

AP - 91

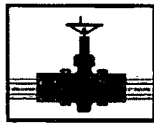
Amendment

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

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2901 S. State Highway 349

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DISTRIBUTION:

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March 15, 2011

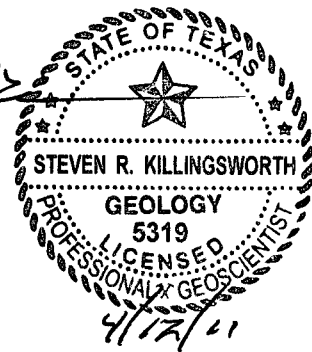
**8" Moore to Jal #1
Addendum to 2008 Abatement Plan**

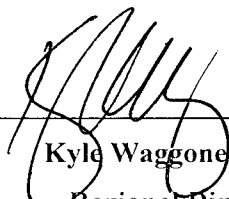
**Plains Pipeline, L.P.
Houston, Texas**

Talon/LPE PROJECT NO. 700376.044.01

Prepared by:


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




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**Talon/LPE
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March 2011

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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

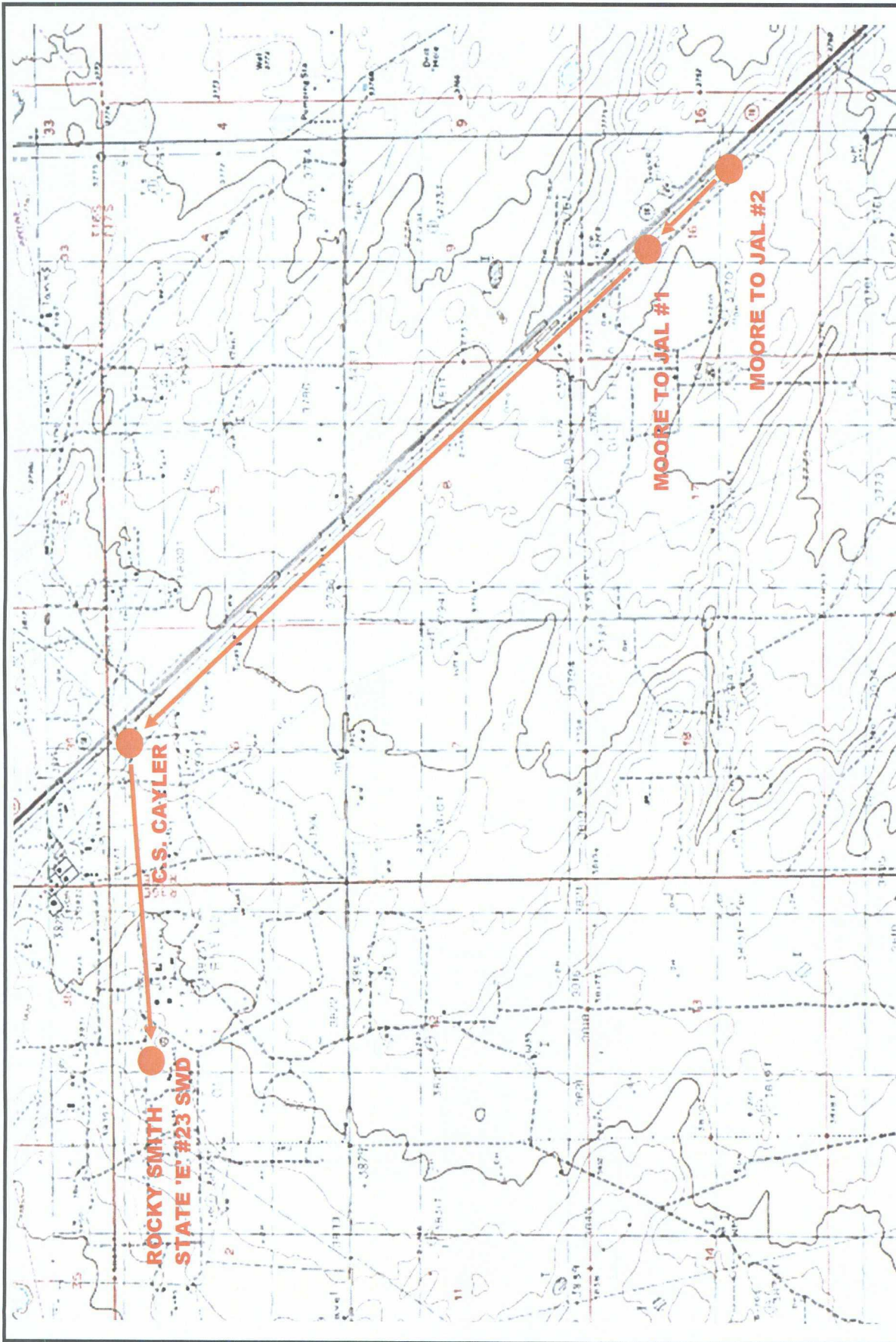
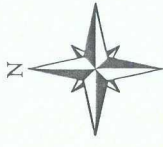


Figure 1 - Topographic Map
Transfer Line Flow Path Layout
Date: April 4, 2011
Prepared by: S. R. Killingsworth, PG

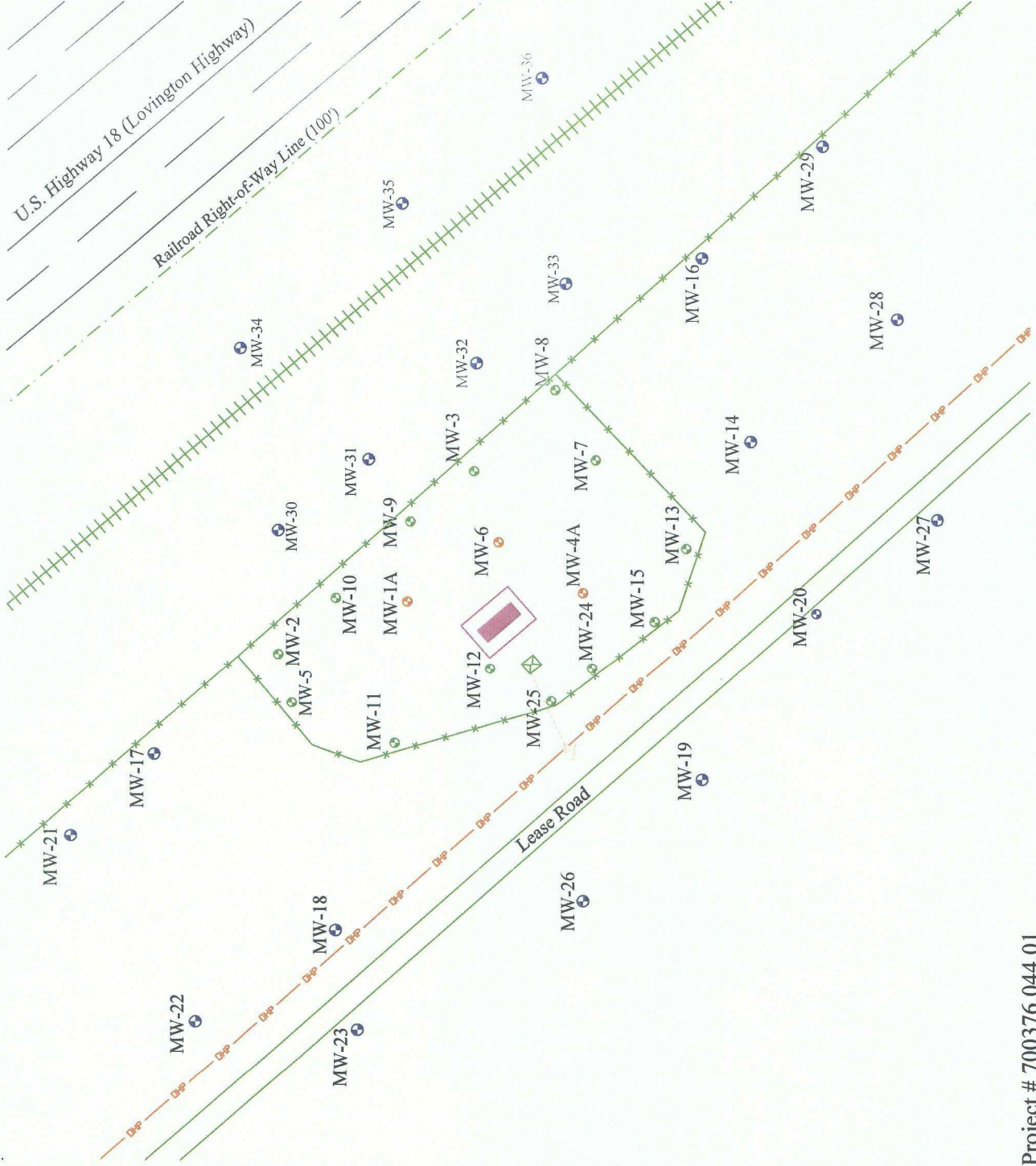


Plains Pipeline, LP
PO Box 4648
Houston, Texas 77210-4648
Not to scale



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

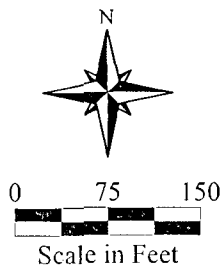
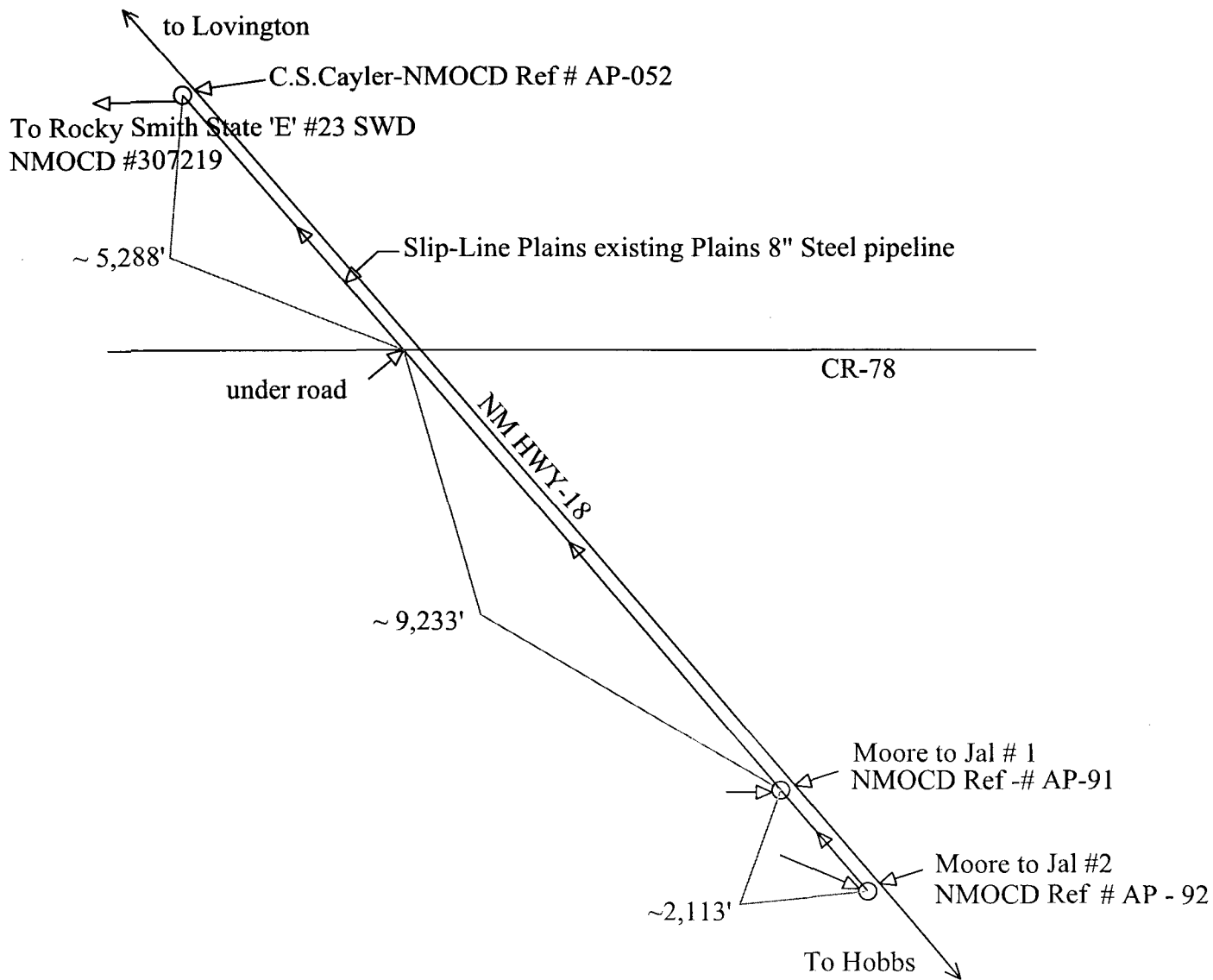


Project # 700376.044.01



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

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



Legend	
○	- Monitor Well
⊗	- Proposed Monitor Well
◆	- Soil Boring
⊕	- Proposed Soil Boring
⊞	- Recovery Well
⊙	- Vapor Recovery Well
⊖	- Domestic Well
⊛	- Plugged & Abandoned Well
⊚	- Observation Well
Δ	- Surface Soil Samples
⊙	- Vapor Monitoring Point
— x —	- Water Main
- - -	- Gas Line
— + —	- Overhead Powerline
- x -	- Underground Electric Line
- w -	- Sanitary Sewer
- s -	- Storm Sewer
- t -	- Telephone Line
- . -	- Fence line
- . . .	- City Utilities
- . . .	- Underground Cable
	- Railroad Tracks
~~~~~	- Groundwater Gradient Contour Line
81.30	- Groundwater Gradient Contour Elevation
➔	- Groundwater Flow Direction

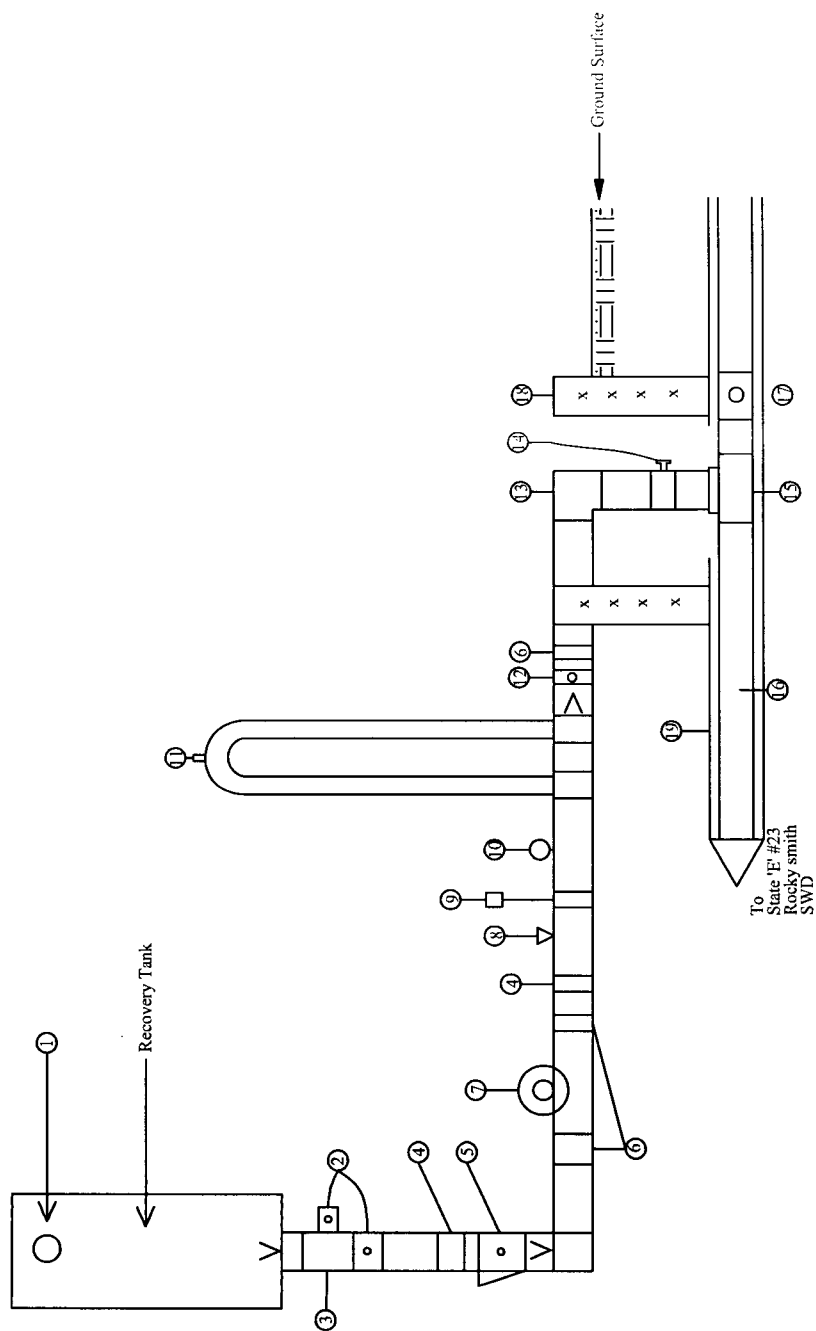


Date: 03/02/2011

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

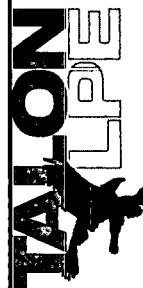


Moore to Jal #1 & #2  
 SRS #2002-10270 & 2002-10273  
 Lea County, New Mexico  
 Figure 4 - Flow Line Detail

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