFF HWY 529 LEA COUNTY, NM</b>								
2. OPTIONAL	(2.5 ACRE) <b>¼</b>	(10 ACRE) <b>¼</b>	(40 ACRE) <b>¼</b>	(160 ACRE) <b>¼</b>	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY					MAP NUMBER	TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>MARTIN STRAUB</b>			NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>			
	DRILLING STARTED <b>4-31-10</b>	DRILLING ENDED <b>4-31-10</b>	DEPTH OF COMPLETED WELL (FT) <b>43</b>	BORE HOLE DEPTH (FT) <b>43</b>	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT)			
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (FT) FROM TO		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
4. WATER BEARING STRATA	DEPTH (FT) FROM TO		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)			YIELD (GPM)	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA					TOTAL ESTIMATED WELL YIELD (GPM)			

<b>5. SEAL AND PUMP</b>	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				
		2	43	2	1.5 BAGS OF 3/8 HOLEPLUG		TOPLOAD
	0	2	2	1/4 BAG OF CEMENT		TOPLOAD	

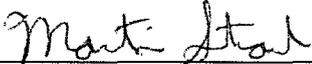
  

<b>6. GEOLOGIC LOG OF WELL</b>	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
	FROM	TO			
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL					

<b>7. TEST &amp; ADDITIONAL INFO</b>	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
		TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	ADDITIONAL STATEMENTS OR EXPLANATIONS. PLUGGING REPORT 1 FT CASING REMOVED	

<b>8. SIGNATURE</b>	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 _____ SIGNATURE OF DRILLER	5-5-10 _____ DATE

FOR USE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION	PAGE 2 OF 2	

**Appendix E**  
**Release Notification and Corrective**  
**Action (Form C-141)**

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 Marketing, LP	Contact	Daniel Bryant
Address	P.O. Box 3119 - Midland, Tx 79702	Telephone No.	(432) 557-5865
Facility Name	Scharb Station Overfill	Facility Type	Truck Station

Surface Owner	E.P. Caudill	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
P	5	19S	35E					Lea

Latitude N 32.68700000° Longitude W 103.47095000°

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	18 bbls	Volume Recovered	3 bbls
Source of Release	Tank at Scharb Truck Station	Date and Hour of Occurrence	08/09/2008	Date and Hour of Discovery	08/09/2008 01:00
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson (left message)			
By Whom?	Daniel Bryant	Date and Hour	08/11/2008 09:30		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Crude oil was released when the tank was overfilled by a transport unloading at the facility.

Describe Area Affected and Cleanup Action Taken.\*

Visible staining from the release measured approx. 35' X 25'.  
All released materials were contained inside the secondary containment.

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.

**OIL CONSERVATION DIVISION**

Signature:			
Printed Name: Daniel Bryant	Approved by District Supervisor:		
Title: Environmental R/C Specialist	Approval Date:	Expiration Date:	
E-mail Address: dmbryant@paalp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date:	Phone: (432) 557-5865		

\* Attach Additional Sheets If Necessary