

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	Mewbourne Redhawk 32	Facility Type	Tank Battery

Surface Owner	Mewbourne Oil Company	Mineral Owner		Lease No.	
---------------	-----------------------	---------------	--	-----------	--

**LOCATION OF RELEASE**

AP 30.025.12803

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	32	19S	34E					Lea

Latitude N 32.62194440° Longitude W 103.57555560°

**NATURE OF RELEASE**

Type of Release	Crude Oil	Volume of Release	11 bbls	Volume Recovered	0 bbls
Source of Release	Transport Truck	Date and Hour of Occurrence	05/01/2010 12:35	Date and Hour of Discovery	05/01/2010 12:35
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Daniel Bryant	Date and Hour	05/03/2010 09:10		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse			

RECEIVED

If a Watercourse was Impacted, Describe Fully.\*

OCT 27 2010  
HOBBSDOCD

Describe Cause of Problem and Remedial Action Taken.\*

The float sensor inside the trailer failed causing 11 bbls to be released when the trailer was overfilled.

Describe Area Affected and Cleanup Action Taken.\*

Please refer to the Remediation Summary and Site Closure Request for closure data.

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	Approved by District Supervisor:	<i>L. Johnson</i> ENVIRONMENTAL ENGINEER
Title:	Environmental R/C Specialist	Approval Date:	10-27-10
E-mail Address:	dmbryant@paalp.com	Expiration Date:	→
Date:	10/27/10	Conditions of Approval:	Attached <input type="checkbox"/>
Phone:	(432) 557-5865		

\* Attach Additional Sheets If Necessary

IRP-2506

NLWS 103163370  
10316334211  
PLWS 1031636707

# *Basin Environmental Consulting, LLC*

2800 Plains Highway  
P. O. Box 381  
Lovington, New Mexico 88260  
cjbryant@basin-consulting.com  
Office: (575) 396-2378 Fax: (575) 396-1429



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

**PLAINS MARKETING, L.P. (231735)  
Mewbourne Red Hawk 32  
Lea County, New Mexico  
Plains SRS# 2010-094  
UNIT "A" (NE/NE), Section 32, Township 19 South, Range 34 East  
Latitude 32.62194440° North, Longitude 103.57555560° West  
NMOCD Reference # 1RP-2506**

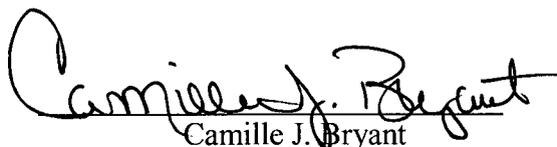
Prepared For:

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

**RECEIVED**  
OCT 27 2010  
HOBBSDUCD

Prepared By:  
Basin Environmental Consulting, LLC

**September 2010**

  
Camille J. Bryant

Project Manager

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## **1.0 INTRODUCTION**

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Marketing, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as Mewbourne Red Hawk 32 (SRS# 2010-094). The site is located in Unit Letter "A" (NE ¼ NE ¼), Section 32, Township 19 South, Range 34 East, in Lea County, New Mexico. The property is owned by Mewbourne Oil Company. The site latitude is 32.62194440° North, and the longitude is 103.57555560° West. The Site Location and Site and Sample Location Map are provided as Figure 1 and Figure 2, respectively. General site photographs are provided as Appendix B.

On May 1, 2010, Plains discovered a crude oil release had occurred at the Mewbourne Red Hawk 32. The release occurred when a float sensor inside a transport trailer failed causing the trailer to overflow. The release was reported to the New Mexico Oil Conservation Division (NMOCD) on May 3, 2010. The Release Notification and Corrective Action (Form C-141) indicated approximately eleven (11) barrels of crude oil was released and zero (0) barrels were recovered, resulting in a net loss of eleven (11) barrels of crude oil. The Release Notification and Corrective Action Form is provided as Appendix C.

## **2.0 NMOCD SITE CLASSIFICATION**

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), no water wells are registered in Section 32, Township 19 South, Range 34 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) indicates groundwater should be encountered at approximately 150 to 175 feet below ground surface (bgs). The depth to groundwater at the Mewbourne Red Hawk 32 release site, results in a score of zero (0) 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 Mewbourne Red Hawk 32 release site has a ranking score of zero (0). Based on this score, the soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 5,000 mg/Kg (ppm)

## **3.0 SUMMARY OF FIELD ACTIVITIES**

On May 5, 2010, excavation of the hydrocarbon impacted soil began at the site. Approximately sixty (60) cubic yards (cy) of impacted soil was excavated and stockpiled on-site pending final

disposition. Final dimensions of the excavation were approximately seventy-five (75) feet in length, approximately thirty-five (35) feet in width and approximately one (1) foot in depth.

On May 5, 2010, two (2) soil samples (North Floor @ 1' and South Floor @ 1') were collected from the excavation and submitted to the laboratory for analysis. The soil samples were analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) and total petroleum hydrocarbon (TPH) using EPA method 8021b and SW 846-8015M Extended, respectively. The analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) in both soil samples. BTEX concentrations ranged from less than the laboratory MDL for soil sample South Floor @ 1' to 0.0159 mg/Kg for soil sample North Floor @ 1'. TPH concentrations ranged from 20.2 mg/Kg for soil sample South Floor @ 1' to 33 mg/Kg for soil sample North Floor @ 1'. A summary of Concentrations of BTEX and TPH in Soil is provided as Table 1 and the laboratory analytical reports are provided as Appendix A.

On May 13, 2010, approximately sixty (60) cy of impacted soil was transported to Lea Land, LLC (NMOCD Permit # WM-01-035) for disposal. The excavation was backfilled with locally purchased caliche and compacted with water.

#### **4.0 QA/QC PROCEDURES**

##### **4.1 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

##### **4.2 Decontamination of Equipment**

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

##### **4.3 Laboratory Protocol**

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

## **5.0 SITE CLOSURE REQUEST**

Based on the analytical results of confirmation soil samples, Basin recommends Plains provide the NMOCD Hobbs District Office a copy of the Remediation Summary and Site Closure Request and request the NMOCD grant site closure to the Mewbourne Red Hawk 32 release site.

## **6.0 LIMITATIONS**

Basin Environmental Consulting, 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 Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains 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 Consulting, LLC and/or Plains Marketing, L.P.

**7.0 DISTRIBUTION:**

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

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

Copy 3: Daniel Bryant  
Plains Pipeline, L.P.  
6 Desta Drive, Suite 6600  
Midland, Texas 79705  
dmbryant@paalp.com

Copy 4: Basin Environmental Consulting, LLC  
P.O. Box 381  
Lovington, New Mexico 88260  
cjbryant@basin-consulting.com

## **Figures**

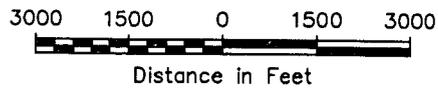
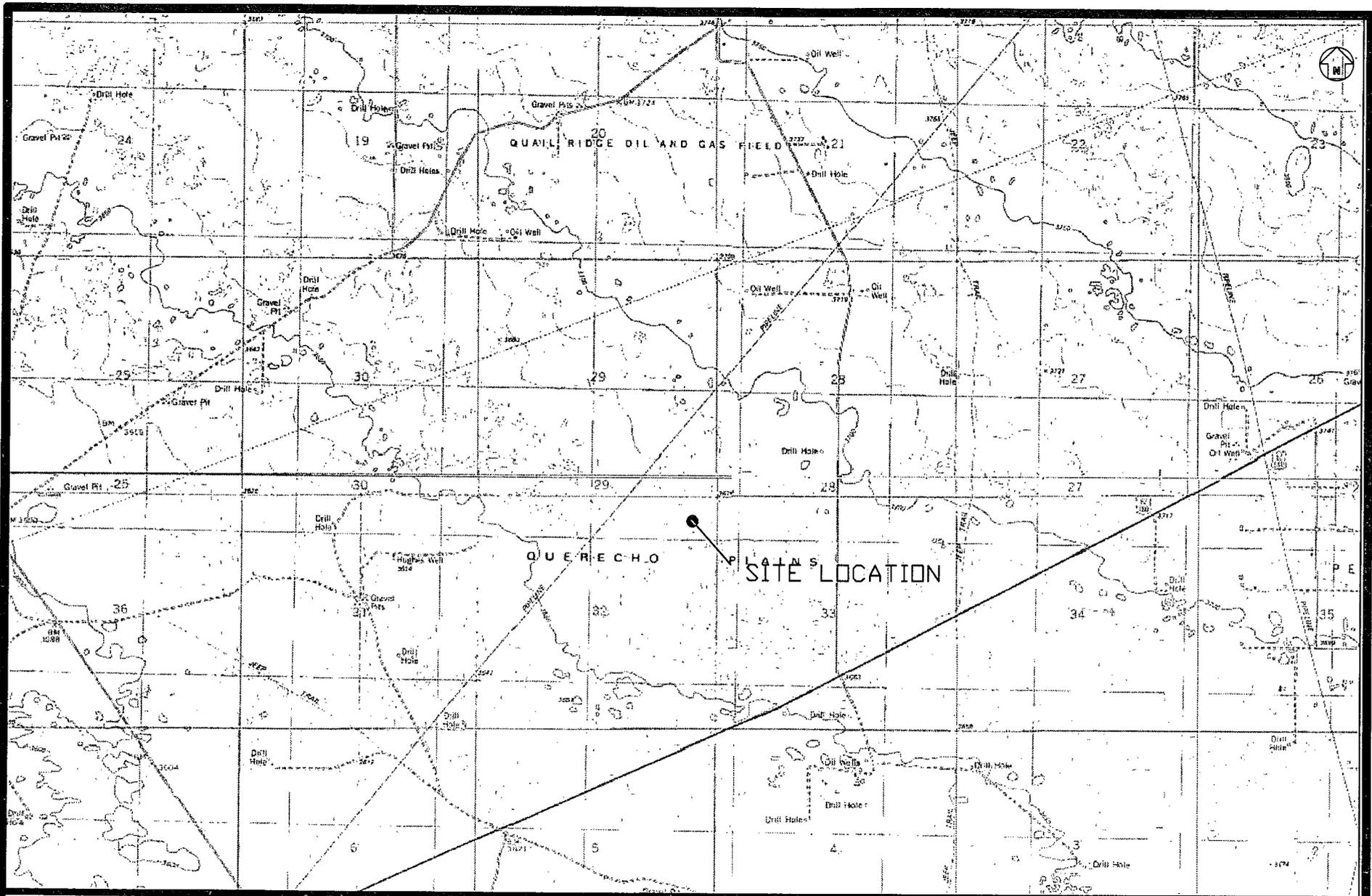
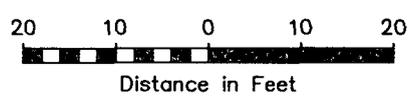
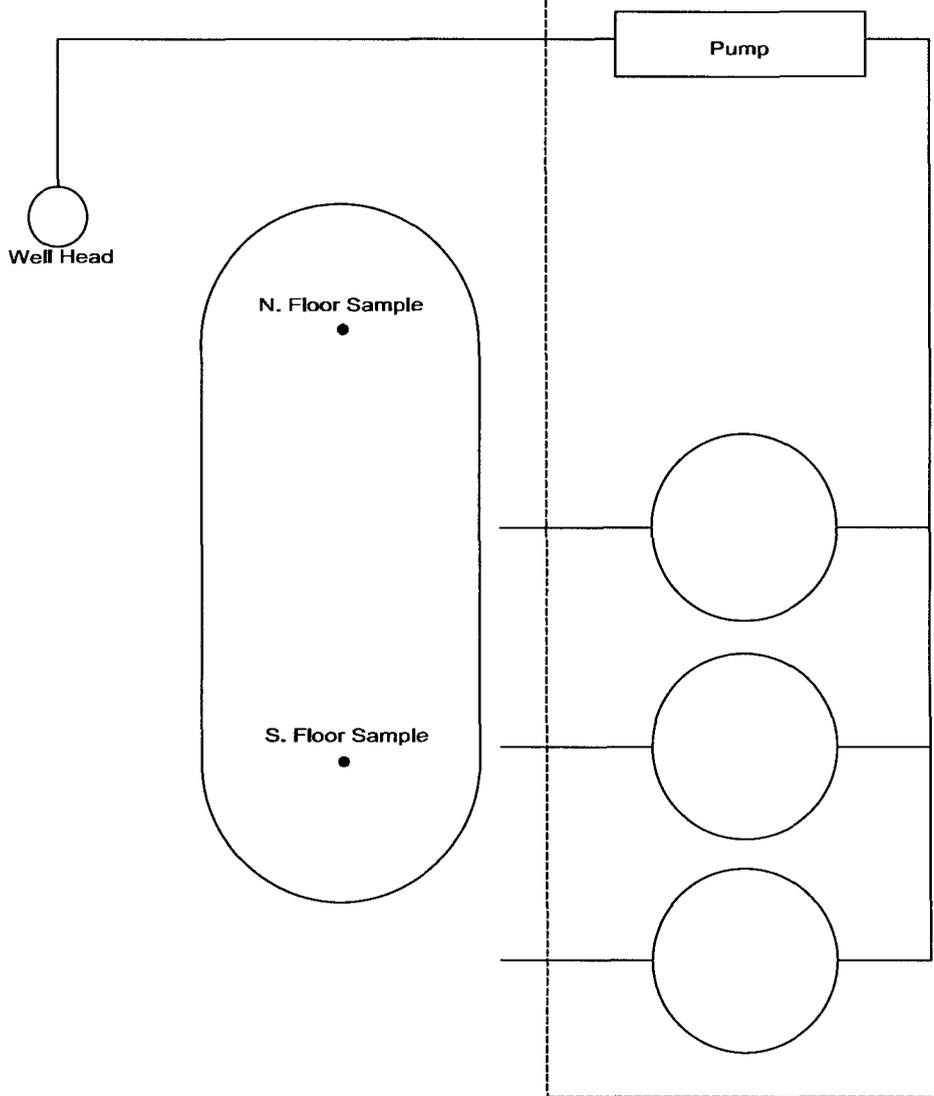


Figure 1  
Site Location Map  
Plains Marketing, L.P.  
Mewbourne Red Hawk 32  
Lea County, New Mexico

Basin Environmental Consulting

Prep By: JWJ	Checked By: CDS
August 16, 2010	Scale 1"=3000'



**LEGEND:**  
— Pipeline  
- - - Fence Line  
• Sample Location

Figure 2  
Site Location Map  
Plains Marketing LP  
Mewbourne Red Hawk 32  
Lea County, NM  
NMOCD Ref # 1RP-2506

**Basin Environmental Consulting**

Scale: 1" = 20'	Drawn By: JWL	Checked By: CJB
August 16, 2010		

# Tables

TABLE 1

CONCENTRATIONS OF BTEX AND TPH IN SOIL

PLAINS MARKETING, L.P.  
 MEWBOURNE RED HAWK 32  
 LEA COUNTY, NEW MEXICO  
 SRS: 2010-094  
 NMOCD # 1RP -2506

SAMPLE LOCATION	SAMPLE DEPTH (below ground surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	TPH GRO C <sub>6</sub> - C <sub>12</sub> (mg/Kg)	TPH DRO C <sub>12</sub> - C <sub>28</sub> (mg/Kg)	TPH ORO C <sub>28</sub> - C <sub>35</sub> (mg/Kg)	TOTAL TPH C <sub>6</sub> - C <sub>35</sub> (mg/Kg)
North Floor @ 1'	1 Foot	05/05/10	In-Situ	<0.0010	0.0059	0.0014	0.0063	0.0086	0.0159	15.1	17.9	<15.1	33
South Floor @ 1'	1 Foot	05/05/10	In-Situ	<0.0012	0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.8	20.2	<18.8	20.2
<b>NMOCD REGULATORY STANDARD</b>				<b>10</b>					<b>50</b>				<b>5,000</b>

# **Appendices**

**Appendix A**  
**Laboratory Analytical Reports**

# Analytical Report 371628

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant**

**Mewbourne Red Hawk 32**

**SRS# 2010-094**

**07-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 (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)



07-MAY-10

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

Reference: XENCO Report No: **371628**  
**Mewbourne Red Hawk 32**  
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 371628. 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. 371628 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 371628**



**PLAINS ALL AMERICAN EH&S, Midland, TX**  
Mewbourne Red Hawk 32

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
North Floor @ 1'	S	May-05-10 09:15		371628-001
South Floor @ 1'	S	May-05-10 09:40		371628-002



## CASE NARRATIVE

*Client Name: PLAINS ALL AMERICAN EH&S*

*Project Name: Mewbourne Red Hawk 32*



*Project ID: SRS# 2010-094*  
*Work Order Number: 371628*

*Report Date: 07-MAY-10*  
*Date Received: 05/06/2010*

---

**Sample receipt non conformances and Comments:**

None

---

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

None

**Analytical Non Conformances and Comments:**

*Batch: LBA-805521 TPH by SW8015 Mod*  
None

*Batch: LBA-805538 BTEX by EPA 8021*  
SW8021BM

*Batch 805538, 1,4-Difluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 562632-1-BLK,371628-002.*

SW8021BM

*Batch 805538, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.*

*Samples affected are: 371628-002, -001.*

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

*Batch: LBA-805545 Percent Moisture*  
None



# Certificate of Analysis Summary 371628

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS# 2010-094

Contact: Daniel Bryant

Project Location: Lea County, NM

Project Name: Mewbourne Red Hawk 32

Date Received in Lab: Thu May-06-10 08:25 am

Report Date: 07-MAY-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	371628-001	371628-002				
	<i>Field Id:</i>	North Floor @ 1'	South Floor @ 1'				
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	May-05-10 09:15	May-05-10 09:40				
<b>BTEX by EPA 8021</b>	<i>Extracted:</i>	May-06-10 09:30	May-06-10 09:30				
	<i>Analyzed:</i>	May-06-10 11:40	May-06-10 12:03				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Benzene		ND 0.0010	ND 0.0012				
Toluene		0.0059 0.0020	ND 0.0025				
Ethylbenzene		0.0014 0.0010	ND 0.0012				
m,p-Xylenes		0.0063 0.0020	ND 0.0025				
o-Xylene		0.0023 0.0010	ND 0.0012				
Xylenes, Total		0.0086 0.0010	ND 0.0012				
Total BTEX		0.0159 0.0010	ND 0.0012				
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-06-10 17:00	May-06-10 17:00				
	<i>Units/RL:</i>	% RL	% RL				
Percent Moisture		ND 1.00	20.2 1.00				
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	May-06-10 10:45	May-06-10 10:45				
	<i>Analyzed:</i>	May-06-10 23:23	May-06-10 23:49				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		15.1 15.1	ND 18.8				
C12-C28 Diesel Range Hydrocarbons		17.9 15.1	20.2 18.8				
C28-C35 Oil Range Hydrocarbons		ND 15.1	ND 18.8				
Total TPH		33.0 15.1	20.2 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.

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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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	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
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: Mewbourne Red Hawk 32

Work Orders : 371628,

Project ID: SRS# 2010-094

Lab Batch #: 805538

Sample: 562632-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/06/10 09:48

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 805538

Sample: 562632-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/06/10 10:10

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 805538

Sample: 562632-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/06/10 11:18

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 805538

Sample: 371628-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/06/10 11:40

### 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	0.0297	0.0300	99	80-120	

Lab Batch #: 805538

Sample: 371628-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/06/10 12:03

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0230	0.0300	77	80-120	*
4-Bromofluorobenzene	0.0270	0.0300	90	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: Mewbourne Red Hawk 32

Work Orders : 371628,

Project ID: SRS# 2010-094

Lab Batch #: 805538

Sample: 371628-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/06/10 21:31

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 805521

Sample: 562616-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/06/10 15:16

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	42.4	50.1	85	70-135	

Lab Batch #: 805521

Sample: 562616-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/06/10 15:43

### 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	42.4	50.1	85	70-135	

Lab Batch #: 805521

Sample: 562616-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/06/10 16:10

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	99.6	90	70-135	
o-Terphenyl	43.6	49.8	88	70-135	

Lab Batch #: 805521

Sample: 371628-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/06/10 23:23

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.1	99.7	84	70-135	
o-Terphenyl	41.3	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: Mewbourne Red Hawk 32

Work Orders : 371628,

Project ID: SRS# 2010-094

Lab Batch #: 805521

Sample: 371628-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/06/10 23:49

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	99.8	97	70-135	
o-Terphenyl	49.9	49.9	100	70-135	

Lab Batch #: 805521

Sample: 371628-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 02:03

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.5	105	70-135	
o-Terphenyl	40.3	49.8	81	70-135	

Lab Batch #: 805521

Sample: 371628-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 02:30

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	39.7	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.



# BS / BSD Recoveries



Project Name: Mewbourne Red Hawk 32

Work Order #: 371628

Analyst: ASA

Lab Batch ID: 805538

Sample: 562632-1-BKS

Date Prepared: 05/06/2010

Batch #: 1

Project ID: SRS# 2010-094

Date Analyzed: 05/06/2010

Matrix: Solid

Units: mg/kg

## 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	0.0921	92	0.1	0.0919	92	0	70-130	35	
Toluene	ND	0.1000	0.0924	92	0.1	0.0923	92	0	70-130	35	
Ethylbenzene	ND	0.1000	0.0948	95	0.1	0.0940	94	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.1893	95	0.2	0.1876	94	1	70-135	35	
o-Xylene	ND	0.1000	0.0941	94	0.1	0.0930	93	1	71-133	35	

Analyst: BEV

Date Prepared: 05/06/2010

Date Analyzed: 05/06/2010

Lab Batch ID: 805521

Sample: 562616-1-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	1090	109	1000	1100	110	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	919	92	1000	851	85	8	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 Recoveries



Project Name: Mewbourne Red Hawk 32

Work Order #: 371628

Lab Batch #: 805538

Date Analyzed: 05/06/2010

Date Prepared: 05/06/2010

Project ID: SRS# 2010-094

Analyst: ASA

QC- Sample ID: 371628-002 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## MATRIX / MATRIX SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	ND	0.1253	0.0657	52	70-130	X
Toluene	ND	0.1253	0.0745	59	70-130	X
Ethylbenzene	ND	0.1253	0.0778	62	71-129	X
m,p-Xylenes	ND	0.2506	0.1665	66	70-135	X
o-Xylene	ND	0.1253	0.0809	65	71-133	X

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: Mewbourne Red Hawk 32

Work Order #: 371628

Project ID: SRS# 2010-094

Lab Batch ID: 805521

QC- Sample ID: 371628-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/07/2010

Date Prepared: 05/06/2010

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	15.1	995	1050	104	999	1030	102	2	70-135	35
C12-C28 Diesel Range Hydrocarbons	17.9	995	773	76	999	883	87	13	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: Mewbourne Red Hawk 32**

**Work Order #: 371628**

**Lab Batch #: 805545**

**Project ID: SRS# 2010-094**

**Date Analyzed: 05/06/2010**

**Date Prepared: 05/06/2010**

**Analyst: JLG**

**QC- Sample ID: 371628-001 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	ND	ND	NC	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: Plains / Basin  
 Date/ Time: 05-06-10 @ 0925  
 Lab ID #: 371628  
 Initials: JMF

### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	2.6 °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? <small>as labels</small>	(Yes)	No	Not Present	
#5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples properly preserved?	(Yes)	No	See Below	
#14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	Yes	(No)	Not Applicable	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	

### Variance Documentation

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

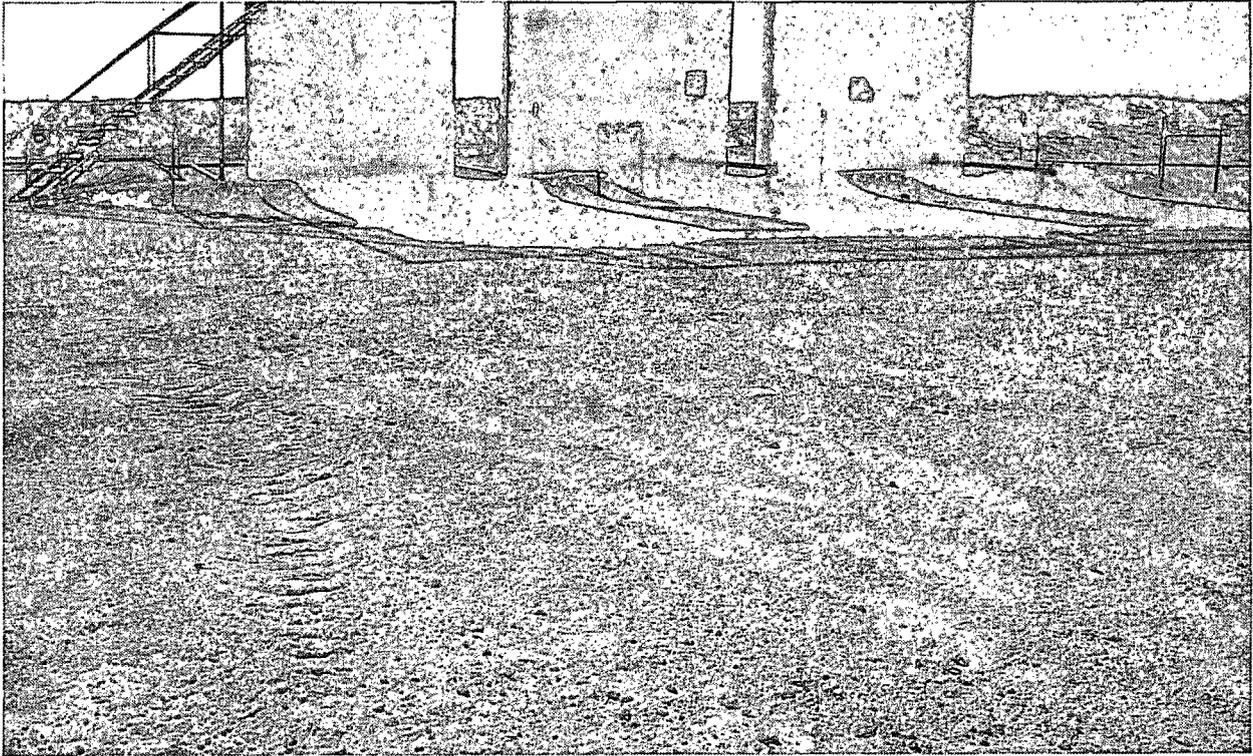
Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

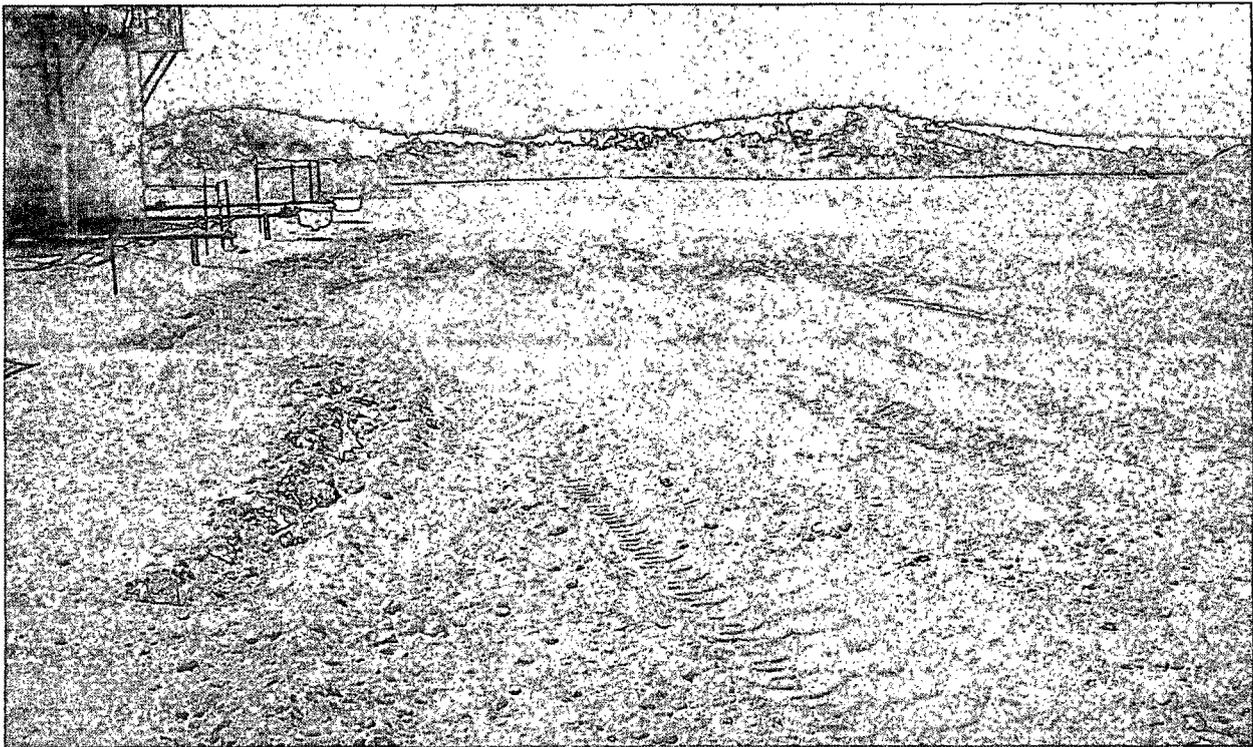
- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

# **Appendix B**

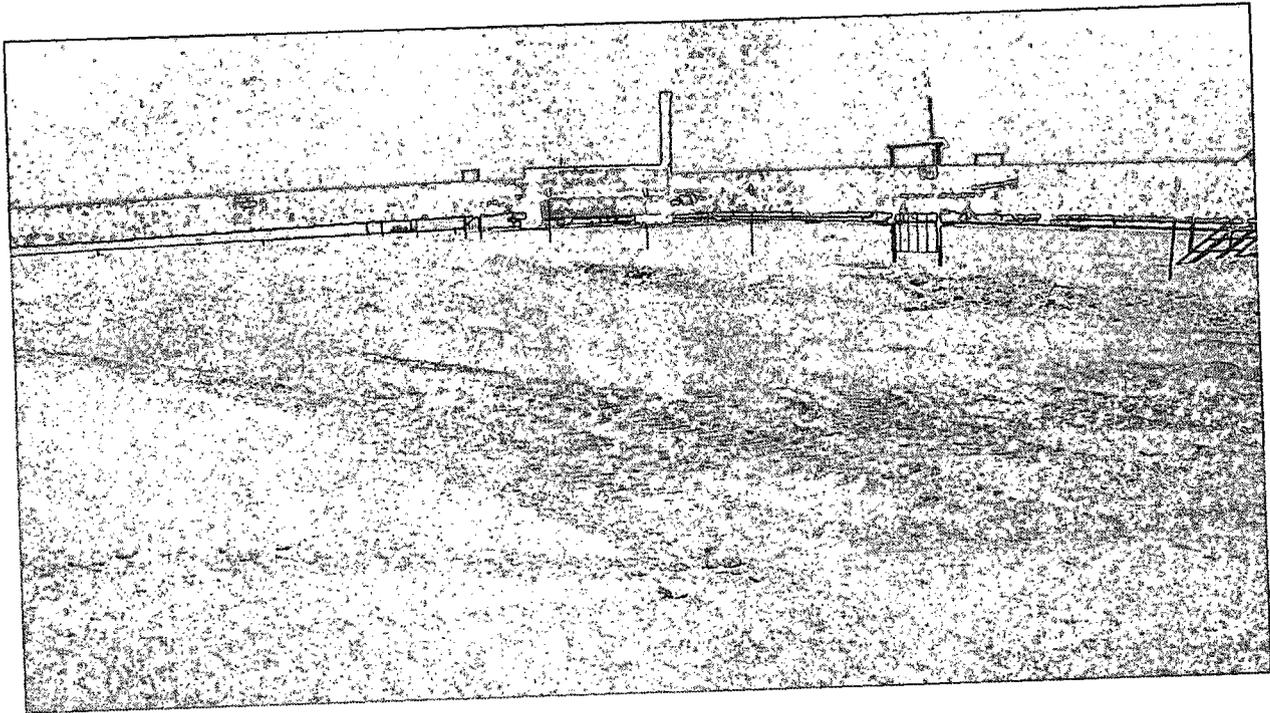
## **Photographs**



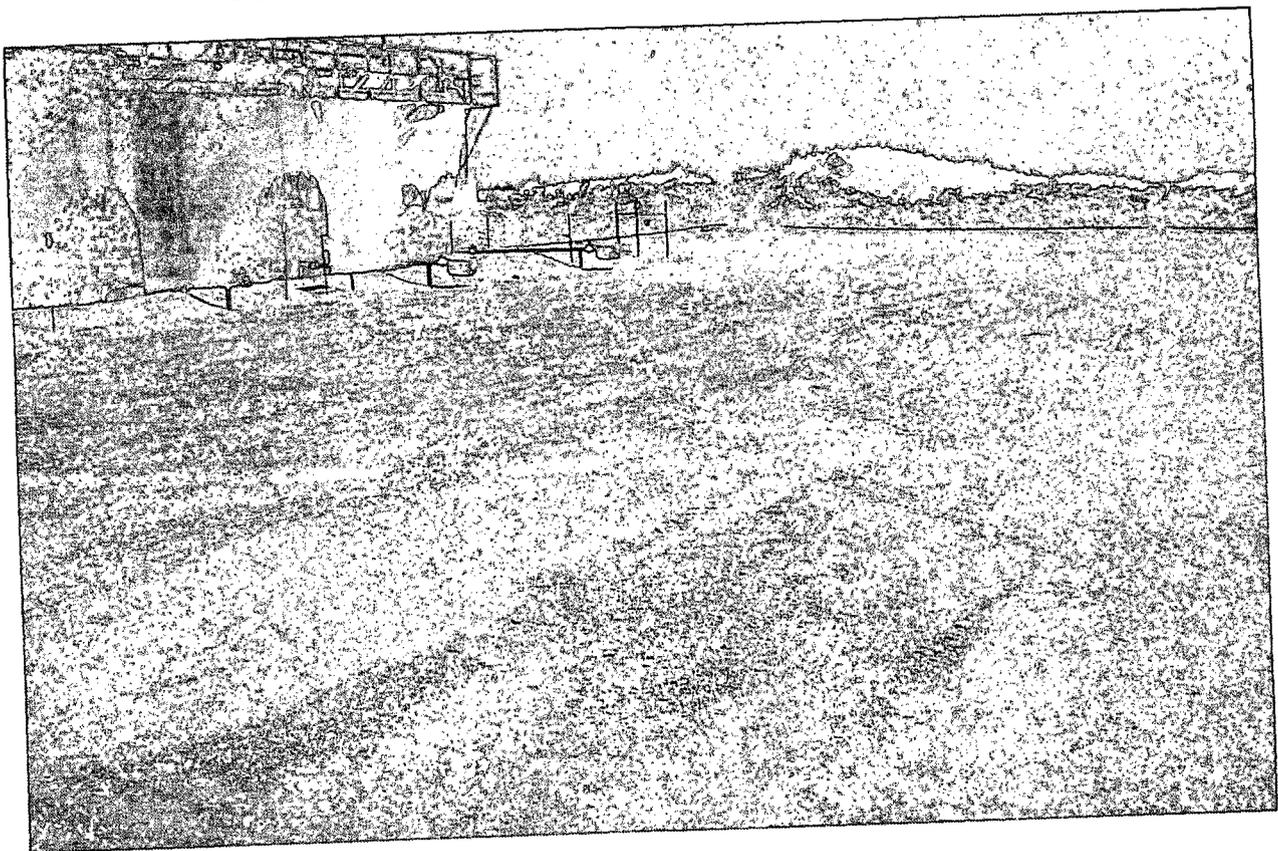
Initial Release at the Mewbourne Red Hawk 32 Release Site



Excavation Activities at the Mewbourne Red Hawk 32 Release Site



Excavation Activities at the Mewbourne Red Hawk 32 Release Site



Completion of Remediation Activities at the Mewbourne Red Hawk 32 Release Site

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