# 2R - 53

# MONITORING REPORTS DATE:

# 2007

Basin Environmental Service Technologies LLC

2800 Plains Highway P. O. Box 301 Lovington, New Mexico 88260 kdutton@basinenv.com Office: (505) 396-2378 Fax:

Fax: (505) 396-1429



2007

#### **ANNUAL MONITORING REPORT**

#### BALLARD GRAYBURG 5" SITE SW ¼ SW ¼ SECTION 10, TOWNSHIP 18 SOUTH, RANGE 29 EAST LATITUDE 32°, 45', 27.1" NORTH, LONGITUDE 104°, 04', 12.0" WEST EDDY COUNTY, NEW MEXICO PLAINS SRS NUMBER: 2004-00192 NMOCD REF: 2R-0053

PREPARED FOR:



PLAINS MARKETING, L.P. 333 CLAY STEET, SUITE 1600 HOUSTON, TEXAS 77002

#### PREPARED BY:

#### **BASIN ENVIRONMENTAL SERVICE TECHNOLOGIES, LLC**

2800 Plains Highway P. O. Box 301 Lovington, New Mexico 88260

February 2008

Ken Dutton Project Manager



RECEIVED 2008 MAR 25 AM 7 27

14 March 2008

Mr. Ed Hansen New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division Environmental Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Plains All American – Annual Monitoring Report 1 Site in Lea County, New Mexico

Dear Mr. Hansen:

Plains All American is an operator of crude oil pipelines and terminal facilities in the State of New Mexico. Plains All American actively monitors historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring report for the following site:

Ballard Grayburg 5" Section 10, Township 18 South, Range 29 East, Eddy County

Basin prepared this document and has vouched for its accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the document and interviewed Basin in order to verify the accuracy and completeness of this document. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Report for the above facility.

Should you have any questions or comments, please contact me at (505) 441-0965.

Sincerely, Krynolds amile Camille Reynolds

Remediation Coordinator Plains All American

Enclosure

cc: Mr. Mike Bratcher, NMOCD Artesia District II

3112 West Highway 82 • Lovington, NM 88260 • (505) 396-3341

#### **TABLE OF CONTENTS**

INTRODUCTION	1
SITE DESCRIPTION AND BACKGROUND INFORMATION	1
FIELD ACTIVITIES	2
LABORATORY RESULTS	2
SUMMARY	3
ANTICIPATED ACTIONS	3
LIMITATIONS	4
DISTRIBUTION	5

FIGURES Figure 1 – Site Location Map

Figure 2A – Inferred Groundwater Elevation Map – 19 March 2007 Figure 2B – Inferred Groundwater Elevation Map – 05 June 2007 Figure 2C – Inferred Groundwater Elevation Map – 27 September 2007 Figure 2D – Inferred Groundwater Elevation Map – 04 December 2007

Figure 3A – Groundwater Concentration Map – 19 March 2007 Figure 3B – Groundwater Concentration Map – 05 June 2007 Figure 3C – Groundwater Concentration Map – 27 September 2007 Figure 3D – Groundwater Concentration Map – 04 December 2007

TABLES

and the

Table 1 – Groundwater Elevation Data

Table 2 - Concentrations of Benzene and BTEX in Groundwater

APPENDICES

Appendix A – Laboratory Reports

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

#### **INTRODUCTION**

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Marketing, L.P., (Plains), prepared this annual report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2007 only. Additional site activities and remedial work is summarized in several letters and reports previously submitted to the NMOCD. For reference, the Site Location Map is provided as Figure 1.

11) **F**F

Groundwater monitoring was conducted during the four (4) consecutive quarters of 2007 at the request of the NMOCD to monitor the groundwater from dissolved phase constituents. The groundwater monitoring event consisted of measuring static water levels in the monitoring wells, checking for the presence of phase-separated hydrocarbons (PSH) atop the water column, and purging and sampling of each well exhibiting sufficient recharge. Monitoring or recovery wells containing a thickness of PSH greater than 0.01 foot were not sampled.

#### SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the site is SW¼ SW¼ Section 10, Township 18 South, Range 29 East. The site latitude is 32°, 45', 27.1" North and the site longitude is 104°, 04', 12.0" West. On 02 September 2004, Allstate Environmental Services responded to the pipeline release to repair the pipeline and excavate the impacted soil. At the request of Plains, Basin performed subsequent remediation of the site. The Ballard Grayburg 5" Pipeline was subsequently de-oiled, cold cut and capped. Approximately 80 barrels of crude oil were released from the Plains pipeline and 0 barrels were recovered. The site is characterized by a right-of-way for the pipeline in a pasture utilized for cattle grazing. The initial visibly surface stained area included the release point covering an area approximately 22 feet long by 23 feet wide. Excavation activities during the emergency response and subsequent remediation of the site covered an area approximately 225 feet long by 60 feet wide and ranged from approximately 10 to 20 feet below ground surface (bgs), respectively. Excavated soil was placed on a 6-mil poly-liner for future remedial action.

A Preliminary Site Investigation Report (PSIR) and Remediation Plan, dated 14 November 2004 was submitted and approved by NMOCD, Artesia District II and the U. S. Department of the Interior, Bureau of Land Management (BLM), Carlsbad Office. The approved plan included excavating to approximately 12 to 15 feet bgs, collecting confirmation soil samples, installing a 40-mil poly liner, blending of the clean segregated overburden and impacted soil on-site and backfilling the excavation with the blended soil. In March 2006, an electronic revision was submitted and subsequently approved by NMOCD (Santa Fe) and BLM. The approved revision included excavating to a depth of approximately 18 to 20 feet bgs, installation of a 40-mil poly liner at the floor of the excavation, blending the excavated soil with clean segregated overburden, backfilling the excavation with blended stockpiled material on-site, collecting soil

samples at 500 cubic yard intervals ensuring TPH constituent concentrations were below 1000 mg/kg and reseed with approved BLM grass seed.

Based on initial delineation of the release site, two (2) groundwater monitoring wells were installed to evaluate the quality of groundwater and one (1) recovery well due to the presents of PSH from the soil samples during drilling activities. During the installation of the two (2) groundwater monitoring wells (October 2004), there were no visual signs of PSH and laboratory results of the selected soil samples did not indicate BTEX and TPH constituent concentrations above laboratory method detection limits or were significantly below NMOCD limits for the soil samples submitted to the laboratory. Two attempts to install an up gradient monitoring well proved futile due to drilling into subsurface limestone caverns. A hydrocarbon absorbent sock was installed in the recovery well to absorb the limited amount of crude oil on the groundwater and was replaced on a monthly basis. During excavation of the release area, recovery well RW-1 collapsed and was rendered unusable. The approved PSIR electronic revision stipulated that an additional recovery well north-northwest of the plugged and abandoned recovery well RW-1 be attempted once backfilling of the excavation was completed. In July 2006, an attempt to install the recovery well was initiated, however, as mentioned above, subsurface limestone caverns were encountered which negated the recovery well installation.

Currently, there are two (2) groundwater monitoring wells, MW-2 and MW-3 which are down gradient, on site.

#### **FIELD ACTIVITIES**

The site monitoring wells were gauged and sampled on 19 March 2007, 05 June 2007, 27 September 2007 and 04 December 2007. During the quarterly sampling events, the monitoring wells, designated to be sampled, were purged of approximately 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 samplers. 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 at an approved disposal in Monument, New Mexico.

Locations of the groundwater monitoring wells and the inferred groundwater elevations, which were constructed from the measurements collected during the quarterly monitoring events, are depicted on Figures 2A through 2D. The groundwater elevation data are provided as Table 1. Research of the New Mexico State Engineers Office reflected a general south to southwest groundwater gradient in this area of Eddy County, New Mexico. The depth to groundwater, as measured from the top of the well casing, was 186.57, from the 04 December 2007 monitoring event.

#### LABORATORY RESULTS

Groundwater samples were collected from the groundwater monitoring wells (MW-2 and MW-3) during the quarterly monitoring events and were delivered to Environmental Laboratory of Texas, Odessa, Texas for determination of benzene, toluene, ethylbenzene and xylenes (BTEX) constituent concentrations by EPA Method SW846-8021b. A summary of BTEX constituent concentrations for 2007 is presented in Table 2 and the laboratory reports are provided as Appendix A.

1. 1.15

Laboratory results for the two (2) site groundwater samples, obtained during the four (4) sampling periods, indicated that benzene and total BTEX constituent concentrations for monitoring well MW-2 were below applicable NMOCD limits for the third quarter monitoring event and exceeded NMOCD benzene limits at 0.043 mg/L, 0.012 mg/L and 0.013 mg/L, respectively, for the remaining three (3) monitoring events. Laboratory results indicated that benzene and total BTEX constituent concentrations for monitoring well MW-3 were not detected above laboratory method detection limits for the first quarter monitoring event and exceeded NMOCD benzene limits at 0.013 mg/L, 0.017 mg/L and 0.013 mg/L, 0.017 mg/L and 0.013 mg/L, 0.013 m

Laboratory analytical results were compared to NMOCD regulatory limits based on the New Mexico groundwater standards found in section 20.6.2.3103 of the New Mexico Administrative Code.

#### SUMMARY

Based on the depth of the soil impact at this site, the NMOCD requested four (4) quarterly groundwater sampling events to be conducted at this site. This report presents the results of monitoring activities for the monitoring period. Currently, there are two (2) groundwater monitoring wells (MW-2 and MW-3) on-site. Based on the limited data, groundwater elevations at the site are relatively similar and research of the New Mexico State Engineers Office reflected a general groundwater gradient to the south-southwest.

Laboratory results for the two (2) site groundwater samples, obtained during the four (4) sampling periods, indicated that benzene and total BTEX constituent concentrations for monitoring well MW-2 were below applicable NMOCD limits for the third quarter monitoring event and exceeded NMOCD benzene limits for the remaining three (3) monitoring events. Laboratory results indicated that benzene and total BTEX constituent concentrations for monitoring well MW-3 were not detected above laboratory method detection limits for the first quarter monitoring event and exceeded NMOCD benzene limits for the remaining three (3) monitoring three (3) monitoring well MW-3 were not detected above laboratory method detection limits for the first quarter monitoring event and exceeded NMOCD benzene limits for the remaining three (3) monitoring three (3) monitoring events.

#### **ANTICIPATED ACTIONS**

The NMOCD approved soil remediation activities at the Ballard Grayburg 5" site were completed and a site closure was submitted and approved by NMOCD Santa Fe. Based on the laboratory results from thirteen (13) consecutive quarterly sampling events, continued quarterly groundwater monitoring for MW-2 and MW-3 and annual reporting will be conducted in 2008.

#### LIMITATIONS

 $\Delta R_{i}$ 

 $\mathcal{A}_{i}, \mathcal{E}_{i},$ 

Basin has prepared this Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

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

#### DISTRIBUTION

- - -

×

ŀ

. . . ۰. <del>ا</del>بد

Copy 1:	Edward J. Hansen New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505 <u>edwardj.hansen@state.nm.us</u>
Copy 2:	Mike Bratcher New Mexico Oil Conservation Division, District II 1301W. Grand Avenue Artesia, New Mexico 88210 <u>mike.bratcher@state.nm.us</u>
Copy 3:	Jeff Dann Plains Marketing, L.P. 333 Clay Street Suite 1600 Houston, Texas 77002 jpdann@paalp.com
Copy 4:	Camille Reynolds Plains Marketing, L.P. 3112 Highway 82 Lovington, New Mexico 88260 <u>cjreynolds@paalp.com</u>
Copy 5:	Basin Environmental Service Technologies, LLC P. O. Box 301 Lovington, New Mexico 88260 <u>kdutton@basinenv.com</u>

Copy Number: <u>1</u>

# **FIGURES**

Big shaqi 2

の時間の

A Bandada

Source and the second

AB Maria

ar tarawara

STRANGTON .

あるかってい

Land Hally

A. S. S.

/ Taf agestudiethe

Station Pro-

163 July -

a Karatata

a part of the same.

.

# FIGURE 1 SITE LOCATION MAP

•

.

1

- di Reder

and the second

1999 - 1997 - 19

Saladi a Ta S

and the

States an

ALCONT OF

t on a sur

23. Car 24.

Carlona - an I

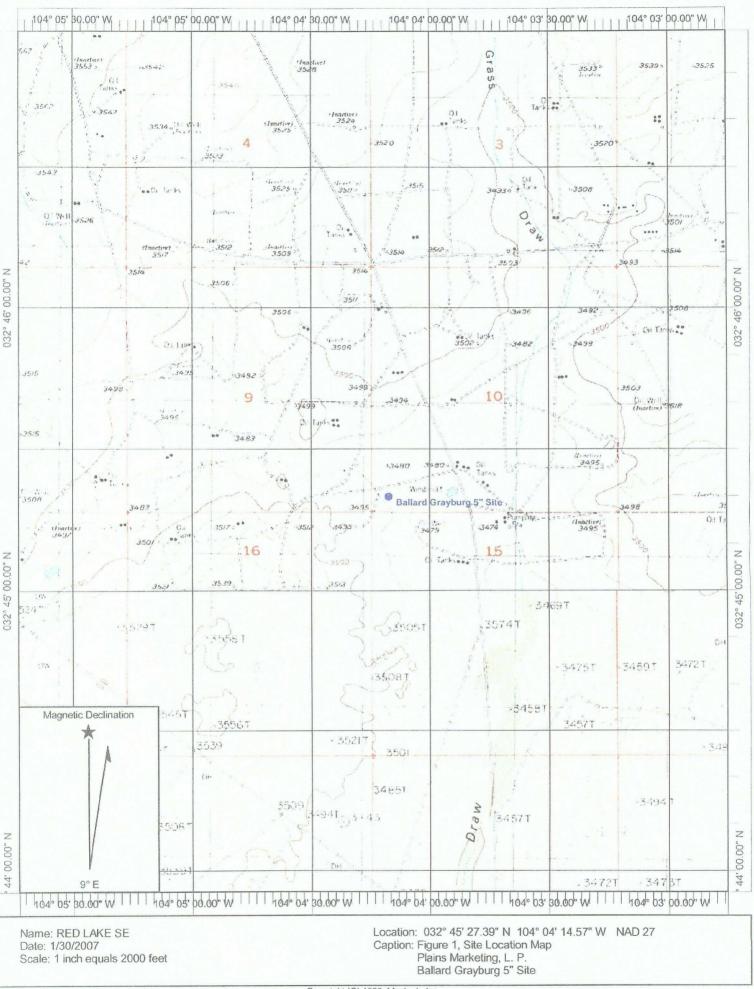
and the s

Databa ak

A. 10. 10.

AND ADD

のたいのない



Copyright (C) 1999, Maptech, Inc.

#### FIGURE 2A

and the second

S. R. California

A support

Mary

Seale of

Br Sylaria

Sec. of

and the second second

A.

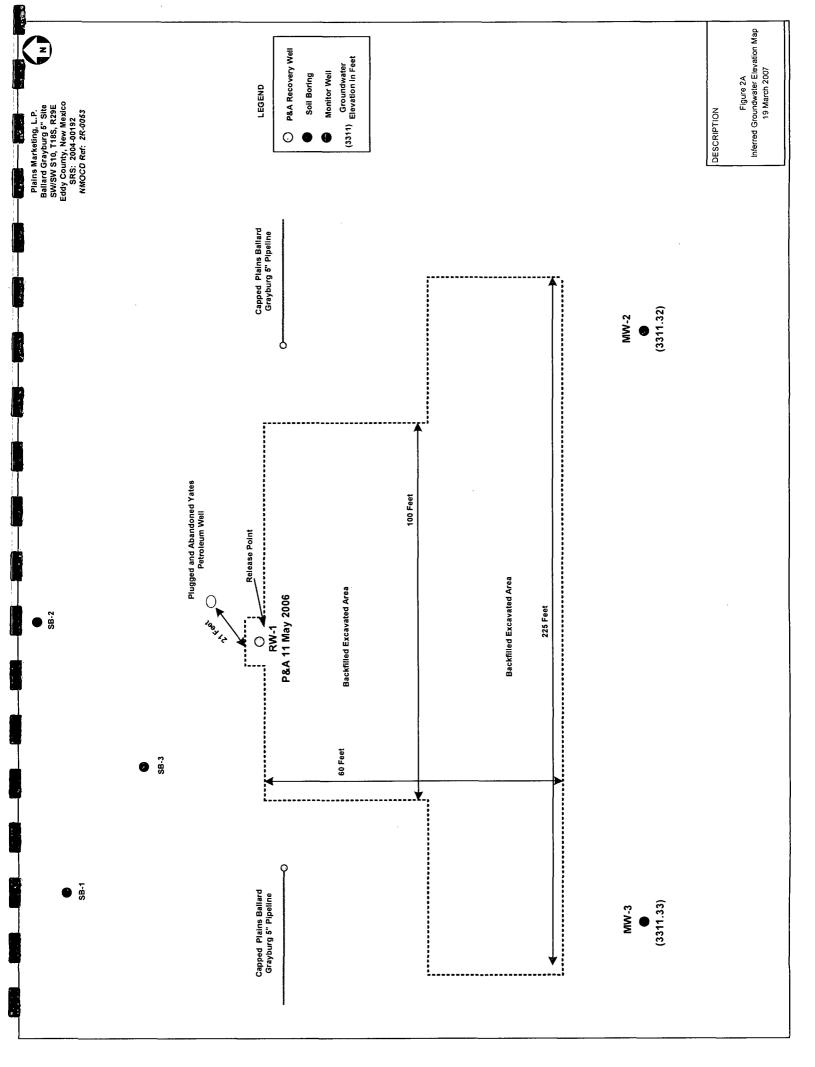
-

A P AND IN

Backater

Server 1

# INFERRED GROUNDWATER ELEVATION MAP – 19 MARCH 2007



#### FIGURE 2B

1.489.4815 935

1000 an 100

Same P

A Salas

A STATE

and the second

and a second

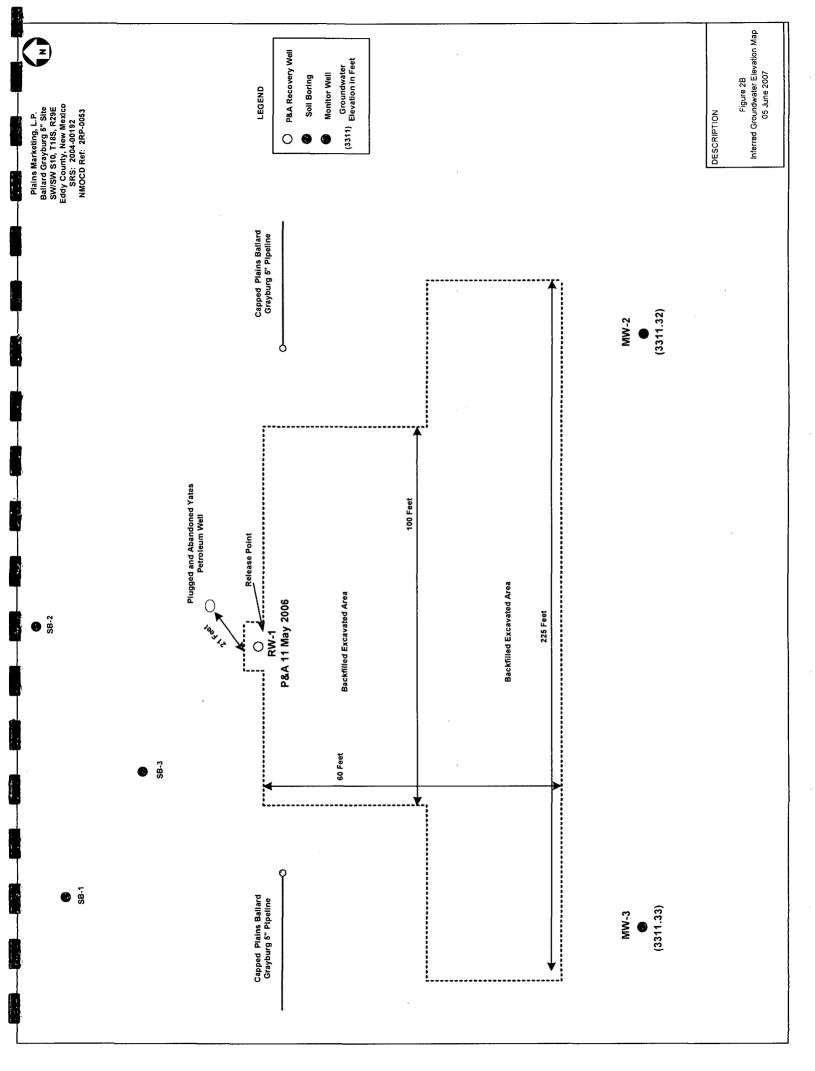
10.00

and the second

Surgery and

ŝ

#### INFERRED GROUNDWATER ELEVATION MAP – 05 JUNE 2007



#### FIGURE 2C

¢,

Sec. 1

- Angles and

ar scool as

A sub So N

alar ara

1. 17 miles

ALC UNIT

R. STREET

14 - A.

1. Sec. 1.

dar w

An ideal

A. S. W. S.

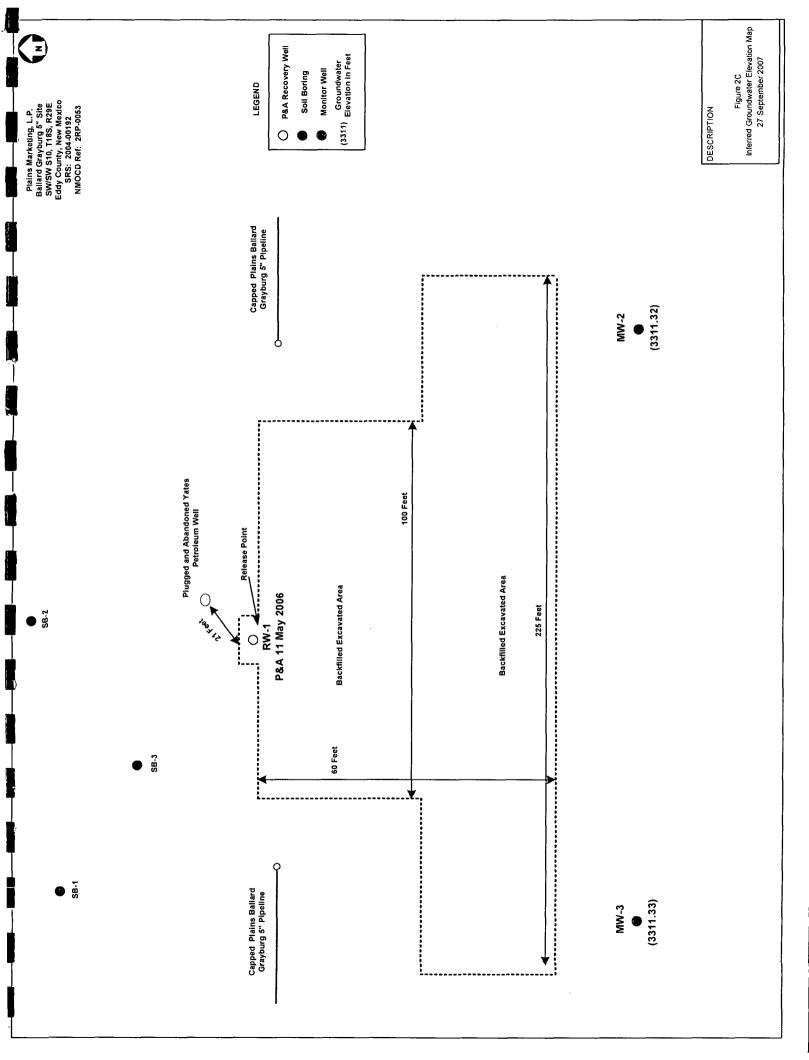
- "The burner

1. 11. 11. 12. 14.

a the state of

a fa ture

# INFERRED GROUNDWATER ELEVATION MAP – 27 SEPTEMBER 2007



#### FIGURE 2D

ţ

the rest

and series

a de très

R. B. C.

and the second

1 200

State of the second sec

Bearing.

1. Sur. 1

-800 4427

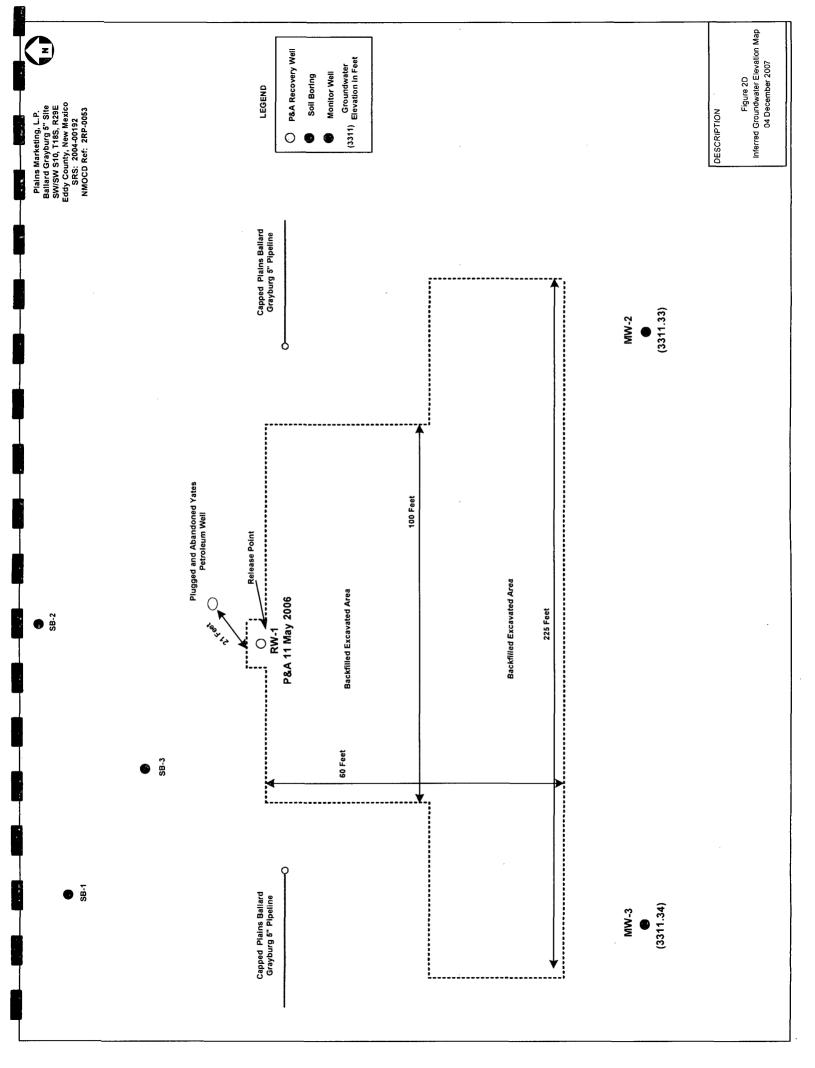
Pris Sect.

alar telle

and all

Series of

# INFERRED GROUNDWATER ELEVATION MAP – 04 DECEMBER 2007



#### FIGURE 3A

on Pert

Sec. Sugar

A analy in 1

a the a

and the

Section 2

A verified

at inte

10,000

28.00 2.

1. Stor 19

admits to

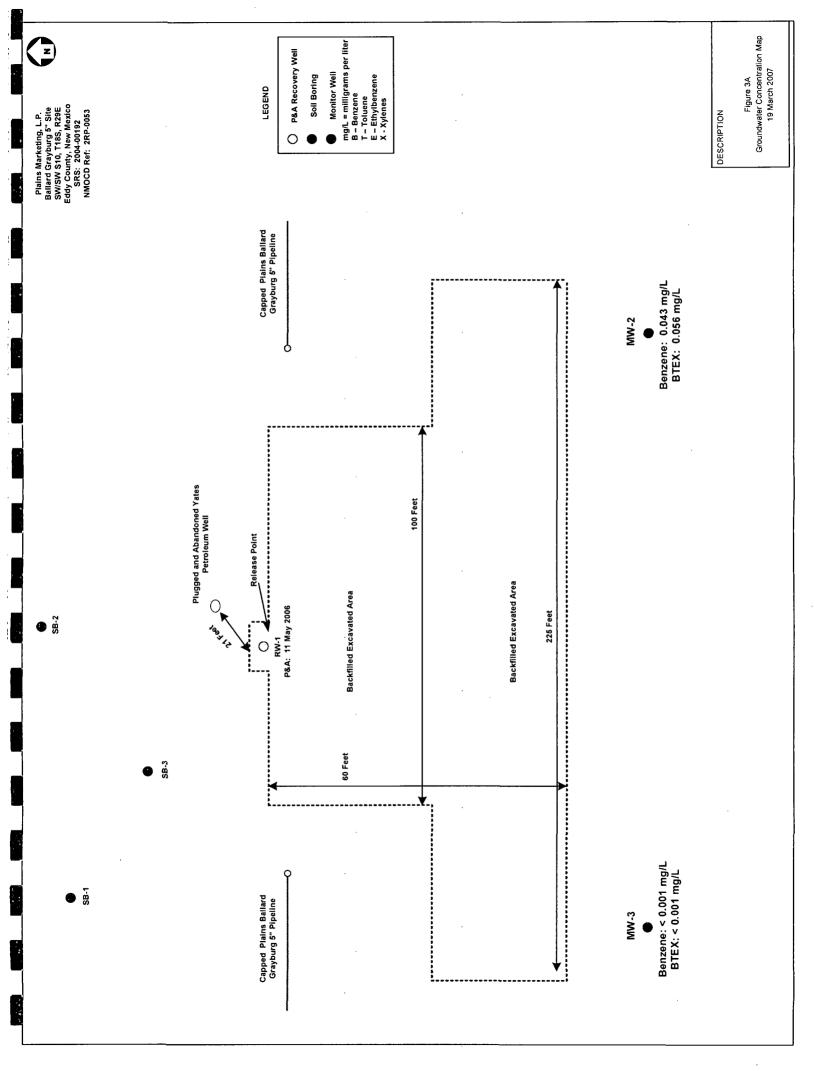
in the b

interes ?

Sec. Ale

# **GROUNDWATER CONCENTRATION MAP – 19 MARCH 2007**

. .



#### FIGURE 3B

•

San San

See.

A A A A A A

in the second second

Survey of

Same and

やいた

1.20

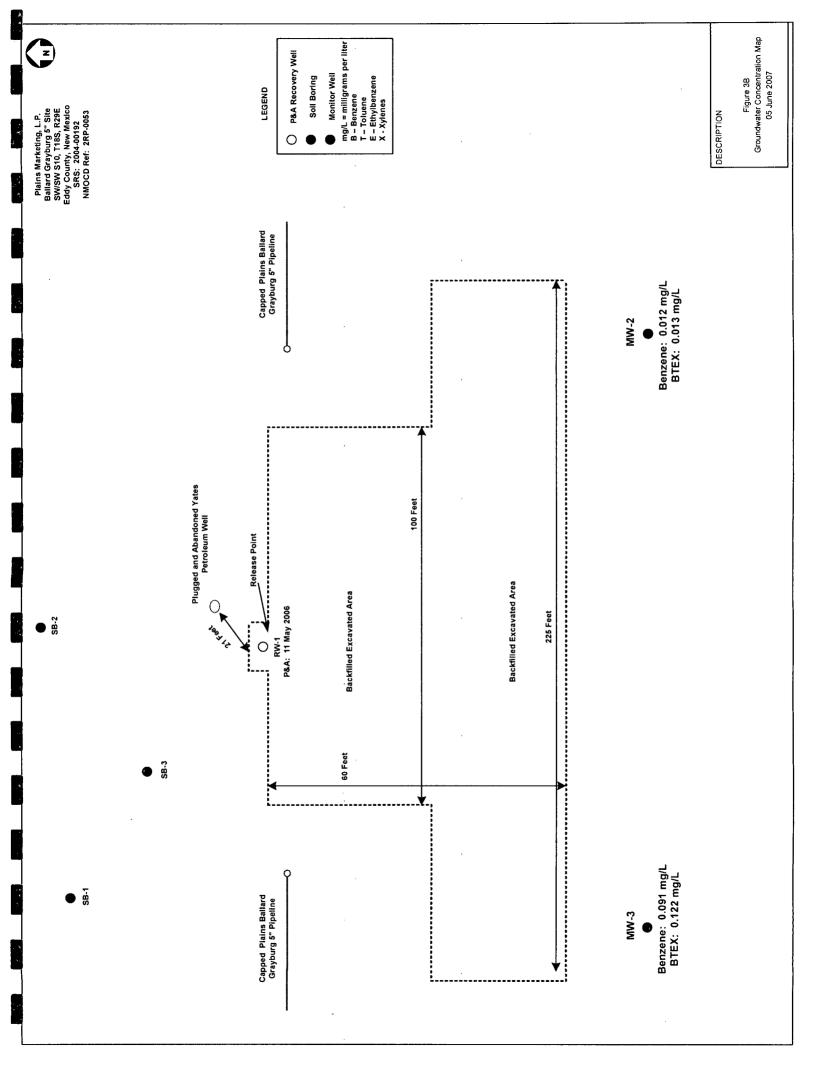
1. N. N. N.

100 A

ALL ALLS

N.S. 3.1.

# GROUNDWATER CONCENTRATION MAP – 05 JUNE 2007



#### FIGURE 3C

1.1

1.

100

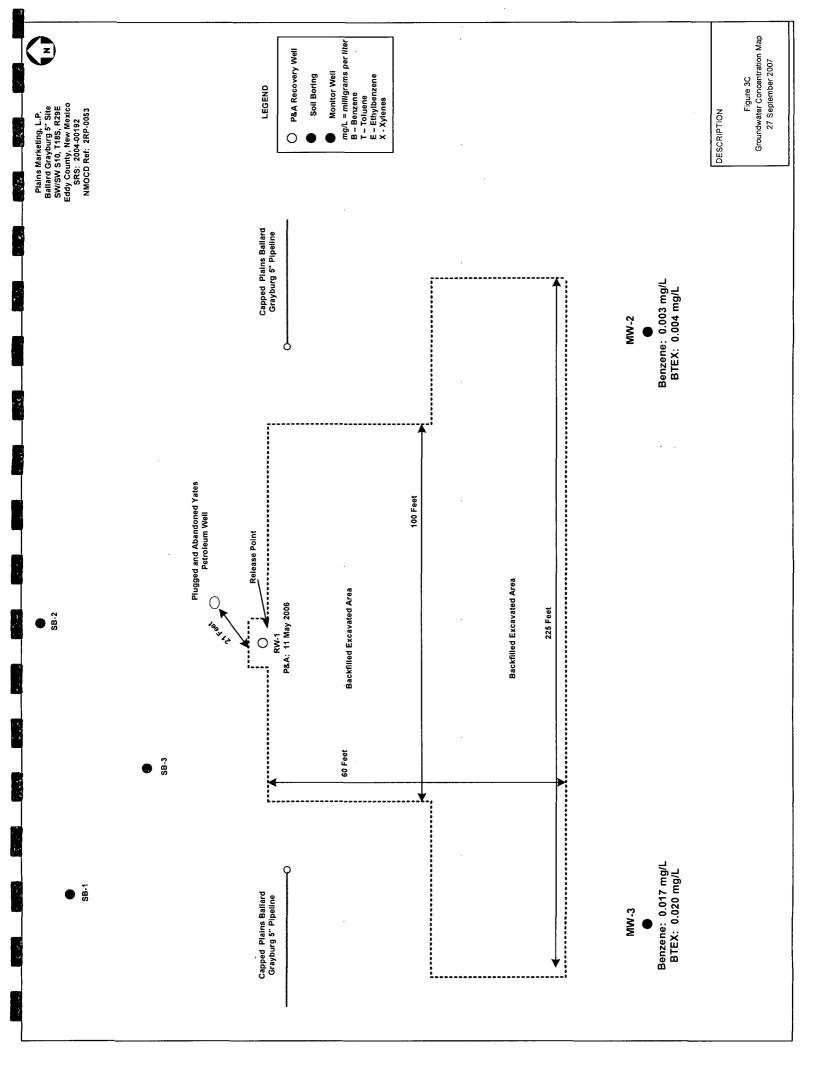
に消ける

のため

50%

A STATE

### **GROUNDWATER CONCENTRATION MAP – 27 SEPTEMBER 2007**



#### **FIGURE 3D**

ALC: NO

A State

1.11

ALC: NO

States of the states

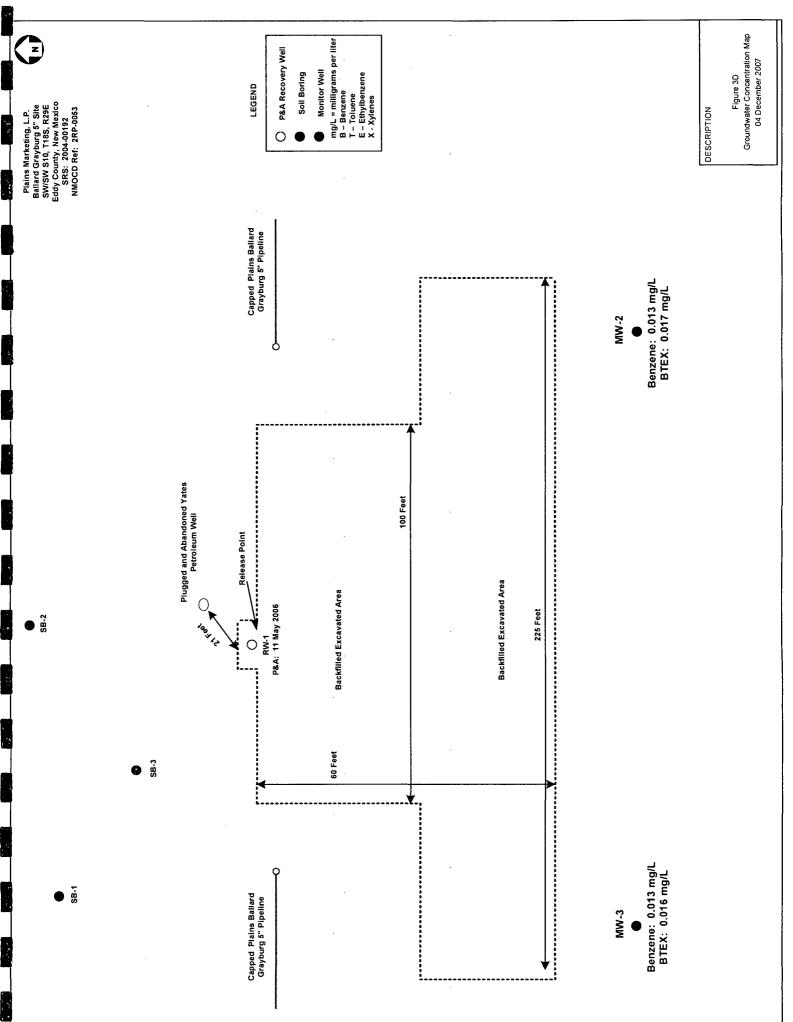
A STATE

A State

102.20

1. N. S.

# **GROUNDWATER CONCENTRATION MAP – 04 DECEMBER 2007**



.

1. S. 1

and and

1000

10.00

State and

ALKE ST.

10 Tay - 5

Station and

14. A.

Take I

.

55.702

320 18 g

1. 187

State of

A BIRK

CLEASE &

14 Sec. 1

and a state

20. Mar 1

Walk for

R. R. S.

E SALAR A

Media

1. 1. A.

1.20

# **GROUNDWATER ELEVATION DATA**

1. 3. C

4 . 4. 4. 4

3.0 . . . .

1. A. .

22

د. هریکانین میلاند اید ا

1. A. . .

# **GROUNDWATER ELEVATION DATA**

PLAINS MARKETING, L.P. BALLARD-GRAYBURG 5" EDDY COUNTY, NEW MEXICO PLAINS SRS NO: 2004-00192 NMOCD REFERENCE NO: 2RP-0053

WELL	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 2	11/10/04	3,497.90	-	186.58	0.00	3,311.32
	03/29/05	3,497.90		186.58	0.00	3,311.32
·	05/26/05	3,497.90		186.58	0.00	3,311.32
	08/11/05	3,497.90	· •	186.57	0.00	3,311.33
	12/27/05	3,497.90	-	186.58	0.00	3,311.32
	03/30/06	3,497.90	1	186.57	0.00	3,311.33
	06/14/06	3,497.90		186.56	0.00	3,311.34
	09/20/06	3,497.90	-	186.57	0.00	3,311.33
	12/14/06	3,497.90	-	186.58	0.00	3,311.32
	03/19/07	3,497.90	-	186.58	0.00	3,311.32
	06/05/07	3,497.90	•	186.58	0.00	3,311.32
	09/27/07	3,497.90		186.58	0.00	3,311.32
	12/04/07	3,497.90	•	186.57	0.00	3,311.33
MW - 3	11/10/04	3,497.91		186.59	0.00	3,311.32
	03/29/05	3,497.91		186.59	0.00	3,311.32
	05/26/05	3,497.91	•	186.58	0.00	3,311.33
	08/11/05	3,497.91	-	186.58	0.00	3,311.33
	12/27/05	3,497.91		186.59	0.00	3,311.32
	03/30/06	3,497.91	1	186.59	0.00	3,311.32
	06/14/06	3,497.91	•	186.59	0.00	3,311.32
	09/20/06	3,497.91	1	186.58	0.00	3,311.33

14. 17. 17.

24 26 12

. . .

A. . . . . .

. . .

See State

1. 2 T W.

. .

1970 - 1970 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 -1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 -1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 -

**GROUNDWATER ELEVATION DATA (CONT)** 

PLAINS MARKETING, L.P. BALLARD-GRAYBURG 5" EDDY COUNTY, NEW MEXICO PLAINS SRS NO. 2004-00192 NMOCD REFERENCE NO: 2RP-0053

WELL	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH	CORRECTED GROUNDWATER ELEVATION
	12/14/06	3,497.91	-	186.58	0.00	3,311.33
	03/19/07	3,497.91	-	186.58	0.00	3,311.33
	06/05/07	3,497.91	-	186.58	0.00	3,311.33
	09/27/07	3,497.91	•	186.58	0.00	3,311.33
	12/04/07	3,497.91	•	186.57	0.00	3,311.34
RW-1	11/10/04	3,497.94	186.56	186.60	0.04	3,311.37
	03/29/05	3,497.94	186.56	186.60	0.04	3,311.37
	05/26/05	3,497.94	186.57	186.60	0.03	3,311.37
	08/11/05	3,497.94	186.57	186.60	0.03	3,311.37
	12/27/05	3,497.94	186.56	186.58	0.02	3,311.38
	03/30/06	3,497.94	186.56	186.57	0.01	3,311.38
NOTE:	NOTE: RW-1 Plugged & Abandoned 11 May 2006	Abandoned 11	May 2006			

, i ji t

1.41

ALC: NO

1000

- Y 18 - 44

S. 140

Will Part

19. N.

1.5.58.00

The set of

10-27.5 B

Sec. 1

ALC: NOT

# **CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER**

ه ، د م م

5 × 1 × 2

- 2,2 See

5.0. S. 9.0

· · · ·

. R. Switch

13 E

18 . Se

A Constant

100 m

. A.

18 - o - o

CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER

PLAINS MARKETING, L.P. BALLARD GRAYBURG 5" EDDY COUNTY, NEW MEXICO PLAINS SRS NO. 2004-00192 NMOCD REFERENCE NO: 2RP-0053

SAMPLE LOCATION	SAMPLE		METHODS:	EPA SW	846-8021B, 5030	30	Method:
	DATE	BENZENE	BENZENE TOLUENE	ЕТНҮС-	М,Р-	<b>O-XYLENES</b>	160.1
				BENZENE	XYLENES		TDS
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW-2	12/04/04	<0.001	<0.001	<0.001	<0.001	<0.001	7730
	03/29/05	0.006	0.001	<0.001	<0.001	<0.001	
	05/26/05	0.002	0.001	<0.001	<0.001	<0.001	
	08/11/05	0.001	0.001	<0.001	<0.001	<0.001	
	12/27/05	0.008	0.003	<0.001	<0.001	<0.001	
	03/30/06	0.003	0.003	<0.001	<0.001	<0.001	
	06/14/06	0.005	0.001	<0.001	<0.001	<0.001	
	09/20/06	0.003	<0.001	<0.001	<0.001	<0.001	
	12/14/06	0.010	0.002	<0.001	0.001	<0.001	
	03/19/07	0.043	0.013	<0.001	<0.001	<0.001	
	06/05/07	0.012	0.001	<0.001	<0.001	<0.001	
	09/27/07	0.003	0.001	<0.001	<0.002	<0.001	
	12/04/07	0.013	0.004	<0.001	<0.002	<0.001	
MW-3	12/04/04	<0.001	<0.001	<0.001	<0.001	<0.001	8530
	03/29/05	0.054	0.004	<0.001	<0.001	<0.001	
	05/26/05	0.014	0.003	<0.001	<0.001	<0.001	
	08/11/05	0.002	<0.001	<0.001	<0.001	<0.001	
	12/27/05	0.024	0.002	<0.001	<0.001	<0.001	
	03/30/06	0.009	0.003	<0.001	<0.001	<0.001	
	06/14/06	0.005	<0.001	<0.001	<0.001	<0.001	
	09/20/06	0.004	<0.001	<0.001	<0.001	<0.001	
	12/14/06	0.011	0.003	<0.001	0.003	<0.001	
	03/19/07	<0.001	<0.001	<0.001	<0.001	<0.001	
	06/05/07	0.091	0.031	<0.001	<0.001	<0.001	
	09/27/07	0.017	0.003	<0.001	<0.002	<0.001	
	12/04/07	0.013	0.003	<0.001	<0.002	<0.001	
NMOCD CRITERIA		0.01	0.75	0.75	<b>TOTAL XYLENES 0.62</b>	ENES 0.62	

# **APPENDICES**

ALC: ALC: N

1. A. A. A.

Sec. 2.

あって、あっし、

9.4.30. 10.00.

 $(\mathbf{x}_{i})$ 

and the

Contraction of the

P. S. S. C. S.

ALC: NO.

A Stratter

S. Carlor

Billion P

1. No. 1

i his the

.

. f

·

# **APPENDIX** A

San Pro

a. contration

STREET,

ALBERT C

Sec. 1

17 . S. 170

Sec. C.

200

Andrew S

100

### LABORATORY REPORTS

.



. . . .

A Xenco Laboratories Company

### Analytical Report

Prepared for: Camille Reynolds Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Ballard- Grayburg 5inch Project Number: EMS: 2004-00192 Location: Eddy County, NM

Lab Order Number: 7C20011

Report Date: 03/28/07

5 - A

day . rate

10 A a C

# Project:Ballard- Grayburg 5inchProject Number:EMS: 2004-00192Project Manager:Camille Reynolds

Fax: (432) 687-4914

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	7C20011-01	Water	03/19/07 14:40	03-20-2007 11:30
MW-3	7C20011-02	Water	03/19/07 10:30	03-20-2007 11:30

1. 1. 1. A.

## Project:Ballard- Grayburg 5inchProject Number:EMS: 2004-00192Project Manager:Camille Reynolds

Fax: (432) 687-4914

### Organics by GC

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (7C20011-01) Water									
Benzene	0.0434	0.00100	mg/L	I	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	0.0135	0.00100	"	"				"	
Ethylbenzene	ND	0.00100	"	"	n		*	н	
Xylene (p/m)	J [0.000575]	0.00100	"	"	н		"		
Xylene (o)	ND	0.00100	"		"	"	**	н	
Surrogate: a.a,a-Trifluorotoluene		89.2 %	80-12	20	ņ	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.0 %	80-12	20	"	"	п	"	
MW-3 (7C20011-02) Water									
Benzene	J [0.000792]	0.00100	mg/L	1	EC72601	03/26/07	03/27/07	EPA 8021B	
Toluene	J [0.000544]	0.00100	"		"	0	н	"	
Ethylbenzene	ND	0.00100	"			"		"	
Xylene (p/m)	ND	0.00100	"		"	*	"	"	
Xylene (o)	ND	0.00100	*	"		**	"	н	
Surrogate: a,a,a-Trifluorotoluene		92.0 %	80-12	20	"	"	"	"	

80-120

84.6 %

Surrogate: 4-Bromofluorobenzene

Environmental Lab of Texas

وتستجاه

A Xenco Laboratories Company

#### Project: Ballard- Grayburg 5inch Project Number: EMS: 2004-00192 Project Manager: Camille Reynolds

#### **Organics by GC - Quality Control**

### Environmental Lab of Texas

		Environm	ental l	Lab of Tex	kas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC72601 - EPA 5030C (GC)										
Blank (EC72601-BLK1)				Prepared &	Analyzed:	03/26/07				
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100								
Ethylbenzene	ND	0.00100	n							
Xylene (p/m)	ND	0.00100	"							
Xylene (0)	ND	0.00100	н							
Surrogate: a,a,a-Trifluorotoluene	40.8		ug/l	50.0		81.6	80-120			
Surrogate: 4-Bromofluorobenzene	40.6		"	50.0		81.2	80-120			
LCS (EC72601-BS1)		Prepared & Analyzed: 03/26/07								
Benzene	0.0442	0.00100	mg/L	0.0500		88.4	80-120			
Toluene	0.0431	0.00100	**	0.0500		86.2	80-120			
Ethylbenzene	0.0419	0.00100	м	0.0500		83.8	80-120			
Xylene (p/m)	0.0890	0.00100	н	0,100		89,0	80-120			
Xylene (o)	0.0450	0.00100		0.0500		90.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.5		ug/l	50.0		81.0	80-120			
Surrogate: 4-Bromofluorohenzene	43.5		"	50.0		87.0	80-120			
Calibration Check (EC72601-CCV1)				Prepared &	Analyzed:	03/26/07				
Benzene	45.8		ug/l	50.0		91.6	80-120			
Toluene	44,4			50.0		88.8	80-120			
Ethylbenzene	45.9			50.0		91.8	80-120			
Xylene (p/m)	89.2		н	100		89.2	80-120			
Xylene (0)	45.9		н	50.0		91.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.8		"	50.0		81.6	80-120			
Surrogate: 4-Bromofluorobenzene	43.9		"	50.0		87.8	80-120			
Duplicate (EC72601-DUP1)	Sou	rce: 7C23001-	10	Prepared &	Analyzed:	03/26/07				
Benzene	ND	0.00100	mg/L		ND				20	
Foluene	0.00353	0.00100	**		0.00330			6.73	20	
Ethylbenzene	0.000521	0.00100	. "		0.000349			39.5	20	

0.000521	0,00100	· ·	0.000349			59.5	20	K4
0.00502	0.00100		0.00430			15.5	20	
0.00123	0.00100	"	0.000981			22.5	20	R5
41.0		ug/l	50.0	82.0	80-120			
42.4		"	50.0	84.8	80-120			
	0.00502 0.00123 41.0	0.00502 0.00100 0.00123 0.00100 41.0	0.00502 0.00100 " 0.00123 0.00100 " 41.0 ug/l	0.00502         0.00100         "         0.00430           0.00123         0.00100         "         0.000981           41.0         ug/l         50.0	0.00502         0.00100         "         0.00430           0.00123         0.00100         "         0.000981           41.0         ug/l         50.0         82.0	0.00502         0.00100         "         0.00430           0.00123         0.00100         "         0.000981           41.0         ug/l         50.0         82.0         80-120	0.00502         0.00100         "         0.00430         15.5           0.00123         0.00100         "         0.000981         22.5           41.0         ug/l         50.0         82.0         80-120	0.00502     0.00100     "     0.00430     15.5     20       0.00123     0.00100     "     0.000981     22.5     20       41.0     ug/l     50.0     82.0     80-120

A Xenco Laboratories Company

. Analysis

2.00 and

#### Project: Ballard- Grayburg Sinch Project Number: EMS: 2004-00192 Project Manager: Camille Reynolds

### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

······································	· · · · · · · · · · · · · · · · · · ·									
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EC72601 - EPA 5030C (GC)

Matrix Spike (EC72601-MS1)	Sou	-ce: 7C23001-	10	Prepared &	& Analyzed:	03/26/07	
Benzene	0.0449	0.00100	mg/L	0.0500	ND	89.8	80-120
Toluene	0.0470	0.00100	"	0.0500	0.00330	87.4	80-120
Ethylbenzene	0.0424	0.00100	"	0.0500	0.000349	84.1	80-120
Xylene (p/m)	0.0924	0.00100	"	0.100	0.00430	88.1	80-120
Xylene (0)	0.0464	0.00100	"	0.0500	0.000981	90.8	80-120
Surrogate: a,a,a-Trifluorotoluene	40.0		ug/l	50.0		80.0	80-120
Surrogate: 4-Bromofluorobenzene	44.7		"	50.0		89.4	80-120

Environmental Lab of Texas

A Xenco Laboratories Company

#### **Notes and Definitions**

- R5 RPD is outside of historic values
- R4 Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- DET Analyte DETECTED ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Burrow

3/28/2007

Date:

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

CHAIN OF CUSTODY RECORD AND ANAL YSIS REQUEST t1-20 East Phone: 432-563-1800 xas 79765 Fax: 432-563-1713	Project Name: BALLARD GRAYBURG 5"	Project #: 2004-00192	Project Loc: Eddy County, NM	PO #: PAA - C. J. Reynolds	Report Format: X Standard TRRP NPDES		Analyze For.	rs Matrix g	סלופר ( Spedify)           W – Drinking water SL – Sludg           W – Croundwater S – Soll/Sol           P – Non-Potabre Specify Oth           PH. 418,1         8015M           PH. 1X 1005         TX 1006           PH. 418,1         8016M           Alons (Ca, Mg, Na, K)         etail           Alons (Ca, Mg, Na, K)         etail           Alons (Ca, Mg, Na, K)         etail           Alons (Ca, Solt Br/s030, 6t BTEX 826         Ca           Cilics         Cilics           Cilics         Cilics		GW				Laboratory Comments: Sample Containers Intact?	Date         Time         Labels on container(s)         N           Do MAR 0.71 DP.00 0         Custody seals on container(s)         N         N	Time Sample Hand Delivered V Sample/Client Rep 7 by Counter? UPS DHL FedEx Lond	pon Recsipt: . U
CHAIN OF CL 12600 West I-20 East Odessa, Texas 79765	PAGE 01 OF 01	ogics, LLC			Fax No: (505) 396-1429	e-mail: <u>kad@basinenv.com</u>		Preservation & # of Container	Date Sampled tens Sampled test Fitered teo teo teo teo teo teo teo teo	-07 1440 2 X X	19-Mar-07 1030 2 X X					Received by Lede wich 30/	Q	Received by ELOF 3/4
b of Texas		Basin Environmental Service Technologies, LL	101	NM 88260	124	Dutto			մյզծմ ըուութց							Date Time	Time	Date Time
Environmental Lab	Project Manager: Ken Dutton	Company Name Basin Envir	Company Address: P. 0, Box 301	City/State/Zip: Lovington, NM 88260	Telephone No: (505) 441-2124	Sampler Signature:		# JC2001	EIFI	MW-2	MW-3				Special Instructions:	Dutton	d by:	doright wilk
л С	7	~	~	~***	Ţ		(lab use only)	ORDER #:	(yino seu dsi) # 8A.	10	-02				Special In	Relinquighed by	Relinquished by	Relinquished by,

. **N** 

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

ent:	Plains	
Date/ Time:	3/20/07 11:30	
• b 1D # :	1020011	
nitials:	CK_	

1 . . . .

Sample Receipt Checklist

			C	lient initials
Temperature of container/ cooler?	Yes	No	(,O`°C	
Shipping container in good condition?	(es	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Xes	No	Not Present	
Chain of Custody present?	Tes	No		
Sample instructions complete of Chain of Custody?	Ves	No		
Chain of Custody signed when relinquished/ received?	Fes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Xes	No	Not Applicable	
Sample matrix/ properties agree with Chain of Custody?	Xes	No		
11 Containers supplied by ELOT?	Yes	No		
2 Samples in proper container/ bottle?	1000	No	See Below	
3 Samples properly preserved?	Yes	- No	See Below	
14 Sample bottles intact?	Yes,	No		
5 Preservations documented on Chain of Custody?	YES	No		
<ul> <li>5 Preservations documented on Chain of Custody?</li> <li>6 Containers documented on Chain of Custody?</li> </ul>	Yes	No		
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
	Yðs	No	See Below	
<ul> <li>All samples received within sufficient hold time?</li> <li>Subcontract of sample(s)?</li> </ul>	Yes	No	Not Applicable	
20 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Date/ Time:

iontact:

rective Action Taken:

eck all that Apply:

See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event



1. S. 1. 1.

4.742

8-J. ....

1

10.00

A 100 1-1-

1.00

Mary.

A Xenco Laboratories Company

### Analytical Report

### Prepared for:

Camille Reynolds Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Ballard- Grayburg 5inch Project Number: EMS: 2004-00192 Location: Eddy County, NM

Lab Order Number: 7F06011

Report Date: 06/11/07

1. A 5 Ku

1 4 m

### Project: Ballard- Grayburg 5inch Project Number: EMS: 2004-00192 Project Manager: Camille Reynolds

Fax: (432) 687-4914

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	7F06011-01	Water	06/05/07 15:00	06-06-2007 12:21
MW-3	7F06011-02	Water	06/05/07 15:30	06-06-2007 12:21

64 - 5 Kg

2. C. M. B.

1.1.1

10 . A. 10 .

Saugers.

. F ...

5 . Sanda - 0

- K 300

A 9.50

Sugar Same

Contract -

Project: Ballard- Grayburg 5inch Project Number: EMS: 2004-00192 Project Manager: Camille Reynolds Fax: (432) 687-4914

### Organics by GC

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (7F06011-01) Water									
Benzene	0.0123	0.00100	mg/L	1,	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	0.00161	0.00100	м					н	
Ethylbenzene	ND	0.00100	н			"	11	H	
Xylene (p/m)	ND	0.00100			"	н	10	*	
Xylene (o)	ND	0.00100	"	•	н	и	"	11	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	80-1	20	"	"	"	"	
MW-3 (7F06011-02) Water									
Benzene	0.0912	0.00100	mg/L	1	EF70802	06/08/07	06/09/07	EPA 8021B	
Toluene	0.0313	0.00100		н	"	н		"	
Ethylbenzene	1 [0.000505]	0.00100	"	н	"	н	"		
Xylene (p/m)	J [0.000978]	0.00100			н	*	n	**	
Xylene (0)	ND	0.00100	н	••	н	"	**	"	
Surrogate: a,a,a-Trifluorotoluene		117 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.4 %	80-1	20	"	"	"	"	

Environmental Lab of Texas

A Xenco Laboratories Company

- ( <del>1</del>4 24 24

dt 2 3

Sec. 60.9

**.** 

- one

32° - 4'

4. 4

2.8.8.8.2

10 St. 10

S. Subs

28.2 1

1. 2 . 2 miles

### Project: Ballard- Grayburg Sinch Project Number: EMS: 2004-00192 Project Manager: Camille Reynolds

#### **Organics by GC - Quality Control**

\$ 14

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF70802 - EPA 5030C (GC)	·····		- 100							-
Blank (EF70802-BLK1)				Prepared &	Analyzed	06/08/07				
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	н							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100								
Surrogate: a,a,a-Trifluorotoluene	54.1		ug/l	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	45.4		n	50.0		90.8	80-120			
LCS (EF70802-BS1)				Prepared &	Analyzed	: 06/08/07				
Benzene	0.0548	0.00100	mg/L	0.0500		110	80-120			
Toluene	0.0556	0.00100		0.0500		111	80-120			
Ethylbenzene	0.0543	0.00100	14	0.0500		109	80-120			
Xylene (p/m)	0,101	0.00100	*	0.100		101	80-120			
Xylene (0)	0.0569	0.00100	11	0.0500		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	54.6		ug/l	50.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	51.7		"	50.0		103	80-120			
Calibration Check (EF70802-CCV1)				Prepared: 0	6/08/07 A	nalyzed: 06	5/09/07			
Benzene	0.0576		mg/L	0.0500		115	80-120			
Foluene	0,0567		н	0.0500		113	80-120			
Ethylbenzene	0.0537			0.0500		107	80-120			
Xylene (p/m)	0,0999		"	0.100		99.9	80-120			
Xylene (0)	0.0573			0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	57.9		ug/l	50.0		116	80-120			
Surrogate: 4-Bromofluorohenzene	53.0		"	50.0		106	80-120			
Matrix Spike (EF70802-MS1)	Sou	ırce: 7F06019-	03.	Prepared: 0	6/08/07 A	nalyzed: 06	6/09/07			
Benzene	0.0598	0.00100	mg/L	0.0500	ND	120	80-120			
Foluene	0.0593	0.00100		0.0500	ND	119	80-120			
Ethylbenzene	0.0584	0.00100		0.0500	ND	117	80-120			
Xylene (p/m)	0.107	0.00100	н	0.100	ND	107	80-120			
Xylene (o)	0.0614	0.00100		0.0500	ND	123	80-120			
Surrogate: a,a,a-Trifluorotoluene	58.4		ug/l	50.0		117	80-120			
Surrogate: 4-Bromofluorobenzene	56.2		"	50.0		112	80-120			

1. E. 200

· ...

Environmental Lab of Texas

A Xenco Laboratories Company

. 8. 0

. . .

÷.

A. 8. 8

### Project: Ballard- Grayburg 5inch Project Number: EMS: 2004-00192 Project Manager: Camille Reynolds

### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte Result Limit Units Level Result %REC Limits RPD Limit No		<u></u>	Reporting		Spike	Source		%REC		RPD	
	Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Matrix Spike Dup (EF70802-MSD1)	Sou	rce: 7F06019-	03	Prepared: 0	6/08/07 A	nalyzed: 06	5/09/07		
Benzene	0.0565	0.00100	mg/L	0.0500	ND	113	80-120	6.01	20
Toluene	0.0566	0.00100	"	0,0500	ND	113	80-120	5.17	20
Ethylbenzene	0.0556	0.00100	"	0.0500	ND	111	80-120	5.26	20
Xylene (p/m)	0.102	0.00100		0.100	ND	102	80-120	4.78	20
Xylene (0)	0,0584	0.00100	"	0.0500	ND	117	80-120	5.00	20
Surrogate: a,a,a-Trifluorotoluene	58.3		ug/l	50.0	··	117	80-120		_ :
Surrogate: 4-Bromofluorobenzene	54.2		"	50.0		108	80-120		

1 - 2 -

8.4.D

1. Y. W.

Environmental Lab of Texas

A Xenco Laboratories Company

#### **Notes and Definitions**

MI	The MS and/or MSD were above the acceptance limits due to sample matrix interfer	rence.	See Blank Spike (LCS).	
DET	Analyte DETECTED			

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Dup Duplicate

Report Approved By:

4.47

Ser. S

and the second

Bur Barron

6/11/2007

Date:

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 5 of 5

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

	anglass and and a							÷				,										•					
		1	1	1						Г		11/1	biebriej2	×	×			r				<b>—</b>			<del></del>		
in a co						ES	ſ	, ,	15 Pte	'87 'Fi	S (shiber		AT H2UA											zz	z z(	z z z	Lone Star
K							ľ	1			al content of the paper	an de altre altre altre altre a	(1999) 1999 1999 1999 1999 1999 1999 199													Ŷ	
R								based on the				sit - is												(QC	A)	<del>2</del> 0<	FedEx 4, S
127 A.L.	Lon	2.				•					·····		.M.9.0.N		_						-	-+	_				FedE
	JES1	RG RG				🛛 TRRP		CONCURSE OF		gacd:			BCI									-+			ີ ອ	. : * .	Ε
Sec. 1	IAL YSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713	Project Name: BALLARD GRAYBURG			sp	Ġ		For	X	0928	8 XƏT8 1	10 0COS/8	BTEX 8021	×	×									set?	Labels on container(s) Custody seals on container(s)	(s)	
	IS R 43: 43:	SRA		N N	PO #: PAA - C. J. Reynolds			Ize F				Se	olitelovimo2	ļ										Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace?	en(s)	Custody seals on cooler(s) Sample Hand Delivered	C Rec
13	AL YS Phone: Fax:	ð	192	unty,	J. Re	lard	Í	Analyze		ac f	Su nu n	n- 20 fu	Volatiles Metals: As v	<b> </b>										omr ainer ( Hea	Labels on container(s) Custody seals on cont	505	
	P	Z	4-00	ů V V	Ċ,	Standard	·		TCLP: OTAL:	- 53	in va vu	****	98319A8								_		$\neg$	ory Cont	n col	iseal Hand	ourie
_		BAI	200	Edd	PAA	X		<b>Contraction</b>	TOTAL		(yiiniit		,IO) anginA											Dorat Os Fi	stody		NO LO
A Land A	DAI	ame:	Project #: 2004-00192	Project Loc: Eddy County, NM	;# 0			and the second second					eO) enoteO	· .											<u>5</u> Ē	<u>3 8</u>	
(44) (44)	SOR	N S	Proje	oject	<b>a</b> .	orma		Constanting of the local division of the loc		8510	38 1006 7X 1006		814 HQT	<u> </u>								-+			Time	Time	Time 12:21
	' REI	Proje	-	Pre		Report Format:	Ĩ.			h-1.			og-nov = qv	-			$\vdash$	$\square$	•			$\neg \uparrow$			Ľ		12
1998 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	łao					Rep				51			CW - Crow	GW	0M												
:	UST	1	ĺ				E						other ( Spi				$\vdash$			ŀ		<u> </u>			Date	Date	Date -0-0-
	CHAIN OF CUSTODY RECORD AND ANAL YSIS REQUEST t I-20 East 79765 79765 Fast 732-563-1710 t xs 79765						<u>kdutton@basinenv.com</u>			Preservation & # of Containers			enoN												ļ		ė _
	IN O East 7976						env			of Con			OrSieN	<b> </b>													
	CHA L-20 Xas						sin			8.8			HOPN TOS <sup>2</sup> H			***					·	-+					
*** **** **	CHAIN OF 12600 West I-20 East Odessa, Texas 79765					429	@p;			vatior		(27) 5	HOI AN	×	×												
	600 Jess					(505) 396-1429	ton			reser			°ONH_	-													
W.	0 13					505) 3	dut			α		ຊາສະເໝາະດ	Total # of C	2 X	2 X							$\rightarrow$					3
						୍ୟ				ŀ	*****		Pield Fillerer	-								-+					3
and a fifther						Fax No:	e-mail;							0	0			,					÷				Ŷ
		10				ц В	<u>ن</u> ه (					pəldm	ie2 emiT	1500	1530												
(4) (4) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5		01 OF								┢				-	~								_				Received by ELOT:
2		1	C									pəjdu	nac ete Car	5-Jun-07	5-Jun-07										Received by:	Received by:	NA by
		PAGE	ies, I											13	5-11										eceivi	eceiv	and and a
「大田市」	10	۵.	hnolog					,		-		цıdə	0 gníbn3						•••••••••								
	Ň		ce Tec				ST.			F		d Depth	ninnigs8	<b> </b>				-						• .	Time	1 Time	Tme
あってあって	Environmental Lab of Texas		Basin Environmental Service Technologies, LLC				Dudgink	0		-				<b> </b>				·				·			5	La UNO I	
6	Q.		nenta		Lovington, NM 88260		Z	ſ	•	$\neg$			•												Date		Date
8 - 10 2 - 10 - 10	Q	ç	rironr	301	NN .	2124	~7]																		1	4-	
- 4.	а Ц	Ken Dutton	n Env	Company Address: P. O. Box 301	ngton	(505) 441-2124	L B		• • •				DE													T	
	Ø	Ken	Basi	0.4 0	Lovi	(505)	(=				5		FIELD CODE	MW-2	NW-3										0	¥	
	ů L			3SS:			, ien		. 7	-   5   c	$\frac{1}{2}$		FEL	2 S	N											X	
ا د والمستقل	0	nage	lame	\ddre	Jp:	No:	gnat		7	3	3															30	
ر <del>ب</del> ر بر	Č,	Mar	iny A	ny A	ate/2	one	ar Si		TCN. AL	5	1B 3631	•												:suc	· ·	g	
ા માટે સુરથ	õ	Project Manager:	Company Name	eduu	City/State/Zip:	Telephone No:	Sampler Signature:		. •		ъ.,											ŀ		ructic	30	₹]	ža
2 8 4 5 T		ď	õ	ŏ	ō	Te	Sa		(lab use only)	ORDER #:												-+		Special Instructions:	Relinquished by	Relinquished by.	Relinquished by.
	с Ш								ab usi	RDE	jA)	uo esn c	19) <b># 8</b> 41	0	3							2		oecia		객	slinqui
Name Pa	لتستع							L	<u>e</u> (	0	·			L			L]	<u> </u>			1			S		ď	<u> </u>
1. AN																	,										
																					۰,						
												•															

### Environmental Lab of Texas

plains Dient: 6.6.07 12:21 Date/ Time: 7F06011 ab ID # : Initials: aL

and a state

The way

Variance/ Corrective Action Report- Sample Log-In

### Sample Receipt Checklist

5				Client Initia
#1	Temperature of container/ cooler?	res	No	21,5 °C
#1	Shipping container in good condition?	(es)	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<not present<="" td=""></not>
#4	Custody Seals intact on sample bottles/ container?	Xes	No	Not Present
#5 #6	Chain of Custody present?	Yes?	No	
#6	Sample instructions complete of Chain of Custody?	Yes	No	
#7	Chain of Custody signed when relinquished/ received?	(es	No	
#8 #9	Chain of Custody agrees with sample label(s)?	(es	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	
#11 #12	Samples in proper container/ bottle?	Yes	No	See Below
#13	Samples properly preserved?	Yes	No	See Below
#14	Sample bottles intact?	(es	No	
#14 #15	Preservations documented on Chain of Custody?	Yes	No	
#16		Yes	No	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#17 #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?	Ves	No	Not Applicable

### Variance Documentation

Contact:	Contacted by:	Date/ Time:
Regarding;		
*		
Corrective Action Taker	<b>1.</b>	
Check all that Apply:		Ild like to proceed with analysis shortly after sampling event

### Analytical Report 290462

. . . .

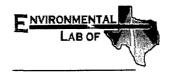
for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Ballard Grayburg 5" 2004-00192

03-OCT-07



12600 West I-20 East Odessa, Texas 79765

A Xenco Laboratories Company

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

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

and had

2019a. -

hind B. Digos

÷ 354+53

1. 1. S. S. S.



03-OCT-07

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

Reference: XENCO Report No: 290462 Ballard Grayburg 5" Project Address: Eddy County, NM

#### **Camille Reynolds**:

S. St. Sant

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 290462. 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. 290462 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

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 - Latin America



/Ber 8 - ...., 8.7

al Bary

o on lighting of

\*\*\*\*\*

on Geor

Acres

38 44 a

14 miles

Sec. 19

1. S. 1.

### Sample Cross Reference 290462

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

Ballard Grayburg 5"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	Sep-27-07 11:15		290462-001
MW-3	W	Sep-27-07 14:30		290462-002

,						
Project ld: 2004-00192		Project Nam	Project Name: Ballard Grayburg 5"	Doto Descinad in Lab.	Providence of the Fri San 38 07 01-45 and	
Contact: Camille Reynolds Project Location: Eddy County, NM				Project Manager: Brent Barron, II	rti 5ep-26-07 01.43 pui 03-0CT-07 Brent Barron, II	
	Lab Id:	290462-001	290462-002	6		
terner Barner	Field Id:	MW-2	MW-3			
naisanhay sistinuy	Depth:					
	Matrix:	WATER	WATER			
	Sampled:	Sep-27-07 11:15	Sep-27-07 14:30			
RTFX hv FPA 8031B	Extracted:	Oct-02-07 16:30	Oct-02-07 16:30			
	Analyzed:	Oct-03-07 03:15	Oct-03-07 03:31			
	Units/RL:	mg/L RL	mg/L RL			
Benzene		0.0037 0.0010	0.0174 0.0010			
Tolucne		0.0017 0.0010	0.0038 0.0010			
Ethylbenzene		ND 0.0010	ND 0.0010			
m,p-Xylene		ND 0.0020	ND 0.0020			
o-Xylene		ND 0.0010	ND 0.0010			
Total Xylenes		QN	ND			
Total BTEX		0.0054	0.0212			

, e <sup>1</sup>

Sale of the second

Son Jok's

1. S. 1. 20

5.486

A.24.24

13. Jan 38. 1

\$26.99.

13. 2. A.

ALL . WAR

12420

Sec. 5. 10 -

Strengton -

and the second

LAB OF

ENVIRONMEN

**Certificate of Analysis Summary 290462** 

PLAINS ALL AMERICAN EH&S, Midland, TX

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 dis analytical report transent the basic highgment of XENCO Laboratories. XENCO Laboratories assumes to 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.

Since 1990 Houston - Dailas - San Antonio - Austin - Tampa - Miami - Latin America

Odessa Laboratory Director 29

Page 4 of 11



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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Phone

Far

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America

·	
$\infty$	mac
	1((0)
	$\sim$
10-0-1	2 mar
Jun	

منية. عنصارة 2

1114 10

Sec. 24

1.18.20

S. . .

----

. A <sup>7</sup>. . .

62.00

S. Sugar

Sond State

Sec. 5. 2

\$ 50 . S. 2

- 4- F -

50 A.

48. C. 8.

74

4,54,64

### Form 2 - Surrogate Recoveries

### Project Name: Ballard Grayburg 5"

ork Order #: 290462 Lab Batch #: 705593 Sample	e: 290462-001 / SMP		<b>D:</b> 2004-0019 <b>ix:</b> Water	2	
Units: mg/L		SURROGATE R		STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Fla
1,4-Difluorobenzene	0.0221	0.0200		80.120	
4-Bromofluorobenzene	0.0321	0.0300	107 86	80-120 80-120	
······································		<u>l</u>		00 120	L
Lab Batch #: 705593 Sample Units: mg/L		Batch: 1 Matr	ix: Water	STUDV	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Fla
Analytes	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0327	0.0300	90	80-120	
				00 120	
Lab Batch #: 705593 Sample Units: mg/L		Batch: 1 Matr SURROGATE R	ix: Water	STUDY	
	Amount	True		Control	
BTEX by EPA 8021B Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Fla
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	
Lab Batch #: 705593 Sample	: 290566-001 SD / MSD	Batch: 1 Matr	ix: Water		
Units: mg/L		SURROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Fla
I,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	
Lab Batch #: 705593 Sample	: 500023-1-BKS / BKS	Batch: <sup>1</sup> Matr	ix: Water		L
Units: mg/L		SURROGATE R		STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Fla
Analytes	-		[D]		
1,4-Difluorobenzene	0.0295	0.0300	98	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: Ballard Grayburg 5"

Vork Order #: 290462 Lab Batch #: 705593	Sample: 500023-1-BLK / /	BLK Ba	v	<b>D:</b> 2004-0019 rix: Water	92	
Units: mg/L	·		RROGATE R	ECOVERY	STUDY	<u> </u>
BTEX by J	EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Ana	lytes			[D]		
1,4-Difluorobenzene		0.0316	0.0300	105	80-120	
4-Bromofluorobenzenc		0.0260	0.0300	87	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.



1. Sugar

6 8 a

\$ 25 00

1. M. W.

1. N. C.

1. 10 2.

1. S. S.

1. . .

A MARCAN

### **Blank Spike Recovery**

# Project Name: Ballard Grayburg 5"

Work Order #: 290462

### Project ID:

2004-00192

Lab Batch #: 705593 Date Analyzed: 10/03/2007	Sample: 500023 Date Prepared: 10/02/2			ix: Water st: SHE		
Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
BTEX by EPA 8021B	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes		[B]	Result [C]	%R [D]	%R	
Benzene	ND	0.1000	0.0958	96	70-125	
Tolucne	ND	0.1000	0.0937	94	70-125	
Ethylbenzene	ND	0.1000	0.0915	92	71-129	
m,p-Xylene	ND	0.2000	0.1830	92	70-131	
o-Xylene	. ND	0.1000	0.0913	91	71-133	

Blank Spike Recovery [D] = 100\*[C]/[B] All results are based on MDL and validated for QC purposes. Form 3 - MS / MSD Recoveries **Project Name: Ballard Grayburg 5"** 

意いた。

S. 10. 10

Ledige .

60-1 De 128

1 Sec. 1

<u>k</u>.

18.2° 2. 2 2

1. 18

1 . Part 8

Work Order #: 290462

Date Analyzed: 10/03/2007

Lab Batch ID: 705593

Matrix: Water ---

Project ID: 2004-00192

QC- Sample ID: 290566-001 S Date Prepared: 10/02/2007 L

SHE Analyst: Batch #:

Reporting Units: mg/L		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/ MAT	AIX SPIF	<b>(E DUPLICA</b>	TE RECO	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added IB1	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R	Spike Added IF1	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzenc	C QN	0.1000	0.0940	2 5	0.1000	0.0935	6	0	70-125	25	
Tolucne	QN	0.1000	0.0894	89	0.1000	0.0883	88	-	70-125	25	
Ethylbenzene	QN	0.1000	0.0897	90	0.1000	0.0849	85	6	71-129	25	
m,p-Xylene	QN	0.2000	0.1761	88	0.2000	0.1650	83	6	70-131	25	
o-Xylene	DN	0.1000	0.0854	85	0.1000	0.0836	84	1	71-133	25	

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

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

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

Page 9 of 11

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

R. Stand. 4

. See e. .

 $(\frac{d^2}{dt}-\frac{d^2}{dt})_{t=0}^{t}(\frac{d^2}{dt})_{t=0}^{t}$ 

الم مطارد

3.5 A 1 2.4

وملي وبقنا

dina si si

Here .

1.1

- E #

S. Hand

2.96 1. 1.

FAT brebner? × × Contraction of the second seco 🗌 NPDES ę 5 M Z1 '89 '92 (99 HALLHSON 2.5 Project Name: BALLARD GRAYBURG 5" 🗌 ткрр Phone: 432-563-1800 Fax: 432-563-1713 NHON Ha ID5 Temperature Upon Receipt: BTEX BUSINEYSOLO N BTEX 8260 × Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? USCs Free of Headspace? Ustody seals on container? Custody seals on container? Þ × uPS U PO #: PAA - C. J. Reynolds SHORTONINA Project Loc: Eddy County, NM Sample Hand Deliver VClient Project #: 2004-00192 seinek Report Formet: X Standard by Sampler/Cl by Counter? e2 gH d'9 70 b0 e8 gA zA :sitte VB VERb / CEC NOR (CI, SOA, Alk (X 'en 'bu 'e) subita; Hd 9001 21 2001 X1 Set 28 00:30 9-2807 1:45 9 LIBLE THAT 108 WS108 10 / 3 3 1 of the salios-s талымаларто) - WC kds) ieutio kdutton@basinenv.com LO, 2, 6N 12660 West I-20 East Odessa, Texas 79765 HOBN '0\$'H (505) 396-1429 юн 'ONH rotal #. of Con ice Lan ack was bene)li'i ble e-mail: Fax No: 1430 1115 PAGE 01 OF 01 sceived by ELOT 27-Sep-07 27-Sep-07 Basin Environmental Service Technologies, LLC Deidmes eien Time radad gaiba 2552002 9.30 Date Time Ě diqeO gainaigeS Dutte Lovington, NM 38260 Date (505) 441-2124 P. O. Bax 301 Ken Outton Jan ( FIELD CODE MW-2 MW-3 Ĵ 294062 Sampler Signature: Company Address: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions Relinguished by: (lab use only) ORDER #: 2 20 (Aux ean ga) # By õ

ndaus

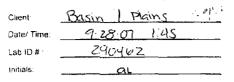
1

220

200

Dut

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



#### Sample Receipt Checklist

Client Initials

Date/ Time:

				Cheric intu
¥1	Temperature of container/ cooler?	Yes	No	2.5 °C
¥2	Shipping container in good condition?	(Yes)	No	
#3	Custody Seals intact on shipping container/ cooler?	les	No	Not Present
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
¥5	Chain of Custody present?	Yes	Ňø	
<b>#</b> 6	Sample instructions complete of Chain of Custody?	Yes	No	
#7	Chain of Custody signed when relinguished/ received?	Yes	No	
#8	Chain of Custody agrees with sample label(s)?	T CR	No	ID written on Cont./ Lid
<b>#</b> 9	Container label(s) legible and intact?	(es)	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	Xes	No	
#11	Containers supplied by ELOT?	Xes	No	T
#12	Samples in proper container/ bottle?	Yes	No	See Below
#13	Samples properly preserved?	e	No	See Below
#14	Sample bottles intact?	Yes	No	
#15	Preservations documented on Chain of Custody?	Reg	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: Regarding:

¥. 10

.....

- 12 Blue

CAL ST.

a fair and

**€** a ¥ :

1.00

6. W. E.

S. 1. 2.

P. 1. 4

1. Carlo

Corrective Action Taken:

\_\_\_\_

Check all that Apply:

See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event - 14年:

### **Analytical Report 293992**

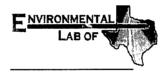
for

### PLAINS ALL AMERICAN EH&S

**Project Manager: JIMMY BRYANT** 

Ballard Grayburg 5" 2004-00192

06-DEC-07



12600 West I-20 East Odessa, Texas 79765

A Xenco Laboratories Company

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

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

1000

Sur R. Sin

9 a. . . . . . .

والمعارفة المحاد

----

4457, H B

19 101

. . .

1. A. S.

1.22.02

4. W. S. S.

\$\$. a

A The

8. a. 8



06-DEC-07

11 10

···\*; ;

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

Reference: XENCO Report No: 293992 Ballard Grayburg 5" Project Address: Eddy County, NM

#### JIMMY 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 293992. 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. 293992 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 - Latin America



at att

alon Prich

. Sel

.

india (. J.

0. -4

, "a.", "

2.00

\* & J' + 2 \*

چارلىنى 1.2

### Sample Cross Reference 293992

## PLAINS ALL AMERICAN EH&S, Midland, TX Ballard Grayburg 5"

Sample Id	Matrix	Date Collected San	nple Depth	Lab Sample Id
MW-2	W	Dec-04-07 11:55		293992-001
MW-3	W	Dec-04-07 10:50		293992-002

wj.,

1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	AB OF
1 4 m 3+ -	E

Contact: JIMMY BRYANT

Project Id: 2004-00192

A 27 4

Certificate of Analysis Summary 293992 PLAINS ALL AMERICAN EH&S, Midland, TX

· · · · ·

1.000

. . . . . . . . .

Art 5 7.40

a i water o

**Project Name: Ballard Grayburg 5**"

Date Received in Lab: Wed Dec-05-07 08:40 am Report Date: 06-DEC-07

Project Location: Eddy County, NM				Report Date: 06-DEC-07	-07
				Project Manager: Brent Barron, II	uron, II
	Lab Id:	293992-001	293992-002		
Auchinic Documental	Field Id:	MW-2	MW-3		
naisanhay sistinuv	Depth:				
	Matrix:	WATER	WATER		
	Sampled:	Dec-04-07 11:55	Dec-04-07 10:50		
BTEX by EPA 8021B	Extracted:	Dec-05-07 11:30	Dec-05-07 11:30		
	Analyzed:	Dec-06-07 01:15	Dec-06-07 01:32		
	Units/RL:	mg/L RL	mg/L RL		
Benzene		0.0139 0.0010	0.0138 0.0010		
Toluene		0.0049 0.0020	0.0033 0.0020		
Ethylbenzene		ND 0.0010	ND 0.0010		-
m,p-Xylenes		ND 0.0020	ND 0.0020		
o-Xylcne		ND 0.0010	ND 0.0010		
Xylenes, Total		ND	DN		
Total BTEX		0.0188	0.0171		

۰,

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 tryon represent to the still adgreent of XENCO Laboratories. XENCO Inhomatories assumes to responsibility and makes no writamy to the end use of the data hereby presented. Our flability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dailas - San Antonio - Austin - Tampa - Miami - Latin America

Odessa Laboratory Director Brent Barron



### **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.
- \* Outside XENCO'S scope of NELAC Accreditation

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 - Latin America

	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(201) 509-3335
2505 N. 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

COLLERS Editorical
-----------------------

語といれて

Sec. 34 .

1. S. .

Sec. Sec.

1. S. S. S.

Sec. Sec.

S and at

Sec. 1

S. 27 6

8. W. -

In and 5

Sec. 18

S. 2. 5. 19.

\$ . . . .

### Form 2 - Surrogate Recoveries

Project Name: Ballard Grayburg 5"

	Troject Name. Da	maru Grayi	urg 5			
ork Order #: 293992	• ** .		Project I	<b>D:</b> 2004-0019	92	
Lab Batch #: 709872	Sample: 293992-001 / SMF	b Ba	tch: 1 Matr	ix: Water		
Units: mg/L	Γ	SU	RROGATE R	ECOVERY	STUDY	
BTEX by E Anal		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	,	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene		0.0257	0.0300	86	80-120	
Lab Batch #: 709872	Sample: 293992-002 / SMF	, Ba	tch:   Matr	ix: Water	L,	
Units: mg/L		SU	RROGATE R	ECOVERY	STUDY	
BTEX by E		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
	ytes	0.0214	0.0200		00.120	
1,4-Difluorobenzene 4-Bromofluorobenzene		0.0314	0.0300	105	80-120 80-120	
				1	80-120	
Lab Batch #: 709872	Sample: 502211-1-BKS / B			ix: Water		
Units: mg/L		SU	RROGATE R	ECOVERY	STUDY	
BTEX by E		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
Anal	ytes			[D]		
I,4-Difluorobenzene		0.0289	0.0300	96	80-120	
4-Bromofluorobenzene		0.0279	0.0300	93	80-120	
Lab Batch #: 709872	Sample: 502211-1-BLK / B	LK Ba	tch: 1 Matr	ix: Water		
Units: mg/L		SU	RROGATE R	ECOVERY	STUDY	
BTEX by E		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
Anal	y ies	0.0317	0.0300	106	80-120	
I-Bromofluorobenzene	1	0.0317	0.0300	87	80-120	
Lab Batch #: 709872	Sample: 502211-1-BSD / B					
$+$ uo Koten $\pi$ , /119A//	Sample: JUZZII-I-DSD/D	SD Ba		ix: Water	STHDV	
	сГ	CI.	RROCATE P			
Units: mg/L	[		RROGATE R		<b>.</b>	
Units: mg/L BTEX by E	CPA 8021B	SU Amount Found [A]	RROGATE R True Amount [B]	Recovery %R	Control Limits %R	Flag
Units: mg/L	CPA 8021B	Amount Found	True Amount	Recovery	Control Limits	Flag

\*\* 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.

E NVIRONMENTAL A

**BS / BSD Recoveries** 

10 C

( X - M -

14 - 47 The

· \* · \* ·

5 - 25 V

ية ال<sup>الم</sup>ة. م

. " 2 5 ". A. . . .

1. 55° 2. 3 . 4

1. 1. gales.

on Pre-

a nice

Project Name: Ballard Grayburg 5"

Work Order #: 293992 Analyst: SHE Lab Batch ID: 709872

Units: mg/L

Date Prepared: 12/05/2007

Batch #: 1

Sample: 502211-1-BKS

Project ID: 2004-00192 Date Analyzed: 12/05/2007 Matrix: Water

DY	
STU	
RY	
OVEF	
I RECC	
E	
PIKE DUPLICAT	
IPLI	
B	
PIKI	
IK SI	
LANK S	
E / B	
BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	
NK S	
LAN	
K/B	
CAN	
B	

Flag					; ; † ; ;	*/ - a
Control Limits   %RPD	25	25	25	25	25	
Control Limits %R	70-125	70-125	71-129	70-131	71-133	
RPD %	4	2	2	2	2	
BIk. Spk Dup. %R [G]	94	93	93	16	94	
Blank Spike Duplicate Result [F]	0.0936	0.0933	0.0934	0.1821	0.0935	
Spike Added [E]	0.1	0.1	0.1	0.2	0.1	
Blank Spike %R [D]	67	95	96	93	96	
Blank Spike Result [C]	0.0970	0.0953	0.0955	0.1863	0.0956	
Spike Added [B]	0.1000	0.1000	0.1000	0.2000	0.1000	
Blank Sample Result [A]	DN	QN	DN	DN	DN .	
BTEX by EPA 8021B Analytes	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylene	

Relative Percent Difference RPD = 200\*[(D-F)/(D+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

ronment	Environmental Lab of Texas	Sexas	40				0000		CHAI	IO N	no :	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	Y RE	COR	DA	E A	NAL	VSIS	REG	UES	F 8			
						~ •	12600 West I-20 East Odessa, Texas 79765	West a, Te	: 1-20 xas 7	East 9765							Fax:	9 4 10 10	132-51	Phone: 432-563-1800 Fax: 432-563-1713	33			
Project Manager	Ken Dutton		٩	PAGE 01 OF	01							1	Proj	ect N	ame:	BAL	AR	50	AYE	Project Name: BALLARD GRAYBURG	5.			
Company Name	Basin Environmental Service Technologies, LLC	vico Tech	Bolour	jies, LLC								1		Proje	Project #: 2004-00192	2004	6	32						
Company Address:	P. O. Box 301											1	ď	oject	Project Loc: Eddy County, NM	Eddy	Court	ity, N	×					
City/State/Zip:	Lovington, NM 88260											1		ц.	PO #: PAA - C. J. Reynolds	AA	- - -	Reyn	splot					
Telephone No:	(505) 441-2124				Fax No:	(505)	(505) 396-1429	429				a B I	hod	Report Format	t.	X	Slandard	Б		ТККР	۵,	Ō		s
Sampler Signature	Jen Hatte				e-mail:	Kd	kdutton@basinenv.com	<u>@</u> ps	sine	SUC.	B		<u>م</u> ـــ		-		Ą	Analwa For	Eor	And a second			┝	r
(lab use only)													n Dennedora			TCLP:			ļ-ŗ				870 27	
ORDER #: 245492	42					-	Preservation & # of containers	vation	810	( Con	ainers	Aairix	ž	65		5			( 09				87	
FEL.	FIELD CODE	ուղունց նուրության	ding Depth	bəlqməS əısQ	bəlqme2 əmiT	Totai #. of Containers	кон Ке	,HCI	H08N *0S <sup>t</sup> H	<sup>(</sup> O <sup>t</sup> S <sup>t</sup> EN	Othor ( Specify)	CM = Crowdres 5 = Sollson DM = Crowdres 2 = Sollson DM = Crowdres 2 = Sollson	jitto Yitoaq2 – stasto9-nov + 9v	108 M2108 1.814 (H4T 8001 XT 2001 XT (H4T	Cations (Ca, Mg, Na, K)	(vinitesta, MS, Alkalinity)	SAR / ESP / CEC	Volatiles	Semivolailies BTEX 8021815030)or BTEX 920	BCI	M.A.O.N.	1:2;	RUSH TAT (Pre-Schedule) 24,	TAT brebnet2
~	MW-2			04-Dec-07	1155	. 01	×	×				GW	N						<u>×</u>			· · ·		<u>×</u>
<b>v</b>	MW-3			04-Dec-07	1050	2		×				GW	S						<u>×</u>					×
							ļ				ļ	_												
									$\left  - \right $							$\vdash$							$\rightarrow$	
			$\neg$										1	-+									╉	-+
						$\neg$	-+				-+		Î		_	-+	_				+		-+	
					-																			
			╂──╂				┞─┼		$\left  - \right $		┼╌┼	┝	ΠŤ	$\vdash$		┢╍╌┾	┟─┼		┢╌┼		┠──╊		┝──┼	- +
Cardial Instantions -			$\neg$						_			_		$\neg$					-[				-	-
nsuucuons:			•												<u>889</u>	oraro pla C S Fr	Laboratory comments Sample Containers Intact VOCs Free of Headspace	ners l tead	Laboratory Comments: * Sample Containers Intact? VOCs Free of Headspace?	t	20A	100	zz;	
Retroductord by	Dato			Received by;							L)	Date		limo	<u>557</u>	808	t cont seals seals	on co on co	Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)	) (		୨୫୫୫	z z z	
Reilnquished by.	Pate.	×		Received by:							Ľ	Date	ľ	1 1 1 1 1 1		t es o	mpler urier?		Sample Hand Delivered by Sampler/Clent Red. by Courter? UPS	DH.		<u>^</u> .	N N Lone Star	Star
Relinquished by:	Date	emi i		Received by ELOT	. (						۲ <b>۰</b>	Date		Time,			Termonature Linno Receipt:	3	Janair	÷	4	6	5	ပ္

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Basin Enviro.	Plains
Date/ Time:	12/05/07 18:40	
Lab ID # :	293992	

-gut

Initials:

1. 1. June 1. 1

1. S. 1.

A. Same

2 . A. S.

Sec. 25.

Salar Sais -

A. 197.

### Sample Receipt Checklist

				Client	Initials	
#1	Temperature of container/ cooler?	Yes	No	5.0 °C		
#2	Shipping container in good condition?	Nes	No			
#3	Custody Seals intact on shipping container/ cooler?	Tes	No	Not Present		
#4	Custody Seals intact on sample bottles/ container?	res	No	Not Present		
#5	Chain of Custody present?	(Tes	No.			
#6	Sample instructions complete of Chain of Custody?	Fes	No			
#7	Chain of Custody signed when relinquished/ received?	Føs	No.			
#8	Chain of Custody agrees with sample label(s)?	Ves	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?	Nes	No			
#11	Containers supplied by ELOT?	Yes	No			
#12	Samples in proper container/ bottle?	Yes	No	See Below		
#13	Samples properly preserved?	Nes	No	See Below		
#14	Sample bottles intact?	Nes	No			
#15	Preservations documented on Chain of Custody?	Yes	No			
#16	Containers documented on Chain of Custody?	Tes	No			
#17	Sufficient sample amount for indicated test(s)?	(Tes)	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?	Kes	No	Not Applicable		
Variance Documentation						
Contact: Contacted by:			-	Date/ Time:		
Reg	garding:					

Corrective Action Taken:

Check all that Apply:

 $\square$ 

See attached e-mail/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

### **APPENDIX B**

•

P

10.00

# **RELEASE NOTIFICATION AND CORRECTIVE ACTION (C-141)**

District.) 1625 N. French Dr., Hobbs, NM 88240 District.il 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztor, 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.

Form C-141 Revised October 10, 2003

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

#### Santa Fe, NM 87505 **Release Notification and Corrective Action**

PERA	

	OPERATOR	x Initial Report	Final Report
Name of Company Plains Marketing, LP	Contact Camille Reynolds		)
Address 5805 East Hwy. 80, Midland, TX 7970	5 Telephone No. 505-441-0965		
Facility Name Ballard Greyburg 5" #2	Facility Type 5"Steel Pipeline		
Surface Owner BLM	Mineral Owner	Lease No	

LOCATION OF RELEASE								
Unit Letter M	Section 10	Township 18S	Range 29E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
L	L		L	L	l			L

Latitude 32°45'27.1" Longitude\_104°04'12.0" NATURE OF RELEASE Volume of Release 80 barrels Date and Hour of Occurrence Type of Release Crude Oil Volume Recovered 0 barrels Date and Hour of Discovery Source of Release 5" Steel Pipeline 9-2-04 @ 06:00 9-2-04 @ 08:45 Was Immediate Notice Given? If YES, To Whom? Van Barton Yes D No D Not Required Date and Hour 9-2-04 @ 14:32 If YES. Volume Impacting the Watercourse. By Whom? Ken Dutton Was a Watercourse Reached? 🗌 Yes 🛛 No If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* External corrosion of the 5" steel pipeline. A line clamp was installed to mitigate the release. The line is a 5-inch steel gathering line that produces approximately 95 barrels of crude per day. The pressure on the line varies from 50 to 70 psi and the gravity of the sour crude oil is 39. The sour crude has an H2S content of 20 ppm

Describe Area Affected and Cleanup Action Taken.\* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was 10 x 6 feet, subsequent excavation of impacted soil resulted in an area of approximately 22 x 23 x 13 feet.

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 Increase perify that the information given above is the all complete to the test of ity allowing and unterstand in a pursuant to Protocol from all 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.

simarure: Camille Reepalds	OIL CONSERVATION DIVISION			
Printed Name: Camille Reynolds	Approved by District Supervisor:			
Title: Remediation Coordinator	Approval Date;	Expiration I	Pate:	
E-mail Address: cjrcynolds@pealp.com	Conditions of Approval:		Attached	
Date: 9-7-04 Phone:505-441-0965				

\* Attach Additional Sheets If Necessary