

AP - 91

Amendment

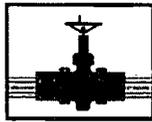
STAGE 2

WORKPLANS

Date:

3-15-11

---



**PLAINS**  
PIPELINE, L.P.

RECEIVED OCD

2011 APR 15 P 12:31

April 7, 2011

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

RE: Plains Pipeline, L.P. 8-inch Moore to Jal #1 Site  
NMOCD Reference # AP-91  
Unit Letter F of Section 16, Township 17 South, Range 37 East  
Lea County, New Mexico

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached *2011 Addendum to 2008 Abatement Plan*, dated March 15, 2011, for the 8-inch Moore to Jal #1 release site located in Section 16 of Township 17 South, and Range 37 East of Lea County, New Mexico. This document provides details regarding the proposed plan to install an automated groundwater disposal system at the subject site.

Should you have any questions or comments, please contact me at (575) 441-1099.

Sincerely,

Jason Henry  
Remediation Coordinator  
Plains Pipeline, L.P.

CC: Geoff Leking, NMOCD, Hobbs Office

Enclosure



**2011 ADDENDUM TO 2008 ABATEMENT PLAN**

**8" MOORE TO JAL #1**

**SE ¼ OF THE NW ¼ OF SECTION 16, TOWNSHIP 17 SOUTH, RANGE 37 EAST  
LEA COUNTY, NEW MEXICO**

**PLAINS SRS #2002-10270**

**NMOCD REF. # AP-91**

AMARILLO  
921 North Bivins  
Amarillo, Texas 79107  
Phone 806.467.0607  
Fax 806.467.0622

AUSTIN  
911 West Anderson Lane  
Suite 202  
Austin, Texas 78757  
Phone 512.989.3428  
Fax 512.989.3487

MIDLAND  
2901 State Highway 349  
Midland, Texas 79706  
Phone 432.522.2133  
Fax 432.522.2180

SAN ANTONIO  
11 Commercial Place  
Schertz, Texas 78154  
Phone 210.265.8025  
Fax 210.568.2191

TULSA  
525 South Main Street  
Suite 535  
Tulsa, Oklahoma 74103  
Phone 918.742.0871  
Fax 918.382.0232

HOBBS  
318 East Taylor Street  
Hobbs, New Mexico 88241  
Phone 505.393.4261  
Fax 505.393.4658

ARTESIA  
408 W. Texas Ave.  
Artesia, New Mexico 88210  
Phone 575.746.8768  
Fax 505.746.8905

**PREPARED FOR:**

**PLAINS PIPELINE, L.P.**

333 Clay Street  
Suite 1600  
Houston, Texas 77002

**PREPARED BY:**

**TALON/LPE**

2901 S. State Highway 349  
Midland, Texas 79706

**DISTRIBUTION:**

**COPY 1 - PLAINS PIPELINE, L.P. – DENVER CITY**

**COPY 2 - PLAINS PIPELINE, L.P. - HOUSTON**

**COPY 3 - NMOCD - HOBBS**

**COPY 4 - NMOCD - SANTA FE**

**COPY 5 - NMSLO - SANTA FE**

**COPY 6 - TALON/LPE**

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
EMERGENCY RESPONSE

Toll Free: 866.742.0742  
www.talonlpe.com

March 15, 2011

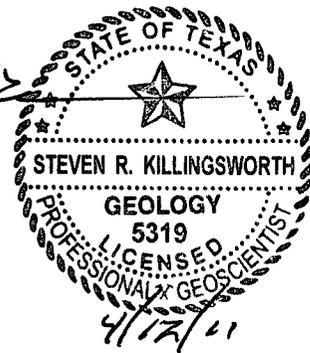
**8" Moore to Jal #1  
Addendum to 2008 Abatement Plan**

**Plains Pipeline, L.P.  
Houston, Texas**

**Talon/LPE PROJECT NO. 700376.044.01**

**Prepared by:**

  
Steven R. Killingsworth, P.G.  
Senior Project Manager



  
Kyle Waggoner, P. G.  
Regional Director

Talon/LPE  
2901 S. Hwy 349  
Midland, Texas 79706

March 2011

Distribution List

Name	Title	Company or Agency	Mailing Address	e-mail
Ed Hansen	Environmental Engineer	NMOCD	1220 South St. Francis Drive Santa Fe, NM 87505	edwardjhansen@state.nm.us
Geoffrey Leking	Environmental Engineer	NMOCD	1625 French Dr. Hobbs, NM 88231	GeoffreyR.Leking@state.nm.us
Brian Henington	Environmental Engineer	NMSLO – Santa Fe	P.O. Box 1148 Santa Fe, NM 87504	bhenington@slo.state.nm.us
Jason Henry	Remediation Coordinator	Plains Pipeline	2530 Highway 214 Denver City, TX 79323	jhenry@paalp.com
Jeff Dann	Senior Environmental Specialist	Plains Pipeline	P. O. Box 4648 Houston, TX 77210-4648	jpdann@paalp.com
File		Talon/LPE	2901 S. St. Hwy 349 Midland, Texas 79706	skillingsworth@talonlpe.com

NMOCD - New Mexico Oil Conservation Division  
NMSLO - New Mexico State Land Office

**TABLE OF CONTENTS**

**1.0 INTRODUCTION AND OBJECTIVE..... 1**

    1.1 Site Background..... 1

    1.2 Objective..... 1

**2.0 RECOVERED GROUNDWATER DISPOSAL..... 2**

    2.1 Construction Scope..... 2

    2.2 Disposal Flow Path..... 2

**3.0 CONCLUSION ..... 2**

    3.1 Conclusion..... 3

**APPENDIX A**

**Figures**

- Figure 1 – Topographic Map
- Figure 2 – Moore to Jal #1 Site Map
- Figure 3 – HDPE Transfer Line Layout Plan
- Figure 4 – Flow Path Detail

## **1.0 INTRODUCTION AND OBJECTIVE**

---

### **1.1 Site Background**

Talon/LPE, on behalf of Plains Pipeline, L.P. (Plains), is submitting this Addendum to the 2008 Stage 1 and Stage 2 Abatement Plan to the New Mexico Oil Conservation Division (NMOCD) regarding the remediation of the Plains 8-inch Moore to Jal #1 (Moore to Jal #1) crude oil pipeline release site (NMOCD Ref. No. AP-91) in Lea County, New Mexico.

The Moore to Jal #1 release site is located approximately 9.2 miles southeast of Lovington, in Lea County, New Mexico in the SE1/4 of the NW ¼ of Section 16, Township 17 South, Range 37 East at Geographic Positioning System (GPS) coordinates Latitude 32° 50' 12.7" N, Longitude 103° 15' 25.2" W. The site is located within the West Lovington Oil Field on land owned by the State of New Mexico. No residences or surface water features are located within a 1,000-foot radius of the site.

In October 2002, a release of approximately two hundred (200) barrels of crude oil occurred at the site due to pipeline corrosion. Approximately eight thousand (8,000) square feet of surface area was impacted by the release. Surface soil saturated by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment. Soil excavation and over-excavation activities were initiated in October 2002 and that activity is documented in the "Soil Over-Excavation Report and Backfill Work Plan", dated May 23, 2006.

Talon/LPE (Talon) has been retained by Plains to conduct quarterly groundwater monitoring activities and operation and maintenance of the phase-separated hydrocarbon (PSH) recovery system.

### **1.2 Objective**

PSH recovery from groundwater has been conducted at the site since 2004, initially by hand bailing and then by using pneumatic pumps. In October of 2008, Talon installed a pneumatic skimmer pump and total fluids pump system at the site. Currently, there are a total of thirteen (13) specific gravity skimmers and bladder pumps operating in monitor wells MW-2, MW-3, MW-5, MW-7 through MW-13, MW-15 MW-24, and MW-25. In addition, there are currently a total of three (3) pneumatic total fluids pumps operating in monitor wells MW-1A, MW-4A, and MW-6 (see Figure 2a).

Currently, the PSH recovered by the skimmer pump system and the total fluid pumps is expelled to an on-site 350 barrel (bbl) steel frac tank, which is monitored for the accumulation of water and PSH on a weekly basis. Currently, when the recovery tank is full, water is removed from the tank with a vacuum truck and transferred to a disposal facility. During the year 2010, 8,915 bbls of water was removed from the recovery tank, which accounts for approximately 75 vacuum truck excursions.

The Plains Moore to Jal 8-in steel pipeline is idle and remains in situ subsurface directly adjacent to the subject site. Plains proposes that a 3-in high density polyethylene (HDPE) line be installed (slip-lined) into the idle 8-in pipeline beginning at the Moore to Jal #2 (NMOCD Reference #AP-092) site to the Moore to Jal #1 (NMOCD Reference #AP-091) site and then to the 8-inch Sweet Vacuum C.S. Cayler (NMOCD Reference #AP-052) site (see Figure 3) and will be

ultimately disposed at Rocky Smith SWD Systems State 'E' #23 salt water disposal (SWD) (NMOCD # 307219) facility.

The purpose of the addendum is to propose an alternative to the removal of recovered water by vacuum truck.

## **2.0 RECOVERED GROUNDWATER DISPOSAL**

---

### **2.1 Construction Scope**

After a one-call utility clearance the project will commence at the Moore to Jal #2 site. The existing Moore to Jal 8-in. steel pipeline will be excavated with a backhoe at a point as close as possible to the active recovery system control center. A window will be cold cut into the pipeline and a 2-ft x 2-ft steel vault will be installed around the access point. After access to the steel pipeline is obtained, a 3-in HDPE line will be pushed from the Moore to Jal #2 site to the Moore to Jal #1 site approximately 2,113-ft to the northwest.

It is expected that the HDPE line will periodically get stuck during the installation process. The distance to the sticking point will be determined and the pipeline will be excavated. A window will be cold cut into the steel pipeline and HDPE line installation will resume. The HDPE line will be fused at the access point.

When the HDPE line arrives at the Moore to Jal #1 site, the steel pipeline will be excavated and cut as previously described. Another 2-ft by 2-ft vault will be installed on the steel pipeline as close as possible to the recovery system control center. The HDPE line installation procedure will continue until the line arrives at the C.S. Cayler site approximately 9,233-ft to the northwest of the Moore to Jal #1 site.

The steel pipeline will be excavated at the Cayler site, a window cut and another vault will be installed. There is currently an active transfer pump at the Cayler site that discharges recovered groundwater to the Rocky Smith SWD Systems State 'E' #23 salt water disposal facility (SWD) (NMOCD # 307219) located approximately 5,288-ft to the west of the Cayler site. The newly installed 3-in HDPE line will be tied to the existing line at the Cayler site. For details regarding flow line construction (see figures 3 and 4).

### **2.2 Disposal Flow Path**

Recovered groundwater will be contained in an on-site 350 bbl frac tank. The water will then be discharged from the recovery tank to the 3-in HDPE transfer line using a 5 HP centrifugal transfer pump. There will be a ball valve and 'Y' strainer installed between the pump and the frac tank. A flow meter with totalizer, vacuum break, pressure gauge and high pressure cut-off switch and another check valve will be installed between the transfer pump and the 3-in HDPE line. The 3-in HDPE line will be equipped with a tee and a 3-in up-stream check valve that will be installed in a 2-ft by 2-ft steel vault for access (see figure 4).

The 350-bbl frac tank will be equipped with level switches that will control the groundwater extraction pumps and the transfer pump. When the water level in the tank achieves a designated height in the recovery tank, the transfer pump will be activated to discharge the water to the disposal facility. When the water level has been depleted to a designated level, a low-level

switch will signal the pump to turn-off.

### **3.0 CONCLUSION**

---

#### **3.1 Conclusion**

The benefit of continuously disposing recovered water, as proposed, is that it will increase the run time for the PSH recovery system, that is, the system will not shut-down periodically due to a full recovery tank. A second benefit is that additional pneumatic total fluids pumps can be added to PSH impacted wells since water disposal delays will no longer impede the recovery process. The ultimate result will be enhanced PSH recovery and mitigation of plume expansion.

## APPENDIX A

---

### Figures

- Figure 1 – Topographic Map
- Figure 2 – Moore to Jal #1 Site Plan
- Figure 3 – HDPE Transfer Line Layout Plan
- Figure 4 – Flow Path Detail

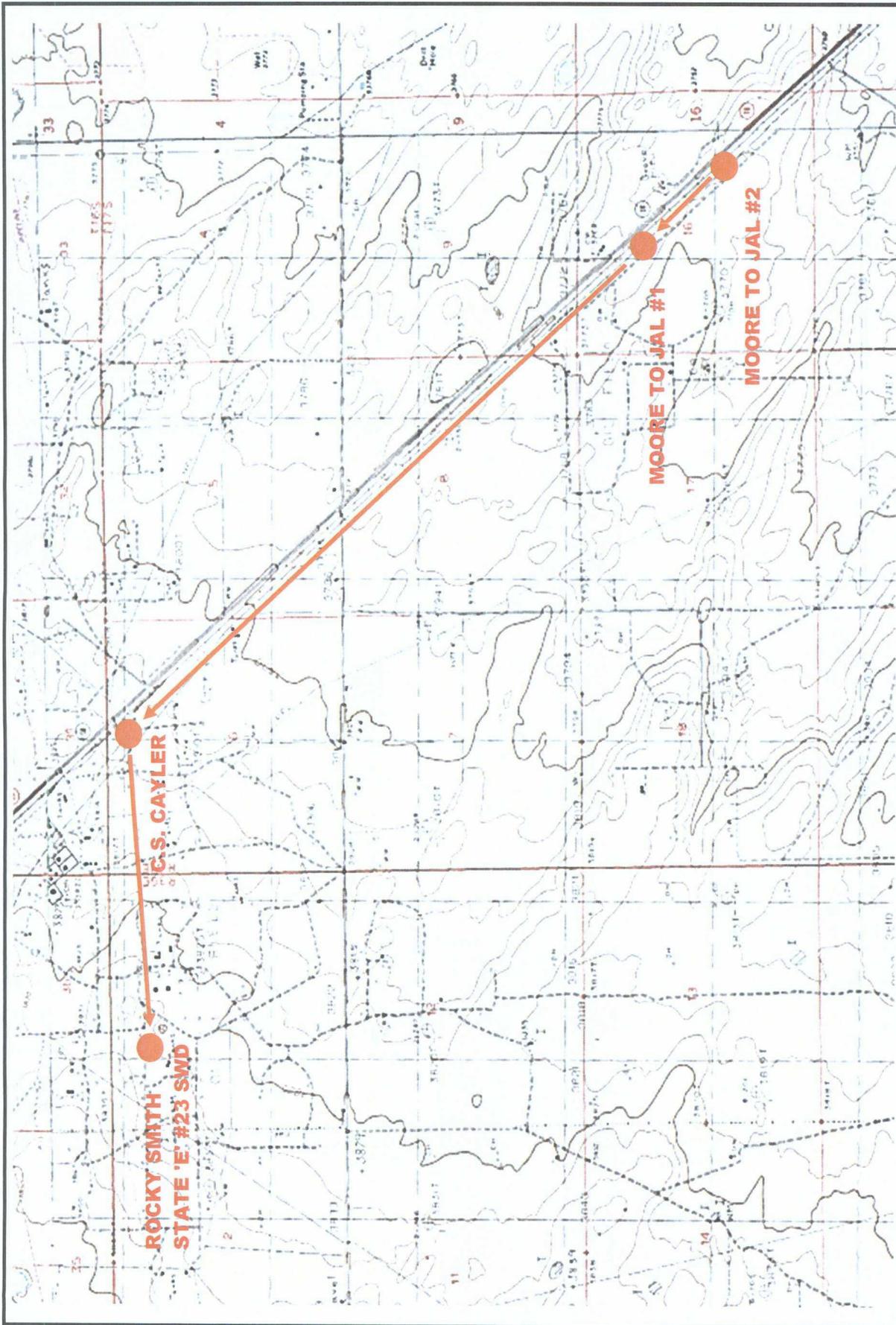


Figure 1 - Topographic Map  
 Transfer Line Flow Path Layout  
 Date: April 4, 2011  
 Prepared by: S. R. Killingsworth, PG

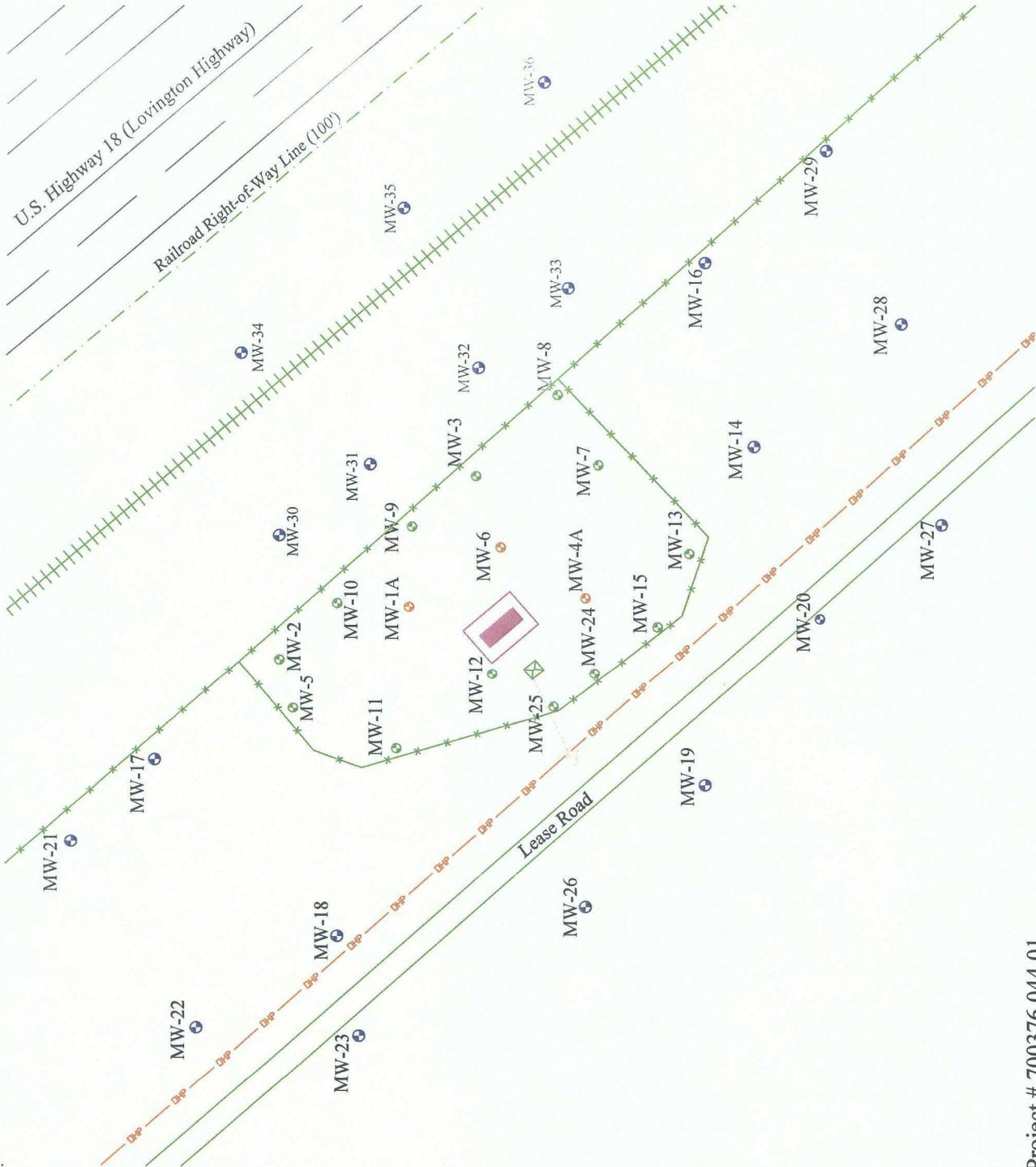


Plains Pipeline, LP  
 PO Box 4648  
 Houston, Texas 77210-4648  
 Not to scale



**Legend**

- Monitor Well
- MW w/Total Fluids Pump
- MW w/Skimmer Pump
- Fence Line
- Overhead Powerline
- Railroad Tracks
- Power Pole W/Transformer
- Compressor Shed
- Controls
- Recovery System Tank and Containment

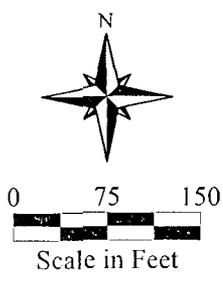
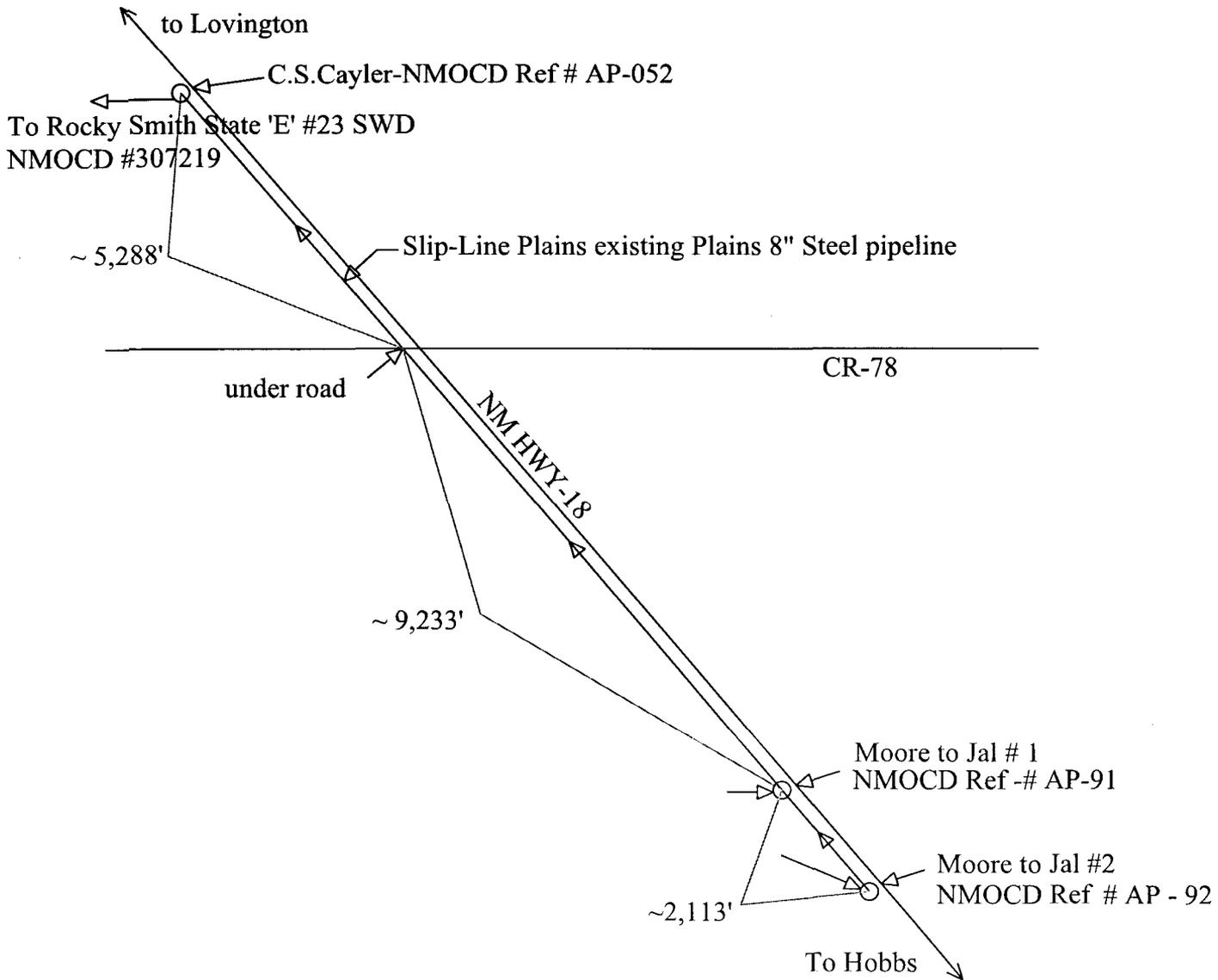


8" Moore to Jal #1  
SRS # 2002-10270, NMOCD REF. # AP-91  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 2 - Site Plan

Date: 01/11/2011  
Scale: 1" = 100'  
Drawn By: TJS



Project # 700376.044.01

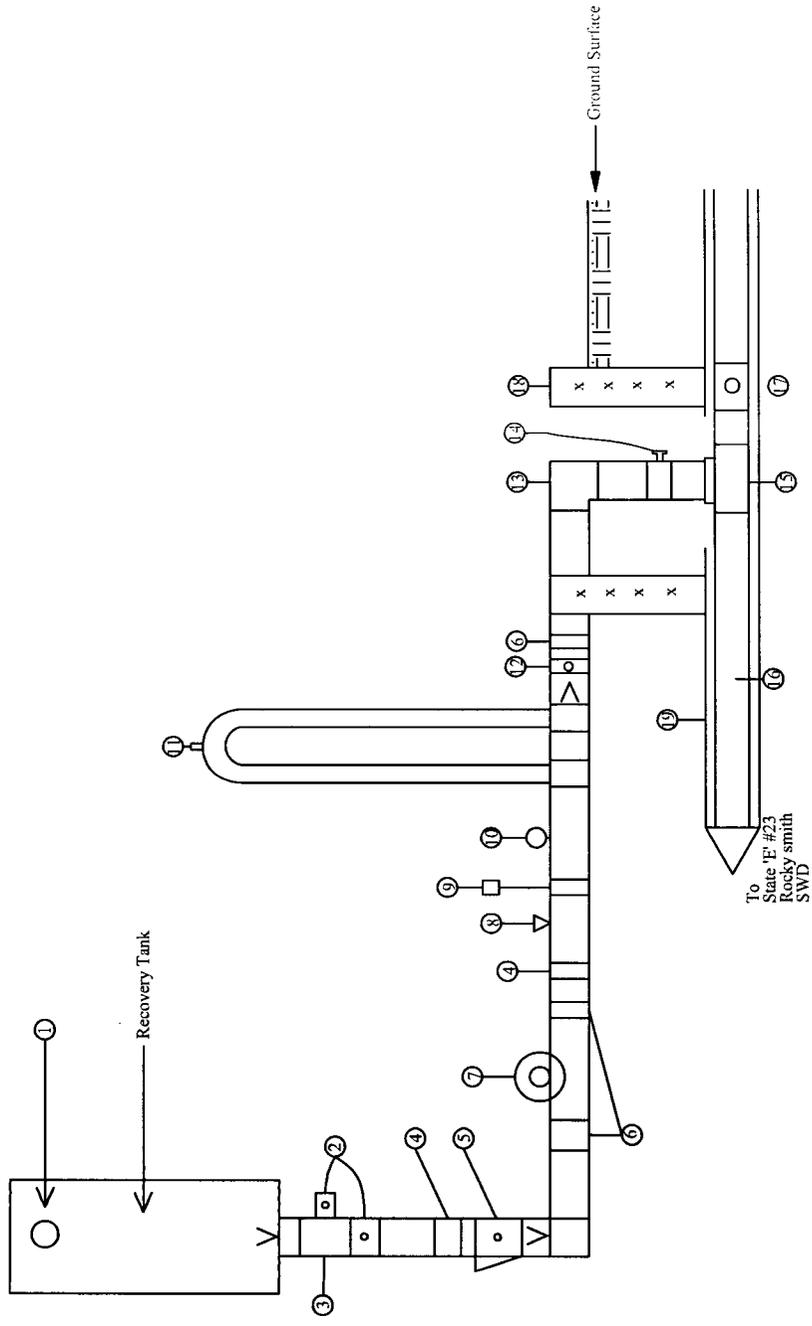


Legend			
○	- Monitor Well	—○—	- Overhead Powerline
⊙	- Proposed Monitor Well	—x—	- Underground Electric Line
◆	- Soil Boring	—w—	- Sanitary Sewer
⊕	- Proposed Soil Boring	—s—	- Storm Sewer
⊞	- Recovery Well	—t—	- Telephone Line
⊙	- Vapor Recovery Well	—f—	- Fence line
⊙	- Domestic Well	—c—	- City Utilities
+	- Plugged & Abandoned Well	—u—	- Underground Cable
○	- Observation Well	—r—	- Railroad Tracks
△	- Surface Soil Samples	—g—	- Groundwater Gradient Contour Line
●	- Vapor Monitoring Point	81.30	- Groundwater Gradient Contour Elevation
—x—	- Water Main	→	- Groundwater Flow Direction
—g—	- Gas Line		



Date: 03/02/2011  
 Scale: 1" = 150'  
 Drawn By: TJS

Moore to Jal #1 & #2  
 SRS # 2002-10270 & 2002-10273  
 Hobbs, Lea County, New Mexico  
 Figure 3 - HDPE Transfer Line Layout Plan



Moore to Jal #1 & #2  
SRS #2002-10270 & 2002-10273  
Lea County, New Mexico  
Figure 4 - Flow Line Detail

Date: 03/16/2011

Scale: 1" = 60'

Drawn By: TJS



**Moore to Jal #1 & #2**  
**2011 Addendum to 2008 Abatement Plan**  
**Key to Flow Line Detail**

- 1) Discharge hose to recovery tank from recovery well extraction pump.
- 2) 2-inch ball valves
- 3) 2-inch tee
- 4) 2-inch tee with drain valve
- 5) 2-inch 'Y' filter trap
- 6) 2-inch union
- 7) 5-HP, 230V, SF, centrifugal pump
- 8) High pressure pump cut-off switch
- 9) Flow meter with totalizer
- 10) 0-150 psi Pressure gauge
- 11) Vacuum break
- 12) 2-inch spring check valve
- 13) 2-inch 90° sweep
- 14) 2-inch gate valve
- 15) 3-inch HDPE tee – fused
- 16) 3-inch HDPE pipe
- 17) 3-inch spring check valve
- 18) 2-ft x 2-ft steel vault set in concrete
- 19) Existing Plains 8-inch steel pipeline