

1R - 398

**CLOSURE
APPROVALS**

YEAR(S):

2007

1R398

ISSUE OFFICE
SANTA FE

Soil Closure Compliance Report

**Livingston Ridge to Hugh P. Sims
NE ¼ of the SE ¼ of Section 3, Township 21 South, Range 37 East
Plains Pipeline SRS Number 2001-11005
Lea County, New Mexico**

Terracon Project Number: A4077008

August 17, 2007

Prepared for:

**Plains Pipeline, L.P.
3112 West US Highway 82
Lovington, New Mexico 88260
NMOCD File Number 1R-395**

Prepared by:

Terracon
Midland, Texas

August 17, 2007

Plains Pipeline, L.P.
3112 West US Highway 82
Lovington, NM 88260
Attn: Ms. Camille Reynolds

Telephone: (505) 441-0965
Fax: (505) 397-0697

Re: Livingston Ridge to Hugh P. Sims Site
NE ¼ of the SE ¼, Section 3, T21S, R37E
Lea County, New Mexico
Plains Pipeline, L.P. SRS Number 2001-11005
Terracon Project Number A4077008

Terracon
Consulting Engineers & Scientists

Terracon Consultants, Inc.
24 Smith Road, Suite 261
Midland, Texas 79705
Phone 432.684.9600
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Dear Ms. Reynolds:

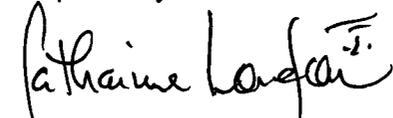
Terracon is pleased to submit four copies of the Closure Compliance Report for the above referenced site.

We appreciate the opportunity to participate in the site remediation project at Livingston Ridge to Hugh P. Sims site for Plains Pipeline, L.P. Please contact either of the undersigned at (432) 684-9600 if you have questions regarding the information provided in the report.

Sincerely,

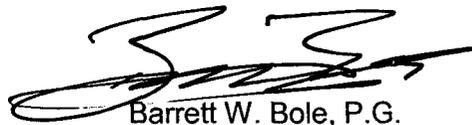
Terracon

Prepared by:



Catharine London, P.G.
Senior Project Manager

Reviewed by:



Barrett W. Bole, P.G.
Operations Manager

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Soil Closure Compliance Report

**Livingston Ridge to Hugh P. Sims Site
NE ¼ of the SE ¼ of Section 3, T21S, R37E
Plains SRS Number 2001-11005
Lea County, New Mexico**

Terracon Project Number A4077008

1.0 INTRODUCTION

The Livingston Ridge to Hugh P. Sims (Livingston Ridge) crude oil release site is located approximately 5 miles north-northeast of Eunice, Lea County, New Mexico on Loop 207. The leak site is a pipeline right-of-way surrounded by native pasture land, in close proximity of the former Carbon Black Plant.

On June 22, 2001, a release of six barrels of crude oil was reported to the New Mexico Oil Conservation District (NMOCD). Initial response activities were reportedly conducted by Environmental Plus, Inc. (EPI) in an effort to expose the leak origin and make permanent repairs to the pipeline. The excavation of impacted soil continued through July 2001. A total of approximately 148 cubic yards of hydrocarbon impacted soil were excavated at the site and transported to EPI's landfarm south of Eunice, New Mexico. Approximately 2,500 cubic yards were excavated and land farmed on site. A temporary groundwater monitor well (TMW-1) was installed in August 2002 in the bottom of the excavation and phase-separated hydrocarbons (PSH) were detected on the groundwater surface. The NMOCD and landowner reportedly were immediately notified of the release. EPI installed three groundwater monitoring wells at the site to determine the extent and magnitude of the release and determine the groundwater gradient.

Environmental Technology Group, Inc. (ETGI), assumed project oversight in August 2002 and installed twelve additional groundwater monitor wells at the site. These wells were installed to complete the delineation activities initiated by EPI. At the time of ETGI's investigation the groundwater monitor wells appear to have adequately delineated the dissolved phase plume and PSH plume at the site.

Plains returned project oversight to EPI in 2004. Terracon assumed project oversight on February 1, 2007. Available files for this site were given to Terracon at this time.

Soil Closure Compliance Report
Livingston Ridge to Hugh P. Sims Site
Plains Pipeline # 2001-11005
Terracon Project #A4077008
August 17, 2007

1.1 Site Description

Site Name	Livingston Ridge to Hugh P. Sims Site
Site Location/GPS	Approximately 5 miles north-northeast of Eunice, Lea County, New Mexico on Loop 207
General Site Description	The release occurred in the immediate area surrounding the pipeline in native pasture land, in close proximity of the former Carbon Black Plant.

A topographic map (Figure 1) and a site plan (Figure 2) are included in Appendix A.

1.2 Scope of Services

The Scope of Services for Terracon as requested by Plains Pipeline included:

- Leveling the bottom and sides of the excavation;
- Installing sand on the bottom of the excavation, a PVC liner, followed by more sand, and backfilling the excavation with excavated soils blended with ambient soil;
- Extending the temporary monitor well (TMW-1) from the bottom of the excavation to the ground surface;
- Completing the monitor well with a 3 foot steel riser and a 12 inch by 12 inch concrete pad; and,
- Submittal of a Soil Closure Compliance Report detailing field activities, site maps and photographs.

1.3 Regulatory Framework

Crude oil facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). Contamination of soil due to a surface release of crude oil is addressed within a NMOCD guideline titled *Guidelines for Remediation of Leaks, Spills and Release*. On April 19, 2007, Mr. Ben Stone with NMOCD approved Plains soil closure proposal for the Livingston Site. The NMOCD requested that a polyvinyl chloride (PVC) liner protected with 6-inches of sand above

**Soil Closure Compliance Report
Livingston Ridge to Hugh P. Sims Site
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and below the liner, be installed on the floor of the excavation. The OCD further requested that groundwater monitoring activities be continued at the Livingston Ridge site. A copy of this letter is included in Appendix B of this report.

1.4 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

1.5 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this remediation activities. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.6 Reliance

This report has been prepared for the exclusive use of Plains Pipeline, LP, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Plains Pipeline, LP and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in this report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

**Soil Closure Compliance Report
Livingston Ridge to Hugh P. Sims Site
Plains Pipeline # 2001-11005
Terracon Project #A4077008
August 17, 2007**

2.0 FIELD ACTIVITIES

2.1 Liner Installation

Plains received approval from the NMOCD to install a PVC liner on the floor of the excavation. On July 25, 2007, a backhoe began flattening and leveling the open excavation. A small crown was mounded in the center of the excavation to allow a preferential runoff pathway for percolating precipitation. Approximately one foot of ambient sand was used to line the bottom of the excavation.

A twenty millimeter thick liner, constructed of PVC and impervious to petroleum hydrocarbons, was installed on July 26, 2007 to isolate the source material and to cease the vertical migration of contaminants of concern. The liner was cut to fit over the monitor well in the excavation (TMW-1). Silicon and pipe tape were used between the liner and monitor well to ensure a watertight seal on TMW-1 and to ensure there was no migration pathway around monitor well TMW-1. Approximately 18 inches of ambient sand was then placed over the liner.

2.2 Backfill and Site Restoration Activities

Approximately 2,500 cubic yards of remediated soils from the previous land treatment area were used to backfill the excavation, as near as possible to the natural grade of the surrounding area on July 26, 2007 through August 1, 2007. Photographs of the site activities are provided in Appendix C.

2.3 Monitor Well Extension

As the excavation was being backfilled, 20 feet of PVC riser was used to extend groundwater monitor well (TMW-1) to near the original ground surface. On August 10, 2007, Straub Corporation, a licensed well driller with the State of New Mexico, completed monitor well TMW-1 by sealing the well in a 3 foot steel riser and setting a 12 inch by 12 inch concrete pad.

2.4 Surface Restoration

At the request of the property owner, gramma grass will be used to reseed the former excavation site in the spring of 2008.

3.0 FINDINGS AND CONCLUSIONS

Backfilling and site restoration activities were conducted in accordance with the NMOCK approved soil closure plan. Terracon respectfully submits this closure compliance report to Plains as documentation of the site soil closure activities. Based on the results of previous field activities and laboratory analyses, conducted by other consulting firms, the NMOCD approved backfilling and site



**Soil Closure Compliance Report
Livingston Ridge to Hugh P. Sims Site
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August 17, 2007**

restoration activities. Terracon recommends that Plains submit this report to the NMOCD as documentation that remediation was completed to NMOCD standards and further recommends Plains requests a "no further action" letter for the site soils.

Soil Closure Compliance Report
Livingston Ridge to Hugh P. Sims Site
Plains Pipeline # 2001-11005
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August 17, 2007

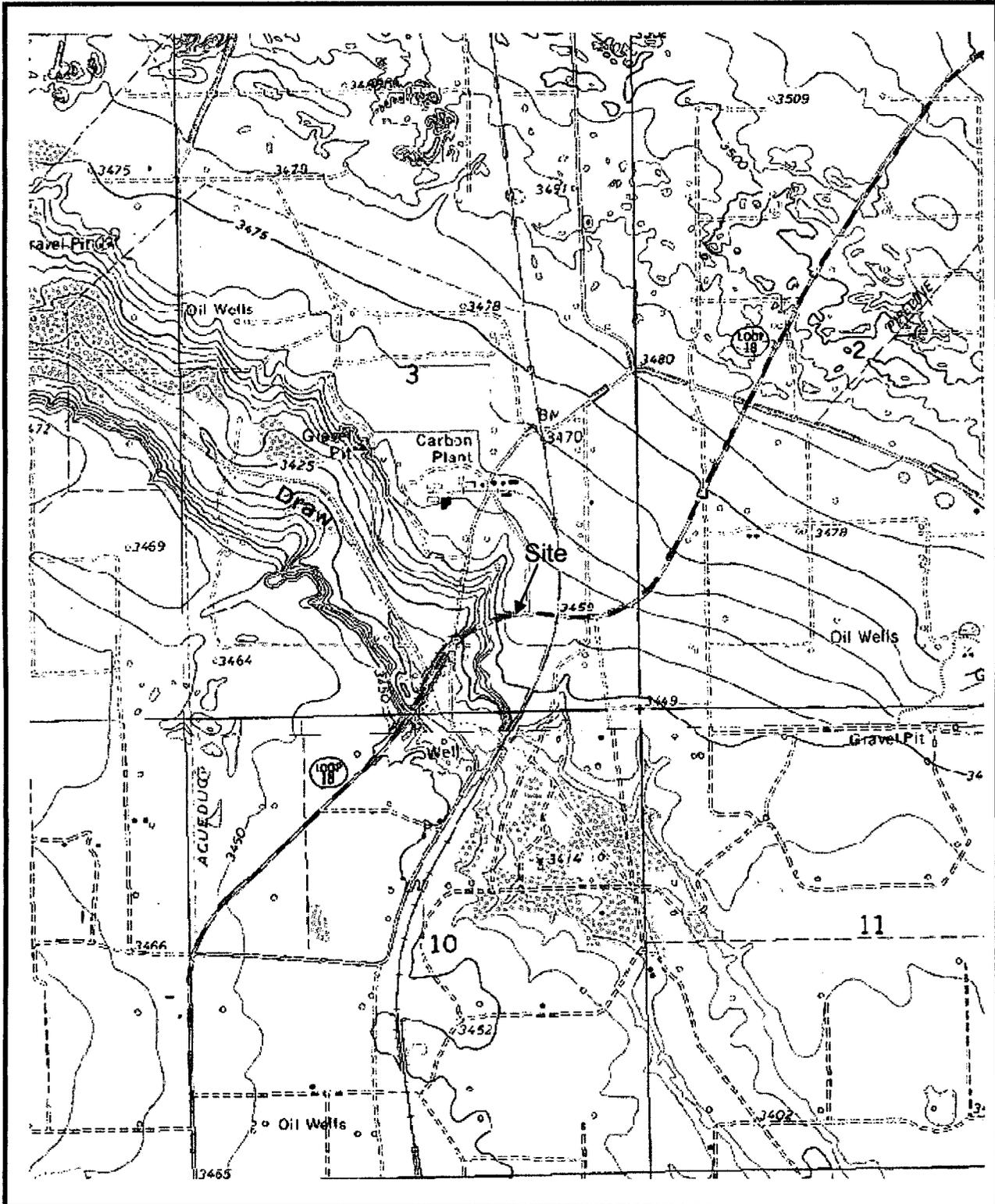
DISTRIBUTION

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APPENDIX A

Figure 1 – Topographic Map

Figure 2 – Site Plan



USGS TOPOGRAPHIC QUADRANGLE MAP

Hobbs SW, NM

Dated: 1979

SCALE: 1" = 1,600'

PROJECT NO. A4077008



Terracon



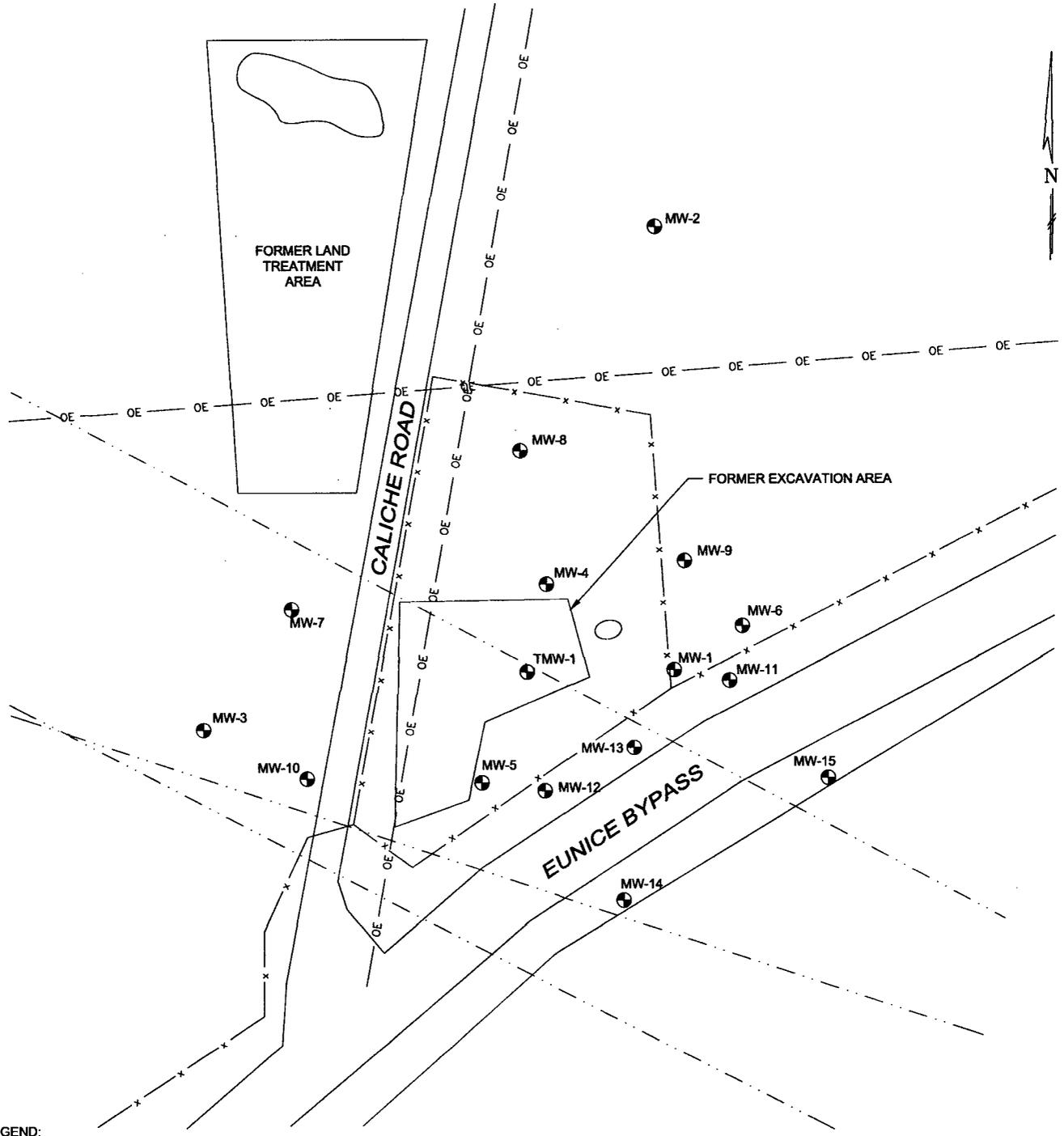
Livingston Line to Hugh - P. Sims

NE 1/4 of SE 1/4, Sec. 3, T21S, R37E

Eunice, Lea County, New Mexico

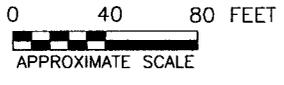
FIGURE 1: TOPOGRAPHIC MAP

O:\HBC\MIDLAND\A4077008.dwg Layout: SITE Date: 08/15/07



- LEGEND:**
- ⊕ MONITOR WELL LOCATION
 - x - FENCE
 - OIL PIPELINE
 - OE - OVERHEAD ELECTRIC LINE

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.



PLAINS PIPELINE, L.P.
LIVINGSTON RIDGE TO HUGH P. SIMS
LEA COUNTY, NEW MEXICO
SRS# 2001-11005

Terracon Project No.: A4077008

FIGURE 2: SITE PLAN

APPENDIX B

NMOCD Soil Closure Letter



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

April 19, 2007

Ms. Camille Reynolds
Plains Pipeline, L.P.
3112 W. Hwy 82
Lovington, NM 88260

AMENDED APPROVAL

**RE: Livingston Ridge to HP Sims Release Site
OCD FILE #1R-398
5 Miles North of Eunice, New Mexico**

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (OCD) has reviewed Plains Pipeline, L.P. June 26, 2006 "SITE CHARACTERIZATION AND SOIL CLOSURE PROPOSAL" on the LIVINGSTON RIDGE TO HP SIMS RELEASE SITE, NW1/4 SE1/4 OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 37 EAST OF LEA COUNTY, NEW MEXICO prepared on behalf of Plains Pipeline, L.P. by Environmental Plus, Inc. (EPI). This document contains Plains Pipeline, L.P.'s proposal for closure of a formerly remediated release site. Since discovery of the release in June 2001 and subsequent ongoing remediation efforts, approximately 2330 yd³ have been excavated and at least 15 monitor wells installed. These efforts have resulted in BTEX concentrations being reduced below the NMOCD threshold and TPH concentrations less than 500 mg/Kg. Chloride concentrations were not at issue with this release. With BTEX and TPH source concentrations effectively being removed, the proposal is to install an impermeable barrier on the floor of the excavated site comprised of **a PVC liner with a 6-inch layer of sand above and below**. Plains Pipeline, L.P. will continue phase-separated hydrocarbon recovery at least bi-monthly and will continue with groundwater monitoring. Additionally, Plains Pipeline, L.P. will submit annual progress reports to the NMOCD while the above-described activities continue.

NMOCD approval of this closure proposal does not relieve Plains Pipeline, L.P. of liability should its operations at this site prove harmful to public health or the environment. Nor does it relieve Plains Petroleum, L.P. of its responsibility to comply with the rules and regulations of any other federal, state, county or local governmental agency.

NEW MEXICO OIL CONSERVATION DIVISION

Ben Stone
Environmental Bureau

Cc: NMOCD Hobbs

Comment [COMMENT1]: CHANGE SINGULAR REFERENCES TO PLURAL FOR MULTIPLE WELL APPLICATIONS!!!!!!!

APPENDIX C

Photographs

Livingston Ridge to Hugh P. Sims
Terracon Project No.: A4077008
Plains SRS No.: 2001-11005
Date Photos Taken: July 2007



Photo #1 View to the east of the excavation.



Photo #2 View of the floor of the excavation. Monitor well TMW-1 is visible in the back center of the photograph.



Photo #3 View to the northeast of the excavation floor. The pipeline and monitor well TMW-1 are visible in the center of the photograph.



Photo #4 View to the southeast of sand being backfilled into the excavation.



Photo #5 The excavation floor, monitor well TMW-1 has been shortened in order to install the PVC liner.



Photo #6 View of sand being backfilled into the floor of the excavation.



Photo #7 View to the northeast of the PVC liner being laid on the floor of the excavation.



Photo #8 View to the southeast of the PVC liner on the floor of the excavation.



Photo #9 Central portion of the excavation with the PVC liner on the excavation floor.



Photo #10 Laying the PVC liner on the floor of the excavation around monitor well TMW-1.



Photo #11 A corner of the PVC liner in the floor of the excavation.

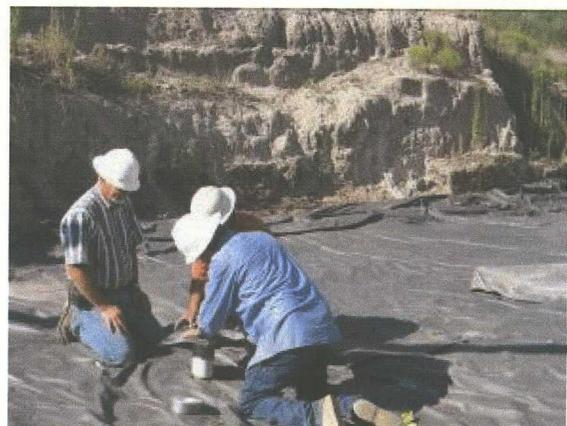


Photo #12 Sealing monitor well TMW-1 at the base of the excavation.

Livingston Ridge to Hugh P. Sims
Terracon Project No.: A4077008
Plains SRS No.: 2001-11005
Date Photos Taken: July 2007

Terracon



Photo #13 View to the southeast of the PVC liner at the floor of the excavation.



Photo #14 Sealing the monitor well TMW-1 in the floor of the excavation.



Photo #15 Placing sand on top of the liner. Monitor well TMW-1 is visible in the center of the photograph.



Photo #16 View to the east of sand being placed on the liner.



Photo #17 View to the east of sand being placed below the pipeline.



Photo #18 Begin backfilling the stockpiled material at the site.

Livingston Ridge to Hugh P. Sims
Terracon Project No.: A4077008
Plains SRS No.: 2001-11005
Date Photos Taken: July 2007



Photo #19 Begin backfilling the stockpiled material at the site.



Photo #20 View to the northeast of stockpiled materials being placed over the sand at the excavation.



Photo #21 View to the northeast; hosing down the stockpiled material as it is being backfilled into the excavation.



Photo #22 Hosing down the stockpiled material as it is being backfilled into the excavation.



Photo #23 View to the northeast of the finished excavation backfilling activities. Monitor well TMW-1 is visible in the back center of the photograph.



Photo #24 Monitor well TMW-1 completed with steel riser and concrete pad.



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

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April 19, 2007

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NEW MEXICO OIL CONSERVATION DIVISION

Ben Stone

Environmental Bureau

Cc: NMOCD Hobbs



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

February 5, 2007

Ms. Camille Reynolds
Plains Pipeline, L.P.
3112 W. Hwy 82
Lovington, NM 88260

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