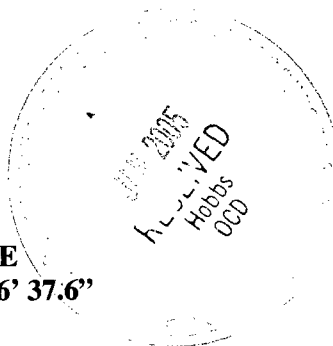




17 January 2005

Mr. Larry Johnson,
Environmental Engineer Specialist
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, NM 88240

RE: Eunice Booster to Lea - 6" Loop Line
UL-L, NW¼ of the SW ¼ of Section 4, T21S, R36E
Latitude N 32° 30' 44.8" and Longitude W 103° 16' 37.6"
Plains EMS No.: 2004-00198



RP#
385
2/2/06

Dear Mr. Johnson:

In September 2004, a release occurred along the Eunice Booster to Lea - 6" Loop Line. The release of approximately 30 barrels of crude oil, of which 3 barrels were recovered, occurred due to external corrosion of the 6-inch line. Basin Environmental responded to the release on September 16, 2004 to excavate the release point and install a clamp. Basin Environmental continued excavation activities at the site through September 23, 2004, excavating approximately 400 cubic yards (cy) of impacted soil from the release area, the flow path area and the pooling area. The excavated soil was stockpiled on plastic, until a determination could be made as to the remedial method to be utilized to treat the impacted soil. Field analyses of soil samples collected from the excavation areas, utilizing a photoionization detector (PID), indicated that soil impacted above the remedial guideline of 100 parts per million (ppm) via field analyses had been removed from the release area; however, soil impacted above the remedial guidelines remained in the flow path and pooling area.

Plains All American Pipeline retained Environmental Plus, Inc. (EPI) in November 2004 to finish excavating the impacted soil at the site. This letter report documents the results of the excavation activities and recommends alternatives as how to proceed with the remediation of the impacted soil.

Site Background

The site is located in the NW¼ of the SW¼ of Section 4, Township 21 South, Range 36 East at an elevation of approximately 3,565 feet above mean sea level (reference *Figures 1 and 2*). The property is owned by the state of New Mexico. A search for area water wells was completed utilizing the New Mexico Office of the State Engineers website. A total of 6 wells were found to be located in the vicinity of the release (i.e., within the eight sections immediately surrounding the subject-property section). The average depth to water in these wells was reported to be approximately 140 feet (reference *Table 2*). No water supply wells or bodies of surface water were found to be located within a 1,000-foot radius of the release location (reference *Figures 1 and 2*). Based on available information it was determined that the distance between the contamination and groundwater was >100 feet. Utilizing this information, it was determined that the New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this site were as follows:

Parameter	Remedial Goal
Benzene	10 parts per million
BTEX	50 parts per million
TPH	5,000 parts per million

Plains - 34053
Facility - FPAC0602436865
Incident - NPAC0602438116

ENVIRONMENTAL PLUS, INC.

Johnson, Larry

From: Johnson, Larry
Sent: Monday, January 24, 2005 4:26 PM
To: 'cjreynolds@paalp.com'
Cc: 'ENVIPLUS1@aol.com'
Subject: Plains eun Boost to lea 6"

Which method do you intend to use? Approval is usually given for a specific plan.

It should be noted that initially the remedial guidelines were believed to be 1,000 milligrams per kilogram (mg/Kg) based on initial research to depths to groundwater. It was not until excavation activities had been completed that it was determined the depth to groundwater in the area was approximately 140 feet, resulting in approximately 125 feet between the lowest detectable levels of contaminants and the groundwater.

Field Work

EPI was on site from November 1 – 8, 2004 to excavate impacted soil from the flow path and the pooling area (reference Figure 3). Approximately 1,800 additional cubic yards of hydrocarbon impacted soil were excavated and stockpiled on plastic until a determination could be made as to the remedial method to be utilized to treat the impacted soil.

During excavation activities, samples were collected and analyzed in the field utilizing a MiniRae[®] photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp to determine when remedial goals had been achieved. Once field analyses indicated soil impacted above the remedial guidelines had been removed, soil samples were collected from the sidewalls and bottom of the excavation and submitted to Environmental Labs of Texas (ELT) for quantification of benzene, toluene, ethylbenzene, and total xylenes (BTEX), gasoline range organics (GRO) and diesel range organics (DRO).

Analytical results, discussed below, indicated soil impacted above the NMOCD remedial guidelines for total petroleum hydrocarbons (TPH) in the south and west sidewalls of the excavation. Based on this, additional excavation activities occurred on December 1, 2004. An additional 100 cubic yards of soil were excavated from the south and west sidewalls of the excavation and samples collected and analyzed in the field for the presence of organic vapors. Field analyses indicated remedial goals had been achieved, so samples were collected and submitted to ELT for quantification of GRO and DRO.

On December 13, 2004, two samples were collected from the stockpiled soil and submitted to ELT for quantification of BTEX, GRO and DRO.

Analytical Data

Analytical results for the samples collected on November 8, 2004 (i.e., the initial sampling event) indicated soil impacted above the NMOCD remedial goals had been excavated with the exception of the west and south sidewalls of the north excavation. Analytical results for the samples collected from the west and south sidewall indicated TPH concentrations of 2,980 milligrams per kilogram (mg/Kg) and 1,510 mg/Kg, respectively (reference *Table 1*). Benzene and BTEX concentrations were reported at concentrations below the NMOCD remedial guidelines for both these samples.

Analytical results for the samples collected from the west and south sidewalls of the south excavation on December 1, 2004, indicated soil impacted above the NMOCD remedial goals had been removed. TPH concentrations for the south and west sidewalls were 6.70 mg/Kg and 205 mg/Kg, respectively (reference *Table 1*).

Analytical results for the soil samples collected from the stockpiled soil indicated BTEX concentrations of 47,500 micrograms per kilogram (ug/Kg) in the sample collected from the southeast portion of the stockpiled soil and 68,100 ug/Kg in the sample collected from the southwest portion of the stockpiled soil. TPH concentrations for these samples were reported at 12,400 milligrams per kilogram (mg/Kg) and 15,500 mg/Kg, respectively.

Conclusions

Based on field and analytical analyses, soil impacted above the NMOCD remedial guidelines has been excavated from the release area/flow path/pooling area and stockpiled on plastic. No further excavation is required at this site. For this site to be eligible for closure, the stockpiled soil needs to be treated to below NMOCD remedial standards or removed from the site and the excavation backfilled with the treated/blended soil.

Recommendations

The stockpiled soil needs to be remediated and the excavation backfilled for closure. The stockpiled soil can be remediated via any of the following methods:

- (a) disposal of the soil at State approved land farm;
- (b) disposal of 50% of the soil at a State approved land farm and blending the remaining soil to below NMOCD remedial guidelines; or
- (c) on-site land treatment of the soil.

The State of New Mexico will not allow on-site land treatment of the soil, so that leaves either disposing of all the soil at an approved land farm site or disposing of 50% of the impacted soil at an approved land farm site and blending the remaining soil. Upon your approval, Plains All American Pipeline, L.P. will implement either of these two methods.

Should you have any questions or concerns, please feel free to contact me at (505) 394-3481 or via e-mail at iolness@hotmail.com. Upon your approval, EPI will initiate the next phase of the remediation. All official correspondence should be submitted to Camille Reynolds at:

Camille Reynolds, Remediation Coordinator
Plains All American Pipeline, L.P.
5805 East Highway 80
Midland, TX 79706

(505) 441-0965
cjreynolds@paalp.com

Sincerely,

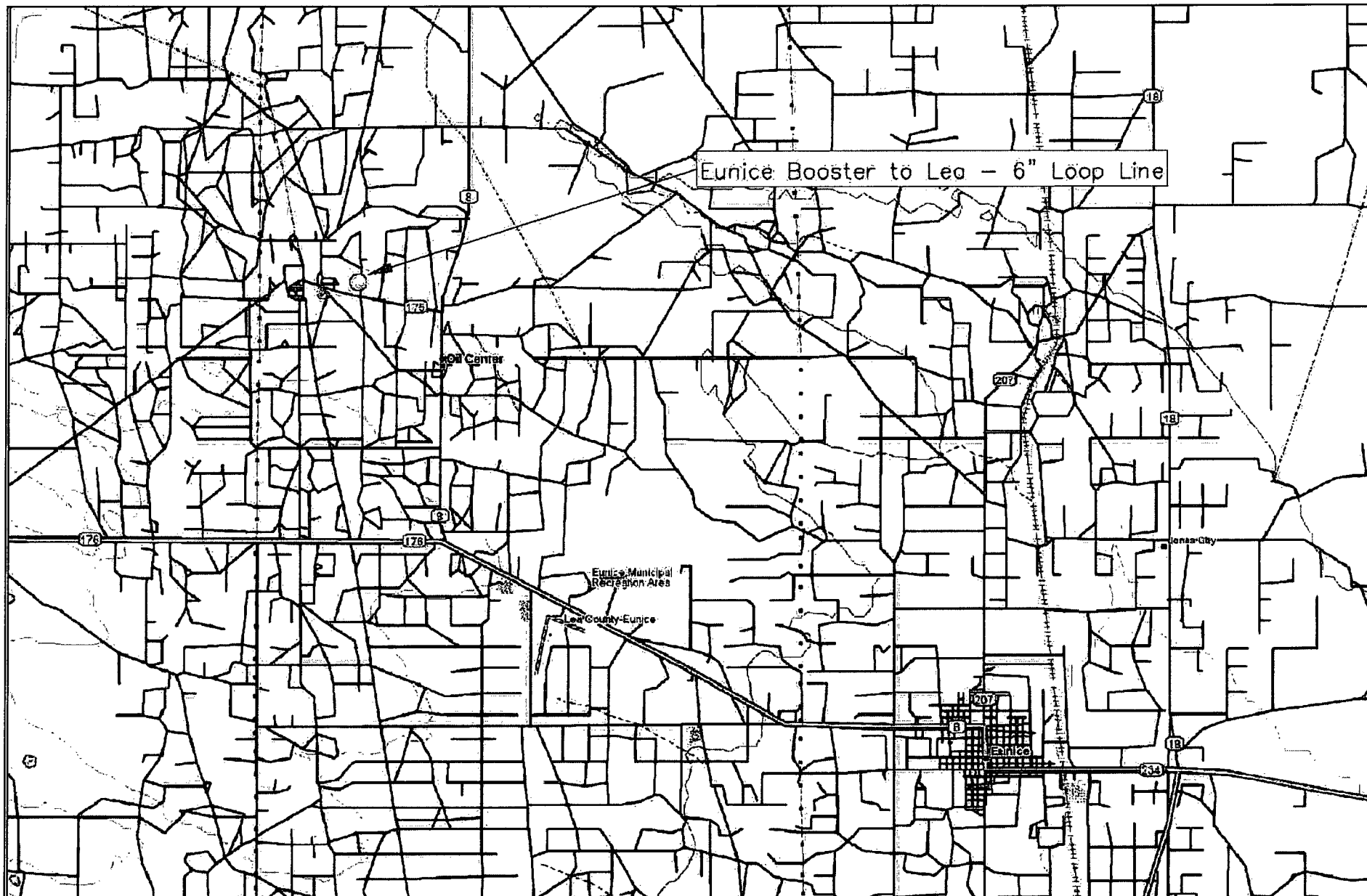
ENVIRONMENTAL PLUS, INC.

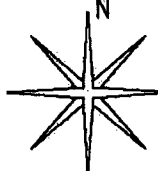


Iain A. Olness, P.G.
Hydrogeologist

encl. Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Site Map
Figure 4 – Excavation Sampling Map
Table 1 – Summary of Soil Analytical Results
Table 2 – Well/Surface Data Report – 11/09/04
Attachment I – Laboratory Results and Chain-of-Custody Forms
Attachment II – Copy of Initial C-141

FIGURES



<p>Figure 1 Area Map Plains All American Pipeline Eunice Booster to Lea - 6" Loop Line</p>	<p>Lea County, New Mexico NW 1/4 of the SW 1/4, Sec. 4, T21S, R36E N 32° 30' 44.8" W 103° 16' 37.6" Elevation: 3,565 feet amsl</p>	<p>DWG By: Iain Olness October 2004</p>	<p>REVISED:</p>	<p>SHEET 1 of 1</p> 
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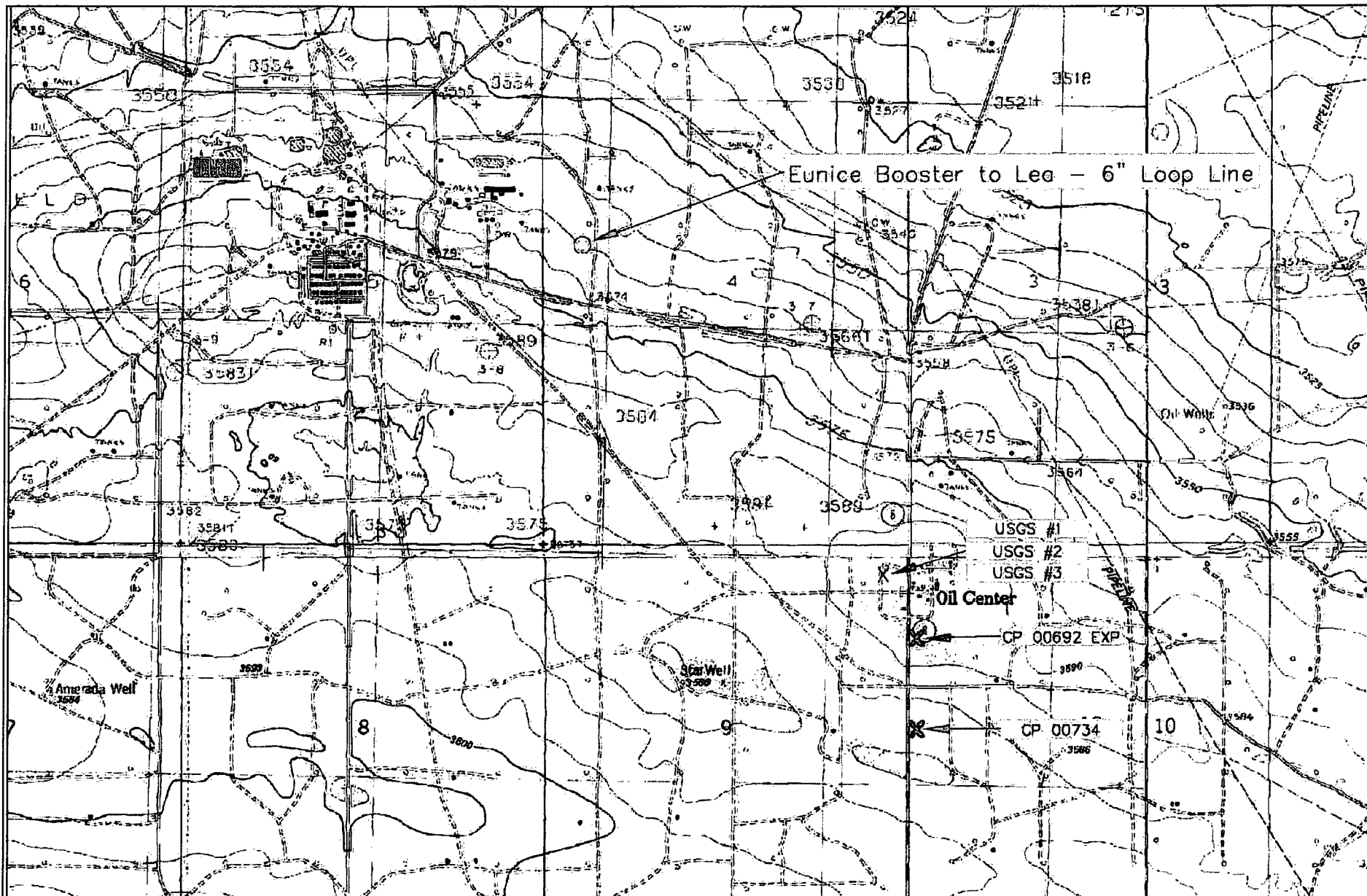


Figure 2

Site and Well Location Map

Plains All American Pipeline

Eunice Booster to Lea - 6" Loop Line

Lea County, New Mexico

NW 1/4 of the SW 1/4, Sec. 4, T21S, R36E

N 32° 30' 44.8" W 103° 16' 37.6"

Elevation: 3,565 feet amsl

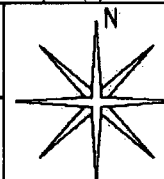
DWG By: Iain Olness

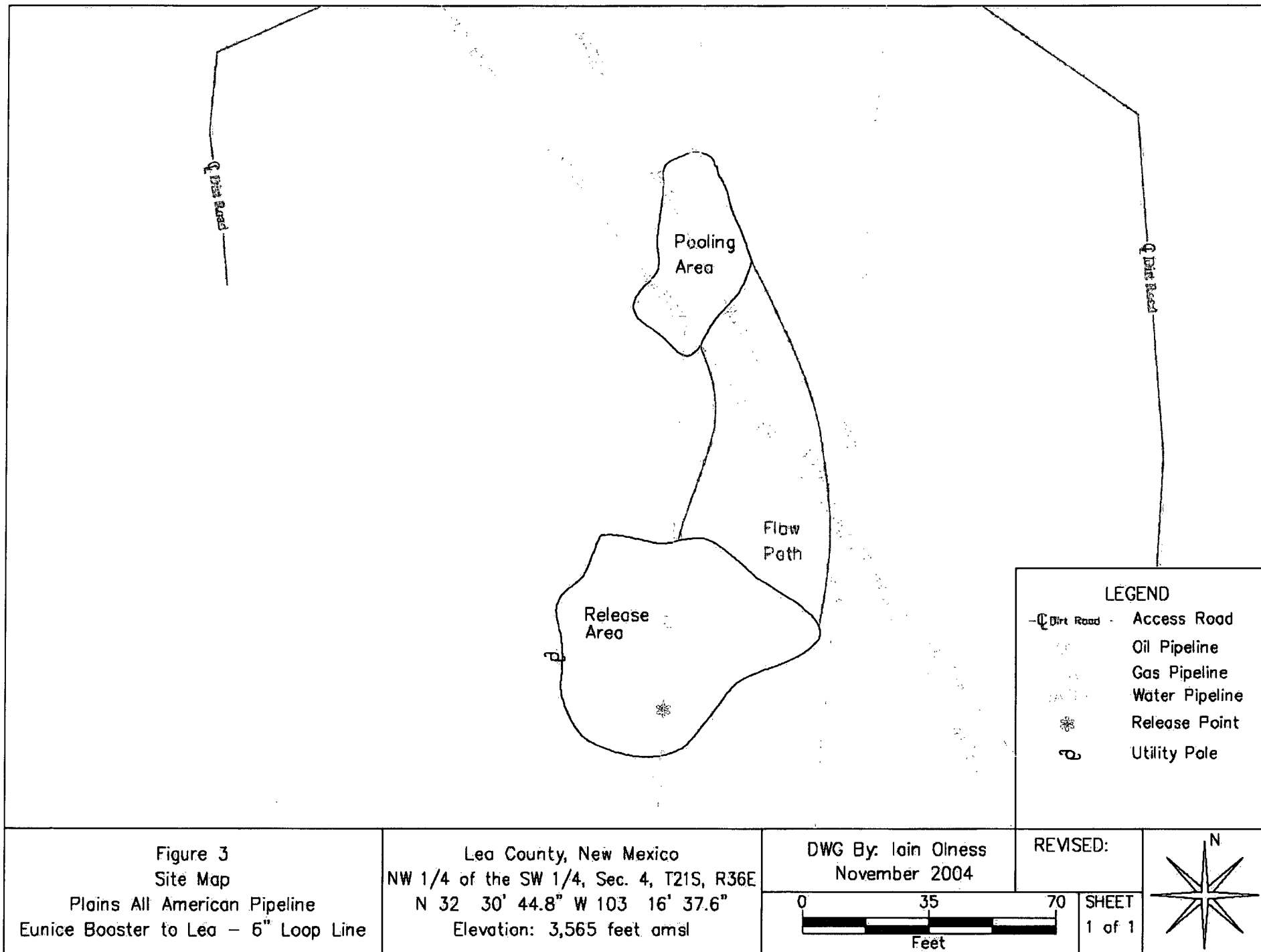
October 2004

REVISED:



SHEET
1 of 1





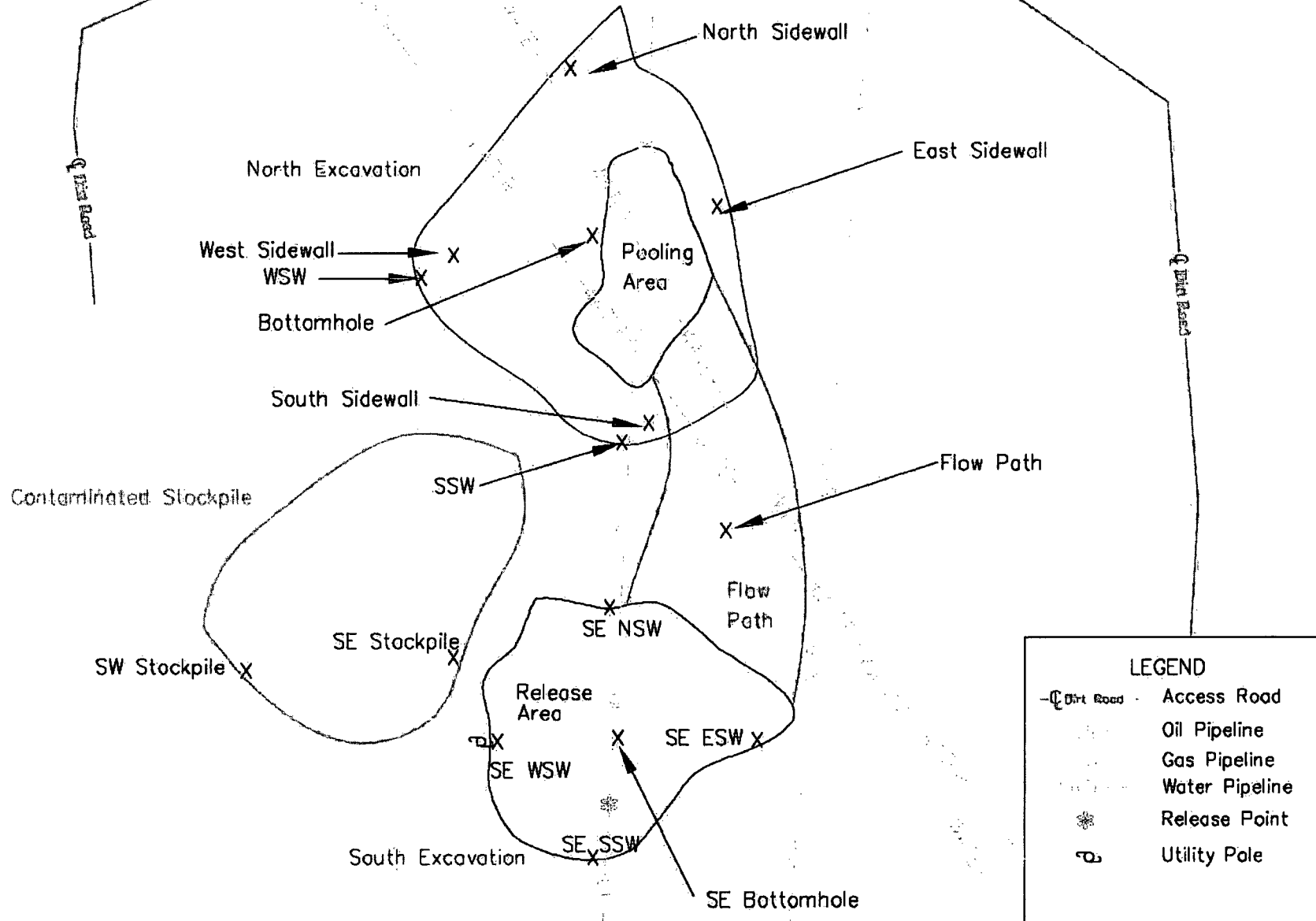
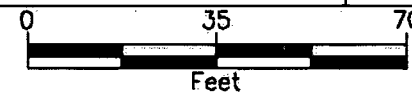


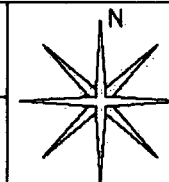
Figure 4
Excavation Sampling Map
Plains All American Pipeline
Eunice Booster to Lea - 6" Loop Line

Lea County, New Mexico
NW 1/4 of the SW 1/4, Sec. 4, T21S, R36E
N 32° 30' 44.8" W 103° 16' 37.6"
Elevation: 3,565 feet amsl

DWG By: Iain Olness
November 2004



SHEET
1 of 1



TABLES

TABLE 1

Summary of Soil Analytical Results**Plains All American Pipeline Eunice Booster to Lea - 6" Loop Line - Ref. #2004-00198**

Sample ID	Sample Date	PID Reading (ppm)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	m,p-Xylenes (µg/Kg)	o-Xylene (µg/Kg)	Total BTEX (µg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)
NT 8-3	01-Nov-04	1,590	NA	NA	NA	NA	NA	NA	NA	NA	NA
NT 8-5	01-Nov-04	711	NA	NA	NA	NA	NA	NA	NA	NA	NA
NT 23-2	01-Nov-04	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
WT 7-5	01-Nov-04	892	NA	NA	NA	NA	NA	NA	NA	NA	NA
WT 15-3	01-Nov-04	92.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
WT 30-2	01-Nov-04	4.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
ET 7-4	01-Nov-04	1,047	NA	NA	NA	NA	NA	NA	NA	NA	NA
ET 12-3	01-Nov-04	1,095	NA	NA	NA	NA	NA	NA	NA	NA	NA
ET 7-5	01-Nov-04	1,356	NA	NA	NA	NA	NA	NA	NA	NA	NA
ET 12-4	01-Nov-04	1,375	NA	NA	NA	NA	NA	NA	NA	NA	NA
WT 7-8	01-Nov-04	1,441	NA	NA	NA	NA	NA	NA	NA	NA	NA
North Sidewall	08-Nov-04	NA	<25	16.2	17.1	57.0	12.1	102	25.3	655	680
East Sidewall	08-Nov-04	NA	<25	<25	<25	49.2	15.7	64.9	18.1	189	207
South Sidewall	08-Nov-04	NA	46.0	173	360	1,100	369	2,048	219	1,290	1,510
West Sidewall	08-Nov-04	NA	<25	24.2	37.6	103	27.9	193	14.7	2,960	2,980
Bottomhole	08-Nov-04	NA	16.3	92.9	186	531	159	985	76.8	542	619
Flow Path	08-Nov-04	10.2	<25	17.8	32.0	148.0	56.7	255	27.6	271	299
SE NSW	08-Nov-04	14.9	<25	30.1	43.4	82.9	34.0	190	32.4	162	194
SE SSW	08-Nov-04	5.7	<25	<25	<25	<25	<25	<125	<10	<10	<10
SE ESW	08-Nov-04	5.1	<25	<25	<25	<25	<25	<125	<10	<10	<10
SE WSW	08-Nov-04	7.7	<25	<25	<25	<25	<25	<125	<10	<10	<10
SE BH	08-Nov-04	13.2	<25	<25	<25	<25	<25	<125	15.4	103	118
SSW	01-Dec-04	86.9	NA	NA	NA	NA	NA	NA	<10.0	6.70	6.70
WSW	01-Dec-04	10.9	NA	NA	NA	NA	NA	NA	13.2	192	205
SE Stockpile	13-Dec-04	NA	743	5,950	7,350	25,400	8,100	47,543	2,570	9,790	12,400
SW Stockpile	13-Dec-04	NA	1,650	12,500	10,700	33,200	10,000	68,050	3,310.0	12,200	15,500
NMOCD Remedial Thresholds		100 ³	10,000					50,000			1,000

¹ and ⁶ bolded values are in excess of the NMOCD Remediation Thresholds.² NA: Not Analyzed³ In lieu of laboratory analyses of benzene, toluene, ethylbenzene and total xylenes.

TABLE 2

WELL / SURFACE DATA REPORT - 10/28/04*

Plains All American Pipeline Eunice Booster to Lea - 6" Loop Line (Ref #200-00198)

Well Number	Diversion ^A	Owner	Use	Source	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation ^B	Depth to Water (ft bgs)
USGS #1					21 S	36 W	9 2 2 2			18-Mar-68	3,595	119.36
USGS #2					21 S	36 W	9 2 2 2			28-Feb-96	3,595	200.43
USGS #3					21 S	36 W	9 2 2 2			20-Mar-86	3,595	203.72
CP 00682 EXP	0	W. L. Van Noy	DOM		21 S	36 E	10 1 1 3	N 32° 29' 48.76"	W 103° 15' 40.54"		3,595	
CP 00734	3	W. L. Van Noy	DOM	Shallow	21 S	36 E	10 1	N 32° 29' 35.71"	W 103° 15' 40.54"	22-Jun-88	3,585	200
USGS #4					20 S	37 E	31 4 4 4			1-Mar-61	3,540	36.73
USGS #5					20 S	37 E	31 3 2 2			15-Jan-71	3,535	79.07
L 07108 EXP	0	Northern Natural Gas	SAN		20 S	37 E	33 1 2 2	N 32° 31' 58.89"	W 103° 15' 36.82"		3,520	
L 07355	3	Northern Natural Gas	SAN	Shallow	20 S	37 E	33 1 2 2	N 32° 31' 58.89"	W 103° 15' 36.82"	4-Jul-75	3,530	120
L 08157	3	Northern Natural Gas	SAN	Shallow	20 S	37 E	33 1 2 2	N 32° 31' 58.89"	W 103° 15' 36.82"	8-Oct-79	3,530	275
CP 00475 EXP	0	Ross Robinson	STK		21 S	36 E	30 4 2 2	N 32° 26' 46.01"	W 103° 17' 59.18"		3,620	
CP 00484 (E)	3	Northern Natural Gas	SAN	Shallow	21 S	36 E	25 4 2	N 32° 26' 45.99"	W 103° 12' 51.03"	20-Jul-70	3,535	148
CP 00490 EXP	0	U. R. Cattle Company	STK		21 S	36 E	19 2 3	N 32° 27' 51.41"	W 103° 18' 14.75"		3,650	
CP 00505	3	Snyder Ranches, Ltd.	STK		21 S	36 E	16 2	N 32° 28' 43.53"	W 103° 16' 11.43"	10-Jul-72	3,605	195
CP 00664	3	Dove Broadcasting, Inc.	SAN	Shallow	21 S	36 E	23 2	N 32° 27' 51.27"	W 103° 14' 7.98"	25-May-84	3,537	150
CP 00676	0	Joe E. Sims	DOM	Shallow	21 S	36 E	18 4 4 1	N 32° 28' 17.46"	W 103° 17' 59.37"	30-Apr-93	3,570	106
CP 00685 ENLRG	0	Will J. McCasland	COM		21 S	36 E	11 4 2	N 32° 29' 22.71"	W 103° 13' 52.54"		3,565	
CP 00685 (1) EXP	0	Chevron USA, Inc.	PRO		21 S	36 E	11 4 2	N 32° 29' 22.71"	W 103° 13' 52.54"		3,565	
CP 00882	3	Laymond Smith	DOM		21 S	36 E	23 2	N 32° 27' 51.27"	W 103° 14' 7.98"		3,537	

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1)

Shaded well information indicates well location shown on Figure 2

^A = in acre feet per annum

^B = Elevation interpolated from USGS topographical map based on referenced location.

DOM = Domestic

SAN = Sanitary

STK = Livestock Watering

COM = Commercial

EXP = Expired

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest

ATTACHMENT I

LABORATORY RESULTS AND CHAIN-OF-CUSTODY FORMS

ATTACHMENT II

COPY OF INITIAL C-141

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Plains Marketing, LP	Contact Camille Reynolds	
Address 5805 East Hwy. 80, Midland, TX 79706	Telephone No. 505-441-0965	
Facility Name Eunice Booster To Lea 6" Loop Line ²⁰⁰⁴⁻⁰⁰¹⁹⁸	Facility Type 6" Steel Pipeline	
Surface Owner Millard Deck Estate	Mineral Owner	Lease No.

LOCATION OF RELEASE

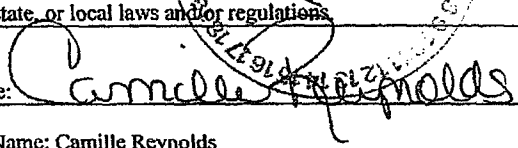
Unit Letter L	Section 4	Township 21S	Range 36E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude 32° 30' 44.6" Longitude 103° 16' 37.5"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 30 barrels	Volume Recovered 3 barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence 9-16-04 @ 09:30	Date and Hour of Discovery 9-16-04 @ 14:30
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	IF YES, To Whom? Larry Johnson	
By Whom? Camille Reynolds	Date and Hour 9-16-04 @ 18:00	
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 6" steel pipeline. A line clamp was installed to mitigate the release. The line is a 6 inch steel transmission pipeline that produces approximately 1,100 to 1,200 barrels of crude oil per day. The pressure on the line varies from 40 to 45 psi and the gravity of the sour crude oil is 36-37. The sour crude has an H ₂ S content of approximately 16 ppm		
Describe Area Affected and Cleanup Action Taken.* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was 7,740 ft ² .		

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: 		OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds		Approved by District Supervisor:	
Title: Remediation Coordinator		Approval Date:	Expiration Date:
E-mail Address: cireynolds@panlp.com		Conditions of Approval:	
Date: 9-23-04 Phone: 505-441-0965		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary