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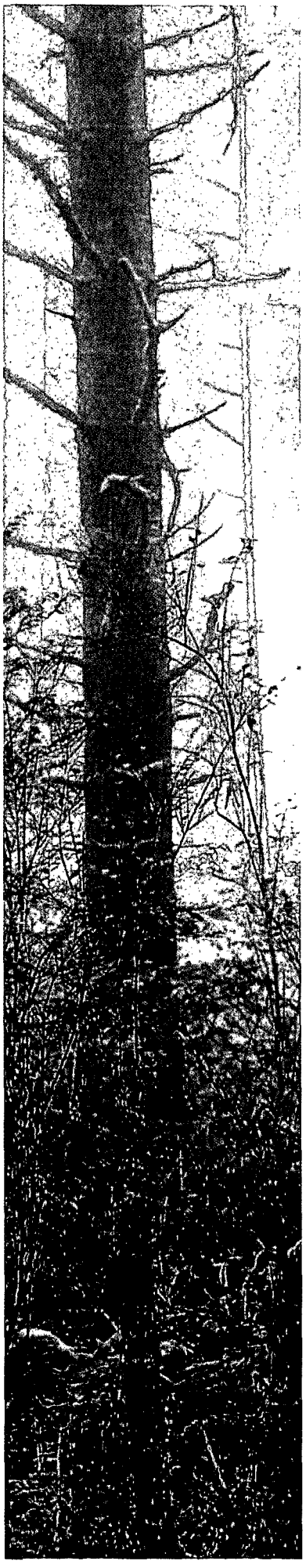
REPORTS

DATE:

5/2006



SOIL REMEDIATION PLAN

VACUUM TO JAL 14" MAINLINE #3

PLAINS EMS NO. 2003-00117

UL-A, SECTION 35, T21S, R37E

Lea County, New Mexico

IR-0455

PREPARED FOR

PLAINS MARKETING, L.P.

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PREPARED BY

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Project No. 205068.00

May 2006

Chan Patel
Senior Project Manager

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PREMIER

DISCLAIMER

Premier has examined and relied upon the file information provided by Plains and Environmental Plus, Inc. (EPI). Premier has not conducted an independent examination of the information contained in the Plains files; furthermore, we assume the genuineness of the documents reviewed and that the information provided in these documents to be true and accurate. Premier has prepared this report using the level of care and professionalism in the industry for similar projects under similar conditions. Premier will not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this report was prepared. Premier believes the conclusions stated herein are factual, but no guarantee is made or implied.

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ES EXECUTIVE SUMMARY

On May 8, 2003, a release of approximately 3 barrels of crude oil occurred from a 14" steel pipeline at the EOTT Energy LLC (EOTT) Vacuum to Jal 14" Mainline # 3 Site (Site), EMS No. 2003-00117 (Vac to Jal #3). Plains Marketing, L.P. (Plains) currently owns the pipeline. The Site is located in unit letter A, NE¼ of the NE¼, Section 35, Township 21S, Range 37E, or more specifically at latitude 32° 26' 32.67" N and longitude 103 ° 07' 36.885" W in Lea County, New Mexico (Figure 1, Appendix A). The release was apparently caused by internal corrosion and the pipeline was repaired.

As part of the initial remediation activities impacted soil was removed and stockpiled onsite in June 2003. A total of 676 cubic yards of stockpiled soil was transported to the Lea Station Land Farm for treatment, as reported on the C-138 in April 2004 by Environmental Plus, Inc. (EPI). Part of the excavated soil was stockpiled east of the excavated area as shown in Figure 2 (Appendix A). In addition, soil samples were collected from four boreholes completed to 15 feet below ground surface (bgs) around the excavation perimeter. Analytical results indicated that total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations are below regulatory standards and generally below the detection limits.

In April 2004, a soil boring was installed to 30 feet bgs proximal to the leak origin. These analytical results show TPH concentrations above NMOCD guidelines to 30 feet bgs. The only benzene exceedance (12.7 mg/kg) was noted at approximately 17 feet bgs.

In September 2005 and December 2005 additional soil and groundwater investigation was completed by Premier which included advancing 10 soil borings and installing 10 monitor and/or recovery wells (Figure 2, Appendix A). Groundwater in monitor well MW-1 and recovery wells RW-1, RW-2 and RW-3 reported the presence of phase separated hydrocarbons (PSH). Groundwater samples collected from monitor wells MW-2 and MW-3 showed concentrations of benzene above NMOCD guidance cleanup concentration for the site. Groundwater samples collected from monitor wells MW-4, MW-5, MW-6 and MW-7 showed no concentrations of TPH or BTEX above the laboratory method detection limits. The results of these soil and groundwater investigations demonstrate that hydrocarbons in soil and groundwater have been delineated at the Site.

The objectives of this soil remediation plan are to isolate and control contaminants of concern (COCs) in the soil and to prevent further impact to groundwater.

Soil stockpile confirmation samples will be collected to verify that COC concentrations in the stockpiled soil meet remediation goals. The soils around and underneath the exposed pipeline will be excavated to appropriate depth to allow the placement of the liner.

Based on the meeting with Mr. Ed Martin of NMOCD Environmental Bureau at the site in April 2006, and his review of existing data, a site specific risk-based cleanup goal for excavated soil was established at 1,000 mg/kg TPH to use as a backfill.

The base of the excavation will be inspected for debris that may have the potential to damage the liner. Such debris will be removed and the base of the excavation will be graded with a high central area. The impermeable liner will be placed into the excavation and secured with 6 inches of non-impacted soil. The excavation will then be backfilled with treated/blended soil which has met the NMOCD risk-based standards set for the site. The surface vegetation will be restored by reseeding or as negotiated with the landowner.

Groundwater remediation will continue by hand bailing of PSH and using oil absorbent socks between bailing events. Bailing is currently completed on a semi-monthly basis. This frequency will increase or decrease based on changing PSH levels in the wells. Monitor wells without the presence of PSH will be sampled on a quarterly basis.

1.0 INTRODUCTION AND SITE HISTORY

Premier Environmental Services, Inc. (Premier) has been retained by Plains Marketing, L.P. (Plains) to complete delineation and remediation at the Vacuum to Jal 14" Mainline #3 Crude oil release Site (Site) (Plains EMS Nos. 2003-00117).

The release was apparently caused by internal corrosion and occurred on May 8, 2003 while the pipeline was owned and operated by EOTT Energy (EOTT). The pipeline is now owned by Plains Marketing, L.P. (Plains). The Site is located in unit letter A, NE¼ of the NE¼, Section 35 Township 21S, Range 37E, or more specifically at latitude 32° 26' 32.67" N and longitude 103° 07' 36.885" W in Lea County, New Mexico (Figure 1, Appendix A). The release was below the reportable quantity and was not initially reported to the New Mexico Oil Conservation Division (NMOCD).

The initial investigation of the release took place in June 2003 through the installation of four borings and collection of soil samples at selected intervals by Environmental Plus, Inc. (EPI). According to Mr. Pat McCasland (with EPI), remedial excavation was conducted in June 2003 until Volatile Organic Concentration (VOC) headspace analysis showed concentrations less than 100 parts per million (ppm), and excavated soil was stockpiled onsite. A total of 676 cubic yards of stockpiled soil was transported to the Lea Station Land Farm for treatment, as reported on the C-138 in April 2004.

To complete delineation of hydrocarbon impact at the Site, a boring was installed in 2004 to 30 feet below ground surface (bgs) by EPI. Samples collected and analyzed from 7 feet bgs to 30 feet bgs showed benzene, toluene, ethylbenzene, and xylenes (BTEX) above regulatory standards to 17 feet bgs and total petroleum hydrocarbons (TPH) above regulatory standards to 30 feet bgs.

In September 2005 and December 2005 additional soil and groundwater investigation was completed by Premier which included advancing 10 soil borings and installing 10 monitor and/or recovery wells (Figure 2, Appendix A). Groundwater in monitor well MW-1 and recovery wells RW-1, RW-2 and RW-3 reported the presence of phase separated hydrocarbons (PSH). Groundwater samples collected from monitor wells MW-2 and MW-3 showed concentrations of benzene above NMOCD guidance cleanup concentration for the site. Groundwater samples collected from monitor wells MW-4, MW-5, MW-6 and MW-7 showed no concentrations of TPH or BTEX above the laboratory method detection limits. The results of these soil and groundwater investigations demonstrate that hydrocarbons in soil and groundwater have been delineated at the Site.

2.0 ENVIRONMENTAL CHARACTERIZATION

2.1 Geological Description

In Lea County, bedrock frequently crop out or are thinly veneered with alluvium and eolian dune sands. The bedrock outcrops range from Triassic age strata rocks to Pleistocene age sediments. The Recent Age Mescalero sands cover 80% of Lea County, and are described as fine to medium-grained and reddish brown in color. Lea County lies in the Pecos Valley Section of the Great Plains Province, very near the Southern High Plains to the east. The Tertiary Age Ogallala Formation underlies all of the High Plains and mantles several ridges in Lea County.

The Site seems to be characteristic of the High Plains, with a uniform, topographically relatively flat surface that slopes very gently to the southeast.

2.2 Land Use

Land use in the area is primarily livestock rangeland and oil field activities. Several gas compressor stations are located in the vicinity of the Site and several major oil and gas transmission lines bisect the region. The area in the immediate vicinity of the Site is sparsely populated. There is a railroad track spur in the immediate area to the north of the current open excavation.

2.3 Ground Water

The New Mexico Office of the State Engineer database lists three water wells in Section 35, T21S R37E. Total depth of two of these private use water wells appears to be 85 feet bgs and 100 feet bgs, respectively. The average depth to groundwater in these wells is not known. There are no municipal water wells within 1,000 feet of the Site. Depth to water in the ten monitor/recovery wells installed at the site as part of the investigation, ranges from 41 to 48 feet bgs.

2.4 Surface Water

There are no surface water bodies within 1,000 feet of the Site.

3.0 REGULATORY FRAMEWORK

In New Mexico, the NMOCD oversees and regulates oil, gas and geothermal activities, including compliance with environmental regulations. Guidance for cleanup of crude oil releases is provided in the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* (August 13, 1993) document. Constituents of concern, or COCs, associated with crude oil releases include TPH, and BTEX. Guidelines for these COCs in soil are evaluated based on a Site ranking system. The ranking system estimates the likelihood of exposures to the COCs and is based on the three following parameters to protect groundwater and surface water resources:

- Depth to groundwater
- Wellhead protection area
- Distance to surface water body

3.1 NMOCD Site Ranking Guidance – Initial Evaluation

The Site was initially evaluated based on the information presented in the previous sections. Based on the proximity of the Site to area water wells, surface water bodies, and depth to groundwater, the Site has an NMOCD ranking score of **20 points,** with the soil remedial goals highlighted below in the Site Ranking Matrix.

Site Ranking Matrix

<table>
<tr><th>1. Groundwater</th><th colspan="2">2. Wellhead Protection Area</th><th>3. Distance to Surface Water Body</th></tr>
<tr><td>If Depth to GW <50 feet: 20 points</td><td colspan="2" rowspan="2">If <1000' from water source, or, <200' from private domestic water source: 20 points</td><td><200 horizontal feet: 20 points</td></tr>
<tr><td>If Depth to GW 50 to 99 feet: 10 points</td><td rowspan="2">200-100 horizontal feet: 10 points</td></tr>
<tr><td>If Depth to GW >100 feet: 0 points</td><td colspan="2" rowspan="2">If >1000' from water source, or, >200' from private domestic water source: 0 points</td></tr>
<tr><td>Groundwater Score:20</td><td>>1000 horizontal feet: 0 points</td></tr>
<tr><td>Groundwater Score:20</td><td colspan="2">Wellhead Protection Area Score: 0</td><td>Surface Water Score: 0</td></tr>
<tr><td colspan="4">Site Rank (1+2+3) =20+0+0=20</td></tr>
<tr><td colspan="4">Total Site Ranking Score and Initial Guidance Cleanup Concentrations</td></tr>
<tr><td>Parameter</td><td>20 or ></td><td>10</td><td>0</td></tr>
<tr><td>Benzene</td><td>10 ppm</td><td>10 ppm</td><td>10 ppm</td></tr>
<tr><td>BTEX</td><td>50 ppm</td><td>50 ppm</td><td>50 ppm</td></tr>
<tr><td>TPH</td><td>100 ppm</td><td>1000 ppm</td><td>5000 ppm</td></tr>
</table>

4.0 SOIL AND GROUNDWATER INVESTIGATIONS

Results of the soil and groundwater investigations completed at the site are detailed in a report titled Site Investigation and Annual Report dated March 2006 and summarized in Section 1.0.

Based on the data collected during these soil and groundwater investigations it was determined that further investigation was not required to delineate hydrocarbon concentrations in the soil and groundwater at this Site.

The proposed remediation approach for this Site is to isolate and control COCs in the soil and to prevent residual contamination in the soil from further impacting groundwater. The details are specified in Section 5.

Premier proposes continuation of recovery operations (absorbent socks in all wells with PSH present), monthly gauging and quarterly groundwater sampling to address the hydrocarbons in groundwater. Oil absorbent socks have been placed in these wells as a PSH recovery technique and will be changed as necessary. Monthly gauging and quarterly groundwater sampling will be conducted to observe any changes in groundwater conditions. Should any appreciable accumulations of PSH be observed (in excess of 0.25') recovery operations will be stepped up to include hand bailing the affected wells as necessary.

5.0 PROPOSED REMEDIATION APPROACH

5.1 Objectives

The objectives of the proposed remediation approach are to isolate and control COCs in the soil and to prevent further impact to groundwater. To accomplish these goals, the proposed remediation approach will include the following:

1. Excavation of soils around the exposed portion of the pipeline and placement of a 20-mil, high-density polyurethane impermeable liner at the base of the excavation.
2. The base of the excavation will be graded with a high central area to create a drainage gradient. This will allow water that infiltrates from the surface to flow off the liner, away from residual hydrocarbons.
3. The liner will prevent precipitation from migrating down through any residual hydrocarbons in the soil column, and possibly transporting COCs to groundwater.
4. Continued PSH recovery from groundwater and on-going quarterly groundwater monitoring of dissolved phase hydrocarbons.

5.2 Remedial Plan Details

Confirmation samples will be collected from the stockpiled soil to verify that COC concentrations in the stockpiled soil meet remediation goals to be used as a backfill material. The soils around and underneath the exposed pipeline will be excavated to appropriate depth to allow the placement of the liner. The excavation depth is anticipated to be at least three feet below the bottom of the exposed pipeline. The base of the excavation will be prepared by removing debris that may damage the liner, and will than be graded with a central high point.

To isolate and control the COCs, an impermeable plastic liner (liner) will be placed at the base of the graded excavation. This will prevent infiltration and migration of surface water through residual hydrocarbons in soil, preventing migration of COCs to groundwater.

Specifically, a 20-mil, high-density polyurethane impermeable liner will be placed at the base of the excavation. If possible, the liner will be placed as a single continuous barrier which may require some sealing (or welding) and secured with 6 inches of clean, imported soil. The excavation will then be backfilled with treated/blended soil. Special care will be taken to ensure a seal between the monitor well and liner. The monitor well MW-1 will be modified by adding additional PVC riser and re-completing the well at surface grade with a metal shroud in a 4 feet by 4 feet concrete pad.

5.3 Operating and Performance Monitoring Details

Treated/blended soil that contains less than 1,000 mg/kg TPH will be placed back into the excavation over the 20 mil liner. Initially, confirmation samples will be collected from treated/blended soils. Confirmation samples will be collected and analyzed based on the following protocol:

- Treated stockpile sample for on-site reuse – one sample every 250 cubic yards.
- Each treated stockpile sample will be analyzed for TPH-DRO and TPH-GRO by EPA method SW-846 8015M, BTEX by EPA method SW 846 8021B.

The base of the excavation will be inspected for debris that may have the potential to damage the liner. Such debris will be removed and the base of the excavation will be graded with a high central area. The impermeable liner will be placed into the excavation and secured with 6 inches of non-impacted soil. The excavation will then be backfilled with treated/blended soil which has met the NMOCD risk-based standards set for the site. The surface vegetation will be restored by reseeding or as negotiated with the landowner.

5.4 Schedule

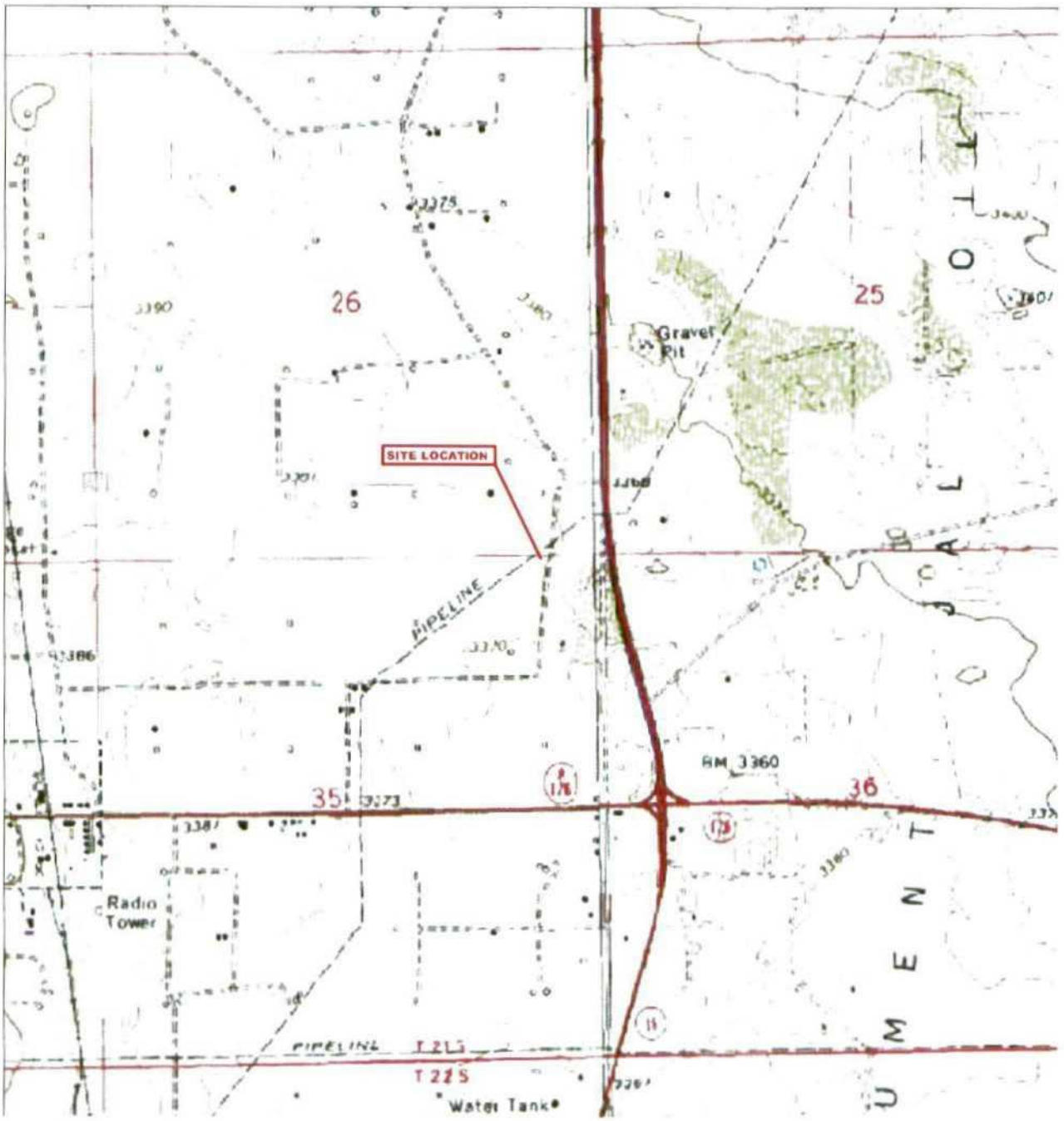
Remediation will be initiated upon receipt of written approval from the NMOCD. Stockpile confirmation samples will be submitted for analysis and upon receipt of analytical results confirming that remediation standards have been met, the base of the excavation will be graded, liner place and excavation backfilled with treated soil. Within four (4) weeks of backfilling the excavation, and grading the site to the original slopes, a final report will be submitted to Plains and the NMOCD.

Appendix A Figures

Figure 1 – Site Location Map

Figure 2 – Site Detail and Monitor Well Location Map

PREMIER



Eunice Quadrangle
32°26'34"N Latitude & 103°07'39"W Longitude

1/2 1/4 0 1/4 1/2
Distance in Miles

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 1
Site Location Map
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #3
EMS. No.: 2003-00117
Lea County, New Mexico

PROJ. NO: 205068.00	CK:	DATE: 6/05

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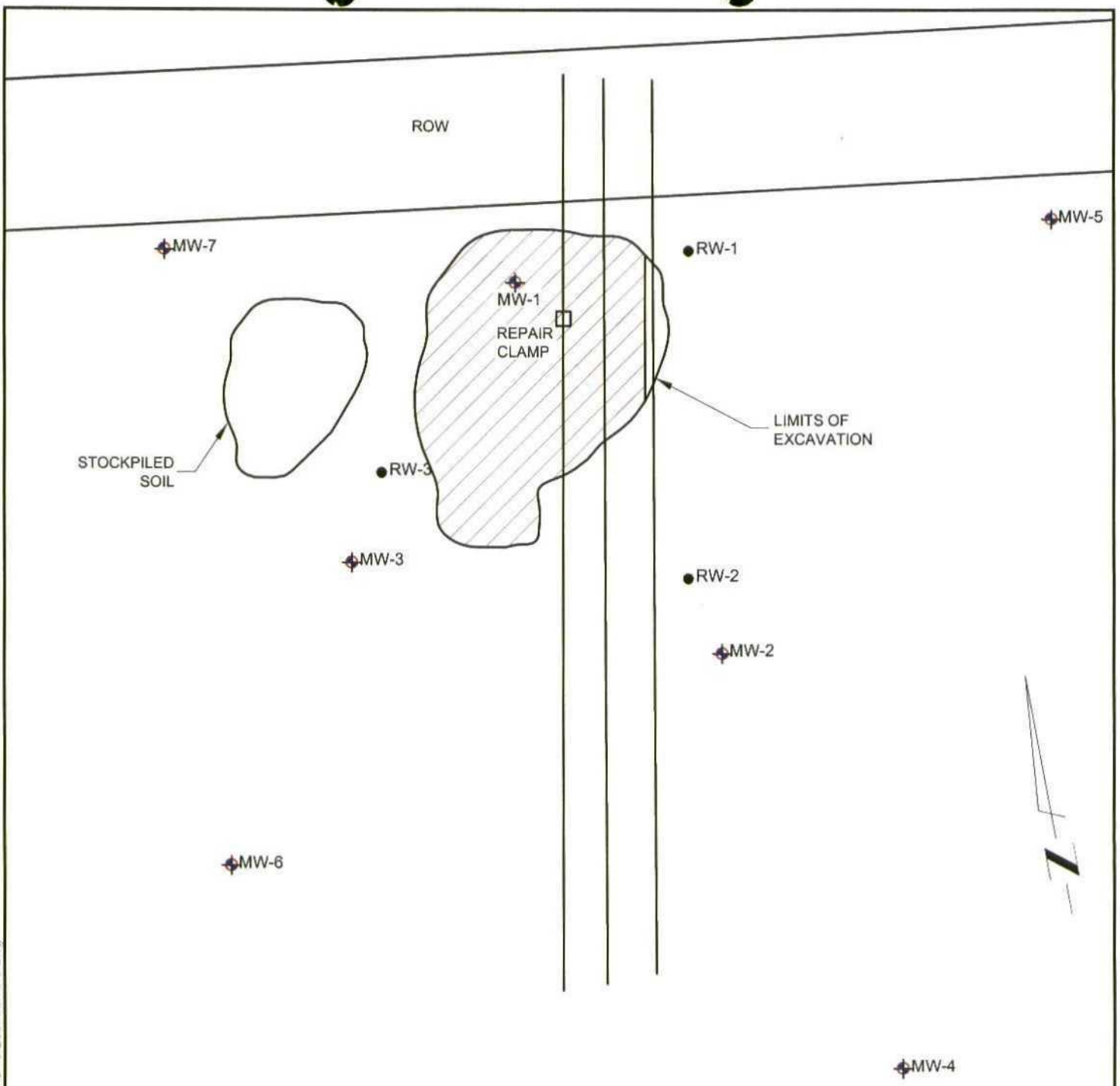

LEGEND:

- RW-1 -RECOVERY WELL LOCATION
- MW-1 -MONITORING WELL LOCATION
- -LOCATION OF LINER IN EXCAVATION

0 30

FEET
APPROXIMATE SCALE

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 2
Site Detail & Monitoring Well Location Map
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #3
EMS. No.: 2003-00117
Lea County, New Mexico

PROJ. NO: 205068.00	CK:	DATE: 5/06

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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 27, 2006

Mr. Daniel Bryant
Plains Marketing, L.P.
P.O. Box 3371
Midland, TX 79702

Dear Mr. Bryant:

Per our discussions on April 26, 2006, work plans are to be submitted on the following sites:

Delrose Scott Hugh Site	1R-0463
Vacuum to Jal 14" Mainline #3 Site	1R-0455
Vacuum to Jal 14" Mainline #5 Site	1R-0464

These work plans will detail the activities we discussed during our visits to the sites. They need not be elaborate, but should adequately describe the remediation of the soil and protection of the groundwater at the sites. Please have these prepared as soon as possible, so that work may begin quickly.

If you have any questions, contact me at (505) 476-3492 or ed.martin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Ed Martin

Edwin E. Martin
Environmental Bureau

Copy: NMOCD, Hobbs
Will Murley, Premier
Chan Patel, Premier

PLAINS
ALL AMERICAN

March 24, 2006

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

Re: Plains All American – Annual Monitoring Reports
2 Sites in Lea County, New Mexico

Dear Mr. Martin:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

Del Rose Scott Hugh	Section 26, Township 21 South, Range 37 East, Lea County
Vacuum to Jal 14" Mainline #3	Section 35, Township 21 South, Range 37 East, Lea County

Premier prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Premier in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (432) 557-5865.

Sincerely,

Daniel Bryant
Environmental Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

SITE INVESTIGATION AND ANNUAL REPORT

VACUUM TO JAL 14" MAINLINE #3
PLAINS EMS NO. 2003-00117
UL-A SECTION 35 T21S R37E
Lea County, New Mexico

1R-455

PREPARED FOR

PLAINS MARKETING, L.P.

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HOUSTON, TEXAS 77002

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Project No. 205068.00

March 2006

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Senior Project Manager

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Figure 2 – Site Detail and Monitor Well Location Map
Figure 3 – Groundwater Gradient Map
Figure 4 – December 2005 - PSH and Benzene in Groundwater

Appendix B Tables

Table 2 – December 2005 - Soil Sample Analytical Results
Table 3 – December 2005 - Groundwater Sample Analytical Results
Table 4 – Groundwater Gauging Data

Appendix C Analytical Reports – CD Enclosed

Appendix D Soil Boring Logs

DISCLAIMER

Premier has examined and relied upon the file information provided by Plains and Environmental Plus, Inc. (EPI). Premier has not conducted an independent examination of the information contained in the Plains files; furthermore, we assume the genuineness of the documents reviewed and that the information provided in these documents to be true and accurate. Premier has prepared this report using the level of care and professionalism in the industry for similar projects under similar conditions. Premier will not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this report was prepared. Premier believes the conclusions stated herein are factual, but no guarantee is made or implied.

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ES EXECUTIVE SUMMARY

On May 8, 2003, a release of approximately 3 barrels of crude oil occurred from a 14" steel pipeline at the EOTT Energy LLC (EOTT) Vacuum to Jal 14" Mainline # 3 Site (Site), EMS No. 2003-00117 (Vac to Jal #3). Plains Marketing, L.P. (Plains) currently owns the pipeline. The Site is located in unit letter A, NE¼ of the NE¼, Section 35, Township 21S, Range 37E, or more specifically at latitude 32° 26' 32.67" N and longitude 103 ° 07' 36.885" W in Lea County, New Mexico (Figure 1, Appendix A). The release was apparently caused by internal corrosion and the pipeline was repaired.

The irregularly shaped spill area was approximately 566 square feet, according to Mr. Pat McCasland with Environmental Plus, Inc. (EPI). As part of the initial remediation activities impacted soil was removed and stockpiled onsite in June 2003. In addition, soil samples were collected from four boreholes completed to 15 feet below ground surface (bgs) around the excavation perimeter. Analytical results indicated that Total Petroleum Hydrocarbons (TPH) and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) concentrations are below regulatory standards and generally below the detection limits.

In April 2004, a soil boring was installed to 30 feet bgs proximal to the leak origin. These analytical results show TPH concentrations above NMOCD guidelines to 30 feet bgs. The only benzene exceedance (12.7 mg/kg) was noted at 17 ft bgs.

In September and December 2005, Premier conducted an additional site investigation by installing a soil boring within the excavation close to the initial release point. Groundwater was encountered at 37 feet below ground surface (bgs) in soil that appeared to be impacted. Phase separated hydrocarbons (PSH) were suspected near the groundwater interface and the soil boring was converted to monitor well MW-1. Two additional monitor wells (MW-2 and MW-3) were installed to determine groundwater gradient and to evaluate PSH impact. Groundwater samples collected in October 2005 from monitor wells MW-2 and MW-3 show that BTEX is present in groundwater at the Site.

In addition, eight soil borings were advanced to a maximum depth of 55 feet bgs. These borings were converted to two 2-inch (2") monitor wells, two 4-inch monitor wells and three 4-inch recovery wells as PSH was detected on the sampling tools and elevated readings were noted on the organic vapor meter (OVM). One boring was abandoned due to flowing sand. The borings were located on the northeast, southeast and southwest sides of the excavation. Twenty soil samples were collected from the seven borings for analysis of TPH and BTEX.

All wells at the Site were gauged and groundwater samples were collected from MW-2 through MW-7 for laboratory analyses of BTEX. Monitor well MW-1 and recovery wells RW-1 through RW-3 had PSH present and were not sampled.

Based on the 2005 soil and groundwater investigations, it appears that there is a soil horizon approximately 35 to 45 feet bgs that has TPH concentration slightly above NMOCD regulatory standards. TPH exceedances were noted in soil from

four locations (December 2005). Soil sample analytical results are presented in Table 2, Appendix B. Copies of the Laboratory Reports, Chain-of-Custody and QA/QC Documentation are presented in Appendix C. Soil boring logs are presented in Appendix D.

Benzene in groundwater was detected above regulatory standards in MW-2 and MW-3 in both the September and December 2005 groundwater sampling events. Groundwater was not sampled in MW-1 in September 2005 event due to PSH sheen. Groundwater from MW-1, RW-1, RW-2, and RW-3 was not sampled in December 2005 due to PSH sheen.

1.0 INTRODUCTION AND SITE HISTORY

Premier Environmental Services, Inc. (Premier) has been retained by Plains Marketing, L.P. (Plains) to complete this Site Investigation and Annual Report at the Vacuum to Jal 14" Mainline #3 Site (Site) (EMS Nos. 2003-00117).

A leak occurred which was apparently caused by internal corrosion on May 8, 2003. The Site is located in unit letter A, NE¼ of the NE¼, Section 35 Township 21S, Range 37E, or more specifically at latitude 32° 26' 32.67" N and longitude 103° 07' 36.885" W in Lea County, New Mexico (Figure 1, Appendix A). The release was below the reportable quantity and was not initially reported to the New Mexico Oil Conservation Division (NMOCD).

The initial investigation of the release took place in June 2003 through the installation of four borings and collection of soil samples at selected intervals by Environmental Plus, Inc. (EPI). According to Mr. Pat McCasland (with EPI), remedial excavation was conducted in June 2003 until Volatile Organic Concentration (VOC) headspace analysis showed concentrations less than 100 parts per million (ppm), and excavated soil was stockpiled onsite. Transport of 676 cubic yards of stockpiled soil to the Lea Station Land Farm for treatment was reported on the C-138 in April 2004.

To complete delineation of hydrocarbon impact at the Site, a boring was installed in 2004 to 30 feet below ground surface (bgs) by EPI. Samples collected and analyzed from 7 feet bgs to 30 feet bgs showed Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) above regulatory standards to 17 feet bgs and TPH above regulatory standards to 30 feet bgs.

In September 2005, an additional soil and groundwater investigation was completed by Premier. This investigation was further expanded in December 2005 to delineate hydrocarbons detected in groundwater.

2.0 ENVIRONMENTAL CHARACTERIZATION

2.1 Geological Description

In Lea County, bedrock frequently crop out or are thinly veneered with alluvium and eolian dune sands. The bedrock outcrops range from Triassic age strata rocks to Pleistocene age sediments. The Recent Age Mescalero sands cover 80% of Lea County, and are described as fine to medium-grained and reddish brown in color. Lea County lies in the Pecos Valley Section of the Great Plains Province, very near the Southern High Plains to the east. The Tertiary Age Ogallala Formation underlies all of the High Plains and mantles several ridges in Lea County.

The Site seems to be characteristic of the High Plains, with a uniform, topographically relatively flat surface that slopes very gently to the southeast.

2.2 Land Use

Land use in the area is primarily livestock rangeland and oil field activities. Several gas compressor stations are located in the vicinity of the Site and several major oil and gas transmission lines bisect the region. The area in the immediate vicinity of the Site is sparsely populated. There is a railroad track spur in the immediate area to the north of the current open excavation.

2.3 Ground Water

The New Mexico Office of the State Engineer database lists three water wells in Section 35, T21S R37E (Appendix E). Total depth of two of these private use water wells appears to be 85 feet bgs and one is 100 feet bgs feet. The average depth to groundwater in these wells is not known. There are no municipal water wells within 1000 feet of the Site. Depth to water in the ten monitor/recovery wells installed at the site as part of the investigation, ranges from 41 to 48 feet bgs.

2.4 Surface Water

There are no surface water bodies within 1000 feet of the Site.

3.0 REGULATORY FRAMEWORK

In New Mexico, the NMOCD oversees and regulates oil, gas and geothermal activities, including compliance with environmental regulations. Guidance for cleanup of crude oil releases is provided in the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* (August 13, 1993) document. Constituents of concern, or COCs, associated with crude oil releases include TPH, and BTEX. Guidelines for these COCs in soil are evaluated based on a Site ranking system. The ranking system estimates the likelihood of exposures to the COCs and is based on the three following parameters to protect groundwater and surface water resources:

- Depth to groundwater
- Wellhead protection area
- Distance to surface water body

3.1 NMOCD Site Ranking Guidance – Initial Evaluation

The Site was initially evaluated based on the information presented in the previous sections. Based on the proximity of the Site to area water wells, surface water bodies, and depth to groundwater, the Site has an NMOCD ranking score of **20 points,** with the soil remedial goals highlighted below in the Site Ranking Matrix.

Table 1 - Site Ranking Matrix

1. Groundwater	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or, <200' from private domestic water source: *20 points*	<200 horizontal feet: 20 points
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: 10 points
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or, >200' from private domestic water source: *0 points*	>1000 horizontal feet: 0 points
Groundwater Score:20	*Wellhead Protection Area Score: 0*	*Surface Water Score: 0*
Site Rank (1+2+3) =20+0+0=20		

Total Site Ranking Score and Initial Guidance Cleanup Concentrations

Parameter	20 or >	10	0
Benzene[1]	**10 ppm**	10 ppm	10 ppm
BTEX[1]	**50 ppm**	50 ppm	50 ppm
TPH	**100 ppm**	1000 ppm	5000 ppm

4.0 SOIL AND GROUNDWATER INVESTIGATION

4.1 Previous Soil Investigations and Results

In June 2003, four boreholes were installed to a depth of 15 feet bgs to delineate impact from the May 6, 2003 Vac to Jal 14" Mainline #3 release by EPI. According to Mr. McCasland (EPI), these borings were on the northeast, northwest, southeast, and southwest perimeter of the leak excavation. Soil samples were collected at intervals between 2 feet to 15 feet in depth and submitted to Accutest, Inc. for laboratory analyses of TPH diesel range organics (DRO), gasoline range organics (GRO), by EPA Method 8015M, and for BTEX by EPA Method 8260B. Analytical results of these borings show no impact to soil from the Vac to Jal #3 release.

In April 2004, a soil boring was installed to 30 feet bgs proximal to the leak origin. These analytical results show TPH concentrations above NMOCD guidelines to 30 feet bgs. BTEX concentrations exceed NMOCD guidelines to 17 feet bgs. The only benzene exceedance was noted at 17 feet bgs, with a concentration of 12.7 mg/kg.

In September 2005, Premier installed three soils borings, which were converted to groundwater monitor wells, as part of the investigation. Laboratory analyses of soil samples collected from monitor well MW-1 detected concentrations of TPH in excess of regulatory guidelines for this Site at 10, 35 and 40 feet bgs. Benzene, toluene, and ethylbenzene were also detected but were below regulatory standards. PSH was observed at the groundwater interface, approximately 37 feet bgs, and groundwater from this well was not sampled. TPH and BTEX concentrations in soil samples from MW-2 and MW-3 were either not detected or were below regulatory standards. Groundwater samples collected and analyzed from MW-2 and MW-3 showed concentrations of benzene above regulatory guidelines (0.389, 0.386 respectively).

Based on the September 2005 investigation and data collected, it was determined that further investigation was required to delineate hydrocarbon concentrations in the soil and groundwater at this Site.

4.2 December 2005 Soil Borings and Monitor Wells Installation

The December 2005 soil and groundwater investigation included advancing eight soil borings (SB-5 through SB-7, and MW-4 through MW-7), collection and screening of soil samples during drilling, converting the soil borings into three recovery and four monitor wells, developing and sampling the groundwater. The boreholes were advanced on December 12 through 16, 2005, one soil boring collapsed and had to be abandoned. The monitor wells were developed on December 15, 16, and 21, 2005 then purged and sampled on December 21, 2005 to complete delineation of the 2003 surface release from the fourteen-inch main pipeline.

On December 12 through 16, 2005, Mr. Will Murley, with Premier, met with representatives of Straub Drilling Corporation, from Stanton, Texas, to drill seven delineation soil borings. Figure 2, Appendix A, depicts the Site layout and soil boring locations. These boring and well locations were based on soil and water sample analytical results from the September 2005, investigation, and previously existing data. Soil samples were collected and examined by Mr. Murley and described using Unified Soil Classification System criteria, modified to include calcified soil horizons locally present. The borings are discussed below in the order of installation.

Discrete soil samples were collected using an open ended core tool mounted to the drill rod at five foot intervals. Cuttings samples were collected and analyzed continuously during drilling operations. The discrete samples were placed in self sealing polypropylene bags for visual and headspace analyses, additionally samples were collected in laboratory supplied, clean, glass containers and place in a cooler on ice in preparation for shipment to Accutest Laboratories, in Houston, Texas for laboratory analysis of TPH GRO and TPH DRO, and for BTEX by EPA method 8260B. Laboratory results are summarized on Table 2, Appendix B, and laboratory reports, QA/QC, and chain of custody documentation are presented in Appendix C. Soil boring logs are presented in Appendix D.

Soil boring SB-5/RW-1 was advanced to a depth of 55 feet bgs December 12, 2005, on the northeastern portion of the excavation, east of the three pipelines, approximately 21 feet north and 25 feet east of the resource area. The first four feet bgs was loose, silty sand, from four to 36 feet was sandy caliche. From 36 to 38 feet bgs damp, sandy gravel was encountered. From 38 to 39 feet bgs, sandy gravel with clay was encountered and the samples were damp. From 39 to 41 feet bgs, light reddish gray, silty caliche was encountered. From 41 to 55 feet bgs, silty/sandy clay with iron staining was encountered. Water was encountered at 44 feet bgs. Hydrocarbon odor was noted in the capillary zone at approximately 44 feet bgs.

PSH were observed on the sampling tools at 45 feet bgs, additionally a disposable bailer was used to confirm the presence of the PSH on groundwater after drilling was completed. This boring was completed as a four-inch PVC monitoring well to enhance future recovery operations. A 0.010-inch screen was set from the total depth of the boring (TD) at 55 feet bgs up to 35 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 55 up to 33 feet bgs. Bentonite was set and hydrated using clean water from 33 feet bgs up to 2 feet bgs. On December 15, 2005, a 4 by 4 foot pad was constructed with a steel shroud to protect the well.

Field screening included headspace analysis using an organic vapor meter (OVM). Samples were prepared from discrete soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', 35', 40', and 45' bgs). Headspace analysis indicated organic vapor concentrations of 0.0 ppm in all the samples, except for those collected from 40 and 45 feet bgs, which were 9.7 ppm and 393 ppm respectively.

Drilling was terminated after drilling approximately ten feet below the first groundwater bearing zone. Soil samples SB5-20', SB5-40', and SB5-45' were selected for laboratory analyses.

Soil boring SB-6/RW-2 was advanced to a depth of 55 feet bgs on December 13, 2005, to the southeast of MW-1 (down gradient), approximately 52 feet south and 24 feet east of the source area. Loose, silty sand was encountered from ground surface to four feet bgs, silty/sandy caliche was observed from three to 23 feet bgs. Light yellowish gray, silty gravel was encountered from 23 to 34 feet bgs. Medium to dark reddish brown clay was encountered from 34 to 55 feet bgs (total depth). Groundwater was observed at 44 feet bgs, at the base of the medium red, silty clay. Dark reddish brown, silty/gravelly clay was observed from 44 to 55 feet bgs. No samples were collected below 45 feet bgs due to PSH in the boring. No odors were noted during the drilling of this borehole until the capillary zone was penetrated at 42 feet bgs where a moderate hydrocarbon odor was noted. Water was encountered at 44 feet bgs and a strong hydrocarbon odor was noted.

PSH was observed on the sampling tool and drill rod at 45 feet bgs. The borehole was terminated at 55 feet bgs, approximately 10 feet below the uppermost groundwater bearing zone. Four-inch PVC casing was set with 20 feet of 0.010-inch slotted screen from 55 feet bgs up to 35 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 55 up to 33 feet bgs; bentonite was brought to 2 feet bgs and hydrated with clean water. On December 15, 2005, a 4 by 4 foot concrete pad was constructed with a protective steel shroud.

Field screening was conducted on soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', 35', 40', and 45'). Headspace analysis indicated of organic vapor concentrations of 0.0 ppm for all soil samples with the exception of the sample at 45 feet bgs, which had a reading of 395 ppm. Soil samples SB6-25', SB6-40', and SB6-45' were selected for laboratory analyses.

Soil boring SB-5/PMW-5 was advanced to a depth of 25 feet bgs on December 13, 2005, to the east of excavation, approximately 97 feet east and 21 feet south of the source area. No staining or odors were observed during the drilling of this borehole. Loose, silty sand was encountered from ground surface to a depth of three feet bgs. Poorly indurated sandy caliche was encountered from three to 12 feet bgs. Loose, flowing sand was encountered from 12 to 17 feet bgs. Poorly indurated, silty/sandy caliche was encountered from 17 to 25 feet bgs (total depth). The flowing sand from 12 to 17 feet continued to collapse into the hole, and samples could not be collected beyond 20 feet bgs. Field screening was conducted on soil samples collected at five foot intervals (5', 10', and 20'). Headspace analysis indicated organic vapor concentrations of 0.0 ppm on all three samples. No samples were selected for laboratory analyses.

The hole collapsed to a depth of 12 feet bgs. After several attempts were made to clear the sand without success, the hole was abandoned and plugged from 12 feet bgs to the surface using hydrated bentonite.

Soil boring MW-4 was advanced to a depth of 55 feet bgs on December 14, 2005, approximately 147 feet south and 67 feet east of the source area. No staining or odors were observed during the drilling of this borehole. Loose, silty sand was encountered from ground surface to a depth of three feet bgs. Poorly indurated, silty/sandy caliche was encountered from three to 18 feet bgs. Loose to poorly indurated, silty/sandy gravel was encountered from 18 to 22 feet bgs. Poorly to moderately indurated gravelly/sandy caliche was encountered from 22 to 32 feet bgs. Loose, dry, silty gravel was encountered from 32 to 37 feet bgs. Dark reddish brown, silty/gravelly clay was encountered from 37 to 55 feet bgs (total depth). Water was encountered at 42 feet bgs, no staining, odors, or PSH were observed at the water interface. Field screening was conducted on soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', 35', 40', and 45'). Headspace analysis indicated concentrations of organic vapor of 0.0 ppm for all soil samples. Soil samples MW4-30', MW4-40', and MW4-45' were selected for laboratory analyses.

The borehole was terminated at 55 feet bgs, approximately 10 feet below the uppermost groundwater bearing zone. Four-inch PVC casing was set with 20 feet of 0.010-inch slotted screen from 55 feet bgs up to 35 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 55 up to 33 feet bgs; bentonite was brought to 2 feet bgs and hydrated with clean water. On December 15, 2005 a 4 by 4 foot concrete pad was constructed with a steel protective shroud.

Soil boring MW-6 was advanced to a depth of 55 feet bgs on December 14, 2005, at a point approximately 107 feet south and 67 feet west of the source area. No staining or odors were observed during the drilling of this borehole. Loose, silty sand was encountered from ground surface to a depth of two feet bgs. Poorly indurated, silty/sandy caliche was encountered from two to 39 feet bgs. Medium to dark reddish brown, silty/gravelly clay was encountered from 39 to 55 feet bgs (total depth). Water was encountered at 44 feet bgs, no staining, odors, or PSH were observed at the water interface. Field screening was conducted on soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', 35', and 40'). Headspace analysis indicated concentrations of organic vapor of 0.0 ppm for all soil samples. Soil samples MW6-10', MW6-40', and MW6-45' were selected for further laboratory analyses. Soil sample MW6-45' was collected from the soil cuttings in close proximity to the water interface, a discrete sample was unobtainable due to water in the drill rod.

The borehole was terminated at 55 feet bgs, approximately 10 feet below the uppermost groundwater bearing zone. Four-inch PVC casing was set with 20 feet of 0.010-inch slotted screen from 55 feet bgs up to 35 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 55 up to

33 feet bgs; bentonite was brought to 2 feet bgs and hydrated with clean water. On December 15, 2005, a 4 by 4 foot concrete pad was constructed with a protective steel shroud.

Soil boring MW-5 was advanced to a depth of 50 feet bgs on December 15, 2005, approximately 88 feet east and 21 feet north of the source area. No staining or odors were observed during the drilling of this borehole. Loose, silty sand was encountered from ground surface to a depth of four feet bgs. Poorly indurated, silty/sandy caliche was encountered from four to six feet bgs. Loose, flowing, gravelly sand was encountered from six to 17 feet bgs. Poor to moderately indurated, silty/sandy caliche was encountered from 17 to 37 feet bgs. Gravelly, silty clay was encountered from 37 to 50 feet bgs (total depth). Water was encountered at 39 feet bgs, no staining, odors, or PSH were observed at the water interface. Field screening was conducted on soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', and 35'). Headspace analysis indicated concentrations of organic vapor of 0.0 ppm for all soil samples. Soil samples MW5-10', and MW5-35' were selected for further laboratory analyses. No sample was obtainable from 40 feet bgs due to water in the borehole.

The borehole was terminated at 50 feet bgs, approximately 10 feet below the first groundwater bearing zone. Two-inch PVC casing was set with 20 feet of 0.010-inch slotted screen from 50 feet bgs up to 30 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 50 up to 28 feet bgs.; bentonite was brought from 28 to 2 feet bgs and hydrated with clean water. On December 15, 2005, a 2 by 2 foot concrete pad was constructed with a protective steel shroud.

Soil boring MW-7 was advanced to a depth of 55 feet bgs on December 15, 2005, approximately 75 feet west and 15 feet north of the source area. No staining or odors were observed during the drilling of this borehole. Loose, silty sand was encountered from ground surface to a depth of one foot bgs. Poorly indurated, silty/sandy caliche was encountered from one to four feet bgs. Loose, sand was encountered from four to six feet bgs. Poor to moderately indurated, silty/sandy caliche was encountered from six to 46 feet bgs. Gravelly, silty clay was encountered from 46 to 55 feet bgs (total depth). Water was encountered at 43 feet bgs, no staining, odors, or PSH were observed at the water interface. The borehole was terminated at 55 feet bgs, approximately 10 feet below first groundwater. Field screening was conducted on soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', 35', and 45'). Headspace analysis indicated concentrations of organic vapor of 0.0 ppm for all soil samples. Soil samples MW7-30', MW7-40' and MW7-45' were selected for laboratory analyses.

Two-inch PVC casing was set with 20 feet of 0.010-inch slotted screen from 55 feet bgs up to 35 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 55 up to 33 feet bgs; bentonite was brought to 2

feet bgs and hydrated with clean water. On December 15, 2005, a 2 by 2 foot concrete pad was constructed with a protective steel shroud.

Soil boring SB-7/RW-3 was advanced to a depth of 55 feet bgs on December 16, 2005, approximately 36 feet west and 30 feet south of the source area. Loose, silty sand was encountered from ground surface to a depth of four and one-half feet bgs. Poorly indurated, silty/sandy caliche was encountered from four and one-half to 39 feet bgs. Gravelly, silty clay was encountered from 39 to 55 feet bgs (total depth). Water was encountered at 42 feet bgs, a slight hydrocarbon odor and PSH were observed at the water interface. The borehole was terminated at 55 feet bgs, approximately 10 feet below first groundwater. Field screening was conducted on soil samples collected at five foot intervals (5', 10', 15', 20', 25', 30', 35', and 45'). Headspace analysis indicated concentrations of organic vapor of 0.0 ppm for all soil samples with the exception of sample SB7-45', which had an OVM reading of 424 ppm. Soil samples SB7-25', SB7-40' and SB7-45' were selected for further laboratory analyses.

Four-inch PVC casing was set with 20 feet of 0.010-inch slotted screen from 55 feet bgs up to 35 feet bgs and riser pipe to the surface. 20/40 sand was used as a filter pack around the well screen from 55 up to 33 feet bgs; bentonite was brought to 2 feet bgs and hydrated with clean water. On December 16, 2005, a 4 by 4 foot concrete pad was constructed with a protective steel shroud.

4.3 December 2005 Soil Investigation Results

Eight soil borings were installed during the December 2005 Investigation, and a total of twenty soil samples were collected from seven borings, no samples from the abandoned boring were submitted for laboratory analyses. Soil samples were analyzed for TPH GRO and TPH DRO by USEPA Method 8015m, and for BTEX by EPA method 8260B. Laboratory results are summarized on Table 2, Appendix B, and laboratory reports, QA/QC, and chain of custody documentation are presented in Appendix C. Soil boring logs are presented in Appendix D.

Analytical results show TPH concentrations exceeding the NMOCD regulatory guideline of 100 ppm for soil per the Site ranking in only recovery wells RW-1 at 45 ft bgs, RW-2 at 45 ft bgs, and RW-3 at 45 ft bgs. BTEX is also detected in soil from these wells at the same intervals but concentrations are below regulatory guidelines. TPH and benzene were detected in RW-2 at 25 ft bgs and 40 ft bgs, as well as some BTEX constituents, but these concentrations are below regulatory guidelines. TPH and benzene concentrations detected in MW-4 at 30 ft bgs are below regulatory guidelines. TPH concentrations detected in MW-5 at 10 ft bgs, is also below regulatory guidelines.

4.4 December 2005 Groundwater Investigation Activities

On December 21, 2005, the wells were gauged to determine approximate groundwater levels in each well (see Table 4). PSH sheen was observed in monitor

well MW-1, and recovery wells RW-1, RW-2, and RW-3. Monitor well MW-1, and recovery wells RW-1, RW-2, and RW-3 were developed by the driller using a 10 foot long bailer and a winch truck, to rapidly develop the wells. Monitor wells MW-5 and MW-7 were developed by hand bailing a minimum of five well volumes and continuing until the bailed water cleared of sediment. Monitor wells MW-2, MW-3, MW-4, and MW-6 were purged of at least three well volumes. Groundwater samples were collected from monitor wells MW-2 through MW-7 for laboratory analyses for BTEX by EPA method 8261B. These samples were shipped overnight to Accutest Laboratories, in Houston, TX. Figure 4, Appendix A shows the groundwater gradient map for December 21, 2005. Groundwater gauging data is summarized on Table 4, Appendix B. Groundwater analytical results are summarized on Table 3, Appendix B. Laboratory Reports and Chain of Custody documentation are presented in Appendix C.

4.5 December 2005 Groundwater Investigation Results

The PSH present in monitor well MW-1, and recovery wells RW-1, RW-2 and RW-3 is of minimal thickness, as shown on Figure 5, Appendix B. Analytical results from groundwater samples collected from monitor wells MW-2 and MW-3 indicate benzene concentrations in excess of NMOCD guidelines, also shown on Figure 4, Appendix B. No PSH was observed in these wells, indicating dissolved phase hydrocarbon (DPH) impact. No BTEX constituents were detected in groundwater samples collected from monitor wells MW-4 through MW-7.

5.0 CONCLUSIONS

The September and December 2005 Site subsurface investigation at the Vac to Jal Mainline # 3 Site included advancing 10 soil borings and installing 10 monitor and/or recovery wells to delineate soil and groundwater impact at the at the Site. The data collected illustrates the following:

- Soil samples collected from the monitor well MW-1 boring detected TPH concentrations above 100 mg/kg down to the first water bearing zone at a depth of 45 feet bgs. This indicates hydrocarbons migrated from the release point to groundwater in this area of the site, as anticipated.
- Soil samples collected from recovery well RW-1, RW-2 and RW-3 boring detected no TPH concentrations from ground surface to total depth except at 45 feet bgs above NMOCD guidance cleanup concentrations for the site. This indicates the hydrocarbons in these soil samples (vadose zone) are due to hydrocarbons migration in groundwater through this interval in the subsurface.
- Soil samples from the monitor wells MW-2 and MW-3 boring detected no TPH concentrations from ground surface to total depth of 45 feet bgs above NMOCD guidance cleanup concentrations for the site.
- Groundwater in monitor well MW-1 and recovery wells RW-1, RW-2 and RW-3 all displayed PSH sheen. Monitor wells MW-2 and MW-3 showed concentrations of Benzene above NMOCD guidance cleanup concentrations for the site.
- Water samples collected from monitor wells MW-4, WM-5, MW-6 and MW-7 showed no concentrations of TPH or BTEX above the method detection limit.

The results of this soil and groundwater investigation demonstrate that hydrocarbons in groundwater and soil have been delineated at the Site.

6.0 COMPREHENSIVE REMEDIAL CLOSURE STRATEGY FOR SOIL AND GROUNDWATER

The irregularly shaped Vac to Jal #3 spill area was approximately 566 square feet, according to documents in the spill file. Impacted soil was excavated and approximately 676 yds^3 was transported for treatment to the Lea Station Land Farm in April 2004. The excavation remains open, and according to Mr. McCasland, clean soil was transported to the site and is stockpiled onsite for use as backfill. The excavation is limited due to the proximity of the railroad spur right-of-way.

The September and December 2005 site subsurface investigation at Site included advancing 10 soil borings and installing 10 monitor and/or recovery wells to delineate soil and groundwater impact at the at the Site. The results of this soil and groundwater investigation demonstrate that hydrocarbons in groundwater and soil have been delineated at the Site.

A risk-based closure is planned to address the hydrocarbons in the base of the excavation. Initially sidewall confirmation samples will be collected every 50 linear feet. Based on observations of the sidewalls the anticipated samples results should illustrate no additional excavation of the sidewalls are required. Excavation to the north is restricted due to the presence of railroad right-of-way. A liner (clay or synthetic) will be placed into the base of the excavation and the excavation backfilled. Special care will be taken to ensure a seal between the monitor well and liner. The monitor well MW-1 will be modified by adding additional PVC riser and re-completing the well at surface grade with a metal shroud in a 4 feet by 4 feet concrete pad. Upon completion of the sidewall confirmation soil sampling, a Soil Closure Proposal will be prepared and submitted to the NMOCD for approval.

Currently, PSH (when present) is recovered by manual bailing product from the recovery wells or removed with the use of absorbent socks. Wells with no PSH present are sampled on a quarterly basis to evaluate any changes in groundwater at Site conditions.

Premier proposes continuation of recovery operations (absorbent socks in all wells with PSH present), monthly gauging and quarterly groundwater sampling to address the hydrocarbons in groundwater. Oil absorbent socks have been placed in these wells as a PSH recovery technique and will be changed as necessary. Monthly gauging and quarterly groundwater sampling will be conducted to observe any changes in groundwater conditions. Should any appreciable accumulations of PSH be observed (in excess of 0.25') recovery operations will be stepped up to include hand bailing the affected wells weekly.

Appendix A Figures

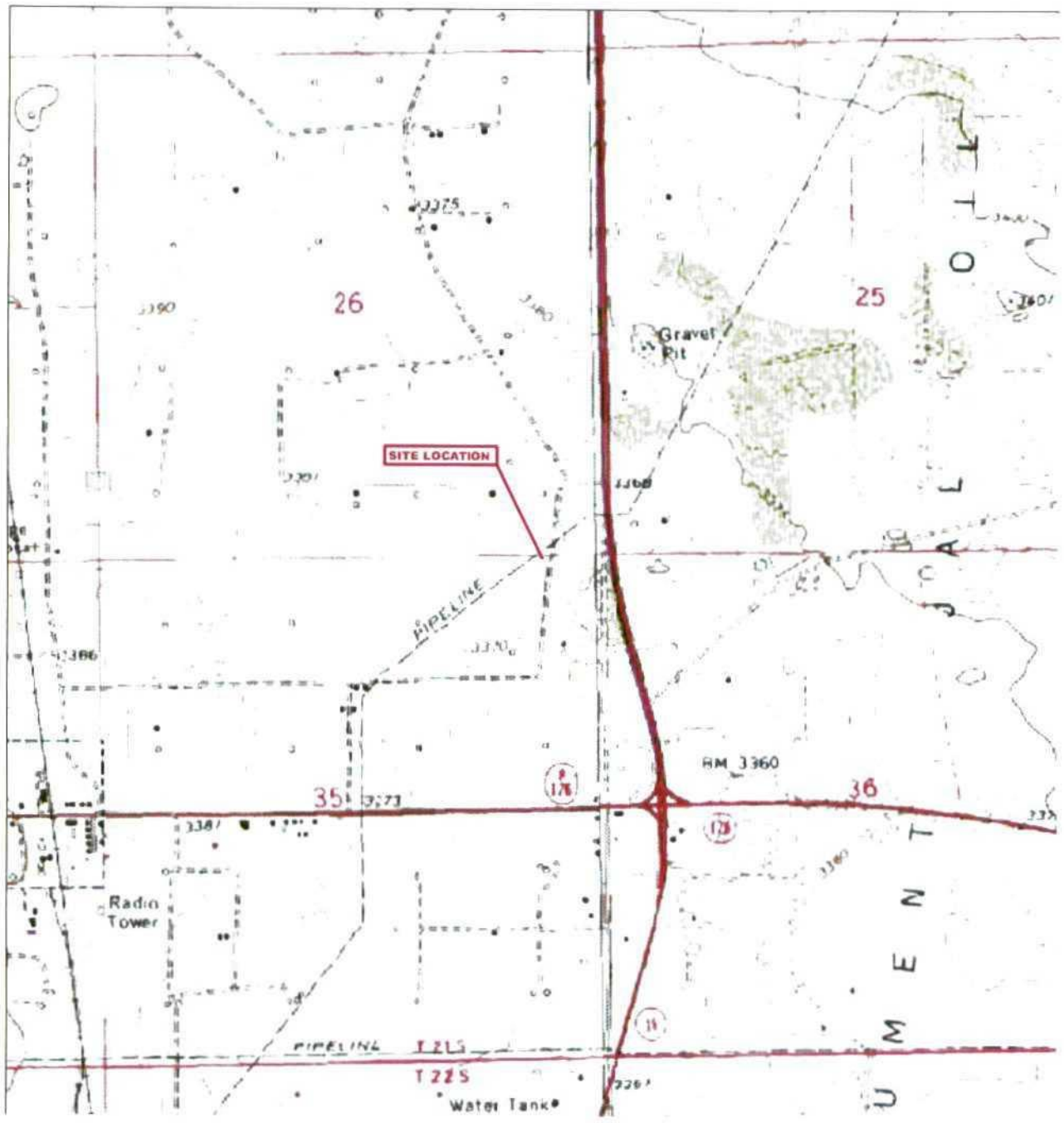
Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – December 21, 2005, Groundwater Gradient Map

Figure 4 – December 2005 - PSH and Benzene in Groundwater

PREMIER



Eunice Quadrangle
32°26'34"N Latitude & 103°07'39"W Longitude

1/2 1/4 0 1/4 1/2
Distance in Miles

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 1
Site Location Map
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #3
EMS. No.: 2003-00117
Lea County, New Mexico

PROJ. NO: 205068.00	CK:	DATE: 6/05

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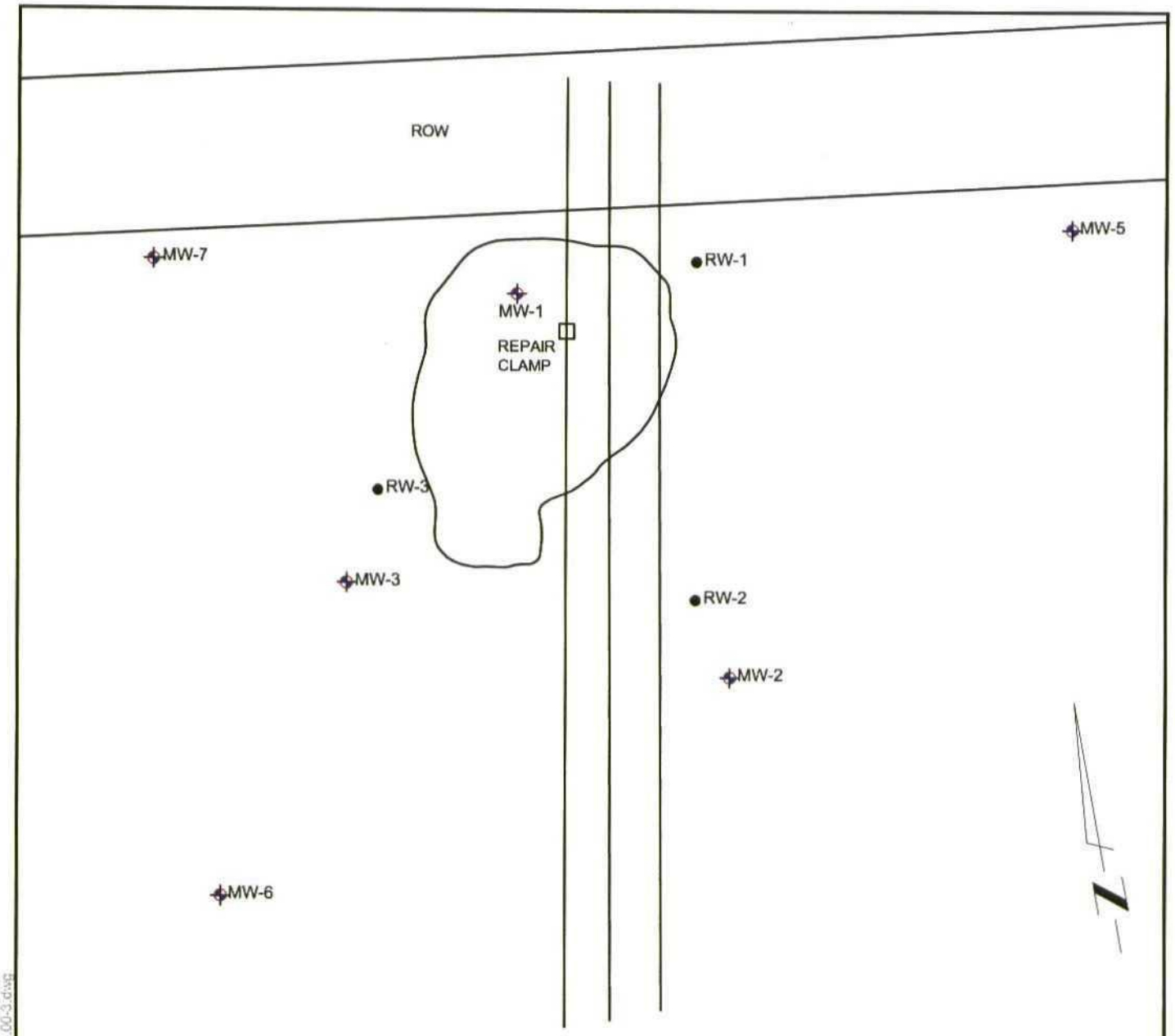

LEGEND:

- RW-1 -RECOVERY WELL LOCATION
- MW-1 -MONITORING WELL LOCATION

0 30

FEET
APPROXIMATE SCALE

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 2
Site Detail and Monitor Well Location Map
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #3
EMS. No.: 2003-00117
Lea County, New Mexico

PROJ. NO: 205068.00	CK:	DATE: 1/06

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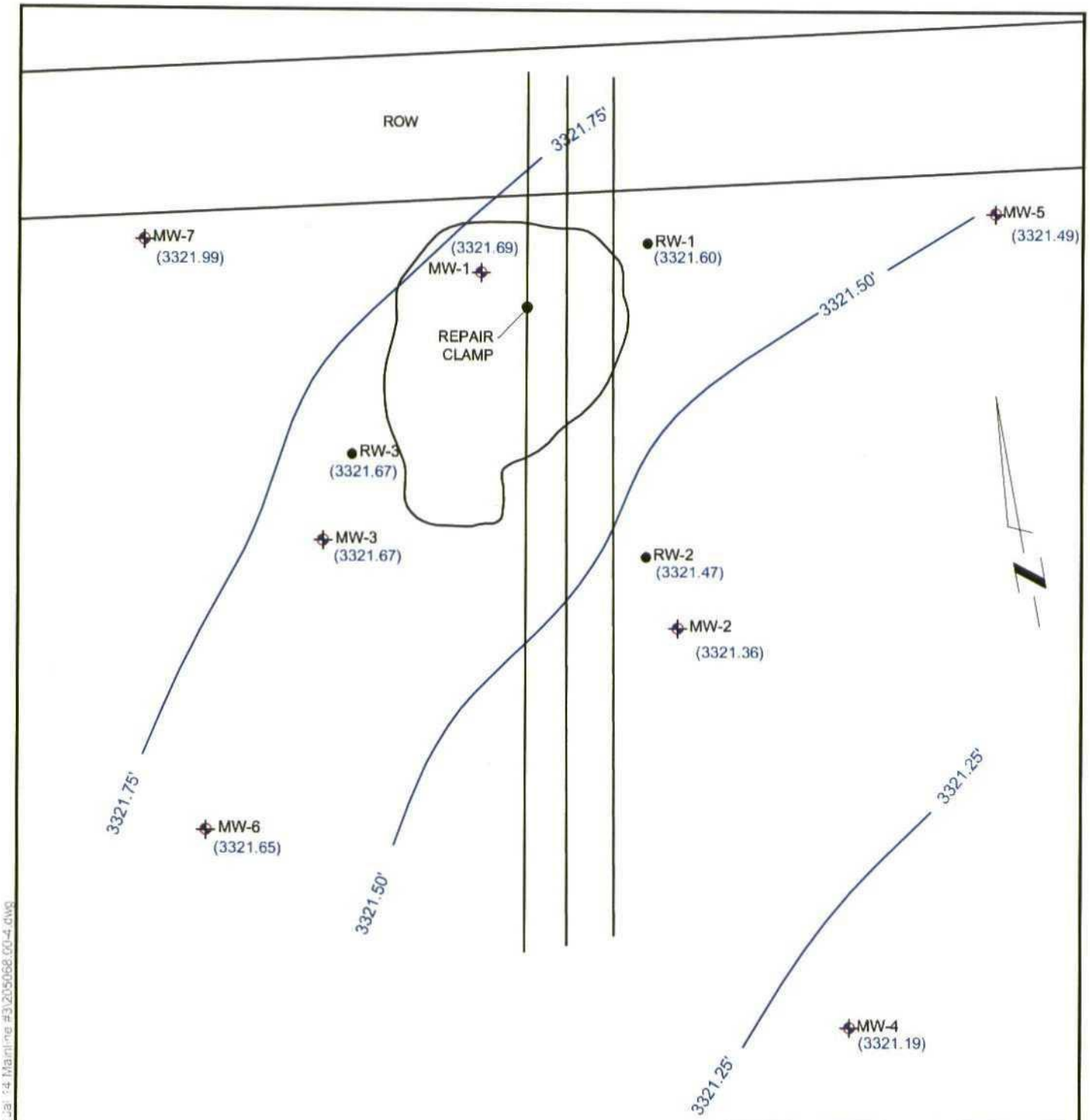

LEGEND:

- RW-1 - RECOVERY WELL LOCATION
- MW-1 - MONITORING WELL LOCATION
- (3121.35) - Corrected Ground Water Elevation, ft.
- 3321.00' - Ground Water Elevation Contour, ft. Contour Interval=0.25 ft.
- Apparent Ground Water Flow Direction

0 30
FEET
APPROXIMATE SCALE

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 3
Groundwater Gradient Map
December 21, 2005
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #3
EMS. No.: 2003-00117
Lea County, New Mexico

PROJ. NO: 205068.00	CK:	DATE: 1/06

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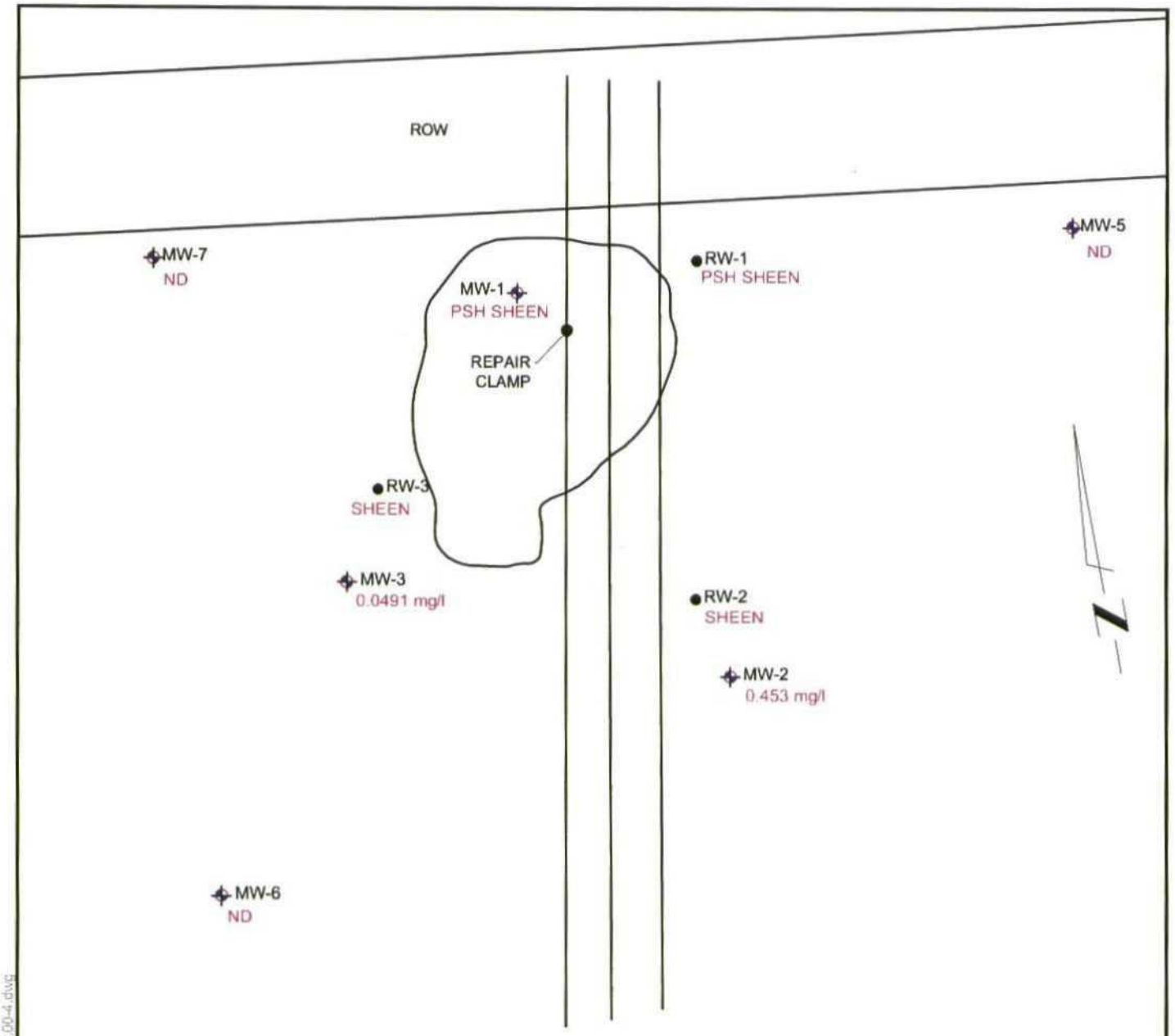

LEGEND:

- RW-1 - RECOVERY WELL LOCATION
- MW-1 - MONITORING WELL LOCATION
- mg/l - BENZENE CONCENTRATION

0 30

FEET
APPROXIMATE SCALE

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 4
PSH Benzene Concentrations in Groundwater - December 21, 2005
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #3
EMS. No.: 2003-00117
Lea County, New Mexico

PROJ. NO: 205068.00	CK:	DATE: 1/06

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Appendix B Tables

Table 1 – Site Ranking Matrix (Section 3.1)

Table 2 – December 2005 - Soil Sample Analytical Results

Table 3 – December 2005 - Groundwater Sample Analytical Results

Table 4 – Groundwater Gauging Data

Table 2
Soil Sample Analytical Results
EMS No. 2003-00117
Plains Marketing, L.P.
Vacuum to Jal 14' Mainline #3
Lea County, New Mexico

Borehole	Sample Interval Feet BGS	Sample Name	Laboratory Sample ID	Date Taken	DRO mg/Kg	GRO mg/Kg	TPH 8015 m mg/Kg	BTEX 8260b mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg	Total Xylenes mg/Kg	OVM Readings ppm
MW-1	10	SB1-10'	T11459-1	9/12/2005	57	81	138	1.7328	0.0438	0.399	1.29	<0.027	186
MW-1	35	SB1-35'	T11459-2	9/12/2005	477	96.8	573.8	8.733	0.183	1.81	4.14	2.6	235
MW-1	45	SB1-45'	T11459-3	9/12/2005	376	13.6	711.8	3.543	0.187	0.757	1.83	0.769	224
MW-2	15	SB2-15'	T11459-4	9/13/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-2	25	SB2-25'	T11459-5	9/13/2005	<5	<5	<5	0.008	<0.020	0.0019	0.0057	<0.020	6.8
MW-2	45	SB2-45'	T11459-6	9/13/2005	<5	<5	<5	0.0311	0.0153	0.0016	0.0063	0.0079	3.0
MW-3	10	SB3-10'	T11459-7	9/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-3	35	SB3-35'	T11459-8	9/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-3	45	SB3-45'	T11459-9	9/14/2005	<5	<5	<5	0.021	<0.020	<0.020	0.018	0.0025	0.0
RW-1	20	SB5-20'	T12153-1	12/12/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
RW-1	40	SB5-40'	T12153-2	12/12/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	9.7
RW-1	45	SB5-45'	T12153-3	12/12/2005	1600	1230	2830	44.05	1.11	10.0	9.84	23.1	393
RW-2	25	SB6-25'	T12153-4	12/13/2005	5.12	<5	5.12	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
RW-2	40	SB6-40'	T12153-5	12/13/2005	18.30	<5	18.30	0.029	<0.020	0.0026	0.0055	0.0207	0.0
RW-2	45	SB6-45'	T12153-6	12/13/2005	408	233	641	7.206	<0.020	0.726	1.75	4.73	395
RW-3	25	SB7-25'	T12153-18	12/16/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
RW-3	40	SB7-40'	T12153-19	12/16/2005	<5	<5	<5	0.142	0.007	0.0886	0.0161	0.0303	0.0
RW-3	45	SB7-45'	T12153-20	12/16/2005	1010	461	1471	19.44	0.11	2.77	4.76	11.8	424
MW-4	30	MW4-30'	T12153-7	12/14/2005	6.21	<5	6.21	0.0035	0.0035	<0.020	<0.020	<0.020	0.0
MW-4	40	MW4-40'	T12153-8	12/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-4	45	MW4-45'	T12153-9	12/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-5	10	MW5-10'	T12153-13	12/15/2005	5.52	<5	5.52	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-5	35	MW5-35'	T12153-14	12/15/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-6	10	MW6-10'	T12153-10	12/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-6	40	MW6-40'	T12153-11	12/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-6	45	MW6-45'	T12153-12	12/14/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-7	30	MW7-25'	T12153-15	12/15/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-7	40	MW7-40'	T12153-16	12/15/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0
MW-7	45	MW7-45'	T12153-17	12/15/2005	<5	<5	<5	<0.020	<0.020	<0.020	<0.020	<0.020	0.0

BGS - Below Ground Surface DRO - Diesel Range Organics GRO - Gasoline Range Organics OVM - Organic Vapor Meter

Table 3
Groundwater Samples - Analytical Results
Plains Marketing L.P. EMS No.2003-00117
Vacuum to Jal 14" Mainline #3
Lea County, New Mexico

Monitor Well (MW) Number	Date Sampled	Laboratory Sample ID	Total BTEX mg/L	Benzene mg/L	Ethylbenzene mg/L	Total Xylene mg/L	Toluene mg/L	Comment
MW 1								Not sampled due to the presence of PSH
MW-1								Not sampled due to the presence of PSH
MW 2	10/5/2005	T11568-1	0.705	**0.389**	0.0157	0.139	0.161	
MW-2	12/21/2005	T12190-1	0.6835	**0.453**	0.0295	0.032	0.169	
MW 3	10/5/2005	T11568-2	0.679	**0.386**	0.0193	0.0864	0.187	
MW-3	12/21/2005	T12190-2	0.0911	**0.0491**	0.0231	0.0014	0.0175	
MW-4	12/21/2005	T12190-3	<0.006	<0.002	<0.002	<0.002	<0.006	
MW-5	12/21/2005	T12190-4	<0.006	<0.002	<0.002	<0.002	<0.006	
MW-6	12/21/2005	T21290-5	<0.006	<0.002	<0.002	<0.002	<0.006	
MW-7	12/21/2005	T12190-6	<0.006	<0.002	<0.002	<0.002	<0.006	
RW-1								Not sampled due to the presence of PSH
RW-2								Not sampled due to the presence of PSH
RW-3								Not sampled due to the presence of PSH
TDS	10/5/2005	T11568-2						1220 mg/L
Trip Blank	10/5/2005	T11568-3	0.000	<0.00047	<0.00048	<0.002	<0.00054	

Concentrations in bold above Regulatory limits

Table 4
Groundwater Gauging Data
Plains Marketing L.P. EMS No. 2003-00117
Vacuum to Jal 14" Mainline #3
Lea County, New Mexico

Well No.	Date Measured	TOC Elevation	Depth of Well	Depth to PSH	Depth to Water	PSH Thickness	Recovery Method	PSH Recovered (gallons)	Corrected Groundwater Elevation
MW-1	09/14/05	3362.64		36.42	36.42	0	install sock		3326.22
MW-1	09/20/05	3362.64	50.7	40.37	40.37	0.00	flip sock		3322.27
MW-1	09/21/05	3362.64		41.00	41.02	0.02	new sock		3321.64
MW-1	10/05/05	3362.64		41.00	41.15	0.15	flip sock		3321.62
MW-1	10/27/05	3362.64		41.23	41.24	0.01	new sock		3321.41
MW-1	11/10/05	3362.64		41.22	41.23	0.01	flip sock		3321.42
MW-1	12/21/05	3362.64		40.95	40.95	0	new sock		3321.69
MW-1	12/29/05	3362.64		40.77	40.77	0	flip sock		3321.87
MW-1	01/05/06	3362.64		41.03	41.05	0.02	new sock		3321.61
MW-1	02/09/06	3362.64		40.87	40.88	0.01	new sock		3321.77
MW-1	02/22/06	3362.64		40.77	40.78	0.01	flip sock		3321.87
MW-2	09/14/05	3367.00			43.42	0.00			3323.58
MW-2	09/20/05	3367.00	58.30		45.76	0.00			3321.24
MW-2	09/21/05	3367.00			45.74	0.00			3321.26
MW-2	10/05/05	3367.00			45.68	0.00			3321.32
MW-2	10/27/05	3367.00			45.74	0.00			3321.26
MW-2	11/10/05	3367.00			45.74	0.00			3321.26
MW-2	12/21/05	3367.00	56.25		45.64	0.00			3321.36
MW-2	12/29/05	3367.00			45.46	0.00			3321.54
MW-2	01/05/06	3367.00			45.76	0.00			3321.24
MW-2	02/09/06	3367.00			45.58	0.00			3321.42
MW-2	02/22/06	3367.00			45.48	0.00			3321.52
MW-3	09/14/05	3369.10			43.84	0.00			3325.26
MW-3	09/20/05	3369.1	58.42		47.58	0.00			3321.52
MW-3	09/21/05	3369.1			47.52	0.00			3321.58
MW-3	10/05/05	3369.1			47.50	0.00			3321.60
MW-3	10/27/05	3369.1			47.55	0.00			3321.55
MW-3	11/10/05	3369.1			47.55	0.00			3321.55
MW-3	12/21/05	3369.1	55.90		47.43	0.00			3321.67
MW-3	12/29/05	3369.1			47.23	0.00			3321.87
MW-3	01/05/06	3369.1			47.50	0.00			3321.60
MW-3	02/09/06	3369.1			47.33	0.00			3321.77
MW-3	02/22/06	3369.1			47.24	0.00			3321.86
MW-4	12/21/05	3365.12	59.50		43.93	0.00			3321.19
MW-4	12/29/05	3365.12			43.76	0.00			3321.36
MW-4	01/05/06	3365.12			44.02	0.00			3321.10
MW-4	02/09/06	3365.12			43.82	0.00			3321.30
MW-4	02/22/06	3365.12			43.80	0.00			3321.32
MW-5	12/21/05	3364.74	53.88		43.25	0.00			3321.49
MW-5	12/29/05	3364.74			43.05	0.00			3321.69
MW-5	01/05/06	3364.74			43.36	0.00			3321.38
MW-5	02/08/06	3364.74			43.13	0.00			3321.61
MW-5	02/22/06	3364.74			43.12	0.00			3321.62
MW-6	12/21/05	3368.96	59.44		47.31	0.00			3321.65
MW-6	12/29/05	3368.96			47.16	0.00			3321.80
MW-6	01/05/06	3368.96			47.40	0.00			3321.56
MW-6	02/09/06	3368.96			47.15	0.00			3321.81

Table 4
Groundwater Gauging Data
Plains Marketing L.P. EMS No. 2003-00117
Vacuum to Jal 14" Mainline #3
Lea County, New Mexico

Well No.	Date Measured	TOC Elevation	Depth of Well	Depth to PSH	Depth to Water	PSH Thickness	Recovery Method	PSH Recovered (gallons)	Corrected Groundwater Elevation
MW-6	02/22/06	3368.96			47.12	0.00			3321.84
MW-7	12/21/05	3370.25	59.35		48.26	0.00			3321.99
MW-7	12/29/05	3370.25			48.05	0.00			3322.20
MW-7	01/05/06	3370.25			48.31	0.00			3321.94
MW-7	02/09/06	3370.25			48.09	0.00			3322.16
MW-7	02/22/06	3370.25			48.06	0.00			3322.19
RW-1	12/21/05	3368.12	60.50	46.52	46.52	0.00	install sock		3321.60
RW-1	12/29/05	3368.12		46.28	46.28	0.00	sock		3321.84
RW-1	01/05/06	3368.12		46.60	46.60	0.00	sock		3321.52
RW-1	02/09/06	3368.12		46.35	46.35	0.00	sock		3321.77
RW-1	02/22/06	3368.12		46.30	46.30	0.00	sock		3321.82
RW-2	12/21/05	3368.32	60.02	46.85	46.85	0.00	install sock		3321.47
RW-2	12/29/05	3368.32		46.63	46.63	0.00	sock		3321.69
RW-2	01/05/06	3368.32		46.94	46.94	0.00	sock		3321.38
RW-2	02/09/06	3368.32		46.71	46.71	0.00	sock		3321.61
RW-2	02/22/06	3368.32		46.68	46.68	0.00	sock		3321.64
RW-3	12/21/05	3369.05	60.30	47.38	47.38	0.00	install sock		3321.67
RW-3	12/29/05	3369.05		47.16	47.16	0.00	sock		3321.89
RW-3	01/05/06	3369.05		47.43	47.43	0.00	sock		3321.62
RW-3	02/09/06	3369.05		47.16	47.16	0.00	sock		3321.89
RW-3	02/22/06	3369.05		47.15	47.15	0.00	sock		3321.90

Appendix C Analytical Reports

September 2005 – Soil Samples – Analytical Results – T11459
December 2005 – Groundwater Samples – Analytical Results – T12190
October 2005 – Groundwater Samples – Analytical Results – T11568
December 2005 – Soil Samples – Analytical Results – T12153

(CD Enclosed)

PREMIER

Appendix D Soil Boring Logs

PREMIER

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-1 (SB-1)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 45 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) –

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 9/12/05

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

LOCATION MAP

slight odor

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SM	Silty Sand, light reddish grey, damp, low plasticity, fine to very fine grained, poorly sorted, subangular.		
4		100		3.0	CAL	Sandy Caliche, light grey, dry, low plasticity, very fine grained, poorly sorted, subangular.	SB1–3'	
6		100		1.8			SB1–5'	
8						modurate odor Odor @ 9'		
10		100		186	CAL	Sandy Caliche, light grey, dry, low plasticty, very fine grained, poorly sorted, subangular.	SB1–10'	
14		100		9.6	CAL	slight odor @ 15 Sandy Caliche, light grey, dry, low plasticty, very fine grained, poorly sorted, subangular, slight odor.	SB1–15'	
20		100		4.7	CAL	slight odor Sandy Caliche, light grey, dry, low plasticty, very fine grained, poorly sorted, subangular, slight odor.	SB1–20'	
24		100		113	CAL	slight odor Sandy Caliche, light grey, dry, low plasticty, very fine grained, poorly sorted, subangular, slight odor, iron staining.	SB1–25'	
30		100		21.8	CAL	modurate odor Red with odor @ 29'. Sandy Caliche with Clay, medium reddish brown, damp, medium plasticty, with very fine grained sand, poorly sorted, subrounded.	SB1–30'	
34		100		234.8	CL	Clayey Caliche, medium reddish brown, damp, medium plasticity, with very fine grained sand, poorly sorted, subrounded, odor.	SB1–35'	
40		100		202.6	SM	Silty Sand, light reddish grey, dry, very fine grianed, fairly sorted, subangular, sheen on tool and water.	SB1–40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER MW-1 (SB-1)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 45 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 9/12/05

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40					SM	Silty Sand, light reddish grey, dry, very fine grianed, fairly sorted, subangular, Sheen on tool and water.		
42								
44		100		224	CAL	Sandy Caliche, light reddish grey, dry, very fine grained, fairly sorted, subangular.	SB1-45'	
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

PREMIER

LOCATION MAP

WELL NUMBER MW-2 (SB-2)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 9/13/05

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Silty Sand with Clay, medium reddish brown, dry, very fine to fine grained, poorly sorted, subangular.		
4		100		2.8	SC	Sandy Caliche, light reddish grey, firm, dry, low plasticity, very fine grained, poorly sorted, subangular.	SB2-5'	
10		100		1.9	SC	Sandy Caliche, light reddish grey, loose, dry, very fine grained, fairly sorted, subangular.	SB2-10'	
14		100		0.0	SC	Sandy Caliche, light grey, firm, dry, very fine grained, fairly sorted, subangular.	SB2-15'	
20		100		3.2	ML	Silty Caliche, light grey, firm, dry, low plasticity, very fine grained, poorly sorted.	SB2-20'	
24		100		6.8	ML	Silty Caliche, light grey, firm, dry, low plasticity, very fine grained, poorly sorted.	SB2-25'	
30		100		0.0	ML	Silty Caliche, light grey, firm, dry, low plasticity, very fine grained, poorly sorted. hole heaving @ 32'	SB2-30'	
34		100		1.6	ML	Silty Caliche, light grey, powder, dry, very fine grained, poorly sorted.	SB2-35'	
40		100		0.0	CL	Clayey Caliche, medium reddish brown, firm, dry, low plasticity, very fine grained, poorly sorted.	SB2-40'	
42								

PREMIER

LOCATION MAP

WELL NUMBER MW-2 (SB-2)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 9/13/05

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42						water @ 43'		
44		100		3.0	ML	Silty Caliche, light greyish green, firm, damp, low plasticity, very fine grained, poorly sorted.	SB2-45'	
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

PREMIER

LOCATION MAP

WELL NUMBER MW-3 (SB-3)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 9/14/05

TOP OF CASING ELEV. (ft) GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Sandy Caliche, medium reddish brown, loose, dry.		
4		100		0.4	SC	Sandy Caliche, light reddish grey, loose, dry, very fine grained, poorly sorted, subangular.	SB3-5'	
10		100		0.0	SM	Sandy Caliche, light grey, loose, dry, very fine grained, fairly sorted, subangular.	SB3-10'	
14		100		0.0	SM	Sandy Caliche, light grey, loose, dry, very fine grained, fairly sorted, subangular.	SB3-15'	
20		100		0.0	CL	Clayey Caliche, light grey, firm, dry, low plasticity, very fine grained, fairly sorted, subangular.	SB3-20'	
24		100		0.0	CL	Clayey Caliche, light greyish green, firm ,dry, low plasticity, very fine grained, fairly sorted, subangular.	SB3-25'	
30		100		0.0	SC	Sandy Caliche, light greyish green, loose, dry, low plasticity, very fine to coarse grained, poorly sorted, subrounded. hole heaving @ 32'	SB3-30'	
34		100		0.0	SC	Sandy Caliche, light reddish grey, loose, dry, low plasticity, very fine to coarse grained, poorly sorted, subrounded.	SB3-35'	
40		100		0.0	SC	Sandy Caliche, medium reddish grey, loose, dry, very fine to fine grained, poorly sorted, subangular.	SB3-40'	

PREMIER

LOCATION MAP

WELL NUMBER MW-3 (SB-3)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 9/14/05

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42						water @ 44'		
44		100		0.0	CL	Clayey Caliche, red, loose, wet, fair plasticity, very fine to coarse grained, poorly sorted, subrounded.	SB3-45'	
46					SC	Sandy Caliche, light greyish green, loose, damp, very fine to coarse grained, poorly sorted, subangular.		
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-4

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

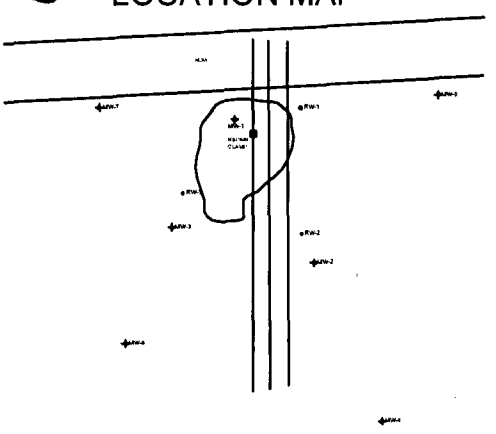
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/14/05 0829

TOP OF CASING ELEV. (ft) 3365.12 GROUND SURFACE ELV. (ft) _____

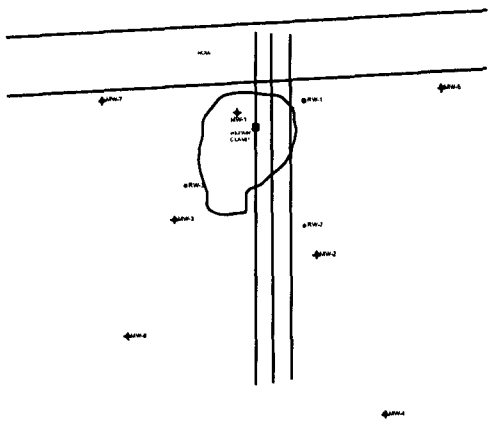
LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Sand: light reddish brown, loose, dry, very-fine grained, well sorted, subrounded to 3'		
4				0.0	CALICHE	Caliche: light reddish gray, slightly indurated, dry, very-fine to fine grained, fair sorting, subangular	MW4-5' 0832	
10				0.0	CALICHE	Very Sandy Caliche	MW4-10' 0839	
14				0.0	CALICHE		MW4-15' 0849	
20				0.0	GC	Gravel: light reddish gray, loose to indurated, dry, very-fine to course grained, poor sorting, subangular	MW4-20' 0857	
22						Less gravel @ 22'		
24				0.0	CALICHE	Caliche: light reddish gray, poor to fair induration, dry, very-fine to course grained, poor sorting, subangular	MW4-25' 0911	
28						Caliche: increase in gravel to 0.5"@ 28'		
30				0.0	CALICHE		MW4-30' 0921	
32						Gravel @ 32'		
34				0.0	GC	Gravel: light reddish brown, loose, dry, with very-fine to course grained sand, poor sorting, subangular	MW4-35' 0930	
40				0.0	CL	Clay with Gravel @ 37': dark red brown, damp, firm, with very fine to coarse grained sand, poorly sorted	MW4-40' 0942	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP



WELL NUMBER MW-4

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55 BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/14/05 0829

TOP OF CASING ELEV. (ft) 3365.12 GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42		42.00 ▽						
44		43.93 ▼		0.0	CL	Clay: dark reddish brown, stiff, wet, no gravel, medium plasticity	MW4-45' 1003	
46								
48						No sample – water		
50								
52								
54						T.D. 55'		
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-5

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 50' BOREHOLE DIA (in) 5 STICKUP (ft) --

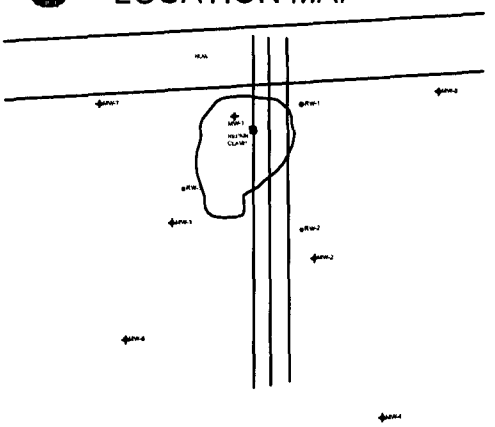
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/15/05 0836

TOP OF CASING ELEV. (ft) 3364.74 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Sand: medium reddish brown, loose, dry, very-fine grained, well sorted, subrounded to 4'		
4				0.0	CALICHE	Caliche: light reddish gray, poorly indurated, dry, very-fine to fine grained, fair sorting, subangular	MW5-5' 0843	
6						Sand @ 6': light gray, loose (flowing), dry, fine grained, fair sorting, sub-angular		
8						Gravelly Sand @ 9'		
10				0.0	SC	Less gravel @ 11'	MW5-10' 0851	
14				0.0	SC		MW5-15' 0858	
18						Silty Sandy Caliche @ 17': light reddish gray, poorly induration, very-fine to fine grained, fair sorting, subangular		
20				0.0	CALICHE		MW5-20' 0927	
24				0.0	CALICHE	Caliche: light reddish gray, poorly indurated, dry, very-fine grained, fair sorting, sub-angular	MW5-25' 0943	
30				0.0	CALICHE	fine grained @ 29'	MW5-30' 1007	
34				0.0	CALICHE		MW5-35' 1019	
38						Gravelly Silty Clay @ 37' medium reddish brown, medium plasticity, stiff		
40		39.00		0.0	CL	Water @ 39' - no odor No Sample - water in drill rod	MW5-40' 1037	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-5

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 50 BOREHOLE DIA (in) 5 STICKUP (ft) --

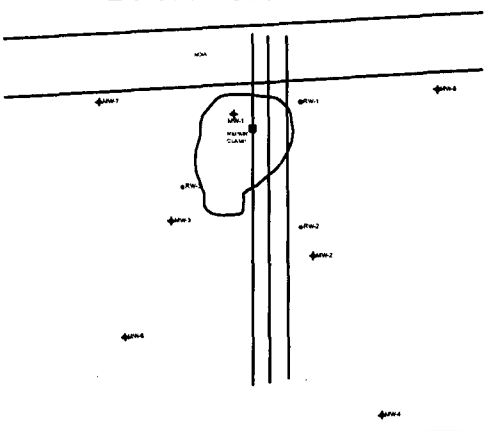
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/15/05 0836

TOP OF CASING ELEV. (ft) 3364.74 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42		43.25						
44				0.0	CL	No sample – hole making good water		
46								
48								
50					CL	T.D. 50'		
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-6

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8" STICKUP (ft) --

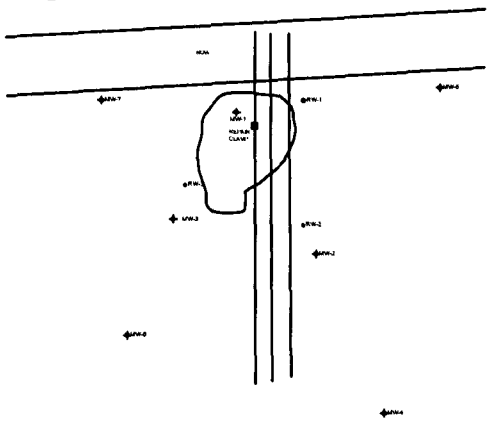
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/14/05 1340

TOP OF CASING ELEV. (ft) 3368.96 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Silty Sand: medium reddish brown, loose, dry, very fine-grained, well sorted, subrounded to 2'		
4				0.0	CALICHE	Silty Sandy Caliche: light reddish gray, poorly indurated, dry, very fine to fine-grained, well sorted, subrounded	MW6-5' 1344	
10				0.0	SC	Sand @ 9': light gray, loose, dry, very fine-grained, well sorted, subrounded	MW6-10' 1351	
14				0.0	CALICHE	Silty Caliche @ 13': light reddish gray, poorly indurated, dry, very fine-grained, well sorted, subangular	MW6-15' 1356	
18						Gravelly Caliche @ 18'		
20				0.0	CALICHE		MW6-20' 1403	
24				0.0	CALICHE	Gravelly Caliche: light reddish gray, poorly indurated, dry, very fine-course grained, poorly sorted, sub-angular	MW6-25' 1414	
30				0.0	CALICHE	Caliche: less gravel @ 30'	MW6-30' 1425	
34						Caliche: medium red, iron staining @ 33'		
35				0.0	CALICHE		MW6-35' 1434	
40				0.0	CL	Silty Caliche @ 39': medium red firm, damp, low plasticity, very fine-grained, well sorted	MW6-40' 1451	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-6

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8" STICKUP (ft) --

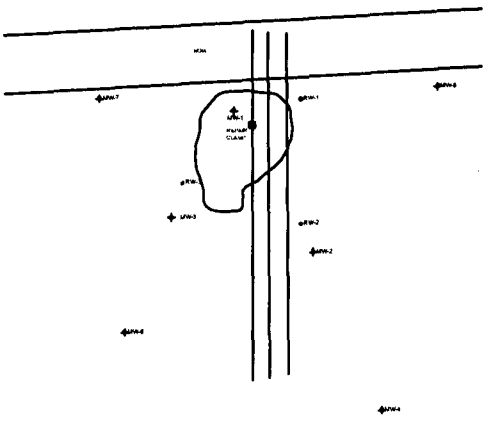
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/14/05 1340

TOP OF CASING ELEV. (ft) 3368.96 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42								
44		44.00		0.0	CL	Water @ 44' Sample washed out of tool Red Clay		
46		47.31						
48								
50					CL			
52								
54					CL	T.D. 55'		
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-7

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 5" STICKUP (ft) --

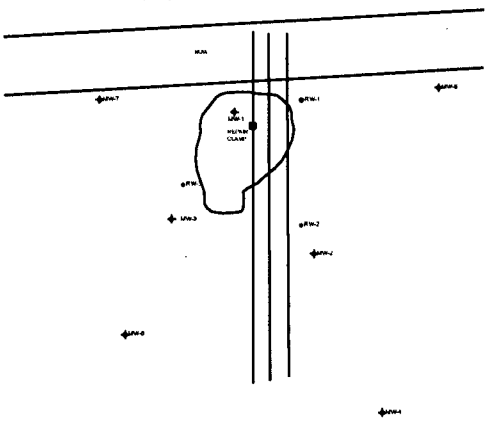
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/15/05 1412

TOP OF CASING ELEV. (ft) 3370.25 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Silty Sand: medium reddish brown, loose, dry, very fine-grained, fair sorting, subrounded to 1'		
2					CALICHE	Silty Caliche: light reddish gray, poorly indurated, dry, very fine to fine-grained, fair sorting, subrounded to 4'		
4				0.0	SC	Sand: light reddish gray, poorly indurated, dry, very fine to fine-grained, fair sorting, subrounded	MW7-5' 1416	
6						Silty Caliche @ 6': light reddish gray, poorly indurated, dry, very fine to fine-grained, fair sorting, subangular		
8								
10				0.0	CALICHE	Sand @ 9': light gray, loose, dry, very fine-grained, well sorted, subrounded	MW7-10' 1422	
12						Gravelly Caliche @ 13': poorly sorted		
14				0.0	CALICHE		MW7-15' 1428	
16								
18								
20				0.0	CALICHE	Increase in Gravel	MW7-20' 1435	
22						Gravelly Caliche: well indurated @ 22'		
24				0.0	CALICHE	Gravelly Caliche: Gravel to 1", poorly sorted	MW7-25' 1447	
26								
28								
30				0.0	CALICHE	Gravelly Caliche: Gravel to 2"	MW7-30' 1457	
32						Caliche: less gravel @ 33'		
34				0.0	CALICHE	Sandy Caliche: light yellow gray, poorly indurated, dry, very fine to coarse-grained, poorly sorted, subangular	MW7-35' 1505	
36						Iron Staining @ 37'		
38								
40				0.0	CALICHE		MW7-40' 1513	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-7

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 5" STICKUP (ft) --

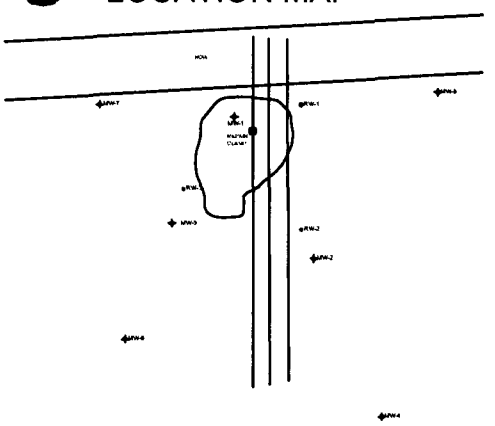
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/15/05 1412

TOP OF CASING ELEV. (ft) 3370.25 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42		43.00 ▽				Sandy Gravelly Caliche: medium red brown, poorly indurateed, wet, very fine to coarse-grained, poorly sorted, subangular		
44				0.0	CALICHE		MW7-45' 1529	
46								
48		48.26 ▼						
50					CL	Silty Gravelly Clay: dark red brown, firm, wet, low plasticity, poorly sorted, subangular		
52								
54					CL	T.D. 55'		
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-1 (SB-5)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

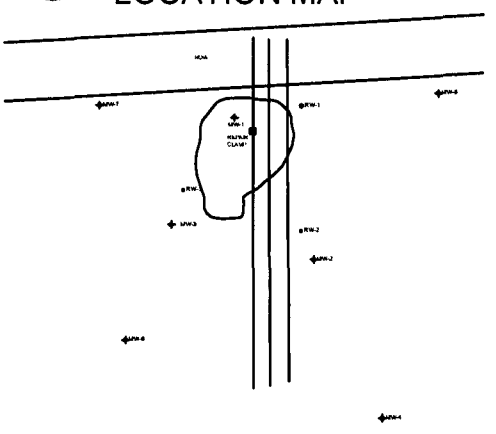
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/12/05 1023

TOP OF CASING ELEV. (ft) 3368.12 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Silty Sand: medium reddish brown, loose, dry, very fine to fine grained, fair sorting, subrounded to 4'		
4				0.0	CALICHE	Silty Sandy Caliche @ 4': light gray, poorly indurated, dry, very fine grained, fair sorting, subrounded	SB5-5' 1026	
10				0.0	CALICHE		SB5-10' 1030	
14				0.0	CALICHE		SB5-15' 1038	
17						Silty Sandy Caliche with Gravel @ 17': medium red, poorly indurated, dry, very fine to coarse grained, poorly sorted, subrounded		
20				0.0	CALICHE		SB5-20' 1048	
21						Silty Sandy Caliche with little Gravel @ 21': light gray, poorly indurated, dry, very fine to coarse grained, poorly sorted, angular, some well indurated layers @ 24'		
25				0.0	CALICHE		SB5-25' 1102	
30				0.0	CALICHE		SB5-30' 1113	
32						Caliche: less gravel @ 32', light yellowish red, iron staining, poor to well induration, very fine to coarse grained, poorly sorted, angular		
35				0.0	CALICHE		SB5-35' 1124	
36						Gravel @ 36': light reddish brown, poorly indurated, damp, fine to coarse grained, poorly sorted, angular		
38						Sandy Clay @ 38': medium reddish brown, firm, damp, low plasticity, very fine to fine grained, fair sorting, angular		
40				9.7	CL		SB5-40' 1141	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-1 (SB-5)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

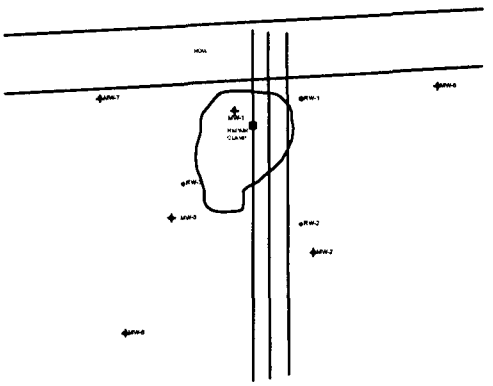
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in)

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/12/05 1023

TOP OF CASING ELEV. (ft) 3368.12 GROUND SURFACE ELV. (ft)

LOCATION MAP



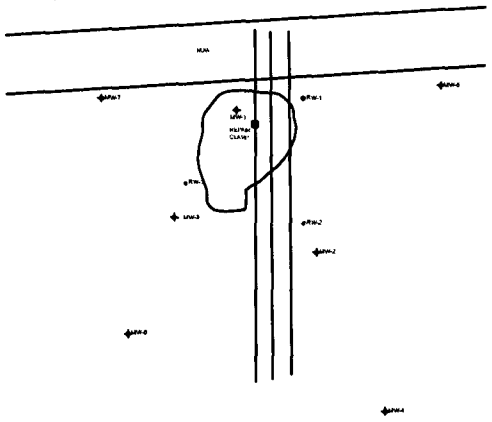
DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42		43.00 ▽				Silty Sandy Clay: medium reddish brown, firm, wet, medium plasticity, very fine to fine grained, fair sorting, water @ 44' – strong odor		
44				393	CL		SB5–45' 1157	
46		46.52 ▼						
48								
50					CL			
52						Silty Sandy Caliche @ 52': light gray, poorly indurated, iron stained streaks		
54					CALICHE			
56						T.D. 55'		
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP



WELL NUMBER RW-2 (SB-6)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

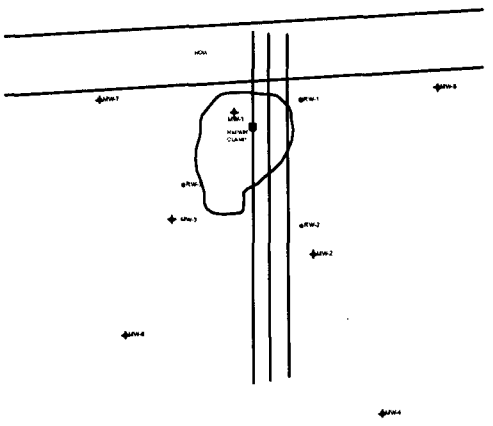
GEOLOGIST Will Murley DATE DRILLED 12/13/05 0841

TOP OF CASING ELEV. (ft) 3368.32 GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Sand with Caliche Gravel(0.5"): light reddish brown, loose, dry, very fine to medium grained, fair sorting, subrounded to 4'		
4				0.0	CALICHE	Silty Sandy Caliche: light reddish gray, poorly indurated, dry, very fine to fine grained, fair sorting, subangular	SB6-5' 0847	
10				0.0	CALICHE		SB6-10' 0853	
12						Caliche: light reddish yellow @ 13'		
14				0.0	CALICHE	Caliche with Gravel(1"): light yellow gray, poorly indurated, dry, with very fine to coarse grained sand, poorly sorted, subangular	SB6-15' 0902	
20				0.0	CALICHE		SB6-20' 0911	
24				0.0	GC	Gravel: light yellowish gray, loose to poorly indurated, dry, with very fine to coarse grained sand, some heaving, poorly sorted, subangular	SB6-25' 0924	
30				0.0	GC	Gravel: medium red brown	SB6-30' 0936	
34				0.0	CL	Clay @ 34': medium reddish brown, firm, dry, low plasticity, well sorted	SB6-35' 0947	
40				0.0	CL		SB6-40' 0956	
42						Clay @ 41': dark yellow brown Moderate odor @ 42'		

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP



WELL NUMBER RW-2 (SB-6)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/13/05 0841

TOP OF CASING ELEV. (ft) 3368.32 GROUND SURFACE ELV. (ft) _____

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42		▽ 42.00				Clay @ 41': dark yellow brown Moderate odor @ 42'		
44				395	CL	Water @ 44', strong odor Clay: dark reddish brown, firm, wet, medium plasticity, well sorted	SB6-45' 1016	
46		▼ 46.85						
48								
50					CL			
52								
54					CL	T.D. 55'		
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-3 (SB-7)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

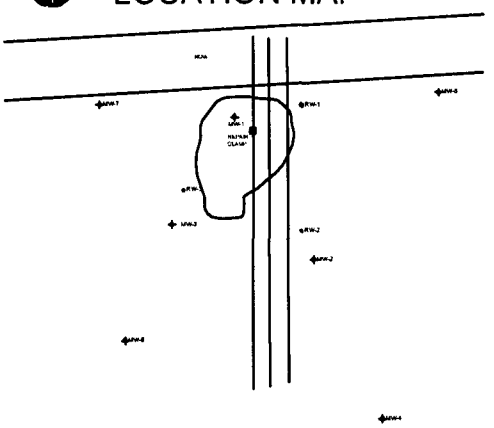
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/16/05 0832

TOP OF CASING ELEV. (ft) 3369.05 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Clayey Sand: medium reddish brown, loose, dry, very fine to medium grained, poor sorting, subrounded to 4.5'		
4				0.0	CALICHE	Silty Sandy Caliche: light reddish gray, poorly indurated, dry, very with fine to fine grained sand, poor sorting, subangular	SB7-5' 0844	
10				0.0	CALICHE		SB7-10' 0858	
12						Caliche @ 13': yellowish red		
14				0.0	CALICHE	Caliche: light yellow gray	SB7-15' 0908	
20				0.0	CALICHE		SB7-20' 0918	
24				0.0	CALICHE	Caliche: light reddish gray, poorly indurated, dry, with very fine to coarse grained sand, poorly sorted, subrounded	SB7-25' 0929	
28						Caliche wtih Gravel @ 27': light reddish gray, poorly indurated, dry, very fine to coarse grained, poorly sorted, subrounded		
30				0.0	CALICHE		SB7-30' 0942	
32						Increase in Clay, less Gravel @ 31'		
34				0.0	CALICHE		SB7-35' 0957	
40				0.0	CL	Gravelly Clay @ 39': medium reddish brown, firm, damp, low plasticity, with very fine to coarse grained sand, poorly sorted, subrounded	SB7-40' 1007	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-3 (SB-7)

PROJECT Vac to Jal #3 205068.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 55' BOREHOLE DIA (in) 7 7/8 STICKUP (ft) --

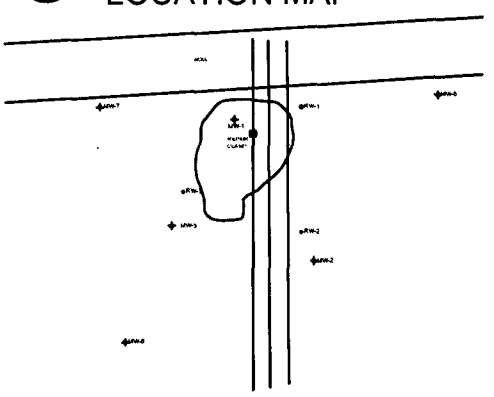
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in)

DRILLING CO. Straub DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 12/16/05 0832

TOP OF CASING ELEV. (ft) 3369.05 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42		42.00 ▽				Water @ 42', slight odor		
44				424	CL	Gravelly Clay: medium red brown, firm, wet (Sheen on tool), medium plasticity, poorly sorted, subangular	SB7–45' 1027	
46		47.38 ▼						
48								
50					CL			
52								
54					CL	T.D. 55'		
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▽ TOP OF WATER AS ENCOUNTERED WHILE DRILLING

▼ STATIC WATER LEVEL

PLAINS
PIPELINE, L.P.

RECEIVED
OCT 3 2005
OIL CONSERVATION
DIVISION

September 26, 2005

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

1R-455

RE: C-141 and Site Information
Vacuum to Jal Mainline #3
S35, T21S, R37E Unit Letter A
Lea County, NM

Dear Mr. Martin:

Enclosed is the C-141 for the above referenced site. Plains Pipeline had a reported release of 3 bbls. of crude oil on 5/8/2003 on a 14" steel transmission pipeline outside of Eunice, NM. During delineation activities performed on 9/12/05, phase separated hydrocarbons were found to exist on the localized water table. Camille Reynolds verbally notified you of groundwater impact on the afternoon of 9/12/05. Three monitoring wells have been installed and a report documenting field activities is currently being prepared.

Premier Environmental is currently performing environmental remediation activities under Plains Pipeline authorization at this time.

If you have any questions or require further information, please contact me at (432) 557-5865

Thank you,

Daniel Bryant
Environmental & Regulatory Compliance Specialist
Office: 432-686-1769
Cell: 432-557-5865
dmbryant@paalp.com

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 Pipeline, LP	Contact	Daniel Bryant
Address	P.O. Box 3119 – Midland, Tx 79702	Telephone No.	(432) 557-5865
Facility Name	Vacuum to Jal 14" Mainline #3	Facility Type	Pipeline

Surface Owner	Mineral Owner	Lease No.
Bill Stevens		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	35	21S	37E					Lea

Latitude N 32° 26' 32.67" **Longitude** W 103° 7' 36.885"

NATURE OF RELEASE

Type of Release: Sour Crude Oil	Volume of Release: 3+ bbls	Volume Recovered: 0 bbls
Source of Release: 14" steel transmission pipeline	Date and Hour of Occurrence: 05/08/2003 14:00	Date and Hour of Discovery: 05/08/2003 14:30
Was Immediate Notice Given? *** ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
While de-oiling the 14" Vacuum to Jal Mainline, a release was discovered by Brentco Air Patrol. The pipeline was clamped to mitigate the release.

*** The release was initially reported as a 3 bbl release but during delineation activities on 9/12/05, phase-separated hydrocarbons (PSH) was found on the water table. The actual release volume is unknown.

Describe Area Affected and Cleanup Action Taken.* .
Impacted soil and groundwater will be remediated per NMOCD guidelines.
Three monitoring wells have been set to facilitate PSH recovery and groundwater monitoring.

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: Daniel Bryant	OIL CONSERVATION DIVISION	
Printed Name: Daniel Bryant	Approved by District Supervisor:	
Title: Environmental R/C Specialist	Approval Date:	Expiration Date:
E-mail Address: dmbryant@paalp.com	Conditions of Approval:	Attached ☐
Date: 9/20/05 Phone: (432) 557-5865		

* Attach Additional Sheets If Necessary

Martin, Ed, EMNRD

From: Camille J Reynolds [cjreynolds@paalp.com]
Sent: Wednesday, September 14, 2005 3:48 PM
To: Martin, Ed, EMNRD
Subject: Notification of Groundwater impact

1R-455

Mr. Martin:

This is follow-up to the verbal notification I gave to you on Monday, September 12 of groundwater impact at the Vacuum to Jal Mainline #3 release site. The site is located in Sec.35, T21S, R37E in Lea County. While installing soil borings at the site, groundwater with phase separated hydrocarbons were encountered. Plains is in the process of delineating the site.

If you have any questions please contact me at 505-441-0965.

Thanks,
Camille Reynolds
Remediation Coordinator
Plains All American

office: 505/396-3341
fax: 505/396-2754
cellular: 505/441-0965

##
Attention:
The information contained in this message and/or attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. If you received this in error, please contact the Plains Service Desk at 713-646-4444 and delete the material from any system and destroy any copies.

This footnote also confirms that this email message has been scanned for Viruses and Content and cleared.
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