AP - 54

STAGE 1 & 2 WORKPLANS

DATE: 4-17-08

PLAINS PIPELINE

April 25, 2008

RECEIVED

APR 28 2008

Environmental Bureau
Oil Conservation Division

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. Corrective Action Plan Addendum
Hobbs Junction Mainline Release Site
NMOCD Reference # AP-0054
Unit Letter M, Section 26, Township 18 South, Range 37 East
Lea County, New Mexico

Dear Mr. Hansen:

Please find attached for your approval the Corrective Action Plan Addendum to the Stage 1 and 2 Abatement Plan, dated April 17, 2008, for the Hobbs Junction Mainline release site located in Section 26 of Township 18 South, and Range 37 East of Lea County, New Mexico. The Corrective Action Plan Addendum details site activities to be conducted for groundwater and soil remediation at the site.

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

Sincerely,

Camille Bryant

Camille Bryant
Remediation Coordinator
Plains Pipeline

Cc: Larry Johnson, NMOCD, Hobbs Office

Enclosure

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HOBBS JUNCTION MAINLINE
NMOCD REF. # AP-054
CORRECTIVE ACTION PLAN ADDENDUM
LEA COUNTY, NEW MEXICO
PLAINS SRS #2003-00017

Section 26, Township18 South, Range 37 East

Prepared for:

PLAINS MARKETING, L.P.
333 Clay Street
Suite 1600
Houston, Texas 77002

Prepared by:

Talon/LPE
Aaron Pachlhofer
318 E. Taylor Street
Hobbs, New Mexico 88240

RECEIVED
APR 28 2008
Environmental Bureau
Oil Conservation Division

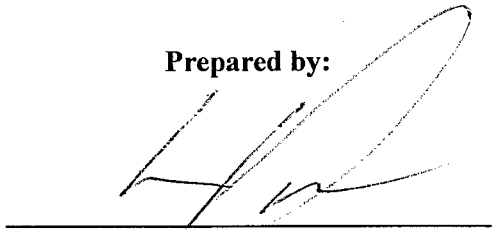
April 17, 2008

Hobbs Junction Mainline
CORRECTIVE ACTION PLAN ADDENDUM

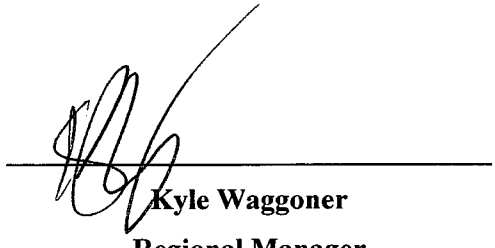
Plains Marketing, L.P.
Houston, Texas

Talon/LPE PROJECT NO. PLAINS047SPL

Prepared by:



Aaron Pachlhofer
Project Manager



Kyle Waggoner
Regional Manager

Talon/LPE
318 E. Taylor Street
Hobbs, New Mexico 88240

April 2008

CONTENTS

Appendices

CORRECTIVE ACTION PLAN ADDENDUM

1.0 Introduction

On February 20, 2008, the New Mexico Oil Conservation Division (OCD) requested, via electronic mail, an aggressive remediation plan to address the soil column to depth of 30 feet below ground surface (bgs) and the removal of non-aqueous phase liquid (NAPL) (i.e. Phase–Separated Hydrocarbon (PSH)) from the top of groundwater.

Currently, eight skimmer pumps and one total fluids pump are installed and operating at the site. Additionally, monitor wells MW-23 and MW-24 were installed during March 2008 to complete the delineation of the dissolve-phase groundwater plume.

Plains Pipeline L.P. (Plains) is currently in the advanced planning stages to achieve the aggressive soil and PSH remediation which is desired by all parties involved. The planned strategy utilizes a combination of remediation technologies consisting of three main phases:

- Soil removal to a depth of 20 feet below ground surface.
- PSH removal by total fluids pumping.
- In situ treatment by Soil Vapor Extraction (SVE) to treat the impacted soils below 20 feet bgs.

As indicated by the bulleted items above, this plan of action proposes to address the impacted soils at the site using two separate phases. The first phase, excavation to 20 feet bgs, will remove the readily accessible impacted soils, while maintaining a manageable excavation plan with respect to structural integrity and personnel safety. The second phase of the soil remediation is expected to occur following the removal of PSH from the groundwater, and will involve the use of SVE technology to remove purgeable gasses from the deeper soils. By removing the impacted overburden during the initial soil excavation, the targeted soil column will be much more focused, resulting in higher efficiency for the SVE system. Due to the depth of the targeted soils and the presence of the proposed excavation liner (discussed below) the threat of forming preferred air-flow pathways to the surface (which can significantly reduce SVE efficiency) is virtually eliminated. Additionally, the removal of PSH during the second phase of remediation will force the SVE system to target the impacted soils and limited "smear" zone, rather than saturating the effluent air with the more readily available purgeable gases from the PSH. The result of this more focused attack during each of the phases should result in a more efficient and timely schedule for final clean-up of the site. Each of the remediation phases is described in more detail in the following sections.

2.0 Soil Removal

The affected area identified for removal by excavation is delineated on the attached site plan (Figure 1). The surface 'footprint' of this area includes approximately 22,500 ft^2. A contractor selected by Plains will remove the affected soils to a maximum depth of 20 feet

below ground surface. The estimated volume of material identified for removal is estimated at 16,700 yd^3. Shallower areas that are not affected (above 100 mg/kg TPH as delineated by field screening with a field TPH Analyzer) will not be removed. All excavated soils will initially be stockpiled onsite. A mobile rock screener will be utilized to separate rock/caliche from the affected soil. Confirmation sampling will be performed on the sidewalls of the excavation to evaluate the lateral effectiveness of the activities. Additionally, confirmation samples from the floor of the excavation will be analyzed to evaluate affected soils that may remain in place.

Pursuant to satisfactory completion of the excavation, a 20-mil liner will be installed at the floor of the excavation to inhibit the percolation of surface precipitation through any remaining affected soils. The liner will be installed between layers of imported sandy soil (approximately 6 inches thick both above and below) to help ensure the integrity of the liner during backfilling activities. Additionally, 8-inch "surface casing" will be placed during the liner installation at the projected SVE well locations to prevent damage to the liner by projected drilling activities. The surface casing will extend from beneath the liner to the final backfilled ground surface to allow a pathway through the liner for the drill string and subsequent SVE well casing. SVE activities are discussed later in this document. Please note that the existing wells suitable for SVE will be preserved if possible. Placement of surface casing is a contingency if existing wells cannot be preserved

Following liner installation, the removed rock, as well as soils that exhibit acceptable total petroleum hydrocarbon (TPH) concentrations (less than 100 mg/kg) will be returned to the excavation as backfill, if approved by the OCD. Soils exhibiting unacceptable TPH concentrations will be transported to a licensed disposal facility for internment/remediation. If additional soil is required for backfill, Plains will acquire it locally.

Plains is currently evaluating appropriate methods to minimize the risk to personnel, equipment, and existing site fixtures (pipelines, cathodic equipment, electricity transmission lines, etc.). If excavation plans require alteration due to safety concerns, Plains will contact the NMOCD as soon as possible. It should also be noted that a small volume of impacted soil will likely remain in place in the vicinity of the electricity transmission lines, to maintain the structural integrity of the pole settings.

3.0 Phase-Separated Hydrocarbon Removal

Prior to and following the excavation activities, four additional pneumatic total fluids pumps will be installed at the site, bringing the total number of total fluids pumps to five. These additional total fluids pumps will replace a portion of the current skimmer pumps in the source area to accommodate a more aggressive PSH removal program. The total fluids pumps will be set in the wells in such a manner that the groundwater is slightly depressed, but not to the point where the smear zone is extended significantly further into the groundwater table.

During excavation operations, Plains proposes to attempt continued PSH recovery utilizing monitor wells MW-2, MW-14, and MW-15. Based on the current proposed plans, these

monitor wells should remain unaffected during the excavation activities. PSH and dissolve-phase plume maps are presented as Figures 2 and 3, respectively.

Downstream from the pumps, two frac tanks will be connected in series and utilized for fluid collection and PSH separation. Gravity separated crude oil will be removed to a product tank for offsite disposal or reclamation. Currently, Plains is attempting to acquire access to one or more of the nearby injection wells to facilitate disposal of purged groundwater. If access is not obtained, other long term options will be further evaluated. In the interim, fluids will be removed via vacuum truck and properly disposed off-site. Subsequent to Plains' selection of a viable treatment and/or disposal option, a specific Work Plan will be provided to the OCD for approval.

Discontinuation of PSH removal activities will be evaluated when gauging results indicate no free product remains on the groundwater, and as approved by the OCD.

4.0 Soil Vapor Extraction

Following and potentially during the removal of PSH from groundwater, a soil vapor extraction (SVE) system will be installed to reduce any remaining hydrocarbon concentrations in the source area. Utilizing information obtained from boring logs, soil concentration data acquired during excavation, and Shelby tube geotechnical soil parameters, additional SVE wells will be installed (through the surface casing previously discussed) to maintain optimal lateral spacing for inducing a high vacuum across the site. If dissolved phase concentrations in groundwater remain high, the total fluids pumps may remain in place, so that the vapor extraction unit can enhance groundwater recovery and further reduce those concentrations.

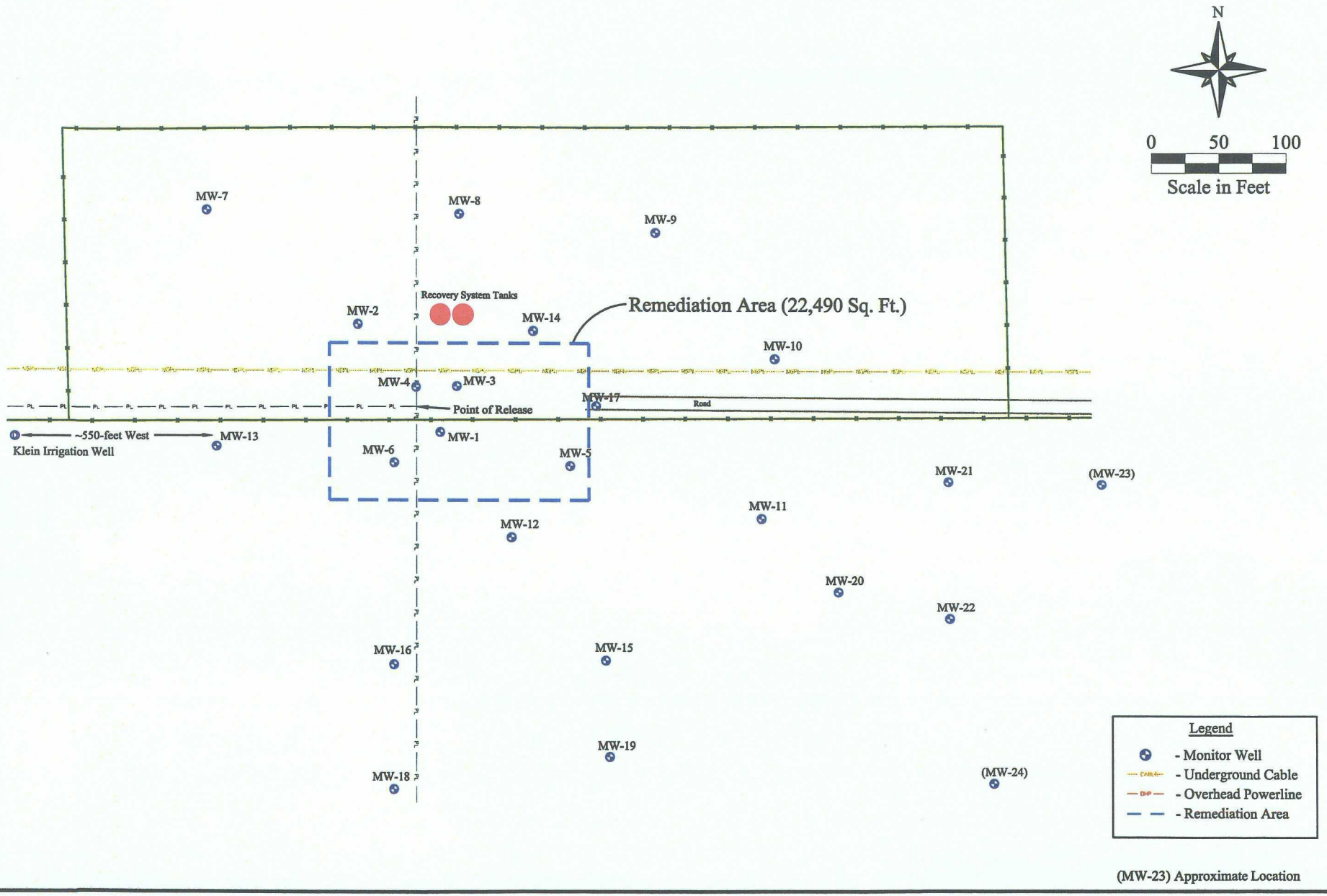
The vapor concentration will be monitored to determine the approximate mass of hydrocarbons being removed. Initially, vapor monitoring will be conducted frequently (i.e. daily or weekly), but should decline in frequency to monthly sampling intervals as conditions stabilize. The vapor concentration monitoring will also allow Plains to determine if effluent vapor emissions treatment is necessary. If effluent vapor emissions treatment is necessary, activated carbon will be the first option considered to treat the vapor. However, if vapor concentrations are too high for activated carbon to be effectively utilized, a thermal oxidizer will be utilized for the destruction of the organic vapors, potentially followed by activated carbon treatment if concentration levels decline to appropriate levels. If vapor treatment is not required, then effluent emissions will be vented to the atmosphere. Plains will operate the SVE system until acceptable hydrocarbon removal has been accomplished.

5.0 Site Closure Strategy

Once conditions at the site have been restored to acceptable levels, Plains will assess SVE system removal and monitor well plugging & abandonment activities for final site closure.

Appendix A
Drawings

Figure 1 – Remediation Area
Figure 2 – PSH Thickness Map
Figure 3 – Groundwater Contaminant Concentration Map



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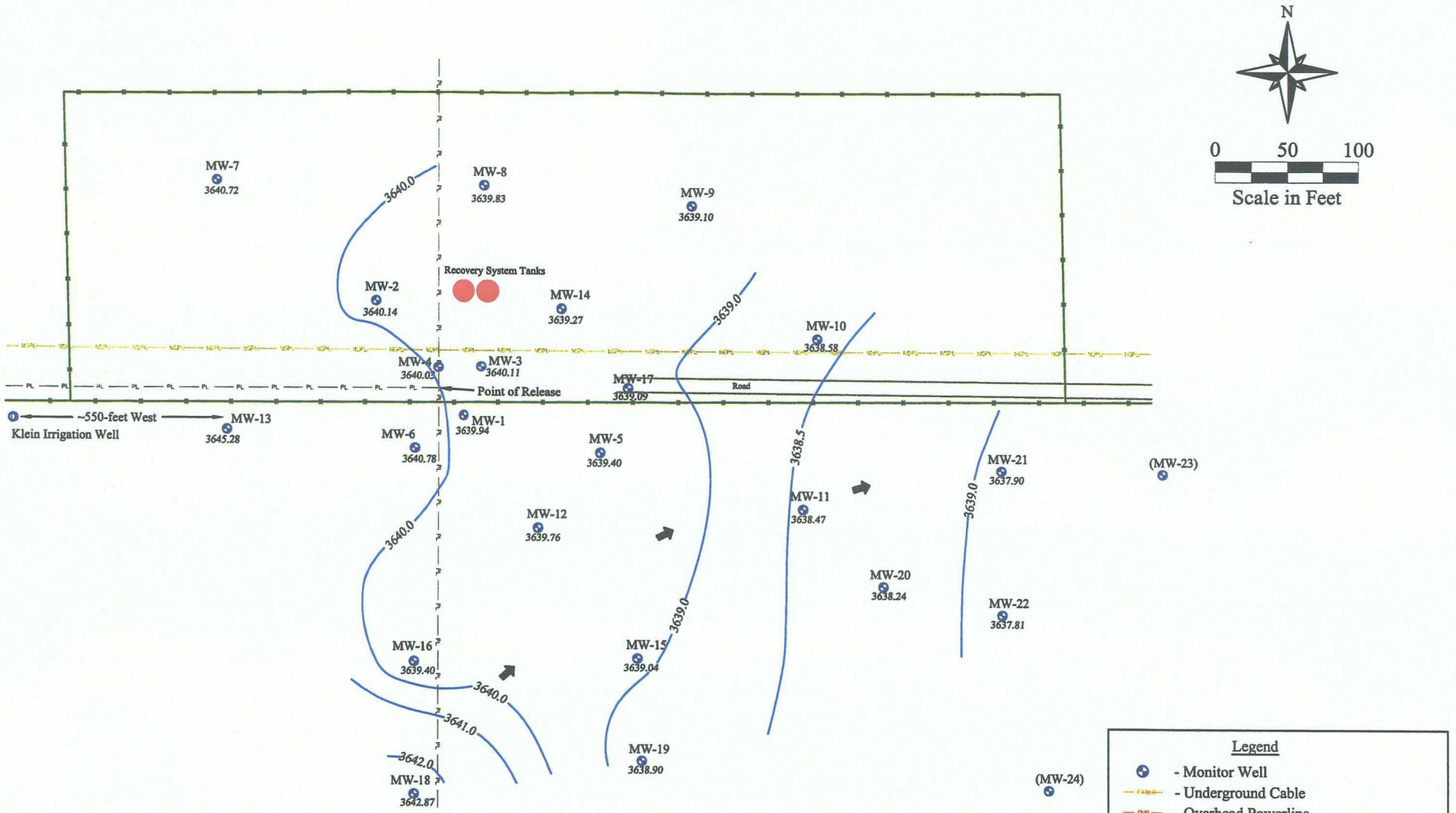
Scale:	1" = 100'
Drawn By:	SJA

Hobbs Junction Mainline

SRS # 2003-00017 , NMOCD REF. # AP-054

SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico

Figure 1 - Remediation Area



TALON LPE

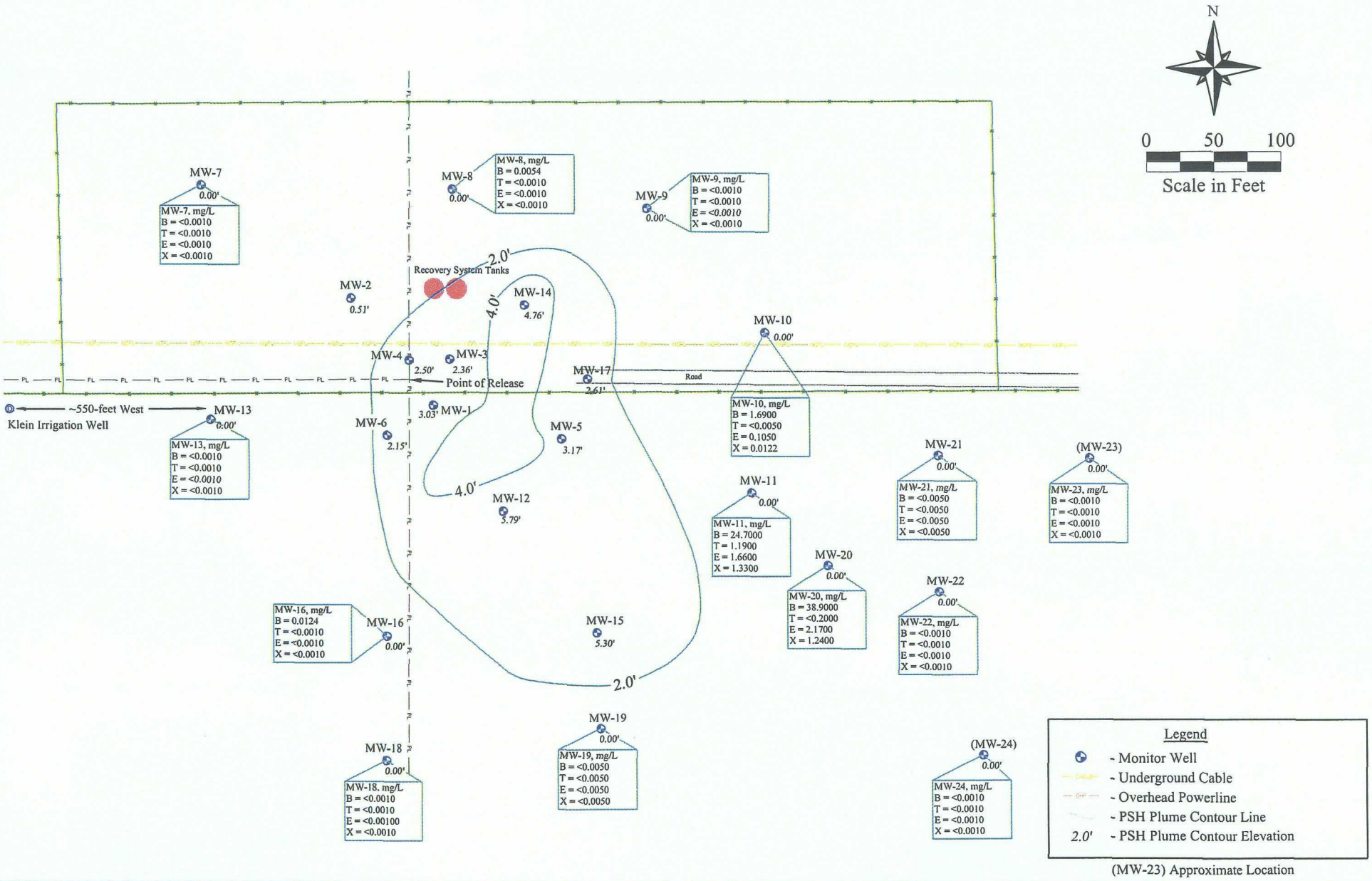
Date:	04/23/2008
Scale:	1" = 100'
Drawn By:	SJA

Hobbs Junction Mainline

SRS # 2003-00017 , NMOCD REF. # AP-054

SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico

Figure 2a - Groundwater Gradient Map, (03/11/2008)



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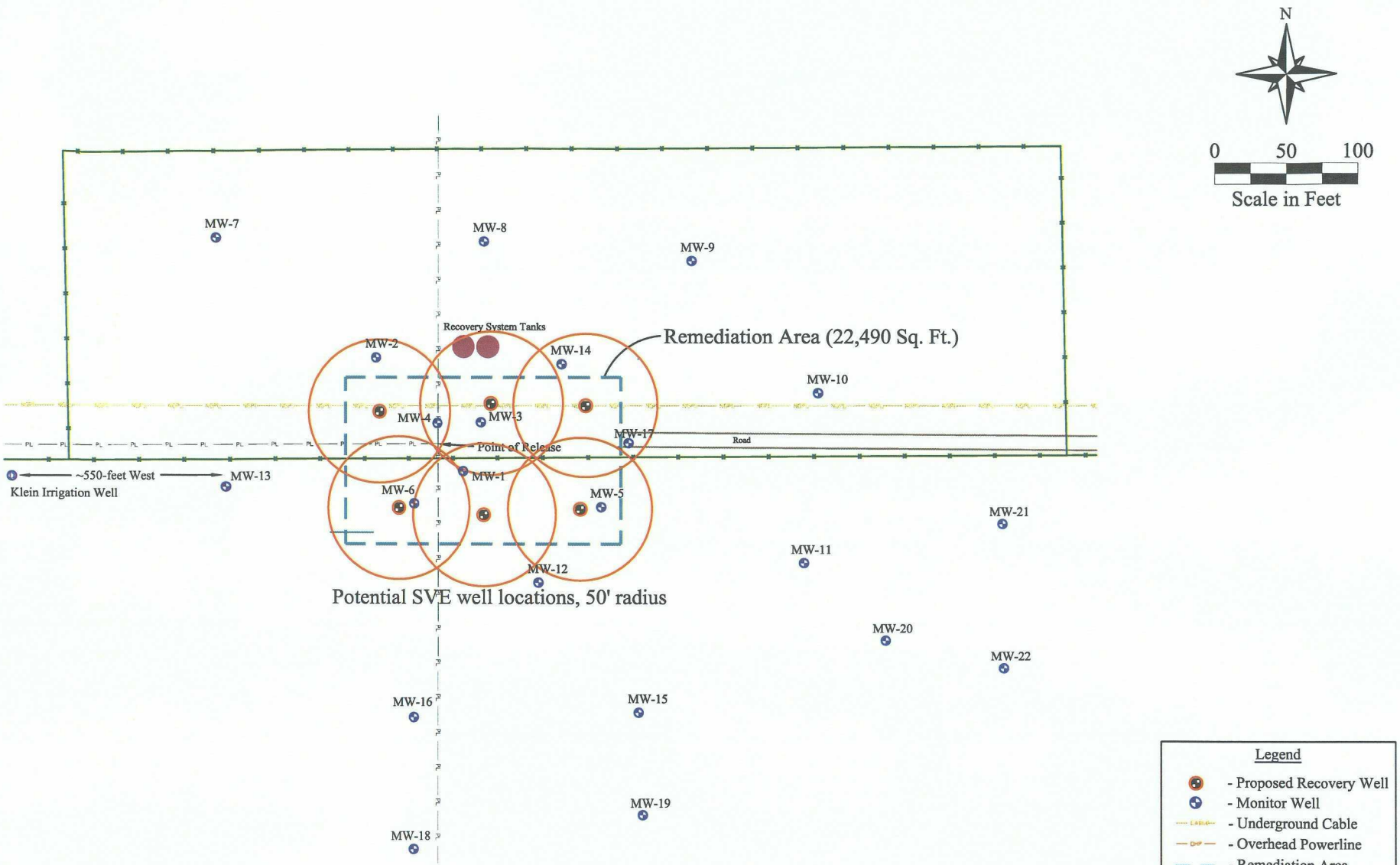
Hobbs Junction Mainline

SRS # 2003-00017 , NMOCD REF. # AP-054

SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico

Figure 3a - PSH Thickness & Groundwater Concentration Map, (03/11/2008)



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Hobbs Junction Mainline

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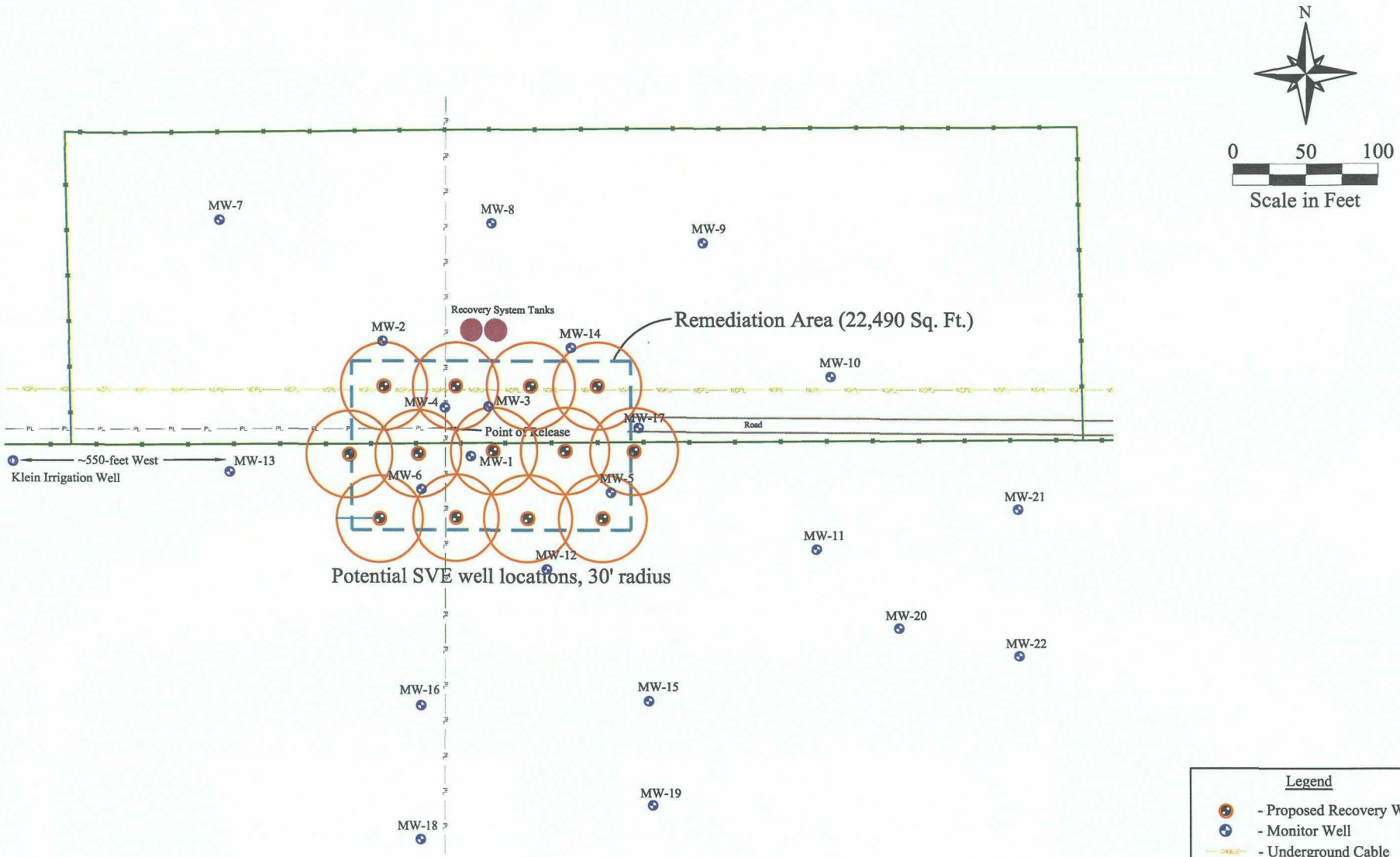
SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico

Potential SVE Well Location - 50' Radius



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Date: 04/18/2008
Scale: 1" = 100'
Drawn By: SJA

Hobbs Junction Mainline

SRS # 2003-00017 , NMOCD REF. # AP-054
SW 1/4, SW 1/4, of Sec. 26, T18S, R37E, Lea County, New Mexico
Potential SVE Well Location - 30' Radius