

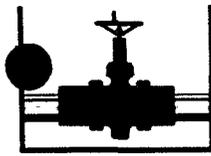
2R - 53

**REPORTS**

**DATE:**

**JAN 2005**

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**PLAINS**  
**MARKETING, L.P.**

January 10, 2005

Mr. Ed Martin  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Plains All American Preliminary Site Investigation and Remediation Plan  
Ballard Greyburg 5-Inch Release Site  
EMS No.: 2004-00192  
SW/4, SW/4 Section 10, T18S, R29E  
Eddy County, New Mexico

Dear Mr. Martin:

Please find attached for your approval a Preliminary Site Investigation and Remediation Plan, dated December 14, 2004, for the Ballard Greyburg 5-Inch release site located in the SW/4, SW/4, Section 10, T18S, and R29E in Eddy County, New Mexico. The proposed Remediation Plan details site activities conducted to date and future activities for remediation and closure of the site.

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

Sincerely,

Camille Reynolds  
Remediation Coordinator  
Plains All American

# *Basin Environmental Service Technologies, LLC*

P. O. Box 301  
Lovington, New Mexico 88260  
kourtov@basinenv.com  
Office: (505) 396-2378 Fax: (505) 396-1429



## **PRELIMINARY SITE INVESTIGATION REPORT and REMEDIATION PLAN**

**PLAINS MARKETING, L.P.  
Ballard Grayburg 5"  
Eddy County, New Mexico  
Plains EMS # 2004-00192**

*2R-053*

**UNIT M (SW/SW), Section 10, Township 18S, Range 29E  
Latitude, Longitude 32°, 45', 27.1" North, 104°, 04', 12.0" West**

Prepared For:

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

Prepared By:

Basin Environmental Service Technologies, LLC  
P. O. Box 301  
Lovington, New Mexico 88260

**14 December 2004**

Ken Dutton

Basin Environmental Service Technologies, LLC

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## INTRODUCTION

Allstate Environmental Services, LLC (Allstate) responded to a pipeline release for Plains Marketing L.P. (Plains), located on the Ballard Grayburg 5" Pipeline on 2 September 2004. The Ballard Grayburg 5" Pipeline was clamped and the saturated impacted soils were excavated and stockpiled on a poly liner. Basin Environmental Service Technologies, LLC (Basin), will perform subsequent remediation of the site at the request of Plains.

This site is located in Unit M (SW/SW), Section 10, Township 18 South, Range 29 East, in Eddy County, New Mexico (topographic Site Location Map is attached as Figure 1). The latitude is 32°, 45', 27.1" North and the longitude is 104°, 04', 12.0" West. The site is characterized by a right-of-way for the pipeline in a pasture utilized for cattle grazing. The visible surface stained area includes the release point covering an area approximately 22 feet long by 23 feet wide. The site is located approximately 21 feet from a plugged and abandoned Yates Petroleum well location. Approximately 80 barrels of crude oil were released from the Plains Pipeline and 0 barrels were recovered.

An Emergency One-Call was initiated 2 September 2004 and all responding companies either cleared or marked their respective lines. Subsequent renewals of the one-call have been accomplished as required.

Mr. James Amos, Bureau of Land Management (BLM), Carlsbad, New Mexico Office, was verbally notified 2 September 2004. Mr. Van Barton, New Mexico Oil Conservation Division (NMOCD), Artesia, New Mexico District 2 was verbally notified of the release on 2 September 2004.

## SUMMARY OF FIELD ACTIVITIES

On 2 September 2004, Allstate employees Ken Dutton and Adam Martinez arrived at the Ballard Grayburg 5" Pipeline release to repair and contain the crude oil pipeline release under the direction of Plains operations personnel. After the release had been contained utilizing a pipeline repair clamp, excavation of the impacted soil was accomplished (see Figure 2, Site Map). The release point was excavated to approximately 22 feet long by 23 feet wide and 12 feet below ground surface (bgs). All excavated soil was placed on a poly liner for future remedial action. A temporary fence was erected to prevent grazing cattle access to the excavated area.

On 18 October 2004, Basin employee, Ken Dutton, utilizing Straub Corporation, Stanton, Texas, initiated vertical and horizontal delineation of the site (see Figure 2, Site Map). Initially soil borings were to be installed; however, once deeper crude oil impact was indicated, a recovery well, at the release point and monitoring wells were installed (soil boring logs are attached as Appendix D). Soil samples were collected at 5 feet intervals and screened with a Photoionization Detector (PID), calibrated 18 October 2004. The selected soil samples were analyzed for benzene, toluene,

ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons – gasoline range organics/diesel range organics (TPH-GRO/DRO). During attempts to install an up gradient monitoring well, the drillers lost circulation at two different locations due to suspected caverns in the limestone thus preventing the installation of an up gradient well. Two down gradient monitoring wells were installed and after developing and purging in accordance with EPA and NMOCD protocols, groundwater samples were collected and analytical results indicated concentrations of BTEX were below laboratory detection levels (see Table 2, Water Chemistry). A hydrocarbon absorbent sock was installed in the recovery well to absorb the limited amount of crude oil noted on the groundwater.

### **NEW MEXICO OIL CONSERVATION DIVISION (NMOCD) SOIL CLASSIFICATION**

A search of the New Mexico State Engineers database revealed no water depth information for that section. However, a phone call, placed by Ken Dutton (Basin), to the State Engineers' Office, Roswell, New Mexico, revealed that a non-domestic livestock water well in the SE¼ of the SW¼ Section 10, Township 18 South, Range 29 East had water depth information, which was 245 feet bgs total depth and 205 feet bgs to groundwater. There are no surface water bodies or water wells within 1000 feet of the release site. Based on this data, the site has an NMOCD Ranking Score of 0 –9, which sets the remediation levels at:

Benzene:	10 ppm
BTEX:	50 ppm
TPH:	5000 ppm

### **DISTRIBUTION OF HYDROCARBONS IN THE USATURATED ZONE**

The release point area has been excavated to a depth of approximately 12 feet bgs and evidence of crude oil impact still exist on the floor and sidewalls of the excavation. PID readings indicated elevated concentrations of Volatile Organic Compounds (VOC) remain. Horizontal and vertical delineation of the site was initiated on 18 October 2004. A recovery well, at the release point, and two down gradient monitoring wells were installed once crude oil impact of groundwater was discovered. Two attempts to install an up gradient monitoring well proved futile due to drilling into limestone caverns and losing circulation. PID field screenings were utilized to determine which soil samples were to be submitted to the laboratory for analysis. Selected soil samples were analyzed for concentrations of BTEX and TPH. Laboratory data sheets and chain-of-custody forms are attached (Appendix C).

Recovery Well 1, as depicted on the Site Map (Figure 2), was installed at the release point. Soil samples collected at the 5, 15, 25, 35, 60, 75, 95, 115, 135, 155, 175 and 185 feet bgs were analyzed. Analytical results indicated BTEX concentrations exceeded NMOCD regulatory standards at 5, 15, 25, 35, 60 and 95 feet bgs.

Analytical results indicated TPH concentrations exceeded NMOCD regulatory standards 15, 25, 35, 60, 75 and 95 feet bgs at 5070 mg/kg, 7920 mg/kg, 5290 mg/kg, 10,400 mg/kg, 12,900 mg/kg and 12,100 mg/kg, respectively. Analytical results indicated BTEX concentrations were below NMOCD regulatory standards at 75, 115, 135, 155, 175 and 185 feet bgs. Analytical results indicated that TPH concentrations were below NMOCD regulatory standards at 5, 115, 135, 155, 175 and 185 feet bgs. The deepest soil impact documented above NMOCD standards was the soil sample collected from a depth of 95 feet bgs.

Monitoring Well 2, as depicted on the Site Map (Figure 2), was installed down gradient of the release point. Soil samples collected at 15, 60, 95, 135 and 195 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits.

Monitoring Well 3, as depicted on the Site Map (Figure 2), was installed down gradient of the release point. Soil samples collected at 15, 60, 95, 135 and 195 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits.

Soil Boring 1, as depicted on the Site Map (Figure 2), was installed up gradient of the release point. Soil samples collected at 15, 35, 60, 75, and 90 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits. Soil Boring 1 was terminated at 95 feet bgs after drilling into a limestone cavern and losing air circulation. Soil Boring 1 was sealed with bentonite chips.

Soil Boring 2, as depicted on the Site Map (Figure 2), was installed up gradient of the release point. Soil samples collected at 15, 35, 60, 75, 90 and 105 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above laboratory method detection limits. Soil Boring 2 was terminated at 105 feet bgs after drilling into a limestone cavern and losing air circulation. Soil Boring 2 was sealed with bentonite chips.

## **DISTRIBUTION OF HYDROCARBONS IN THE SATURATED ZONE**

Groundwater was encountered at a depth of approximately 189 feet bgs in the recovery and monitoring wells. Recovery well 1 has a measured thickness of 0.04 feet of free phase hydrocarbon on the groundwater. A hydrocarbon absorbent sock was installed in the recovery well. Analytical results of the soil and groundwater samples indicated there was no hydrocarbon impact on the groundwater in Monitoring Well 1 and Monitoring Well 2 (see Water Chemistry, Table 3).

## **RECOMMENDATIONS FOR REMEDIATION/CLOSURE**

Approximately 50 cubic yards of impacted soil has been excavated and stockpiled on-site resulting from the emergency response and pipeline repair. Based on the soil

delineation investigation, the release point will require further excavation. An archeological study of the site will be performed in accordance with BLM directives prior to excavation activities. Once the archeological study is completed and Plains has authorization to excavate, Plains proposes to excavate the hydrocarbon-impacted soil at the release point to a depth of approximately 12 feet bgs. Based on the available data and the extent of the surface stained soil, we anticipate the excavation will be approximately 40 feet by 40 feet in size. The excavated soils will be placed on a poly liner to prevent contamination of the surrounding area. It is estimated that approximately 711 cubic yards of impacted soil will be excavated. The excavated soils will be transported to the Plains Lea Station Land Farm. Due to the remote area of this location and lack of receptors it is recommended that an impermeable barrier consisting of a 40-mil poly liner be permanently installed at the base of the excavation to inhibit vertical migration of contaminants in soil left in place below the cap. The barrier will extend a minimum of four feet beyond the edges of soil impacted above NMOCD remedial thresholds. A 6-inch layer of fine sand will be installed beneath and above the 40-mil poly liner to prevent degrading the integrity of the poly liner. Installation of the 40-mil poly liner at a depth of 20 feet bgs will protect the barrier from erosion and human intrusion for a term sufficient to allow natural biodegradation of contaminants in the soil. After the barrier has been installed, the excavation will be backfilled with indigenous soil approved by the NMOCD and BLM. Once backfilling has occurred, the area will be contoured to the original rangeland surrounding the site and reseeded with approved BLM grass seed.

The analytical results from the initial groundwater samples collected from MW-2 and MW-3 indicated that the BTEX concentrations are below the regulatory standards established by NMOCD. It is recommended that four (4) consecutive sampling events be performed and if the groundwater samples remain below NMOCD regulatory standards the monitoring wells be plugged and abandoned pursuant to NMOCD protocols. The recovery well will be gauged monthly and in conjunction with quarterly sampling events to ascertain the level of phase-separated hydrocarbons on the groundwater. The crude oil absorbent sock, placed in recovery well 1, will be inspected on a monthly basis and replaced as required.

## **QA/QC PROCEDURES**

### **Soil Sampling**

Soil samples were delivered to Environmental Lab of Texas, Inc. in Odessa, Texas for BTEX, TPH analyses using the methods described below. Soil samples were analyzed for BTEX, TPH-GRO/DRO within fourteen days following the collection date.

The soil samples were analyzed as follows:

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

- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO

### **Groundwater Sampling**

The groundwater monitoring wells were developed utilizing the Environmental Protection Agency (EPA) protocol of approximately nine well volumes of groundwater or until the monitoring wells are dry using an electrical Grundfos Pump. Within forty-eight hours of development, the monitoring wells were measured and purged of approximately three well volumes utilizing an electrical Grundfos Pump. Groundwater samples were collected using a disposable Teflon sampler and the groundwater samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purged water was collected in a polystyrene tank and disposed of at a licensed New Mexico disposal facility. Groundwater samples were delivered to Environmental Lab of Texas, Odessa, Texas for analysis of BTEX and Total Dissolved Solids (TDS) concentrations using the methods described below. All samples were analyzed within approved holding times following the collection date.

- BTEX concentrations in accordance with EPA Method 8260B/5030
- TDS concentrations in accordance with EPA Method 160.1

### **Decontamination Of Equipment**

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

### **Laboratory Protocol**

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

### **LIMITATIONS**

Basin Environmental Service Technologies, LLC, has prepared this Preliminary Investigation Report and Work Plan to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Service Technologies, LLC, has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Service Technologies, LLC, has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin

Environmental Service Technologies, LLC, has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Service Technologies, LLC, also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains Marketing, L.P. The information contained in this report including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and Plains Marketing, L.P.

**DISTRIBUTION**

- Copy 1: Jeff Dann  
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333 Clay Street  
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- Copy 2: Camille Reynolds  
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Hobbs, New Mexico 88240  
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Oil Conservation Division  
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- Copy 5: Mr. James Amos  
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Bureau of Land Management  
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P. O. Box 301  
Lovington, New Mexico 88260  
[kdutton@basinenv.com](mailto:kdutton@basinenv.com)

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**TABLES**

**TABLE 1**

**SOIL CHEMISTRY, SOIL BORINGS/MONITOR  
AND RECOVERY WELLS**



TABLE 1, PAGE 2

SOIL CHEMISTRY

PLAINS MARKETING, L.P.  
 BALLARD GRAYBURG 5"  
 EDDY COUNTY, NEW MEXICO  
 PLAINS EMS NO: 2004-00206

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH (mg/kg)	
			BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	M,P-XYLENES (mg/kg)	O-XYLENE (mg/kg)	GRO (mg/kg)	DRO (mg/kg)			
MW-3	15'	10/20/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
MW-3	60'	10/20/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
MW-3	95'	10/20/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
MW-3	135'	10/20/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
MW-3	195'	10/21/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-1	15'	10/19/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-1	35'	10/19/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-1	60'	10/19/04	<0.025	<0.025	<0.025	<0.025	0.041	<0.025	<0.025	<10.0	<10.0	<10.0
SB-1	75'	10/19/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-1	90'	10/19/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-2	15'	10/22/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-2	35'	10/22/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-2	60'	10/22/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-2	75'	10/22/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-2	90'	10/22/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0
SB-2	105'	10/22/04	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0

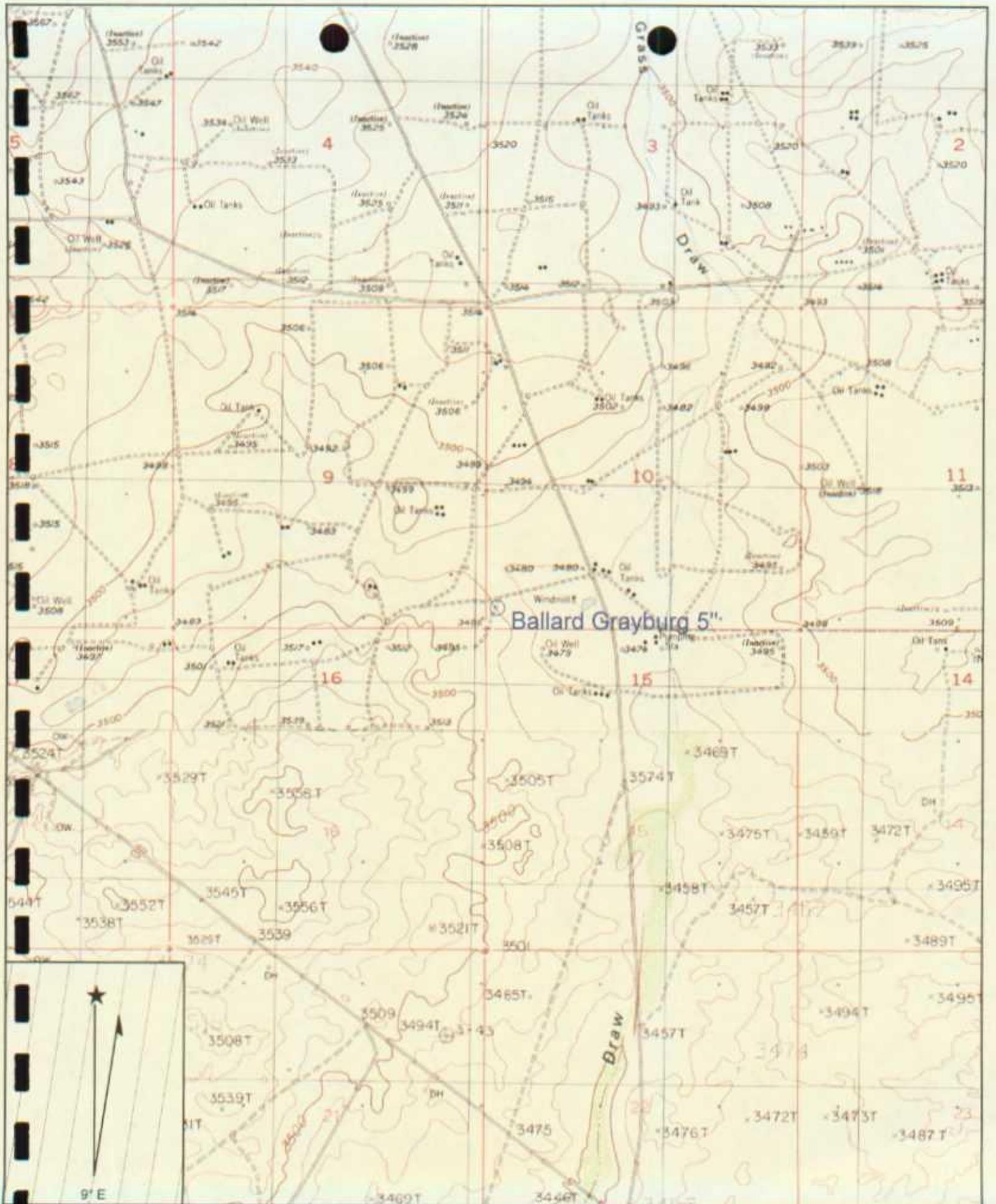
**TABLE 2**

**WATER CHEMISTRY**



**FIGURES**

**FIGURE 1**  
**SITE LOCATION MAP**



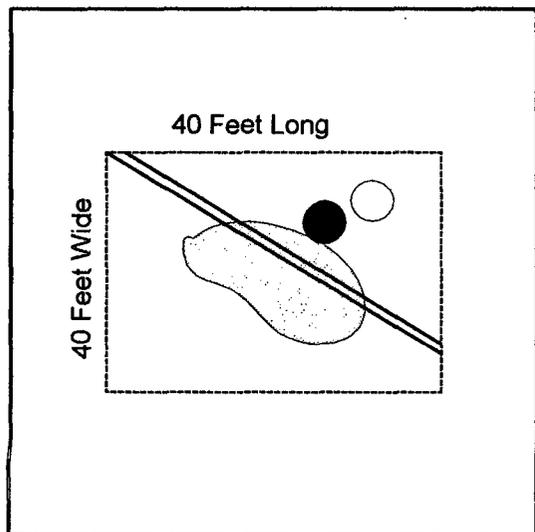
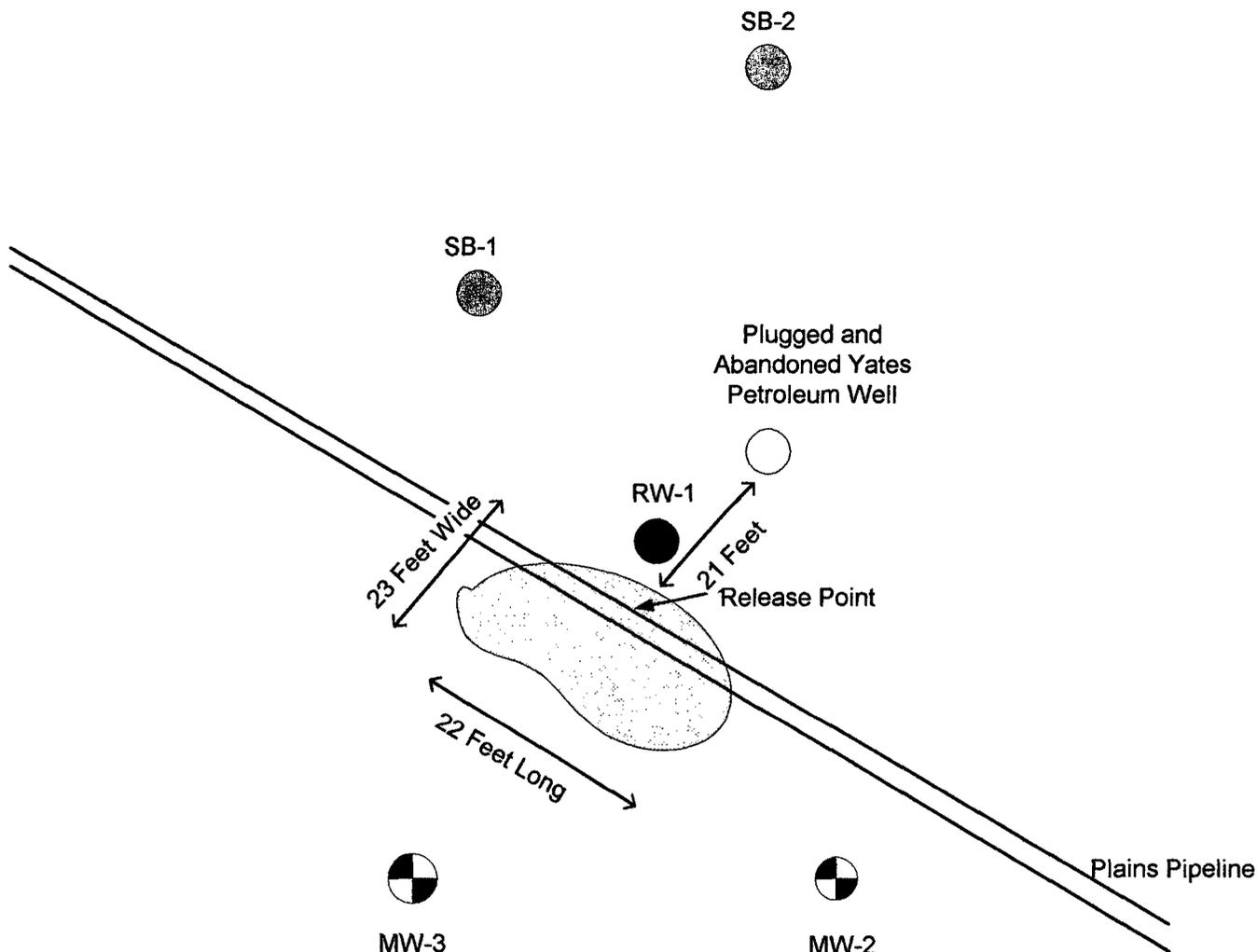
Name: RED LAKE SE  
 Date: 12/14/2004  
 Scale: 1 inch equals 2000 feet

Location: 032° 45' 20.7" N 104° 04' 12.71" W  
 Caption: Plains Marketing, L. P.  
 Ballard Grayburg 5" Pipeline  
 SW/SW, S10, T18S, R29E  
 Eddy County, New Mexico

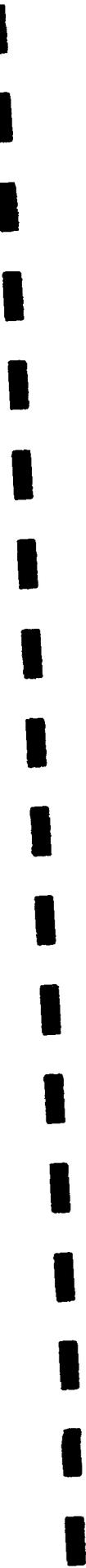
**FIGURE 2**

**SITE MAP**

Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 Unit M, S10, T18S, R29E  
 Eddy County, New Mexico



TITLE	DRAWN BY
Ballard Grayburg 5"	Basin Environmental Service Technologies
DESCRIPTION	kad
Site Map, Figure 2	



**FIGURE 3**  
**DIGITAL PHOTOGRAPHS**

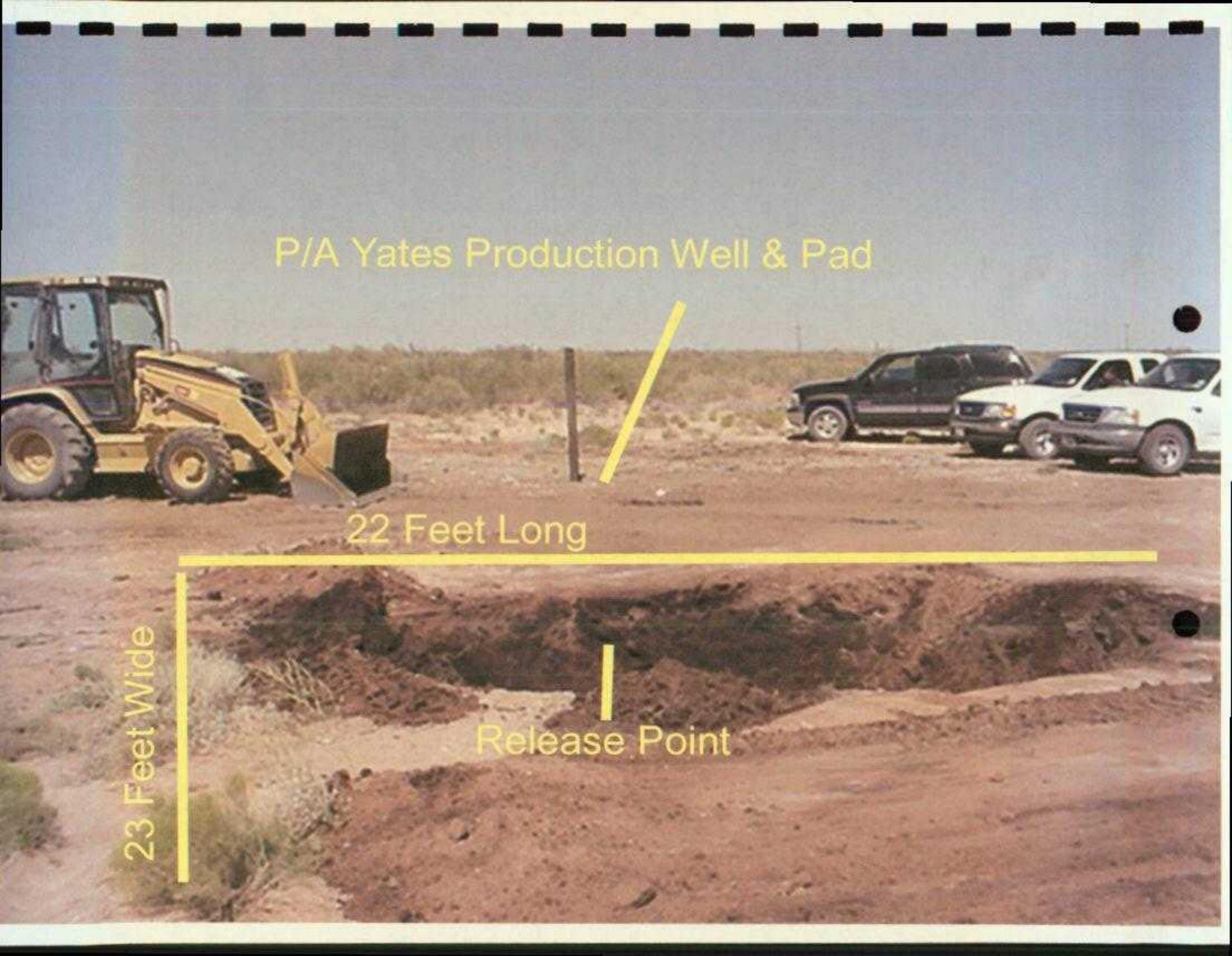
P/A Yates Production Well & Pad

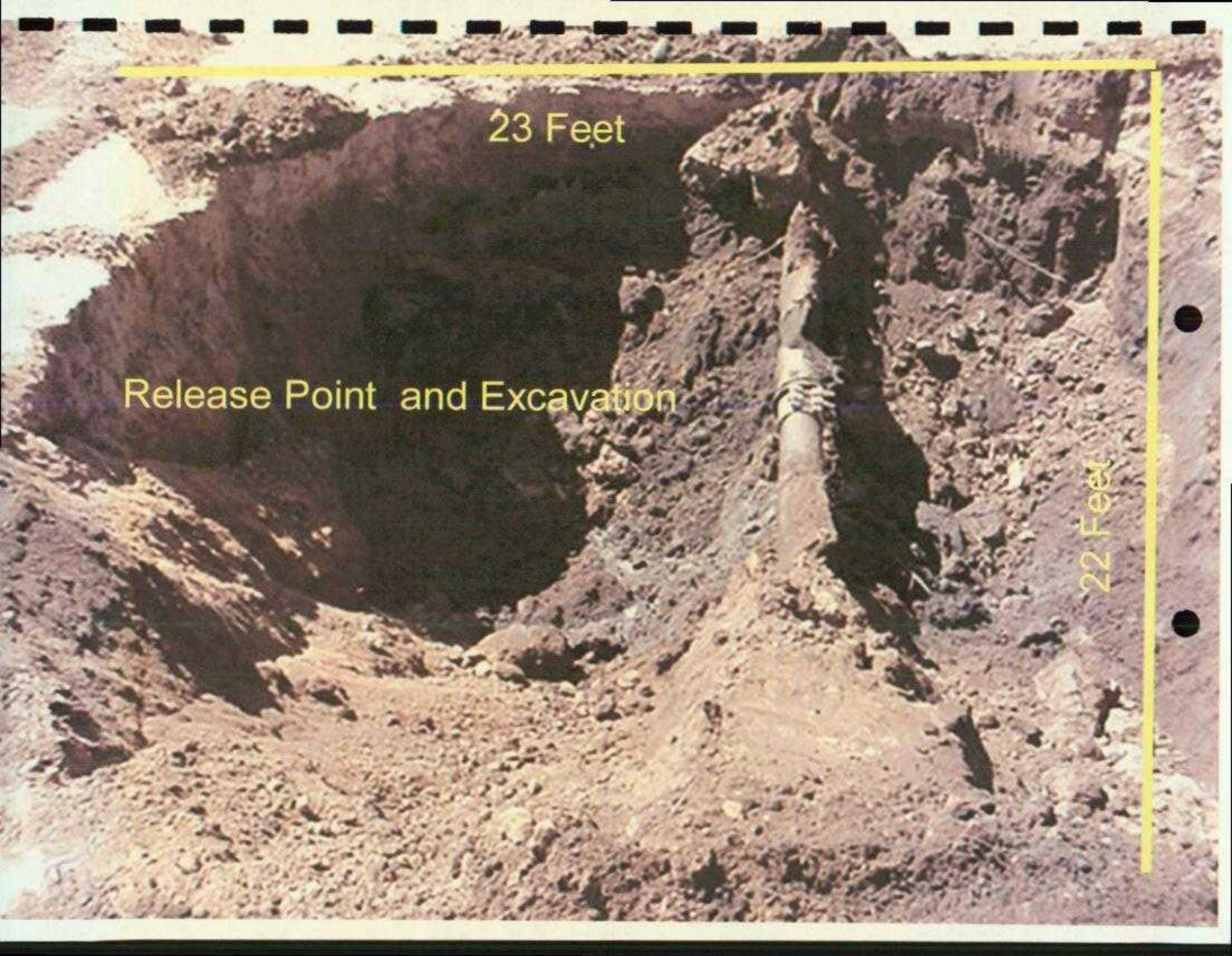


22 Feet Long

23 Feet Wide

Release Point





23 Feet

Release Point and Excavation

22 Feet

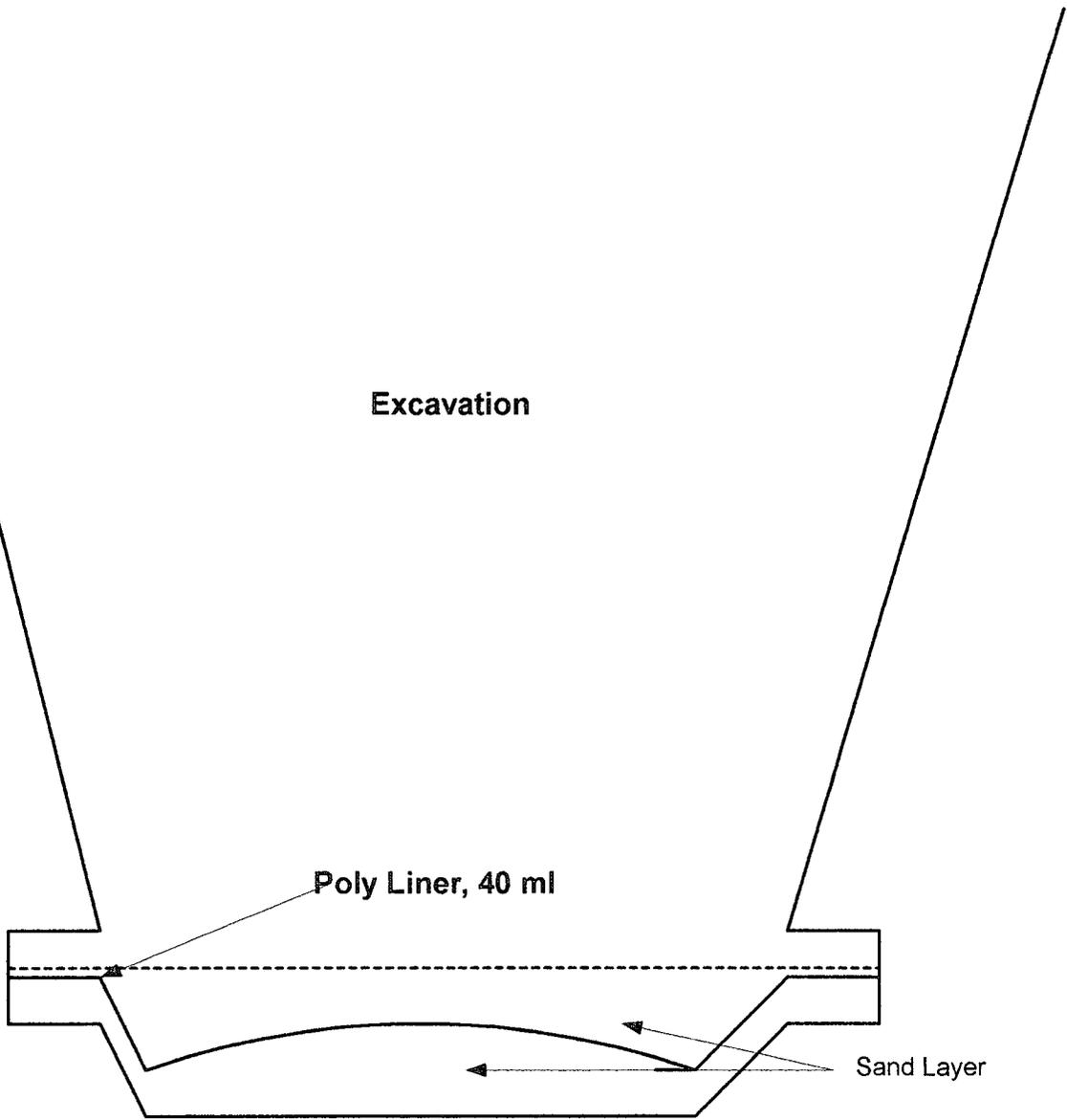
**FIGURE 4**

**INSTALLATION OF 40-ml POLY-LINER**

**Ballard Grayburg 5"  
40-mil Poly-Liner Installation**

**Excavation**

**Cross Section of  
Excavation**



TITLE	DATE
<b>Ballard Grayburg 5"</b>	<b>14 Dec 04</b>
DRAWN BY <b>Basin Environmental Services</b> KAD	LABEL <b>Installation of 40 ml Poly Liner</b>

**APPENDICES**

**APPENDIX A**

**NEW MEXICO OFFICE OF THE STATE  
ENGINEER WATER WELL DATABASE REPORT**

New Mexico Office of the State Engineer  
Well Reports and Downloads

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)   Non-Domestic  Domestic  
 All

WATER COLUMN REPORT 09/22/2004

(quarters are 1=NW 2=NE 3=SW 4=SE)  
 (quarters are biggest to smallest)

Well Number	Tws	Rng	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Wats Colv
-------------	-----	-----	-----	---	---	------	---	---	------------	-------------	-----------

No Records found, try again

New Mexico Office of the State Engineer  
Well Reports and Downloads

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)   Non-Domestic  Domestic  
 All

AVERAGE DEPTH OF WATER REPORT 09/22/2004

(Depth Water in Feet)

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
No Records found, try again										



**APPENDIX B**

**BLM REPORT OF UNDESIRABLE EVENT  
CHECKLIST**

REPORT OF UNDESIRABLE EVENT CHECKLIST

DATE OF OCCURRENCE/DISCOVERY: 9-2-04 TIME OF OCCURRENCE: 06:00  
DATE REPORTED TO BLM: 9-2-04 TIME REPORTED: 13:00  
BLM OFFICE REPORTED TO (RESOURCE AREA/DISTRICT OFFICE/OTHER): Carlsbad  
LOCATION: SECTION: 10 T. 18S R. 29E MERIDIAN: NM Prime Meridian  
COUNTY: Eddy STATE: NM WELL NAME: 5 Inch Gathering Line  
OPERATOR: Plains  
SURFACE OWNERSHIP: BLM MINERAL OWNERSHIP: BLM  
LEASE NO.: 9018555 UNIT/CA NO.: RIGHT-OF-WAY NO.: LC057579

TYPE OF EVENT, CIRCLE APPROPRIATE ITEM(S):  
BLOWOUT, FIRE, FATALITY, INJURY, PROPERTY DAMAGE, OIL SPILL, SALTWATER SPILL, TOXIC FLUID SPILL, OIL AND SALTWATER SPILL, OIL AND TOXIC FLUID SPILL, SALTWATER AND TOXIC FLUID SPILL, GAS VENTING, UNCONTROLLED FLOW OF WELL BORE FLUIDS, OR OTHER (SPECIFY):

CAUSE OF EVENT: External corrosion of 5 inch gathering line

CAUSE AND EXTENT OF PERSONAL INJURIES/CAUSE OF DEATH(S): none

EFFECTS OF EVENT: Crude oil impacted well

ACTION TAKEN TO CONTROL THE EVENT: clamp placed on line, impacted well stockpiled on plastic

LENGTH OF TIME TO CONTROL EVENT AND SUBSEQUENT CLEAN-UP: 9 hours

VOLUME(S) OF FLUIDS (SPECIFY): DISCHARGED: 80 barrels crude oil  
CONSUMED: 80 barrels crude RECOVERED: 0 barrels crude oil

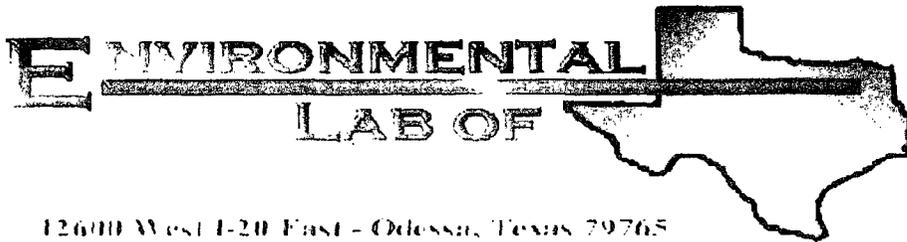
OTHER FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCIES NOTIFIED (INCLUDE NAMES AND DATE AND TIME): NMCD Artesia Van Barton notified on 9-2-04 at 1432.

ACTION THAT HAS BEEN OR WILL BE TAKEN TO PREVENT RECURRENCE: A clamp was placed on the line

SIGNED: Camille Reynolds  
DATE: 9-7-04 TITLE: Remediation Coordinator  
Plains Cell American

**APPENDIX C**

**ENVIRONMENTAL LABORATORY OF TEXAS  
ANALYTICAL RESULTS**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Ken Dutton

Basin Environmental Services

P.O. Box 301

Lovington, TX 88260

Project: Ballard-Grayburg 5 Inch

Project Number: EMS:2004-00206

Location: Eddy County, NM

Lab Order Number: 4J26001

Report Date: 11/01/04

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
11/01/04 16:44

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-1 5'	4J26001-01	Soil	10/18/04 12:53	10/25/04 17:25
RW-1 15'	4J26001-02	Soil	10/18/04 13:17	10/25/04 17:25
RW-1 25'	4J26001-03	Soil	10/18/04 13:41	10/25/04 17:25
RW-1 35'	4J26001-04	Soil	10/18/04 13:56	10/25/04 17:25
RW-1 60'	4J26001-05	Soil	10/18/04 14:30	10/25/04 17:25
RW-1 75'	4J26001-06	Soil	10/18/04 14:41	10/25/04 17:25
RW-1 95'	4J26001-07	Soil	10/18/04 15:00	10/25/04 17:25
RW-1 115'	4J26001-08	Soil	10/18/04 15:34	10/25/04 17:25
RW-1 135'	4J26001-09	Soil	10/18/04 16:07	10/25/04 17:25
RW-1 155'	4J26001-10	Soil	10/18/04 16:41	10/25/04 17:25
RW-1 175'	4J26001-11	Soil	10/18/04 17:11	10/25/04 17:25
RW-1 185'	4J26001-12	Soil	10/18/04 17:26	10/25/04 17:25
SB-1 15'	4J26001-13	Soil	10/19/04 12:27	10/25/04 17:25
SB-1 35'	4J26001-14	Soil	10/19/04 12:46	10/25/04 17:25
SB-1 60'	4J26001-15	Soil	10/19/04 13:04	10/25/04 17:25
SB-1 75'	4J26001-16	Soil	10/19/04 13:15	10/25/04 17:25
SB-1 90'	4J26001-17	Soil	10/19/04 13:38	10/25/04 17:25
MW-2 15'	4J26001-18	Soil	10/19/04 15:29	10/25/04 17:25
MW-2 60'	4J26001-19	Soil	10/19/04 16:29	10/25/04 17:25
MW-2 95'	4J26001-20	Soil	10/20/04 08:39	10/25/04 17:25
MW-2 135'	4J26001-21	Soil	10/20/04 09:29	10/25/04 17:25
MW-3 15'	4J26001-22	Soil	10/20/04 12:36	10/25/04 17:25
MW-3 60'	4J26001-23	Soil	10/20/04 13:19	10/25/04 17:25
MW-3 95'	4J26001-24	Soil	10/20/04 13:46	10/25/04 17:25
MW-3 135'	4J26001-25	Soil	10/20/04 14:25	10/25/04 17:25
MW-3 195'	4J26001-26	Soil	10/21/04 09:30	10/25/04 17:25
SB-2 15'	4J26001-27	Soil	10/22/04 08:47	10/25/04 17:25
SB-2 35'	4J26001-28	Soil	10/22/04 09:04	10/25/04 17:25
SB-2 60'	4J26001-29	Soil	10/22/04 09:27	10/25/04 17:25
SB-2 75'	4J26001-30	Soil	10/22/04 09:38	10/25/04 17:25
SB-2 90'	4J26001-31	Soil	10/22/04 09:53	10/25/04 17:25
SB-2 105'	4J26001-32	Soil	10/22/04 10:09	10/25/04 17:25
MW-2 195'	4J26001-33	Soil	10/20/04 14:15	10/25/04 17:25

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

**Reported:**  
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Basin Environmental Services P.O. Box 301 Lovington TX, 88260	Project: Ballard-Grayburg 5 Inch Project Number: EMS:2004-00206 Project Manager: Ken Dutton	Fax: (505) 396-1429  Reported: 11/01/04 16:44
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**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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RW-1 5' (4J26001-01) Soil									
Benzene	0.0322	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	0.148	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.187	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.836	0.0250	"	"	"	"	"	"	
Xylene (o)	0.441	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		116 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	424	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	3400	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	3820	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		99.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		97.8 %	70-130		"	"	"	"	

RW-1 15' (4J26001-02) Soil									
Benzene	0.0787	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	0.462	0.0250	"	"	"	"	"	"	
Ethylbenzene	1.70	0.0250	"	"	"	"	"	"	
Xylene (p/m)	3.11	0.0250	"	"	"	"	"	"	
Xylene (o)	2.02	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		149 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		111 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	918	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	4150	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	5070	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		120 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		87.6 %	70-130		"	"	"	"	

RW-1 25' (4J26001-03) Soil									
Benzene	0.0771	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	0.844	0.0250	"	"	"	"	"	"	
Ethylbenzene	4.23	0.0250	"	"	"	"	"	"	
Xylene (p/m)	5.85	0.0250	"	"	"	"	"	"	
Xylene (o)	3.44	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		172 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		104 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	1360	50.0	mg/kg dry	5	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	6560	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	7920	50.0	"	"	"	"	"	"	

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Basin Environmental Services  
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Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
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**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 25' (4J26001-03) Soil</b>									
Surrogate: 1-Chlorooctane		23.0 %	70-130		EJ42604	10/26/04	10/26/04	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		21.2 %	70-130		"	"	"	"	S-06
<b>RW-1 35' (4J26001-04) Soil</b>									
Benzene	0.238	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/26/04	EPA 8021B	
Toluene	0.747	0.0250	"	"	"	"	"	"	
Ethylbenzene	3.09	0.0250	"	"	"	"	"	"	
Xylene (p/m)	4.59	0.0250	"	"	"	"	"	"	
Xylene (o)	2.71	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		220 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		99.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	979	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	4310	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	5290	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		114 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		85.8 %	70-130		"	"	"	"	
<b>RW-1 60' (4J26001-05) Soil</b>									
Benzene	0.0275	0.0250	mg/kg dry	25	EJ42716	10/26/04	10/27/04	EPA 8021B	
Toluene	0.318	0.0250	"	"	"	"	"	"	
Ethylbenzene	2.03	0.0250	"	"	"	"	"	"	
Xylene (p/m)	3.12	0.0250	"	"	"	"	"	"	
Xylene (o)	2.06	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		106 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	1710	50.0	mg/kg dry	5	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	8650	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	10400	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		24.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		19.8 %	70-130		"	"	"	"	S-06

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**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 75' (4J26001-06) Soil</b>									
Benzene	ND	0.100	mg/kg dry	100	EJ42716	10/26/04	10/27/04	EPA 8021B	
Toluene	0.494	0.100	"	"	"	"	"	"	
Ethylbenzene	1.90	0.100	"	"	"	"	"	"	
Xylene (p/m)	2.89	0.100	"	"	"	"	"	"	
Xylene (o)	2.31	0.100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		116 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	1850	50.0	mg/kg dry	5	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	11000	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	12900	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		24.6 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		36.8 %	70-130		"	"	"	"	S-06
<b>RW-1 95' (4J26001-07) Soil</b>									
Benzene	0.0288	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/27/04	EPA 8021B	
Toluene	0.387	0.0250	"	"	"	"	"	"	
Ethylbenzene	2.83	0.0250	"	"	"	"	"	"	
Xylene (p/m)	4.14	0.0250	"	"	"	"	"	"	
Xylene (o)	2.60	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	2130	50.0	mg/kg dry	5	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	9970	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	12100	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		27.0 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		32.2 %	70-130		"	"	"	"	S-06
<b>RW-1 115' (4J26001-08) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/27/04	EPA 8021B	
Toluene	0.0634	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.349	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.519	0.0250	"	"	"	"	"	"	
Xylene (o)	0.389	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.1 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.7 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	381	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	3070	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	3450	10.0	"	"	"	"	"	"	

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Project: Ballard-Grayburg 5 Inch  
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Project Manager: Ken Dutton

Fax: (505) 396-1429

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**Organics by GC**  
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 115' (4J26001-08) Soil</b>									
Surrogate: 1-Chlorooctane		99.0 %	70-130		EJ42604	10/26/04	10/26/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		93.8 %	70-130		"	"	"	"	
<b>RW-1 135' (4J26001-09) Soil</b>									
Benzene	J [0.0220]	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/27/04	EPA 8021B	J
Toluene	0.122	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.655	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.994	0.0250	"	"	"	"	"	"	
Xylene (o)	0.672	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	393	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	2150	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	2540	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		96.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		88.4 %	70-130		"	"	"	"	
<b>RW-1 155' (4J26001-10) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	0.0485	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.289	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.424	0.0250	"	"	"	"	"	"	
Xylene (o)	0.297	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		86.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.7 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	285	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	2420	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	2700	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		101 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	

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**Organics by GC**  
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 175' (4J26001-11) Soil</b>									
Benzene	J [0.0174]	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/27/04	EPA 8021B	J
Toluene	0.134	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.725	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.15	0.0250	"	"	"	"	"	"	
Xylene (o)	0.768	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	503	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	2500	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	3000	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		107 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	
<b>RW-1 185' (4J26001-12) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/27/04	EPA 8021B	
Toluene	0.0690	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.308	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.503	0.0250	"	"	"	"	"	"	
Xylene (o)	0.332	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		83.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	247	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	1580	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1830	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		95.2 %	70-130		"	"	"	"	
<b>SB-1 15' (4J26001-13) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		80.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.7 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SB-1 15' (4J26001-13) Soil**

Surrogate: 1-Chlorooctane		93.4 %	70-130		EJ42604	10/26/04	10/26/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		94.6 %	70-130		"	"	"	"	

**SB-1 35' (4J26001-14) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/27/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	

Surrogate: a,a,a-Trifluorotoluene		80.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Surrogate: 1-Chlorooctane		95.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		95.4 %	70-130		"	"	"	"	

**SB-1 60' (4J26001-15) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	J [0.00851]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	J [0.0226]	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	0.0417	0.0250	"	"	"	"	"	"	
Xylene (o)	J [0.0178]	0.0250	"	"	"	"	"	"	J

Surrogate: a,a,a-Trifluorotoluene		83.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Surrogate: 1-Chlorooctane		102 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		108 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
11/01/04 16:44

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SB-1 75' (4J26001-16) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87.3 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		107 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		115 %	70-130		"	"	"	"	
<b>SB-1 90' (4J26001-17) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		84.7 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		86.2 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		103 %	70-130		"	"	"	"	
<b>MW-2 15' (4J26001-18) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.2 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.9 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

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Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
11/01/04 16:44

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 15' (4J26001-18) Soil</b>									
Surrogate: 1-Chlorooctane		94.8 %	70-130		EJ42604	10/26/04	10/26/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		102 %	70-130		"	"	"	"	
<b>MW-2 60' (4J26001-19) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	J [0.0128]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	J [0.0232]	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	0.0702	0.0250	"	"	"	"	"	"	
Xylene (o)	J [0.0154]	0.0250	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		83.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		98.6 %	70-130		"	"	"	"	
<b>MW-2 95' (4J26001-20) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EJ42905	10/27/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		80.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/26/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		94.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70-130		"	"	"	"	

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
11/01/04 16:44

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-2 135' (4J26001-21) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		82.5 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		80.2 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		89.0 %	70-130		"	"	"	"	

**MW-3 15' (4J26001-22) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.1 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		86.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		90.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		99.2 %	70-130		"	"	"	"	

**MW-3 60' (4J26001-23) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.6 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		86.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

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Basin Environmental Services P.O. Box 301 Lovington TX, 88260	Project: Ballard-Grayburg 5 Inch Project Number: EMS:2004-00206 Project Manager: Ken Dutton	Fax: (505) 396-1429  Reported: 11/01/04 16:44
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**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-3 60' (4J26001-23) Soil**

Surrogate: 1-Chlorooctane		93.2 %	70-130		EJ42604	10/26/04	10/27/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		99.2 %	70-130		"	"	"	"	

**MW-3 95' (4J26001-24) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		82.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		95.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	

**MW-3 135' (4J26001-25) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		83.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		97.0 %	70-130		"	"	"	"	

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
11/01/04 16:44

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 195' (4J26001-26) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		81.3 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		92.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		101 %	70-130		"	"	"	"	
<b>SB-2 15' (4J26001-27) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.0 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		88.4 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		91.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		97.4 %	70-130		"	"	"	"	
<b>SB-2 35' (4J26001-28) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		83.4 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.5 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

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Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
11/01/04 16:44

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SB-2 35' (4J26001-28) Soil**

Surrogate: 1-Chlorooctane		101 %	70-130		EJ42604	10/26/04	10/27/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	

**SB-2 60' (4J26001-29) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		86.1 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		102 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		109 %	70-130		"	"	"	"	

**SB-2 75' (4J26001-30) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		84.1 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		89.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		96.4 %	70-130		"	"	"	"	

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

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**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SB-2 90' (4J26001-31) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		85.8 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		96.2 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		101 %	70-130		"	"	"	"	
<b>SB-2 105' (4J26001-32) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		82.3 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		86.4 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		80.2 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		84.6 %	70-130		"	"	"	"	
<b>MW-2 195' (4J26001-33) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK40101	10/28/04	10/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		81.9 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42604	10/26/04	10/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

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Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

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**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 195' (4J26001-33) Soil</b>									
Surrogate: 1-Chlorooctane		88.8 %	70-130		EJ42604	10/26/04	10/27/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		99.6 %	70-130		"	"	"	"	

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**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 5' (4J26001-01) Soil</b>									
% Moisture	6.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 15' (4J26001-02) Soil</b>									
% Moisture	7.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 25' (4J26001-03) Soil</b>									
% Moisture	7.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 35' (4J26001-04) Soil</b>									
% Moisture	9.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 60' (4J26001-05) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 75' (4J26001-06) Soil</b>									
% Moisture	6.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 95' (4J26001-07) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 115' (4J26001-08) Soil</b>									
% Moisture	13.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 135' (4J26001-09) Soil</b>									
% Moisture	2.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 155' (4J26001-10) Soil</b>									
% Moisture	12.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>RW-1 175' (4J26001-11) Soil</b>									
% Moisture	12.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	

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**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 185' (4J26001-12) Soil</b>									
% Moisture	11.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-1 15' (4J26001-13) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-1 35' (4J26001-14) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-1 60' (4J26001-15) Soil</b>									
% Moisture	3.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-1 75' (4J26001-16) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-1 90' (4J26001-17) Soil</b>									
% Moisture	11.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-2 15' (4J26001-18) Soil</b>									
% Moisture	4.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-2 60' (4J26001-19) Soil</b>									
% Moisture	4.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-2 95' (4J26001-20) Soil</b>									
% Moisture	3.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-2 135' (4J26001-21) Soil</b>									
% Moisture	12.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-3 15' (4J26001-22) Soil</b>									
% Moisture	13.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	

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**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 60' (4J26001-23) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-3 95' (4J26001-24) Soil</b>									
% Moisture	5.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-3 135' (4J26001-25) Soil</b>									
% Moisture	13.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-3 195' (4J26001-26) Soil</b>									
% Moisture	15.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-2 15' (4J26001-27) Soil</b>									
% Moisture	3.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-2 35' (4J26001-28) Soil</b>									
% Moisture	3.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-2 60' (4J26001-29) Soil</b>									
% Moisture	2.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-2 75' (4J26001-30) Soil</b>									
% Moisture	4.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-2 90' (4J26001-31) Soil</b>									
% Moisture	3.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>SB-2 105' (4J26001-32) Soil</b>									
% Moisture	1.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	
<b>MW-2 195' (4J26001-33) Soil</b>									
% Moisture	14.0		%	1	EJ42701	10/26/04	10/27/04	% calculation	

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Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

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Reported:  
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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42604 - Solvent Extraction (GC)**

**Blank (EJ42604-BLK1)**

Prepared & Analyzed: 10/26/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	39.6		mg/kg	50.0		79.2	70-130			
Surrogate: 1-Chlorooctadecane	41.0		"	50.0		82.0	70-130			

**Blank (EJ42604-BLK2)**

Prepared: 10/26/04 Analyzed: 10/27/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	39.7		mg/kg	50.0		79.4	70-130			
Surrogate: 1-Chlorooctadecane	40.3		"	50.0		80.6	70-130			

**LCS (EJ42604-BS1)**

Prepared & Analyzed: 10/26/04

Gasoline Range Organics C6-C12	455	10.0	mg/kg wet	500		91.0	75-125			
Diesel Range Organics >C12-C35	486	10.0	"	500		97.2	75-125			
Total Hydrocarbon C6-C35	941	10.0	"	1000		94.1	75-125			
Surrogate: 1-Chlorooctane	45.7		mg/kg	50.0		91.4	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			

**LCS (EJ42604-BS2)**

Prepared: 10/26/04 Analyzed: 10/27/04

Gasoline Range Organics C6-C12	434	10.0	mg/kg wet	500		86.8	75-125			
Diesel Range Organics >C12-C35	488	10.0	"	500		97.6	75-125			
Total Hydrocarbon C6-C35	922	10.0	"	1000		92.2	75-125			
Surrogate: 1-Chlorooctane	45.8		mg/kg	50.0		91.6	70-130			
Surrogate: 1-Chlorooctadecane	41.7		"	50.0		83.4	70-130			

**Calibration Check (EJ42604-CCV1)**

Prepared & Analyzed: 10/26/04

Gasoline Range Organics C6-C12	488		mg/kg	500		97.6	80-120			
Diesel Range Organics >C12-C35	519		"	500		104	80-120			
Total Hydrocarbon C6-C35	1010		"	1000		101	80-120			
Surrogate: 1-Chlorooctane	48.3		"	50.0		96.6	70-130			
Surrogate: 1-Chlorooctadecane	45.0		"	50.0		90.0	70-130			

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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42604 - Solvent Extraction (GC)**

**Calibration Check (EJ42604-CCV2)**

Prepared & Analyzed: 10/26/04

Gasoline Range Organics C6-C12	489		mg/kg	500		97.8	80-120			
Diesel Range Organics >C12-C35	488		"	500		97.6	80-120			
Total Hydrocarbon C6-C35	977		"	1000		97.7	80-120			
Surrogate: 1-Chlorooctane	41.7		"	50.0		83.4	70-130			
Surrogate: 1-Chlorooctadecane	39.9		"	50.0		79.8	70-130			

**Matrix Spike (EJ42604-MS1)**

Source: 4J26001-17

Prepared & Analyzed: 10/26/04

Gasoline Range Organics C6-C12	573	10.0	mg/kg dry	562	ND	102	75-125			
Diesel Range Organics >C12-C35	584	10.0	"	562	ND	104	75-125			
Total Hydrocarbon C6-C35	1160	10.0	"	1120	ND	104	75-125			
Surrogate: 1-Chlorooctane	55.0		mg/kg	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	50.3		"	50.0		101	70-130			

**Matrix Spike (EJ42604-MS2)**

Source: 4J26001-21

Prepared: 10/26/04 Analyzed: 10/27/04

Gasoline Range Organics C6-C12	536	10.0	mg/kg dry	568	ND	94.4	75-125			
Diesel Range Organics >C12-C35	611	10.0	"	568	ND	108	75-125			
Total Hydrocarbon C6-C35	1150	10.0	"	1140	ND	101	75-125			
Surrogate: 1-Chlorooctane	46.4		mg/kg	50.0		92.8	70-130			
Surrogate: 1-Chlorooctadecane	44.5		"	50.0		89.0	70-130			

**Matrix Spike Dup (EJ42604-MSD1)**

Source: 4J26001-17

Prepared & Analyzed: 10/26/04

Gasoline Range Organics C6-C12	567	10.0	mg/kg dry	562	ND	101	75-125	1.05	20	
Diesel Range Organics >C12-C35	584	10.0	"	562	ND	104	75-125	0.00	20	
Total Hydrocarbon C6-C35	1150	10.0	"	1120	ND	103	75-125	0.866	20	
Surrogate: 1-Chlorooctane	54.5		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	51.8		"	50.0		104	70-130			

**Matrix Spike Dup (EJ42604-MSD2)**

Source: 4J26001-21

Prepared: 10/26/04 Analyzed: 10/27/04

Gasoline Range Organics C6-C12	550	10.0	mg/kg dry	568	ND	96.8	75-125	2.58	20	
Diesel Range Organics >C12-C35	589	10.0	"	568	ND	104	75-125	3.67	20	
Total Hydrocarbon C6-C35	1140	10.0	"	1140	ND	100	75-125	0.873	20	
Surrogate: 1-Chlorooctane	46.7		mg/kg	50.0		93.4	70-130			
Surrogate: 1-Chlorooctadecane	44.8		"	50.0		89.6	70-130			

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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42716 - EPA 5030C (GC)**

Prepared: 10/26/04 Analyzed: 10/27/04										
<b>Blank (EJ42716-BLK1)</b>										
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	87.0		ug/kg	100		87.0	80-120			
Surrogate: 4-Bromofluorobenzene	103		"	100		103	80-120			

Prepared & Analyzed: 10/26/04										
<b>LCS (EJ42716-BS1)</b>										
Benzene	115		ug/kg	100		115	80-120			
Toluene	108		"	100		108	80-120			
Ethylbenzene	105		"	100		105	80-120			
Xylene (p/m)	240		"	200		120	80-120			
Xylene (o)	115		"	100		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	111		"	100		111	80-120			
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			

Prepared: 10/26/04 Analyzed: 10/27/04										
<b>Calibration Check (EJ42716-CCV1)</b>										
Benzene	99.0		ug/kg	100		99.0	80-120			
Toluene	92.9		"	100		92.9	80-120			
Ethylbenzene	96.9		"	100		96.9	80-120			
Xylene (p/m)	218		"	200		109	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	103		"	100		103	80-120			
Surrogate: 4-Bromofluorobenzene	114		"	100		114	80-120			

Source: 4J25002-01 Prepared: 10/26/04 Analyzed: 10/27/04										
<b>Matrix Spike (EJ42716-MS1)</b>										
Benzene	88.8		ug/kg	100	ND	88.8	80-120			
Toluene	91.2		"	100	ND	91.2	80-120			
Ethylbenzene	97.3		"	100	ND	97.3	80-120			
Xylene (p/m)	220		"	200	ND	110	80-120			
Xylene (o)	106		"	100	ND	106	80-120			
Surrogate: a,a,a-Trifluorotoluene	104		"	100		104	80-120			
Surrogate: 4-Bromofluorobenzene	118		"	100		118	80-120			

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Reported:  
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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42716 - EPA 5030C (GC)**

**Matrix Spike Dup (EJ42716-MSD1)**

Source: 4J25002-01

Prepared: 10/26/04 Analyzed: 10/27/04

Benzene	92.0		ug/kg	100	ND	92.0	80-120	3.54	20	
Toluene	93.6		"	100	ND	93.6	80-120	2.60	20	
Ethylbenzene	102		"	100	ND	102	80-120	4.72	20	
Xylene (p/m)	233		"	200	ND	116	80-120	5.31	20	
Xylene (o)	113		"	100	ND	113	80-120	6.39	20	
Surrogate: a,a,a-Trifluorotoluene	104		"	100		104	80-120			
Surrogate: 4-Bromofluorobenzene	118		"	100		118	80-120			

**Batch EJ42905 - EPA 5030C (GC)**

**Blank (EJ42905-BLK1)**

Prepared & Analyzed: 10/27/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	81.0		ug/kg	100		81.0	80-120			
Surrogate: 4-Bromofluorobenzene	85.4		"	100		85.4	80-120			

**LCS (EJ42905-BS1)**

Prepared & Analyzed: 10/27/04

Benzene	88.7		ug/kg	100		88.7	80-120			
Toluene	90.0		"	100		90.0	80-120			
Ethylbenzene	98.9		"	100		98.9	80-120			
Xylene (p/m)	223		"	200		112	80-120			
Xylene (o)	110		"	100		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	93.8		"	100		93.8	80-120			
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
11/01/04 16:44

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42905 - EPA 5030C (GC)**

**Calibration Check (EJ42905-CCV1)**

Prepared: 10/27/04 Analyzed: 10/28/04

Benzene	90.6		ug/kg	100		90.6	80-120			
Toluene	90.9		"	100		90.9	80-120			
Ethylbenzene	93.5		"	100		93.5	80-120			
Xylene (p/m)	211		"	200		106	80-120			
Xylene (o)	102		"	100		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	100		"	100		100	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	80-120			

**Matrix Spike (EJ42905-MS1)**

Source: 4J26001-16

Prepared: 10/27/04 Analyzed: 10/28/04

Benzene	91.1		ug/kg	100	ND	91.1	80-120			
Toluene	93.9		"	100	ND	93.9	80-120			
Ethylbenzene	105		"	100	ND	105	80-120			
Xylene (p/m)	238		"	200	ND	119	80-120			
Xylene (o)	118		"	100	ND	118	80-120			
Surrogate: a,a,a-Trifluorotoluene	106		"	100		106	80-120			
Surrogate: 4-Bromofluorobenzene	118		"	100		118	80-120			

**Matrix Spike Dup (EJ42905-MSD1)**

Source: 4J26001-16

Prepared: 10/27/04 Analyzed: 10/28/04

Benzene	88.7		ug/kg	100	ND	88.7	80-120	2.67	20	
Toluene	91.9		"	100	ND	91.9	80-120	2.15	20	
Ethylbenzene	99.8		"	100	ND	99.8	80-120	5.08	20	
Xylene (p/m)	225		"	200	ND	112	80-120	6.06	20	
Xylene (o)	110		"	100	ND	110	80-120	7.02	20	
Surrogate: a,a,a-Trifluorotoluene	98.8		"	100		98.8	80-120			
Surrogate: 4-Bromofluorobenzene	118		"	100		118	80-120			

**Batch EK40101 - EPA 5030C (GC)**

**Blank (EK40101-BLK1)**

Prepared & Analyzed: 10/28/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	83.7		ug/kg	100		83.7	80-120			
Surrogate: 4-Bromofluorobenzene	98.7		"	100		98.7	80-120			

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
11/01/04 16:44

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EK40101 - EPA 5030C (GC)**

**LCS (EK40101-BS1)**

Prepared & Analyzed: 10/28/04

Benzene	84.3		ug/kg	100		84.3	80-120			
Toluene	87.5		"	100		87.5	80-120			
Ethylbenzene	96.2		"	100		96.2	80-120			
Xylene (p/m)	216		"	200		108	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	97.4		"	100		97.4	80-120			
Surrogate: 4-Bromofluorobenzene	116		"	100		116	80-120			

**Calibration Check (EK40101-CCV1)**

Prepared: 10/28/04 Analyzed: 10/29/04

Benzene	94.5		ug/kg	100		94.5	80-120			
Toluene	94.2		"	100		94.2	80-120			
Ethylbenzene	93.3		"	100		93.3	80-120			
Xylene (p/m)	206		"	200		103	80-120			
Xylene (o)	98.7		"	100		98.7	80-120			
Surrogate: a,a,a-Trifluorotoluene	107		"	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	101		"	100		101	80-120			

**Matrix Spike (EK40101-MS1)**

Source: 4J26001-31

Prepared: 10/28/04 Analyzed: 10/29/04

Benzene	90.7		ug/kg	100	ND	90.7	80-120			
Toluene	93.4		"	100	ND	93.4	80-120			
Ethylbenzene	101		"	100	ND	101	80-120			
Xylene (p/m)	229		"	200	ND	114	80-120			
Xylene (o)	111		"	100	ND	111	80-120			
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	113		"	100		113	80-120			

**Matrix Spike Dup (EK40101-MSD1)**

Source: 4J26001-31

Prepared: 10/28/04 Analyzed: 10/29/04

Benzene	92.0		ug/kg	100	ND	92.0	80-120	1.42	20	
Toluene	93.8		"	100	ND	93.8	80-120	0.427	20	
Ethylbenzene	101		"	100	ND	101	80-120	0.00	20	
Xylene (p/m)	228		"	200	ND	114	80-120	0.00	20	
Xylene (o)	110		"	100	ND	110	80-120	0.905	20	
Surrogate: a,a,a-Trifluorotoluene	99.9		"	100		99.9	80-120			
Surrogate: 4-Bromofluorobenzene	118		"	100		118	80-120			

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
11/01/04 16:44

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ42701 - General Preparation (Prep)**

**Blank (EJ42701-BLK1)**

Prepared: 10/26/04 Analyzed: 10/27/04

% Moisture 0.0 %

**Duplicate (EJ42701-DUP1)**

Source: 4J26001-01

Prepared: 10/26/04 Analyzed: 10/27/04

% Moisture 6.0 % 6.0 0.00 20

Basin Environmental Services  
P.O. Box 301  
Lovington TX, 88260

Project: Ballard-Grayburg 5 Inch  
Project Number: EMS:2004-00206  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
11/01/04 16:44

### Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

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:

*Raland K Tuttle*

Date:

11/1/04

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Biezugbe, Lab Tech.

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

Environmental Lab of Texas

*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 27 of 27

### Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
4J26001-03	8021B BTEX	a,a,a-Trifluorotoluene	Exceeds upper control limit
	8021B BTEX	(Soil)	Result calculations based on MDL
	TPH 8015	(Soil)	Result calculations based on MDL
	8021B BTEX	(Soil)	RPD calculations based on %Recovery
	8021B BTEX	(Soil)	J-Flags used
	TPH 8015	(Soil)	J-Flags used
4J26001-03	TPH 8015	1-Chlorooctadecane	Exceeds lower control limit
4J26001-03	TPH 8015	1-Chlorooctane	Exceeds lower control limit
4J26001-05	TPH 8015	1-Chlorooctadecane	Exceeds lower control limit
4J26001-05	TPH 8015	1-Chlorooctane	Exceeds lower control limit
4J26001-06	TPH 8015	1-Chlorooctadecane	Exceeds lower control limit
4J26001-06	TPH 8015	1-Chlorooctane	Exceeds lower control limit
			Default Report (not modified)
4J26001-07	TPH 8015	1-Chlorooctadecane	Exceeds lower control limit
4J26001-07	TPH 8015	1-Chlorooctane	S-06
4J26001-04	8021B BTEX	a,a,a-Trifluorotoluene	Exceeds upper control limit
4J26001-02	8021B BTEX	a,a,a-Trifluorotoluene	Exceeds upper control limit
4J26001-02	8021B BTEX	a,a,a-Trifluorotoluene	S-04
4J26001-03	8021B BTEX	a,a,a-Trifluorotoluene	S-04
4J26001-03	TPH 8015	1-Chlorooctadecane	S-06
4J26001-03	TPH 8015	1-Chlorooctane	S-06
4J26001-04	8021B BTEX	a,a,a-Trifluorotoluene	S-04
4J26001-05	TPH 8015	1-Chlorooctadecane	S-06
4J26001-05	TPH 8015	1-Chlorooctane	S-06
4J26001-06	TPH 8015	1-Chlorooctadecane	S-06
4J26001-06	TPH 8015	1-Chlorooctane	S-06
4J26001-07	TPH 8015	1-Chlorooctadecane	S-06
4J26001-07	TPH 8015	1-Chlorooctane	Exceeds lower control limit

# Environmental Lab of Texas

1000 West Loop West  
 Suite 200, Texas 75203  
 Phone: 409-882-1888  
 Fax: 409-882-8773

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

1 of 4

Project Name: RAILROAD-GARLAND, TEXAS  
 Project #/EHS: 2004-00166  
 Project Loc: EDDY COUNTY, NM

Project Manager: KEV DUTTON  
 Company Name: BES  
 Company Address: P.O. BOX 301  
 City/State/Zip: LOVINGTON, NM 88264  
 Telephone No: (505) 494-2124 Fax No: (505) 388-1429  
 Sampler Signature: [Signature]

DATE	TIME	FIELD NO.	DEPTH	PARAMETER	UNIT	RESULT	LAB. NO.	ANALYST
01	08:15	2004	1'	TEMP	°C	11.1		
02	08:15		2'	TEMP	°C	11.1		
03	08:15		3'	TEMP	°C	11.1		
04	08:15		4'	TEMP	°C	11.1		
05	08:15		5'	TEMP	°C	11.1		
06	08:15		6'	TEMP	°C	11.1		
07	08:15		7'	TEMP	°C	11.1		
08	08:15		8'	TEMP	°C	11.1		
09	08:15		9'	TEMP	°C	11.1		
10	08:15		10'	TEMP	°C	11.1		

Sample Containers Filled?  Yes  No  
 Temperature Upon Receipt: Rec 0.0°C  
 Laboratory Comments: Rec 0.0°C

Date: 10-25-04 Time: 17:25  
 Date: Nov 04 Time: 14:40

Signature: [Signature]  
 Signature: [Signature]  
 Signature: [Signature]







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

Client: Basin Environmental

Date/Time: 10-26-04 @ 0815

Order #: 4J26001

Initials: JMM

### Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	O.C	G
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Custody Seals intact on shipping container/cooler?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<del>Not present</del>	
Custody Seals intact on sample bottles?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<del>Not present</del>	
Chain of custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Sample instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	

Other observations:

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### Variance Documentation:

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

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

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Corrective Action Taken:

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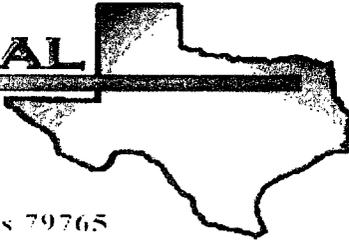


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**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Ken Dutton

Basin Environmental Services

P.O. Box 301

Lovington, NM 88260

Project: Plain Marketing

Project Number: Ballard-Grayburg 5 inch

Location: Eddy County, NM

Lab Order Number: 4L06005

Report Date: 12/09/04

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
12/09/04 17:29

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	4L06005-01	Water	12/02/04 13:05	12/06/04 09:30
MW-3	4L06005-02	Water	12/02/04 15:10	12/06/04 09:30

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

**Organics by GC  
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (4L06005-01) Water</b>									
Benzene	0.00111	0.00100	mg/L	1	EL40913	12/08/04	12/08/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	80-120		"	"	"	"	
<b>MW-3 (4L06005-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	EL40913	12/08/04	12/08/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		114 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	80-120		"	"	"	"	

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

**General Chemistry Parameters by EPA / Standard Methods  
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (4L06005-01) Water</b>									
Total Dissolved Solids	7730	5.00	mg/L	1	EL40702	12/06/04	12/07/04	EPA 160.1	
<b>MW-3 (4L06005-02) Water</b>									
Total Dissolved Solids	8530	5.00	mg/L	1	EL40702	12/06/04	12/07/04	EPA 160.1	

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL40913 - EPA 5030C (GC)**

**Blank (EL40913-BLK1)**

Prepared & Analyzed: 12/08/04

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	19.8		ug/l	20.0		99.0	80-120			
Surrogate: 4-Bromofluorobenzene	17.4		"	20.0		87.0	80-120			

**LCS (EL40913-BS1)**

Prepared & Analyzed: 12/08/04

Benzene	94.3		ug/l	100		94.3	80-120			
Toluene	97.6		"	100		97.6	80-120			
Ethylbenzene	96.2		"	100		96.2	80-120			
Xylene (p/m)	194		"	200		97.0	80-120			
Xylene (o)	99.5		"	100		99.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	17.8		"	20.0		89.0	80-120			
Surrogate: 4-Bromofluorobenzene	22.1		"	20.0		110	80-120			

**LCS Dup (EL40913-BSD1)**

Prepared & Analyzed: 12/08/04

Benzene	97.4		ug/l	100		97.4	80-120	3.23	20	
Toluene	100		"	100		100	80-120	2.43	20	
Ethylbenzene	102		"	100		102	80-120	5.85	20	
Xylene (p/m)	202		"	200		101	80-120	4.04	20	
Xylene (o)	103		"	100		103	80-120	3.46	20	
Surrogate: a,a,a-Trifluorotoluene	18.7		"	20.0		93.5	80-120			
Surrogate: 4-Bromofluorobenzene	22.2		"	20.0		111	80-120			

**Calibration Check (EL40913-CCV1)**

Prepared & Analyzed: 12/08/04

Benzene	97.0		ug/l	100		97.0	80-120			
Toluene	99.1		"	100		99.1	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	199		"	200		99.5	80-120			
Xylene (o)	101		"	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	19.4		"	20.0		97.0	80-120			
Surrogate: 4-Bromofluorobenzene	21.5		"	20.0		108	80-120			

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL40913 - EPA 5030C (GC)**

**Matrix Spike (EL40913-MS1)**

Source: 4L06002-01

Prepared & Analyzed: 12/08/04

Benzene	102		ug/l	100	ND	102	80-120			
Toluene	102		"	100	ND	102	80-120			
Ethylbenzene	101		"	100	ND	101	80-120			
Xylene (p/m)	203		"	200	ND	102	80-120			
Xylene (o)	111		"	100	ND	111	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.4		"	20.0		92.0	80-120			
Surrogate: 4-Bromofluorobenzene	19.5		"	20.0		97.5	80-120			

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

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

**Batch EL40702 - General Preparation (WetChem)**

**Blank (EL40702-BLK1)**

Prepared: 12/06/04 Analyzed: 12/07/04

Total Dissolved Solids ND 5.00 mg/L

**Duplicate (EL40702-DUP1)**

Source: 4L03001-01

Prepared: 12/06/04 Analyzed: 12/07/04

Total Dissolved Solids 4120 5.00 mg/L 4030 2.21 20

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

### Notes and Definitions

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: Roland K Tuttle Date: 12/9/2004

Roland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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  
Variance / Corrective Action Report – Sample Log-In**

Client: Basin Env. Susc

Date/Time: 12/6/04 12:35

Order #: 4606005

Initials: JLH

**Sample Receipt Checklist**

Temperature of container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	3	C
Shipping container/cooler in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Custody Seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not present	
Custody Seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not present	
Chain of custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Chain of Custody signed when relinquished and received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Chain of custody agrees with sample label(s)	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Container labels legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Samples in proper container/bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sufficient sample amount for indicated test?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable	

Other observations:

---



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**Variance Documentation:**

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

Regarding:

---



---

Corrective Action Taken:

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**APPENDIX D**  
**SOIL BORING LOGS**

Plains Marketing, L. P.  
Ballard Grayburg 5"  
RW-1  
Eddy County, New Mexico  
Unit M, S10, T18S, R29E

**Well Completion Data**

Installed 18 Oct 04,  
Basin Environmental  
Service Technologies

TD: 210 Feet bgs  
40 feet, 4" 020 PVC Screen  
170 feet, 4" PVC Riser  
166 feet, Depth of Sand Pack  
166 feet to surface, Bentonite Pellet Seal

2 by 2 feet concrete surface pad installed  
with a 6" by 60" metal locking square  
protector

Groundwater depth  
 Samples selected for  
analysis

Depth	Soil Column	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
15		724 ppm	Heavy	Heavy	Caliche layer, dry
30		675 ppm	Heavy	None	Sand (SM) Red-Brown, Very Fine Grain, Well Sorted, Imbedded w/Limestone nodules, Dry
45		788 ppm	Heavy	None	Sand (SM) Red-Brown, Very Fine Grain, Well Sorted, Imbedded w/River Rock, Dry
60		813 ppm	Heavy	None	Sand (SM) Dark-Red, Very Fine Grain, Well Sorted, Dry
75		839 ppm	Moderate	None	Clay Layer (Soft), Red, Dry
90		245 ppm	Moderate	None	Sand (SM) Brown, Very Fine Grain, Well Sorted, Dry
105		771 ppm	Moderate	None	Limestone Layer, Dry
120		216 ppm	Slight	None	Sand (SP) Brown, Very Fine Grain, Well Sorted, Imbedded w/Limestone Nodules, Dry
135		411 ppm	Slight	None	Sand (SP) Tan, Very Fine Grain, Well Sorted, Imbedded w/Limestone Nodules, Dry
150		312 ppm	Heavy	Slight	
165		314 ppm	Slight	None	Limestone Layer, Dry
180		348 ppm	Slight	None	
189		443 ppm	Slight	None	
195		291 ppm			Sand (SM) Red-Brown, Very Fine Grain, Well Sorted, Imbedded w/ Gravel, Moist
210					

TITLE	DESCRIPTION	DRAWN BY	DATE
Ballard Grayburg 5"	Recovery Well 1	KAD	14 Dec 04

Plains Marketing, L. P.  
Ballard Grayburg 5"  
MW-2  
Eddy County, New Mexico  
Unit M, S10, T18S, R29E

**Well Completion Data**

Installed 19 Oct 04,  
Basin Environmental  
Service Technologies

TD: 210 Feet bgs

30 feet, 2" 020 PVC Screen

180 feet, 2" PVC Riser

175 feet, Depth of Sand Pack

175 feet to surface, Bentonite Pellet Seal

2 by 2 feet concrete surface pad installed  
with a 4' by 60" metal locking square  
proctorator

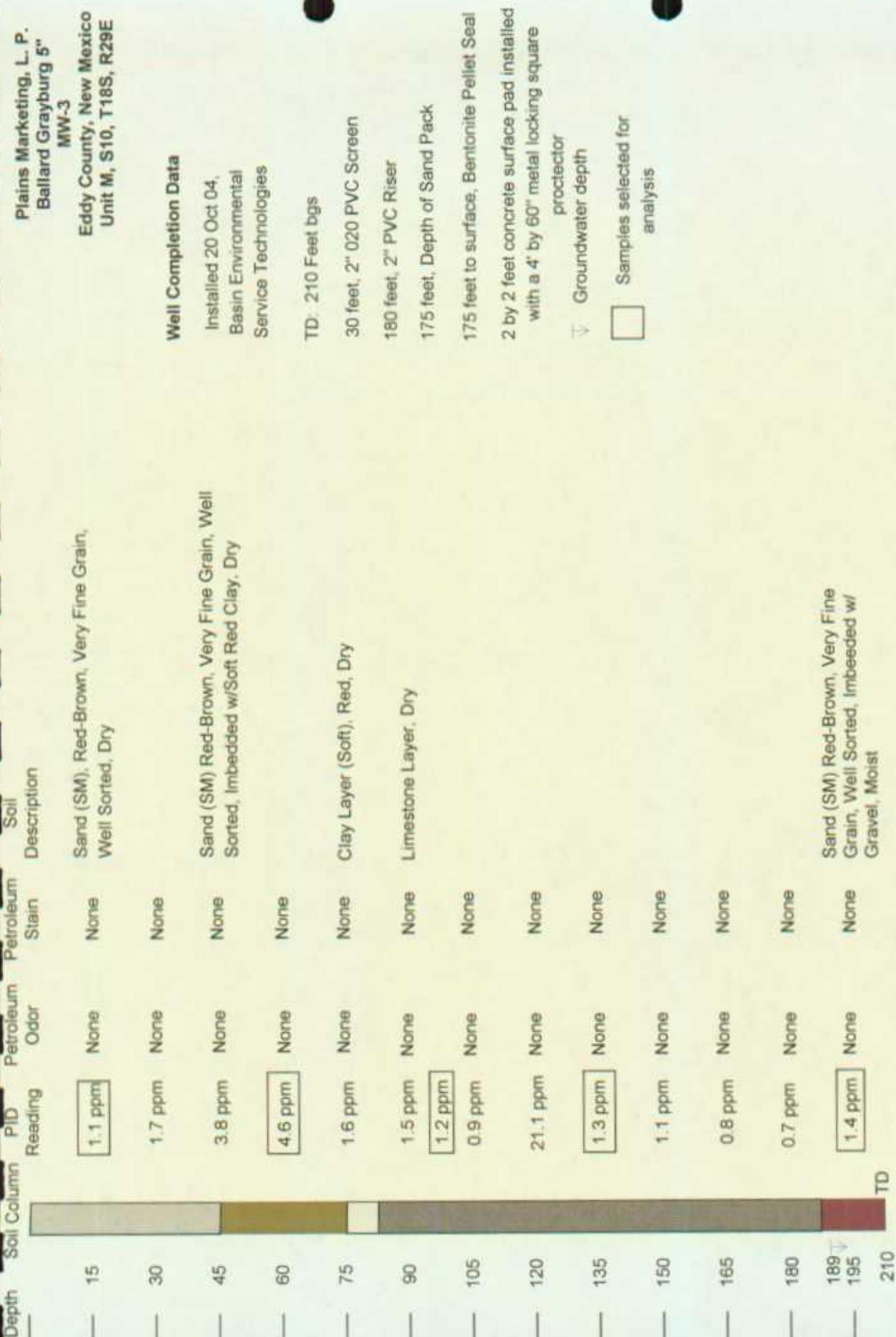
↓ Groundwater depth

Samples selected for  
analysis

Depth	Soil Column	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
15		1.3 ppm	None	None	Sand (SM), Red-Brown, Very Fine Grain, Well Sorted, Dry
30		1.2 ppm	None	None	
45		0.4 ppm	None	None	Sand (SM) Red-Brown, Very Fine Grain, Well Sorted, Imbedded w/Soft Red Clay, Dry
60		0.6 ppm	None	None	
75		1.1 ppm	None	None	Clay Layer (Soft), Red, Dry
90		1.1 ppm	None	None	Limestone Layer, Dry
105		1.6 ppm	None	None	
120		3.0 ppm	None	None	
135		1.1 ppm	None	None	
150		1.3 ppm	None	None	
165		0.6 ppm	None	None	
180		1.1 ppm	None	None	
189		1.0 ppm	None	None	
195		0.6 ppm	None	None	Sand (SM) Red-Brown, Very Fine Grain, Well Sorted, Imbedded w/ Gravel, Moist
210					TD

TITLE	DESCRIPTION	DRAWN BY	DATE
Ballard Grayburg 5"	Monitoring Well 2	KAD	14 Dec 04

Plains Marketing, L. P.  
Ballard Grayburg 5"  
MW-3  
Eddy County, New Mexico  
Unit M, S10, T18S, R29E



**Well Completion Data**

Installed 20 Oct 04,  
Basin Environmental  
Service Technologies

TD: 210 Feet bgs

30 feet, 2" 020 PVC Screen

180 feet, 2" PVC Riser

175 feet, Depth of Sand Pack

175 feet to surface, Bentonite Pellet Seal

2 by 2 feet concrete surface pad installed with a 4' by 60" metal locking square

Groundwater depth

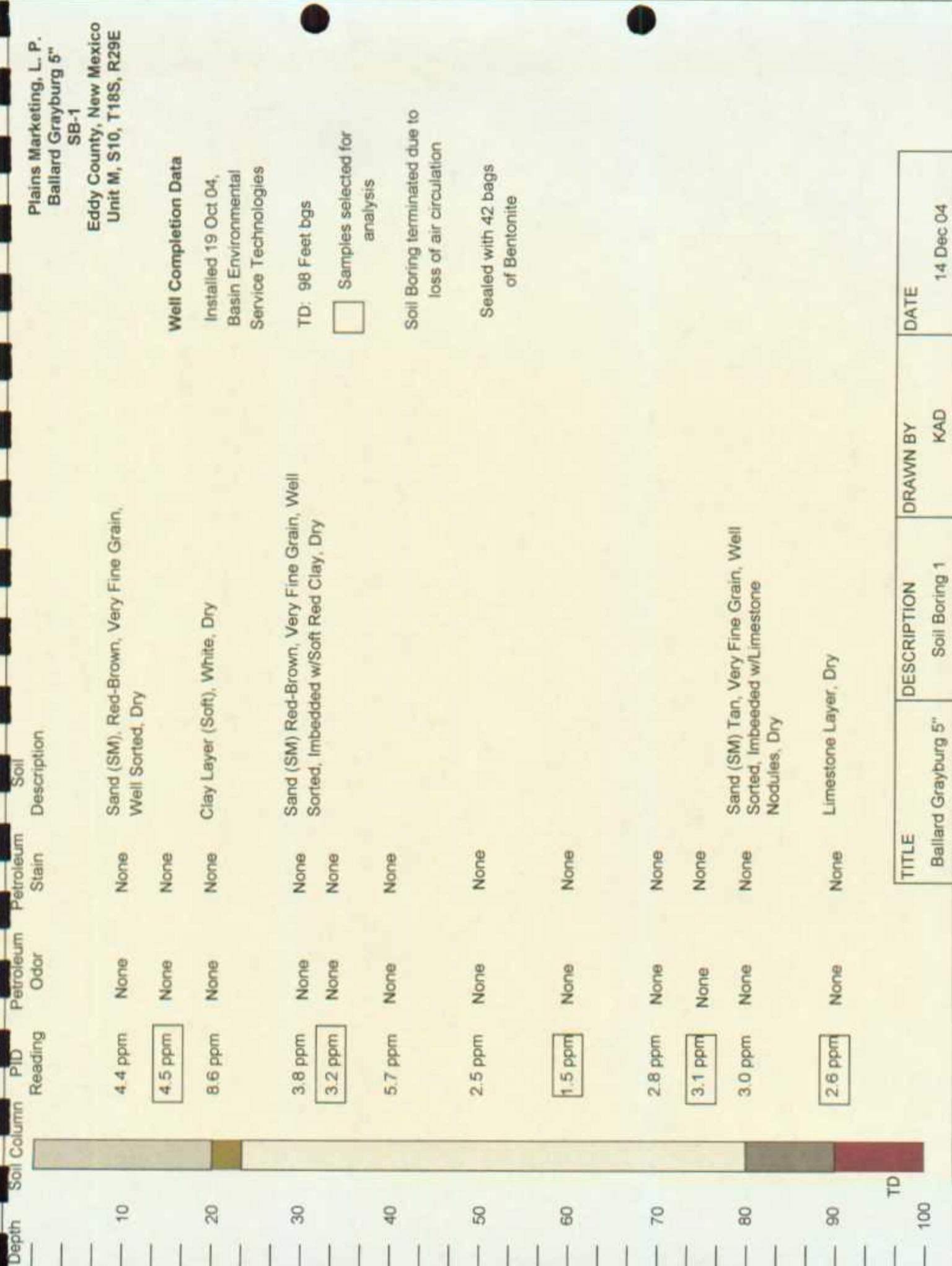
Samples selected for analysis

TITLE	DESCRIPTION	DRAWN BY	DATE
Ballard Grayburg 5"	Monitoring Well 3	KAD	14 Dec 04

Plains Marketing, L. P.  
Ballard Grayburg 5"  
SB-1  
Eddy County, New Mexico  
Unit M, S10, T18S, R29E

**Well Completion Data**

Installed 19 Oct 04,  
Basin Environmental  
Service Technologies  
TD: 98 Feet bgs  
 Samples selected for  
analysis  
Soil Boring terminated due to  
loss of air circulation  
Sealed with 42 bags  
of Bentonite



TITLE	DESCRIPTION	DRAWN BY	DATE
Ballard Grayburg 5"	Soil Boring 1	KAD	14 Dec 04

Plains Marketing, L. P.  
Ballard Grayburg 5"  
SB-2  
Eddy County, New Mexico  
Unit M, S10, T18S, R29E

**Well Completion Data**

Installed 20 Oct 04,  
Basin Environmental  
Service Technologies

TD: 105 Feet bgs

Samples selected for  
analysis

Soil Boring terminated due to  
loss of air circulation

Sealed with 17 bags  
of Bentonite

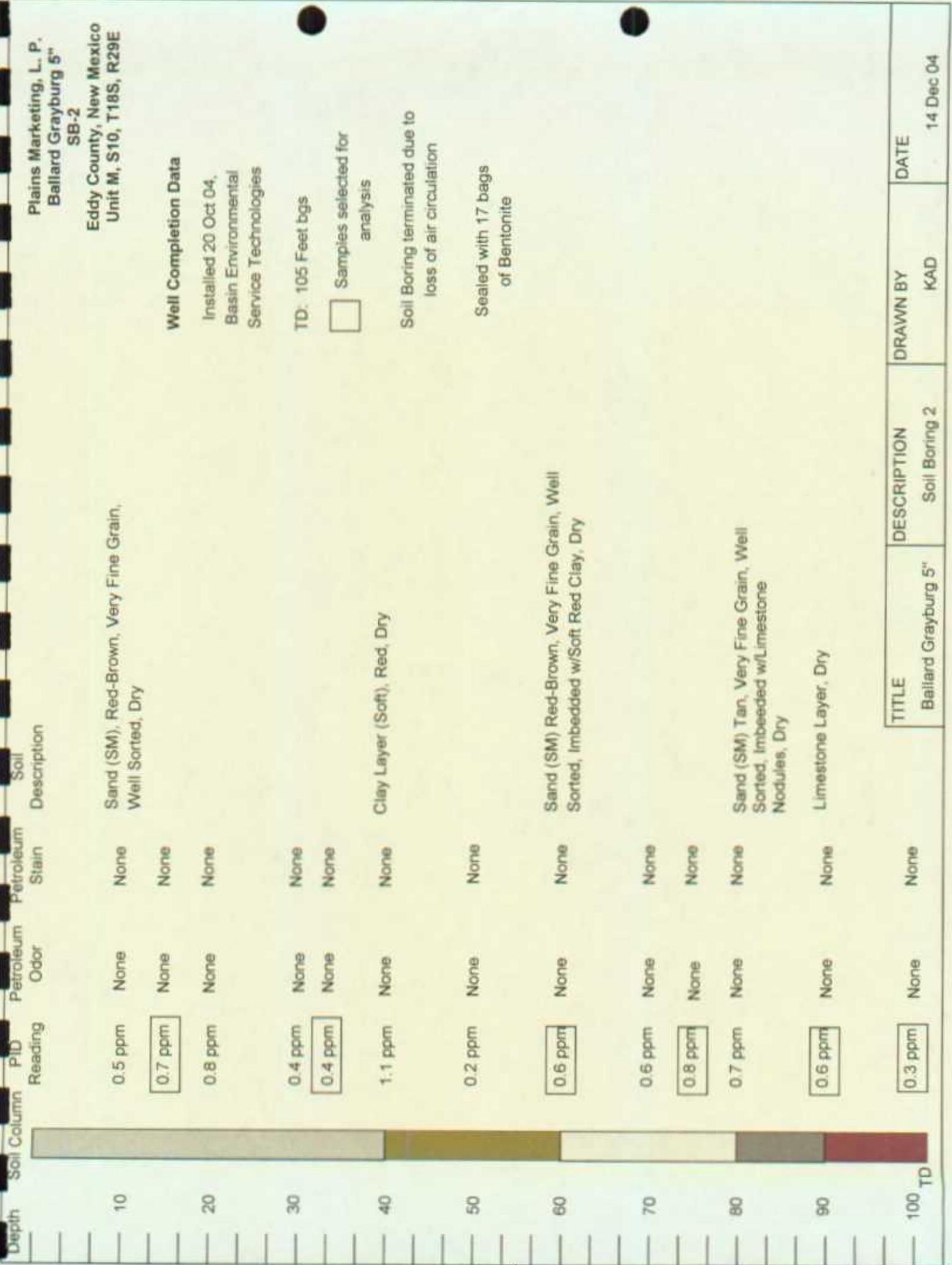
Sand (SM), Red-Brown, Very Fine Grain,  
Well Sorted, Dry

Clay Layer (Soft), Red, Dry

Sand (SM) Red-Brown, Very Fine Grain, Well  
Sorted, Imbedded w/Soft Red Clay, Dry

Sand (SM) Tan, Very Fine Grain, Well  
Sorted, Imbedded w/Limestone  
Nodules, Dry

Limestone Layer, Dry



Soil  
Description

Petroleum  
Stain

Petroleum  
Odor

PID  
Reading

None  
None  
None  
0.5 ppm  
0.7 ppm  
0.8 ppm  
None  
0.4 ppm  
0.4 ppm  
1.1 ppm  
None  
0.2 ppm  
None  
0.6 ppm  
None  
0.6 ppm  
0.8 ppm  
0.7 ppm  
None  
0.6 ppm

10

20

30

40

50

60

70

80

90

100 TD

TITLE

Ballard Grayburg 5"

DESCRIPTION

Soil Boring 2

DRAWN BY

KAD

DATE

14 Dec 04

None

None

None

**APPENDIX E**  
**NMOCD C-141**

District I  
7625 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, 2005

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

Release Notification and Corrective Action

OPERATOR

x Initial Report  Final Report

Name of Company Plains Marketing, LP	Contact Camille Reynolds
Address 5805 East Hwy. 80, Midland, TX 79706	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	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	10	18S	29E					Eddy

Latitude 32° 45' 27.1" Longitude 104° 04' 12.0"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 80 barrels	Volume Recovered 0 barrels
Source of Release 5" Steel Pipeline	Date and Hour of Occurrence 9-2-04 @ 05:00	Date and Hour of Discovery 9-2-04 @ 08:15
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Van Barton	
By Whom? Ken Dutton	Date and Hour 9-2-04 @ 14:32	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* 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 H<sub>2</sub>S 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 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>Camille Reynolds</i>	OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjrreynolds@peaap.com	Conditions of Approval:	
Date: 9-7-04	Phone: 505-441-0965	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary



**PLAINS  
PIPELINE**

March 11, 2005

Mr. Ed Martin  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

*2R-053*

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

Dear Mr. Martin:

Plains Pipeline is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains Pipeline actively monitors certain 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 Pipeline hereby submits our Annual Monitoring report for the following site:

Ballard Greyburg 5 Inch      Section 10, Township 18 South, Range 29 East, Eddy County

Basin Environmental prepared this document and has vouched for their accuracy and completeness, and on behalf of Plains Pipeline, 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 Pipeline submits the enclosed Annual Monitoring Report for the above 1 facility.

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

Camille Reynolds  
Remediation Coordinator  
Plains Pipeline

CC: Van Barton, NMOCD, Artesia, NM

Enclosures

**2004  
ANNUAL MONITORING REPORT**

**BALLARD-GRAYBURG 5" GATHERING  
SW ¼ SW ¼ SECTION 10, TOWNSHIP 18 SOUTH, RANGE 29 EAST  
LATITUDE, LONGITUDE: 32°, 45', 27.1" NORTH, 104°, 04', 12.0" WEST  
EDDY COUNTY, NEW MEXICO  
PLAINS EMS NUMBER: 2004-00192**

**PREPARED FOR:**

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

**PREPARED BY:**

**BASIN ENVIRONMENTAL SERVICE TECHNOLOGIES, LLC  
P. O. Box 301  
Lovington, New Mexico 88260**

**April 2005**

  
\_\_\_\_\_  
Ken Dutton  
Project Manager

## TABLE OF CONTENTS

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

### FIGURES

Figure 1 – Site Location Map

Figure 2 – Inferred Groundwater Elevation Map

Figure 3 – Groundwater Concentration and Inferred PSH Extent Map

### TABLES

Table 1 – Groundwater Elevation Data (2004)

Table 2 – Concentrations of Benzene and BTEX in Groundwater (2004)

### 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 initial quarterly groundwater monitoring event conducted in calendar year 2004 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.

Initial groundwater monitoring was conducted during the fourth (4<sup>th</sup>) quarter in 2004 to assess the levels and extent of dissolved phase and phase-separated hydrocarbons (PSH) constituents. The groundwater monitoring event consisted of measuring static water levels in the monitoring wells, checking for the presence of 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 SW ¼ SW ¼ Section 10, Township 18 South, Range 29 East. The latitude is 32° 45' 27.1" North and the longitude is 104° 04' 12.0" West. On 02 September 2004, Allstate Environmental Services, LLC (Allstate) responded to the pipeline release on behalf of Plains to repair the pipeline and excavate the impacted soil. Beginning on 18 October 2004, Basin assumed project responsibilities for the Ballard Grayburg 5" site. The site is characterized by a right-of-way for the pipeline in a pasture utilized for cattle grazing. The visible surface stained area includes the release point covering an area approximately 22 feet long by 23 feet wide. Excavation activities during the emergency response covered an area approximately 22 feet long by 23 feet wide and 12 feet below ground surface (bgs). All excavated soil was placed on a poly-liner for future remedial action. Approximately 80 barrels of crude oil were released from the Plains Pipeline and 0 barrels were recovered.

Currently, there are two (2) monitoring wells (MW-2 and MW-3) and one (1) recovery well (RW-1) on site. Two (2) attempts to install an up gradient monitoring well proved futile due to drilling into limestone caverns. A hydrocarbon absorbent sock was installed in the recovery well to absorb the limited amount of crude oil on the groundwater and is replaced on a monthly basis.

## **FIELD ACTIVITIES**

The site monitoring wells were gauged and sampled on 04 December 2004. During the initial sampling event, 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 polystyrene fifty-five gallon drums which remain on-site.

Locations of the monitoring wells, recovery well and the inferred groundwater elevations, which were constructed from the measurements collected during the initial 4<sup>th</sup> quarter monitoring event, are depicted on Figure 2, Inferred Groundwater Elevation Map. 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 186.58 feet.

A measurable thickness of PSH was detected in RW-1 during the reporting period, refer to Figure 3, Groundwater Concentration and Inferred PSH Extent Map. A maximum thickness of 0.04 in RW-1 was measured and is shown on Table 1. A hydrocarbon absorbent sock was installed in the recovery well and is replaced on a monthly basis.

## **LABORATORY RESULTS**

Groundwater samples were collected from the monitor wells MW-2 and MW-3 during the initial fourth quarter monitoring event 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 listing of BTEX constituent concentrations for 2004 is summarized in Table 2 and the laboratory reports are provided as Appendix A. Recovery well, RW-1, was not sampled due to the presence of PSH.

Laboratory results for the two (2) site groundwater samples, obtained during the 2004 annual period, indicate that benzene and total BTEX concentrations were below laboratory detection limits for monitor wells MW-2 and MW-3.

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**

This report presents the results of monitoring activities for the 2004 annual monitoring period. Currently, there are two (2) groundwater monitoring wells (MW-1 and MW-2) and one (1) recovery well (RW-1) on-site. During 2004, hydrocarbon absorbent socks were installed in RW-1 for passive product recovery. A measurable thickness of PSH was detected in RW-1 during the quarterly sampling event. A maximum thickness of 0.04 in RW-1 was measured and is shown on Table 1.

Laboratory results for the two (2) site groundwater samples, obtained during the 2004 annual period, indicated that benzene and BTEX constituent concentrations were below laboratory detection limits for monitor wells MW-2 and MW-3.

Based on the limited data, groundwater elevations at the site are relatively similar and groundwater gradient appears to be to the south. Research of the New Mexico State Engineers Office reflected a general south to southwest groundwater gradient.

As previously mentioned, several unsuccessful attempts were made to install an up gradient monitoring well. Based on the location of the recovery well RW-1 adjacent to the source area, the limited amount of PSH on the groundwater, the fact that the two (2) attempted up gradient monitor wells did not encounter impacted soils, and the two (2) down gradient monitor wells are not impacted, it appears the groundwater impacted area is very limited in extent and an up gradient monitor well is not warranted at this site.

### **ANTICIPATED ACTIONS**

Groundwater monitoring and annual reporting will continue in 2005. A Remediation Work Plan has been submitted and remediation of the site will commence once approval is received from the regulatory agencies.

### **LIMITATIONS**

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**

Copy 1: Ed Martin  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Copy 2: Van Barton  
New Mexico Oil Conservation Division  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

Copy 3: Camille Reynolds  
Plains Marketing, L.P.  
3112 Highway 82  
Lovington, New Mexico 88260  
[cjreynolds@paalp.com](mailto:cjreynolds@paalp.com)

Copy 4: Jeff Dann  
Plains Marketing, L.P.  
333 Clay Street  
Suite 1600  
Houston, Texas 77002  
[jpdann@paalp.com](mailto:jpdann@paalp.com)

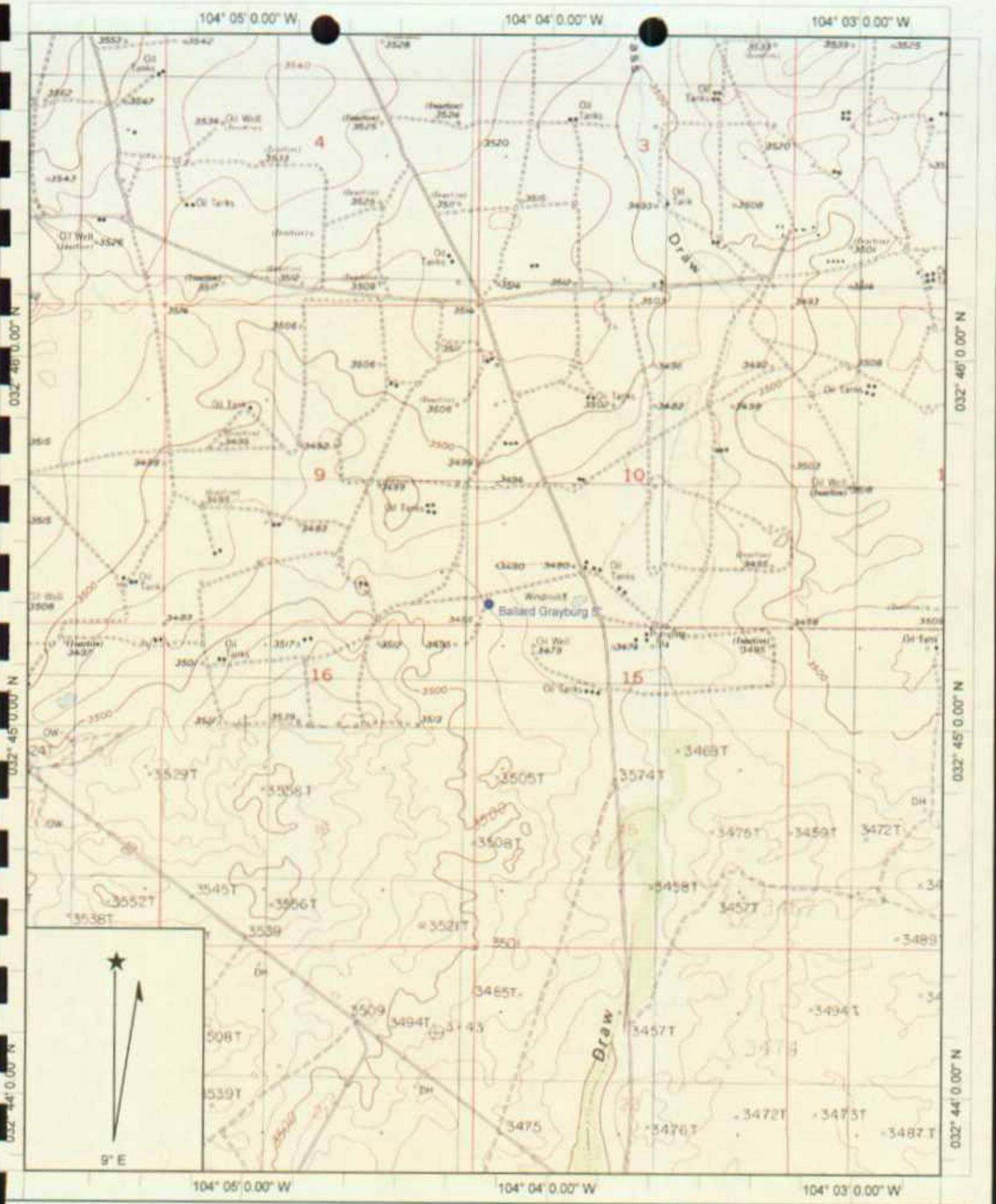
Copy 5: Basin Environmental Service Technologies, LLC  
P. O. Box 301  
Lovington, New Mexico 88260  
[kdutton@basinenv.com](mailto:kdutton@basinenv.com)

Copy Number: 1

**FIGURES**

**FIGURE 1**

**SITE LOCATION MAP**



Name: RED LAKE SE  
 Date: 3/10/2005  
 Scale: 1 inch equals 2000 feet

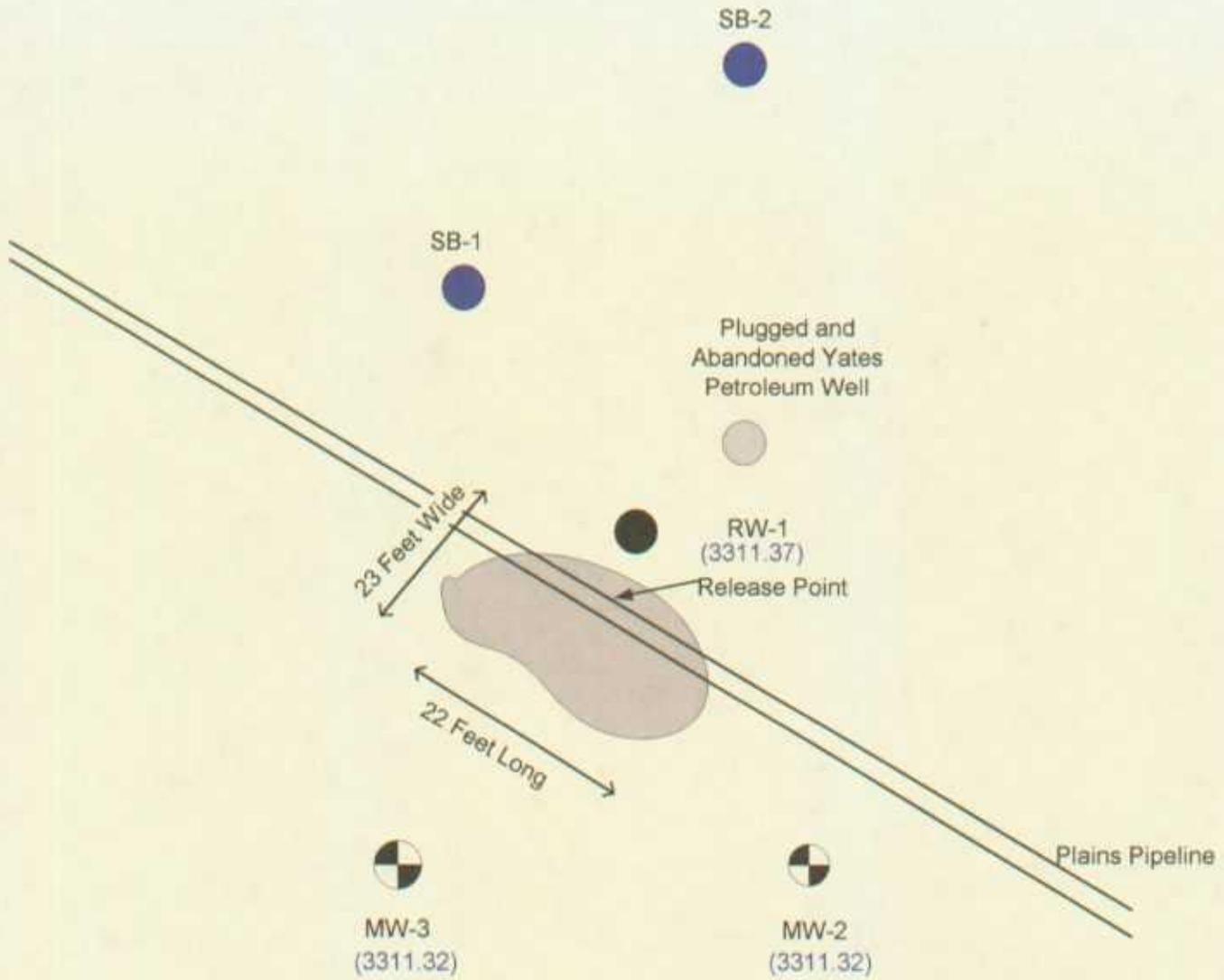
Location: 032° 45' 20.7" N 104° 04' 12.71" W  
 Caption: Figure 1

SITE LOCATION MAP  
 BALLARD-GRAYBURG 5"  
 CIA/SIA/S10 T18C B30E

**FIGURE 2**

**INFERRED GROUNDWATER ELEVATION MAP**

Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 Unit M, S10, T18S, R29E  
 Eddy County, New Mexico



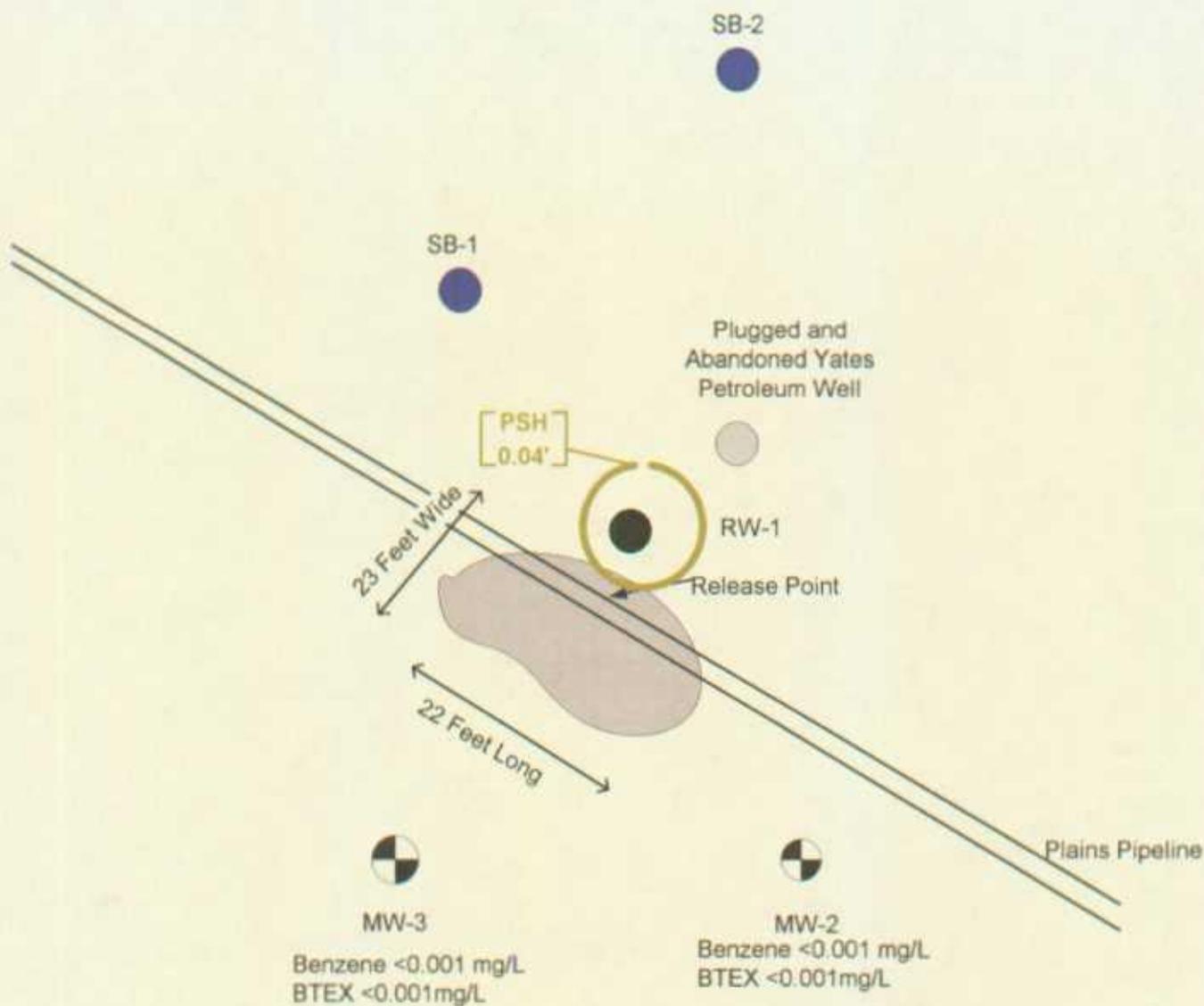
 Monitor Well Location  
 (3497.20) Groundwater Elevation in Feet

TITLE	DESCRIPTION	DRAWN BY
Plains Marketing, L.P. Ballard Grayburg 5" Eddy County, NM	Figure 2 Inferred Groundwater Elevation Map 04 Dec 04	Basin Environmental Service Technologies kad

**FIGURE 3**

**GROUNDWATER CONCENTRATION AND  
INFERRED PSH EXTENT MAP**

Plains Marketing, L.P.  
 Ballard Grayburg 5"  
 Unit M, S10, T18S, R29E  
 Eddy County, New Mexico



-  Monitor Well Location
-  Inferred PSH Extent

TITLE	DESCRIPTION	DRAWN BY
Plains Marketing, L.P. Ballard Grayburg 5" Eddy County, NM	Figure 3 Groundwater Concentration and Inferred PSH Extent Map 04 Dec 04	Basin Environmental Service Technologies kad

**TABLES**

**TABLE 1**

**GROUNDWATER ELEVATION DATA (2004)**

TABLE 1

GROUNDWATER ELEVATION DATA (2004)

PLAINS MARKETING, L.P.  
 BALLARD-GRAYBURG 5"  
 EDDY COUNTY, NEW MEXICO  
 PLAINS EMS NO. 2004-00192

WELL NUMBER	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
	12/04/04	3,497.90	-	186.58	0.00	3,311.32
MW - 2	01/17/05	3,497.90	-	186.57	0.00	3,311.33
	02/22/05	3,497.90	-	186.58	0.00	3,311.32
MW - 3	11/10/04	3,497.91	-	186.59	0.00	3,311.32
	12/04/04	3,497.91	-	186.59	0.00	3,311.32
MW - 3	01/17/05	3,497.91	-	186.58	0.00	3,311.33
	02/22/05	3,497.91	-	186.59	0.00	3,311.32
RW-1	11/10/04	3,497.94	186.56	186.60	0.04	3,311.37
	12/04/04	3,497.94	186.56	186.60	0.04	3,311.37
RW-1	01/17/05	3,497.94	186.57	186.60	0.03	3,311.37
	02/22/05	3,497.94	186.56	186.58	0.02	3,311.38

**TABLE 2**

**CONCENTRATIONS OF BENZENE AND BTEX IN  
GROUNDWATER (2004)**

TABLE 2

CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER (2004)

PLAINS MARKETING, L.P.  
 BALLARD-GRAYBURG 5"  
 EDDY COUNTY, NEW MEXICO  
 PLAINS EMS NO: 2004-00192

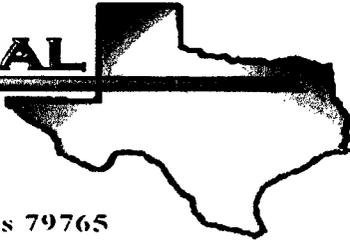
SAMPLE LOCATION	SAMPLE DATE	METHODS: EPA SW 846-8021B				
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	M,P- XYLENES (mg/L)	O-XYLENES (mg/L)
NMOCD REGULATORY STANDARD		0.01	0.75	0.75	TOTAL XYLENES 0.62	
MW-2	12/04/04	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	12/04/04	<0.001	<0.001	<0.001	<0.001	<0.001

**APPENDICES**

**APPENDIX A**

**LABORATORY REPORTS**

**E NVIRONMENTAL**  
**LAB OF**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Ken Dutton

Basin Environmental Services

P.O. Box 301

Lovington, NM 88260

Project: Plain Marketing

Project Number: Ballard-Grayburg 5 inch

Location: Eddy County, NM

Lab Order Number: 4L06005

Report Date: 12/09/04

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
12/09/04 17:29

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	4L06005-01	Water	12/02/04 13:05	12/06/04 09:30
MW-3	4L06005-02	Water	12/02/04 15:10	12/06/04 09:30

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (4L06005-01) Water</b>									
Benzene	0.00111	0.00100	mg/L	1	EL40913	12/08/04	12/08/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.0 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.5 %	80-120	"	"	"	"	"	
<b>MW-3 (4L06005-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	EL40913	12/08/04	12/08/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		114 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		112 %	80-120	"	"	"	"	"	

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
12/09/04 17:29

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (4L06005-01) Water</b>									
<b>Total Dissolved Solids</b>	<b>7730</b>	<b>5.00</b>	<b>mg/L</b>	<b>1</b>	<b>EL40702</b>	<b>12/06/04</b>	<b>12/07/04</b>	<b>EPA 160.1</b>	
<b>MW-3 (4L06005-02) Water</b>									
<b>Total Dissolved Solids</b>	<b>8530</b>	<b>5.00</b>	<b>mg/L</b>	<b>1</b>	<b>EL40702</b>	<b>12/06/04</b>	<b>12/07/04</b>	<b>EPA 160.1</b>	

Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
12/09/04 17:29

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL40913 - EPA 5030C (GC)**

**Blank (EL40913-BLK1)**

Prepared & Analyzed: 12/08/04

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	19.8		ug/l	20.0		99.0	80-120			
Surrogate: 4-Bromofluorobenzene	17.4		"	20.0		87.0	80-120			

**LCS (EL40913-BS1)**

Prepared & Analyzed: 12/08/04

Benzene	94.3		ug/l	100		94.3	80-120			
Toluene	97.6		"	100		97.6	80-120			
Ethylbenzene	96.2		"	100		96.2	80-120			
Xylene (p/m)	194		"	200		97.0	80-120			
Xylene (o)	99.5		"	100		99.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	17.8		"	20.0		89.0	80-120			
Surrogate: 4-Bromofluorobenzene	22.1		"	20.0		110	80-120			

**LCS Dup (EL40913-BSD1)**

Prepared & Analyzed: 12/08/04

Benzene	97.4		ug/l	100		97.4	80-120	3.23	20	
Toluene	100		"	100		100	80-120	2.43	20	
Ethylbenzene	102		"	100		102	80-120	5.85	20	
Xylene (p/m)	202		"	200		101	80-120	4.04	20	
Xylene (o)	103		"	100		103	80-120	3.46	20	
Surrogate: a,a,a-Trifluorotoluene	18.7		"	20.0		93.5	80-120			
Surrogate: 4-Bromofluorobenzene	22.2		"	20.0		111	80-120			

**Calibration Check (EL40913-CCV1)**

Prepared & Analyzed: 12/08/04

Benzene	97.0		ug/l	100		97.0	80-120			
Toluene	99.1		"	100		99.1	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	199		"	200		99.5	80-120			
Xylene (o)	101		"	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	19.4		"	20.0		97.0	80-120			
Surrogate: 4-Bromofluorobenzene	21.5		"	20.0		108	80-120			

Environmental Lab of Texas

*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.*

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Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429  
Reported:  
12/09/04 17:29

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL40913 - EPA 5030C (GC)**

**Matrix Spike (EL40913-MS1)**

Source: 4L06002-01

Prepared & Analyzed: 12/08/04

Benzene	102		ug/l	100	ND	102	80-120			
Toluene	102		"	100	ND	102	80-120			
Ethylbenzene	101		"	100	ND	101	80-120			
Xylene (p/m)	203		"	200	ND	102	80-120			
Xylene (o)	111		"	100	ND	111	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.4		"	20.0		92.0	80-120			
Surrogate: 4-Bromofluorobenzene	19.5		"	20.0		97.5	80-120			

Environmental Lab of Texas

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Page 5 of 7

Basin Environmental Services P.O. Box 301 Lovington NM, 88260	Project: Plain Marketing Project Number: Ballard-Grayburg 5 inch Project Manager: Ken Dutton	Fax: (505) 396-1429 Reported: 12/09/04 17:29
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**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL40702 - General Preparation (WetChem)**

**Blank (EL40702-BLK1)** Prepared: 12/06/04 Analyzed: 12/07/04

Total Dissolved Solids	ND	5.00	mg/L							
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**Duplicate (EL40702-DUP1)** Source: 4L03001-01 Prepared: 12/06/04 Analyzed: 12/07/04

Total Dissolved Solids	4120	5.00	mg/L		4030			2.21	20	
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Environmental Lab of Texas

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Basin Environmental Services  
P.O. Box 301  
Lovington NM, 88260

Project: Plain Marketing  
Project Number: Ballard-Grayburg 5 inch  
Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:  
12/09/04 17:29

### Notes and Definitions

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:

*Raland K Tuttle*

Date:

12/9/2004

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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

Environmental Lab of Texas

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Page 7 of 7



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

Client: Basin Env. Suss

Date/Time: 12/6/04 12:35

Order #: 4606005

Initials: JLH

**Sample Receipt Checklist**

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	No	3	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	<input checked="" type="checkbox"/> Not present	
Custody Seals intact on sample bottles?	Yes	No	<input checked="" type="checkbox"/> Not present	
Chain of custody present?	<input checked="" type="checkbox"/> Yes	No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	No		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	No		
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	No		
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	No		
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No		
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	No		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No		
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No		Not Applicable

Other observations:

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**Variance Documentation:**

Contact Person: - \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
Regarding:

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Corrective Action Taken:

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**APPENDIX B**

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

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR x Initial Report  Final Report

Name of Company Plains Marketing, LP	Contact Camille Reynolds
Address 5805 East Hwy. 80, Midland, TX 79706	Telephone No. 505-441-0965
Facility Name Ballard Greyburg 5" #2	Facility Type 5" Steel Pipeline

Surface Owner BLM	Mineral Owner	Lease No.
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LOCATION OF RELEASE

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

Latitude 32°45'27.1" Longitude 104°04'12.0"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 80 barrels	Volume Recovered 0 barrels
Source of Release 5" Steel Pipeline	Date and Hour of Occurrence 9-2-04 @ 06:00	Date and Hour of Discovery 9-2-04 @ 08:45
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Van Barton	
By Whom? Ken Dutton	Date and Hour 9-2-04 @ 14:32	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* 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 H<sub>2</sub>S 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 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>Camille Reynolds</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cgreynolds@paalp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9-7-04	Phone: 505-441-0965	

\* Attach Additional Sheets If Necessary