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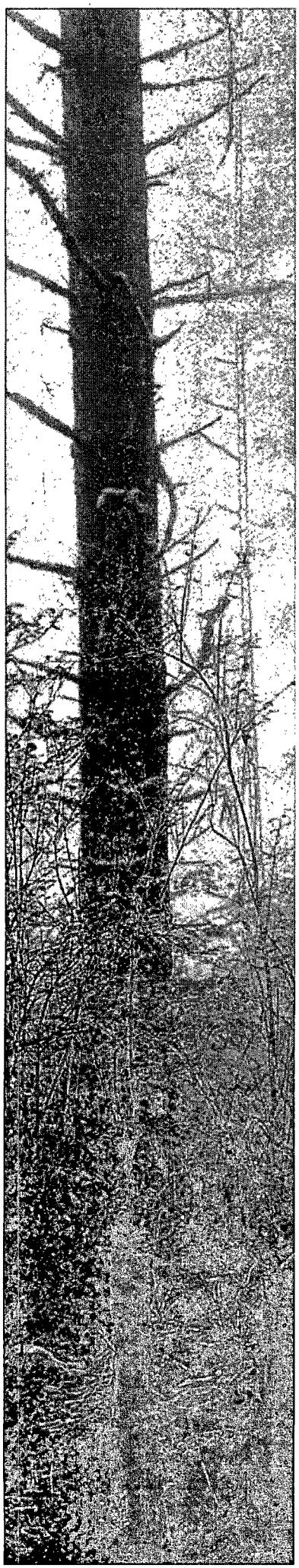

IR0463 Report March 2007

SOIL CLOSURE REPORT
D.S. HUGH
PLAINS SRS NO. 2000-10807
UL-A, SECTION 26, T21S, R37E
Lea County, New Mexico
NMOCD N0. IR-0463

PREPARED FOR

PLAINS MARKETING, L.P.

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IR-0463

PREPARED BY

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Project No. 205071.00

March 2007

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Senior Project Manager

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Premier has examined and relied upon the file information provided by Plains. 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.

EXECUTIVE SUMMARY

Premier Environmental Services, Inc. (Premier) has prepared this *Soil Closure Report (Report)* on behalf of Plains Marketing, L.P. (Plains) for the D. S. Hugh 4" Gathering line (Site), located in T21S, R37E, Section 26 of Lea County, New Mexico, approximately 2 miles east of Eunice, New Mexico (Figure 1, Appendix A). Hydrocarbon impact at the Site was the result of a 20 barrel crude oil release, described in previous reports. The pipeline was owned by EOTT Energy, LLC (EOTT) at the time of the release, and is currently owned by Plains.

Results from previous investigations conducted in 2005 were submitted in a March 2006 report entitled 2005 Annual Report, and are summarized in this *Report* for convenience. The Remediation Plan was prepared and submitted to the New Mexico Oil Conservation Division (NMOCD) for approval in May 2006. This plan was conditionally approved by the NMOCD in a May 31, 2006 letter.

Generally, the remediation approach proposed was to excavate the most highly impacted soil, to isolate and control residual contaminants of concern (COCs) in the soil, and prevent further impact to groundwater. Impacted surface soil containing the highest COC concentrations was excavated and the most heavily impacted soils were transported off-site for land farm treatment. To minimize further impact to groundwater, an impermeable plastic liner was placed at the base of the excavation. The remaining excavated soil was blended and used as backfill material and replaced in the excavation.

In accordance with the approved Remediation Plan, the following activities were completed:

- Six soil borings were installed around the flow path to delineate soil impact caused by the 20 barrel crude oil release.
- The most heavily impacted soils with the highest COC concentrations were excavated and transported off-site to Lea Station for land farm treatment.
- The two areas where the crude oil had pooled on the surface were excavated. The size of the excavated area near monitor well MW-2 was approximately 34 feet long by 40 feet wide and 10 feet deep. The size of the area excavated near monitor well MW-1 was approximately 50 feet by 110 feet, to a depth of 15 feet below ground surface (bgs).
- A buffer zone was created by over-excavating three additional feet beyond the clean side walls of the excavation.
- The base of the excavation was inspected for debris and graded so that the central portion of the excavation was higher than the surrounding areas creating an outward slope from the center of the excavation.
- An impermeable plastic liner was placed at the base of the excavation to prevent precipitation from percolating down through residual hydrocarbons in the soil column, and possibly transporting COCs to groundwater.

- The COCs in stockpiled soil were treated to bring COC levels to concentrations below the backfill performance standard of 1,000 mg/kg total petroleum hydrocarbons (TPH). The excavation was then backfilled with the treated material and the Site was returned to grade to allow for stormwater runoff.

The remedial activities completed to date, including the recent excavation, placement of an impermeable liner, and backfilling described in this report, demonstrate that the requirements of the May 2006 Soil Remediation Plan and specific conditions identified in the NMOCD approval letter have been met. The site-specific risk-based NMOCD cleanup criteria for soil at this Site have also been attained. Upon review and approval of this Report by the NMOCD, soil remediation will be considered complete at this Site.

A hydrocarbon sheen has been present in groundwater at only one monitor well (MW-1) of the seven site monitoring wells. Hydrocarbon removal will continue using an absorbent sock and by hand bailing every two weeks. To monitor the effectiveness of soil remediation conducted at the Site, groundwater monitoring for Total Petroleum Hydrocarbons (TPH), benzene, toluene, ethyibenzene, and xylenes (BTEX) will continue on a quarterly and/or semiannual basis in the remaining monitor wells.

1.0 INTRODUCTION AND SITE HISTORY

Premier was retained by Plains to complete delineation and remediation at the D.S. Hugh 4" Gathering line (SRS No. 2000-10807). The hydrocarbon release, which occurred on November 10, 2000, was due to external corrosion of the pipeline and was reported by EOTT to Ms. Donna Williams at the New Mexico Oil Conservation Division (NMOCD) on November 10, 2000 (Appendix H, C-141 Release Notification Form). The Site is located in T21S, R37E, Section 26 of Lea County, New Mexico, approximately 2 miles east of Eunice, New Mexico (Figure 1, Appendix A). At the time of the release, the pipeline was owned by EOTT. Plains currently owns the pipeline.

Approximately 5 of the 20 barrels of crude oil were reported as recovered. During repair of the pipeline, approximately five cubic yards of soil were excavated, placed on a plastic liner surrounded by fencing, and stored on site. No other remedial activities were conducted along the flow path or in the pooling areas during the initial response.

Three investigations have been conducted at the Site by Premier to assess impact from the November 2000 release; September and December 2005, and May 2006. These included the installation of ten soil borings, five of which were converted to groundwater monitor wells or recovery wells. These investigations are summarized in Section 4.0. Based on the findings of the three investigations, a Remediation Plan dated May 2006 was prepared, and submitted to the NMOCD for approval. In a May 31, 2006, letter, NMOCD conditionally approved the Remediation Plan. A copy of the NMOCD letter is included in Appendix D.

As requested by the NMOCD, six additional borings were completed and two monitoring wells were installed in May 2006. These were used to assess subsurface soil impact in the vicinity of the crude oil release and the dissolved phase hydrocarbon plume in groundwater (Figure 2, Appendix A). The field and analytical data collected from the soil borings confirmed that subsurface contamination around the flow path was delineated and the data obtained from the monitor wells confirmed that the dissolved phase plume in groundwater was delineated.

Generally, the remediation approach proposed was to excavate the most highly impacted soil, to isolate and control residual contaminants of concern (COCs) in the soil, and prevent further impact to groundwater. Impacted surface soil containing the highest COC concentrations was excavated and the most heavily impacted soils were transported off-site for land farm treatment. To minimize further impact to groundwater, an impermeable plastic liner was placed at the base of the excavation. Excavated soil was treated to less than 1000 mg/kg TPH and backfilled over the impermeable liner and the Site was returned to grade (Table 2, Appendix B).

This report details the activities completed to meet the requirements of the Remediation Plan as conditionally approved by the NMOCD; and to meet NMOCD closure standards.

2.0 ENVIRONMENTAL CHARACTERIZATION

2.1 Geological Description

In Lea County, bedrock frequently outcrops at the ground surface or is thinly interbedded with alluvium and eolian dune sands. The bedrock outcrops range from Triassic Age lithofied strata 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 the High Plains and is exposed on several ridges in Lea County.

The uppermost sediments at the Site are largely unstable sands. Wind generated sand dunes, somewhat stabilized with vegetation including mesquite and shinnery oak are found in the general area. One to four feet of aeolian sands overlie silty to sandy caliche with minor clay lenses present near the groundwater interface. The relatively flat topographic surface slopes very gently to the southeast and Monument Draw bisects the area east of the Site.

2.2 Land Use

Land use in the area is primarily livestock rangeland and oil and gas production. 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 located south of the Site.

2.3 Groundwater

The New Mexico Office of the State Engineer database lists three water wells in Section 26, T21S, R37E (included in Appendix D). The total depth of two of these private use water wells are reported to be 85 feet bgs and one is 100 feet bgs feet. Based on gauging data collected from the five on-site monitor wells, the average depth to water at the Site is approximately 43 feet bgs. No municipal water wells have been identified within 1,000 feet of the Site.

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 enforcement and 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. Primary contaminants, 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 following three parameters to protect groundwater and surface water resources:

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

3.1 NMOCD Site Ranking

Based on the proximity of the Site to area water wells, surface water bodies, and depth to groundwater, the Site has a NMOCD ranking score of **20 points**, with the soil remedial goals specified below in the Site Ranking Matrix.

Table 1 - 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>

Based on data gathered from the 2005 and 2006 investigations, as well as guidelines outlined in Premier's Soil Remediation Plan (dated May 2005) and the NMOCD Remediation Plan approval letter dated May 31, 2006, the following site-specific performance or remediation standards for excavation wall confirmation samples were established: TPH target concentration of 100 mg/kg, benzene target concentration of 10 mg/kg and total BTEX target concentration of 50 mg/kg. The performance or remediation standard established for treated/blended soil was 1,000 mg/kg TPH. The treated/blended soils that met the 1,000 mg/kg cleanup standard for TPH were returned to the open excavation after installing a 20 mil impermeable liner at the base of the excavation.

4.0 SITE INVESTIGATIONS AND RESULTS

4.1 Pipeline Repair Activities

According to information provided by Plains, at the time of the release, the area impacted by hydrocarbons was approximately 200 feet long by 15 feet wide, and product was contained within the pipeline right-of-way. In November 2000, impacted soil surrounding the source leak was excavated and the line was repaired. Impacted soil from the excavation to repair the pipeline was temporarily placed on a plastic liner. An initial site visit by Premier personnel in April 2005 confirmed that impacted soil remained stockpiled on site.

4.2 2005 Investigation Activities

Premier oversaw the investigation of the release in September and December 2005 through the installation of ten soil borings, with three borings converted to groundwater monitor wells (MW-1 through MW-3). Figure 2 found in Appendix A is a site plan depicting soil boring and monitor well locations. Soil samples were collected for laboratory analysis between depths of 2 feet and 45 feet bgs based on field screening using a photo ionization detector (PID). Selected soil samples were submitted to Accutest Laboratories in Houston, TX for analyses of TPH Diesel Range Organics (TPH-DRO) and TPH Gas Range Organics (TPH-GRO) by EPA method 8015M, and for BTEX by EPA method 8021B. Details of the September and December investigations can be found in the December 28, 2005 letter report submitted to Plains and the NMOCD.

In soil, TPH or BTEX were generally not detected in excess of NMOCD guidelines towards the west, north and east away from the release flow path. Select soil samples collected in the central area of the release flow path and pooling areas had the highest concentrations of TPH at depths ranging from about 10 feet bgs to about 40 feet bgs, and BTEX concentrations exceeding 50 mg/kg to 35 feet bgs. TPH was detected at a concentration of 214 mg/kg in a soil sample collected from the monitor well MW-2 soil boring at 45 feet bgs. This sample was collected from the soil/groundwater interface and suggested potential contaminant migration in groundwater after the spill. TPH or BTEX were not detected above the method detection limits in groundwater samples collected from MW-2 (December 2005) (Figure 2, Appendix A).

4.3 2006 Investigation Activities

4.3.1 2006 Groundwater Delineation

During the 1st quarter 2006, the sheen observed in monitor well MW-1 resulted in monitor wells being installed to the southeast (MW-4; downgradient) and east (MW-5; cross-gradient), of MW-1. Soil samples were collected from each borehole and analyzed for TPH, Diesel Range Organics (DRO), Gasoline Range Organics (GRO), and for BTEX. Laboratory results from MW-4 and MW-5 soil samples are below NMOCD cleanup guidelines for this Site. Details regarding these results can be found in the April 13, 2006 ***Groundwater Delineation Investigation Results*** letter report. Only benzene was

detected in groundwater from monitor well MW-4 at 0.2 mg/l. Toluene and ethylbenzene were below the NMOCD groundwater guidelines. Removal of hydrocarbons from monitor well MW-1 continued, using an absorbent sock.

4.3.2 May 2006 Investigation Activities

On May 18 and 19, 2006 Premier conducted further soil investigation at the Site. As requested by the NMOCD, the soil investigation was undertaken to delineate the extent of hydrocarbon contamination in soil adjacent to the flow path of the crude oil release. The investigation was conducted by advancing six soil borings to a depth of 15 feet bgs on all sides of the crude oil release flow path. Soil boring depths were based on discussions with Mr. Ed Martin (NMOCD) during an April 26, 2006 on-site meeting. In addition, two soil borings were advanced to a depth of 55 feet bgs and converted to two-inch diameter monitor wells to delineate the down-gradient extent of the dissolved phase plume. A site plan with soil borings locations and Site details is found as Figure 2, Appendix A.

Laboratory results showed both TPH and BTEX concentrations were below laboratory detection limits for all soil samples with the exception of soil sample MW 6-20' that showed a concentration of 27.0 mg/kg TPH DRO (Table 2, Appendix B).

Monitor wells MW-6 and MW-7 were installed in positions to delineate potential dissolved phase hydrocarbons to the south and east of monitor well MW-4.

The visual observation and analytical data collected during this investigation demonstrate that the extent of hydrocarbon contamination in soil adjacent to the flow path of the crude oil release has been delineated. The data also confirms the accuracy of the tentatively approximated excavation presented in the NMOCD-approved *Remediation Plan*. Based on analytical results, further excavation beyond the areas identified should not be required. A letter report detailing the field activities is enclosed in Appendix C.

5.0 REMEDIATION ACTIVITIES

Implementation of the May 2006 Remedial Plan was initiated in October 2006. Soil remediation included excavation of the most highly impacted soil and isolation of residual COCs in the soil to prevent further impact to groundwater. Impacted surface soil containing the highest COC concentrations were excavated with the most heavily impacted soils transported off-site for land farm treatment. To minimize further impact to groundwater, an impermeable plastic liner was placed at the base of the excavation. The liner is designed to prevent precipitation from migrating through residual hydrocarbons in the soil column, and possible transportation of COCs to groundwater. The remaining soil was blended and used as backfill material.

5.1 Excavation and Off-site Treatment

A pre-excavation site inspection was completed on October 9, 2006, to determine the area requiring temporarily fencing off while excavation was completed. An area of 71,195

square feet was temporarily fenced on October 10, 2006. On October 11, 2006, the area around the partially buried pipeline was excavated and the pipeline was cut. A roller-grip bull-end clamp was attached approximately 39 feet west from the eastern perimeter of the area temporarily fenced (Photograph 1, Appendix E). A second cut along the pipeline was made close to the western end of the site and capped in the same manner. Approximately 240 feet of pipeline was removed and cut into approximately 40 feet sections and placed on the south west section of the fenced area. Inspection of the removed section of pipeline revealed two clamps and one relatively new 40 foot section of pipeline. The locations of the clamps are shown in Figure 3, Appendix A. The significance of the clamps is discussed in detail in Section 5.3.3.

Excavation activities were initiated on October 11, 2006 to remove contaminated soil containing the highest COC concentrations. An excavation along the entire length of the release, approximately 230 feet long and 12 feet wide was completed to an average depth of 5 feet bgs (Photograph 2, Appendix E). This allowed Premier field personnel to identify areas of crude oil impact in the base and side walls of the excavation requiring further excavation.

The two areas where the crude oil pooled on the surface were initially excavated to the same depths as the main flow path area. Excavation activities continued through October 13, 2006 in the area where hydrocarbons had previously pooled on the surface, in the vicinity of monitor well MW-2 (Photograph 3, Appendix E), to a depth of 10 feet bgs. Excavation was completed to a depth of 15 feet bgs around monitor well MW-1. The excavated soil was inspected and segregated; with the most highly impacted soils stockpiled separately for transport to and off-site treatment at Lea Station Land Farm. On October 16 and 17, 2006, 93 truckloads (approximately 12 cubic yards per load) of the most highly impacted soil were transported to Plains' Lea Station Land Farm. The less impacted soil remained stockpiled for on-site treatment/blending and reuse as backfill.

5.2 Excavation and On-Site Treatment

Soil at the D.S. Hugh Site was originally classified as a Class C, based on OSHA safe trenching regulations defined in 29 OSHA 1926, Subpart P. From ground surface to the first three to five feet bgs the soil is unconsolidated sand. Below five feet the soil was a poorly cemented silty/sandy caliche rock. The caliche rock was reclassified as a stable rock. As the surface soil at D.S. Hugh Site is unstable wind blown sand, the excavation of Class C soil required a 34 percent slope, or 1.5 feet wide for every one foot of depth along the side walls. Benching was competed in two stages. The top three to five feet of the excavation was completed to meet Class C soil type and the lower section was completed to meet benching requirement for stable rock. Ramps were sloped into the excavation to allow equipment and personnel into the base of the excavation.

Excavation continued in the vicinity of the release flow path and two areas of crude oil pooling, based on field observations and field TPH data. Side wall samples were

collected in the field and analyzed using a TPH field analyzer test kit. The excavated area proximal to monitor well MW-2 was approximately 34 feet by 40 feet wide and 10 feet deep. The excavated area proximal to monitor well MW-1 was approximately 50 feet by 110 feet wide, to a depth of 15 feet bgs (Figure 4, Appendix A, Photograph 4, Appendix E). Side walls of each excavation were visually inspected, sampled and screened using a TPH field analyzer for readings greater than 100 parts per million (ppm). Locations in which field sample results yielded readings greater than 100 ppm were further excavated, until field sample results were below 100 ppm.

Soil confirmation samples were collected and submitted for laboratory verification that COC concentrations in the excavation side walls met remediation goals. The analytical results are described in Section 5.3. After confirmation samples were collected and the data reviewed to show COC concentrations below NMOCD cleanup goals, side walls were further benched and/or sloped to allow equipment into the base of the excavation and to stabilize the side walls of the excavation.

The total estimated volume of excavated soil was approximately 3,800 cubic yards. Approximately 1,116 cubic yards of soil was transported for off-site treatment and the remaining 2,684 cubic yards of soil was treated and/or blended on site. Treatment and/or blending on-site were completed using a track-hoe, front-end loaders and a bulldozer. The excavated soil was blended with clean overburden, spread out and ripped or turned with a bulldozer and allowed to aerate. Once treated and/or blended, the soil was stockpiled, sampled and tested with the field TPH analyzer. As field TPH data showed concentrations below 1,000 ppm, soil samples were collected from the stockpiles for laboratory analysis to verify that the site-specific cleanup goals of 1,000 mg/kg TPH, 10 mg/kg benzene and 50 mg/kg total BTEX for treated soils had been attained.

5.3 Confirmation Sampling

Hydrocarbon impacted soil was initially excavated and stockpiled on site. The most highly impacted soil was sampled and transported off-site for land farm treatment. Clean overburden was segregated (when possible) and set aside for use as backfill and for use as blending material. Less impacted soil was treated/blended with clean overburden soil, stockpiled and later sampled. Treated/blended soil that contained less than 1,000 mg/kg TPH was replaced into the excavation above the 20 mil liner. Confirmation samples were collected from the walls of the excavation and treated/blended soils. Confirmation samples were collected based on the following protocol:

- Wall samples – one sample every 50 linear feet.
- Treated stockpile samples for on-site reuse – one sample every 250 cubic yards.
- Each wall sample was analyzed for TPH-DRO and TPH-GRO by EPA method SW 846 8015M and BTEX by EPA method SW 846 8021B.

- Each treated stockpile sample was analyzed for TPH-DRO and TPH-GRO by EPA method SW-846 8015M, BTEX by EPA method SW 846 8021B.
- Wall sample analytical results were compared to site-specific cleanup standards.
- If one or more of the wall samples exceeded the Site cleanup standards, additional excavation was completed following the above confirmation sampling protocol.

As removal of impacted soil was completed, confirmation samples were collected from the excavation side walls based on field TPH readings and field observations. Performance or remediation standards for excavation side walls were met when the total TPH concentrations were below 100 mg/kg, benzene was below 10 mg/kg and total BTEX concentrations were below 50 mg/kg. Performance or remediation standards for treated/blended soil were met when TPH concentrations were below NMOCD risk-based standards established for the Site; specifically TPH was below 1,000 mg/kg, benzene was below 10 mg/kg and total BTEX were below 50 mg/kg. These concentrations were deemed acceptable for return to the excavation after placement of the 20-mil, high-density polyethylene reinforced impermeable liner.

Side wall samples and stockpile analytical results are summarized in Table 3, Appendix B. The laboratory reports for samples analyzed are enclosed in Appendix F.

5.3.1 Confirmation Side Wall Sampling

On October 13, 2006, the first set of soil samples SW-1, SW-2, SW-3 and SW-4DS were collected from side walls associated with the excavated area around monitor well MW-2. Soil samples SW-1, SW-2 and SW-3 were collected as side wall confirmation samples. Analytical results showed these samples were below NMOCD cleanup standards (Figure 5, Appendix A). Soil sample SW-4DS was collected to determine the concentration of COC of a crude oil impacted sample to evaluate the feasibility of treatment and/or blending ratios necessary to treat the soil. This sample was also collected to determine the relative accuracy of the field TPH analyzer to laboratory results and to review the chromatogram to determine the relative concentrations of the different hydrocarbon chains. This sample SW-4DS showed concentrations of 0.147 mg/kg benzene and 13.03 mg/kg total BTEX, both below the NMOCD cleanup standards of 10 mg/kg for benzene and 50 mg/kg for BTEX. Therefore, only TPH at a concentration of 4,510 mg/kg required treatment to less than 1,000 mg/kg. Comparison to field data was deemed acceptable as the field reading at SW-4DS was 5,700 mg/kg).

On October 17, 2006, the second set of soil confirmation samples, SW-4 through SW-10, were collected from side walls associated with the main excavated area around monitor well MW-1 and along the trench. The analytical results showed all TPH concentrations were below the method detection limit, except for sample SW-4 at 18.4 mg/kg and SW-5 at 9.8 (J flagged) mg/kg, which are both below the NMOCD cleanup limit of 100 mg/kg for

this Site (Figure 5, Appendix A). All seven samples were below the method detection limit for BTEX constituents. Excavation activities continued and on October 19, 2006, the final set of soil confirmation side wall samples, SW-11 through SW-13 were collected from the main excavated area. The analytical results for samples SW-11 through SW-13 indicated that all TPH and BTEX concentrations were below the method detection limits and therefore, below the NMOCD cleanup limits for this Site.

5.3.2 Confirmation Stockpile Sampling

Excavated soil from within the release flow path and two areas of surficial pooling that appeared to be most highly impacted was stockpiled and sampled on October 17, 2006 (Sample ID DSP 1 and DSP 2). Two additional samples (SP-1 and SP-2) were collected from the stockpiled material that appeared to be less impacted. The less impacted material was treated and blended onsite. The analytical data showed TPH concentrations above 1,000 mg/kg for sample DSP-2 and below 1,000 mg/kg for DSP-1. The stockpiles of soil associated with these samples were sent to Lea Station Land farm for off-site treatment. Soil sample SP-1 was also above 1,000 mg/kg TPH. The stockpiled soil associated with this sample was treated and blended, then re-sampled on October 24, 2006 (Sample ID SP-1A). Analytical results for the sample collected from the treated stockpile (Sample ID SP-1A) showed a TPH concentration of 823 mg/kg (Table 3, Appendix B). The treated soil was blended with soil from the previous excavations, and the area was backfilled to grade using the blended soil.

5.3.3 Soil Sampling Around Clamps

During excavation activities, an inspection of the removed section of pipeline revealed two clamps and one relatively new 40-foot section of pipe (Photographs 5 and 6, Appendix E). The locations of the clamps and newer pipe section are shown on Figure 3, Appendix A. The two clamps and the 40-foot section of new pipe indicate that multiple releases have likely taken place at this location in the past. Three soil samples were collected from stained side walls associated with these three points of suspected releases. Sample DS1 was collected in the vicinity of the 40-foot section of new pipe. Sample DS2 was collected in the vicinity of the three pin clamp on the surface pipe associated with the November 10, 2000 release and Sample DS3 was collected from the buried two pin clamp area.

The analytical data for these three samples are summarized on Table 3, Appendix B. The analytical data and chromatograms associated with these three samples were analyzed by Kevin Jeanes, a chemist specializing in Hydrocarbon Chemistry. Mr. Jeanes' analysis of the data indicates the sample DS3 is likely associated with an older spill (Appendix G).

5.4 Liner Placement

Upon demonstrating that the analytical data for the side wall samples verified COC removal below NMOCD standards, a buffer zone was created by over-excavating beyond the clean side walls an additional three feet. Over-excavation will minimize potential

groundwater runoff that may infiltrate the liner, and prevent the percolating water from contacting potential hydrocarbon containing (residual) soils below the liner (Photograph 7, Appendix E). The base of the excavation was graded to create a higher central area, creating a drainage gradient away from the center of the excavation. This will shed water that infiltrates from the surface to flow off the liner, away from residual hydrocarbons. A 20-mil, high-density polyurethane reinforced impermeable liner was placed on the base of the excavation (Photographs 8 and 9, Appendix E). The 100 foot by 40 foot sections of liner placed at the base of the excavation were overlapped and interwoven at the ends to seal, forming a single continuous barrier. In the vicinity of MW-1, special precaution was taken to ensure a seal. Bentonite was placed beneath the liner and again above the liner immediately around the monitor well (Photograph 10, Appendix E).

5.5 Backfill and Grade Excavation

After the impermeable liner was placed into the excavation and the liner secured with 6 inches of non-impacted soil, the excavation was backfilled with treated/blended soil which had been verified as meeting the NMOCD risk-based standards established for the Site (Photograph 11 and 12, Appendix E). The surface vegetation will be restored by reseeding or as negotiated with the landowner.

6.0 CONCLUSIONS and RECOMMENDATIONS

The soil excavation was conducted in accordance with the Remediation Plan that was submitted to NMOCD in May 2006, and approved by NMOCD May 31, 2006. The excavation activities completed between October 10 and October 24, 2006 accomplished the following:

- The excavation was completed in accordance with the approved Remediation Plan, the central portion of the main crude oil stained flow path was over- excavated to an approximate depth of 5 feet and the most heavily contaminated soils were sent to Lea Station land farm for off-site treatment.

- Two areas where the crude oil pooled on the surface were further excavated. The excavated area in the vicinity of monitor well MW-2 was approximately 34 feet long by 40 feet wide and 10 feet deep. The area excavated near monitor well MW-1 was approximately 50 feet by 110 feet wide, to a depth of 15 feet bgs.

- Soil samples SW-1 to SW-13 were collected as side wall confirmation samples. Analytical results showed these samples were below NMOCD cleanup standards.

- Upon verification through analytical data from side wall samples demonstrating removal of COCs to below NMOCD limits, a buffer zone was created by over-excavating three feet beyond the clean side walls.

- The base of the excavation was inspected for debris that may have the potential to damage the liner. Such debris was removed and the base of the excavation was graded with a high central area, thus creating an outward slope from the center of the excavation base.

- A 20-mil high-density polyurethane impermeable liner was placed along the base of the excavation. The impermeable liner was covered with a 6-inch thick layer of clean imported sand. The area around monitor well MW-1 was sealed by placing bentonite chips both below and above the liner and hydrating the bentonite.

- Composite soil samples were collected from the on-site treated stockpiled soil to verify that COC concentrations in the stockpiled soil met remediation goals to allow for use as a backfill material as specified in Section 5.3. The analytical results of the stockpile samples (SP-2 to SP-13) confirmed that TPH concentrations were all below regulatory cleanup goals and were suitable for use as backfill material.

- One composite soil sample (SP-1) collected from the stockpiled excavated soil was above regulatory cleanup goals at 1,120 mg/kg TPH. The stockpiled excavated soil was further treated and re-sampled (SP1A) and showed a TPH concentration at 823 mg/kg. Once all COC concentrations detected for stockpiled soil were below the backfill performance standard of 1,000 mg/kg (TPH), as specified in the Remediation Plan and NMOCD approval letter dated May 31, 2006, the excavation was backfilled with the treated material and the Site was returned to grade to allow for stormwater runoff.

If required, the surface vegetation will be restored by reseeding in late spring or early summer of 2007.

The Remedial activities completed to date including excavation, placement of impermeable liner, and backfill described in this report demonstrate that the requirements of the May 2006 Remediation Plan and specific conditions identified in the NMOCD approval letter have been met. This report also confirms that the risk based NMOCD cleanup criteria for soil at the D.S. Hugh site have been met. Premier recommends that Plains submit this report to the NMOCD for final regulatory approval of closure of soil issues at this Site, and request a "No Further Action required for soil remediation" letter from the NMOCD.

Appendix A

Figures

Eunice Quadrangle
32°26'48"N Latitude & 103°08'07"W Longitude

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

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ENVIRONMENTAL SERVICES, INC.

Figure 1
Site Location Map
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
SRS. No.: 2000-10807
Lea County, New Mexico

PROJ. NO: 205071.00	CK:	DATE: 2/07

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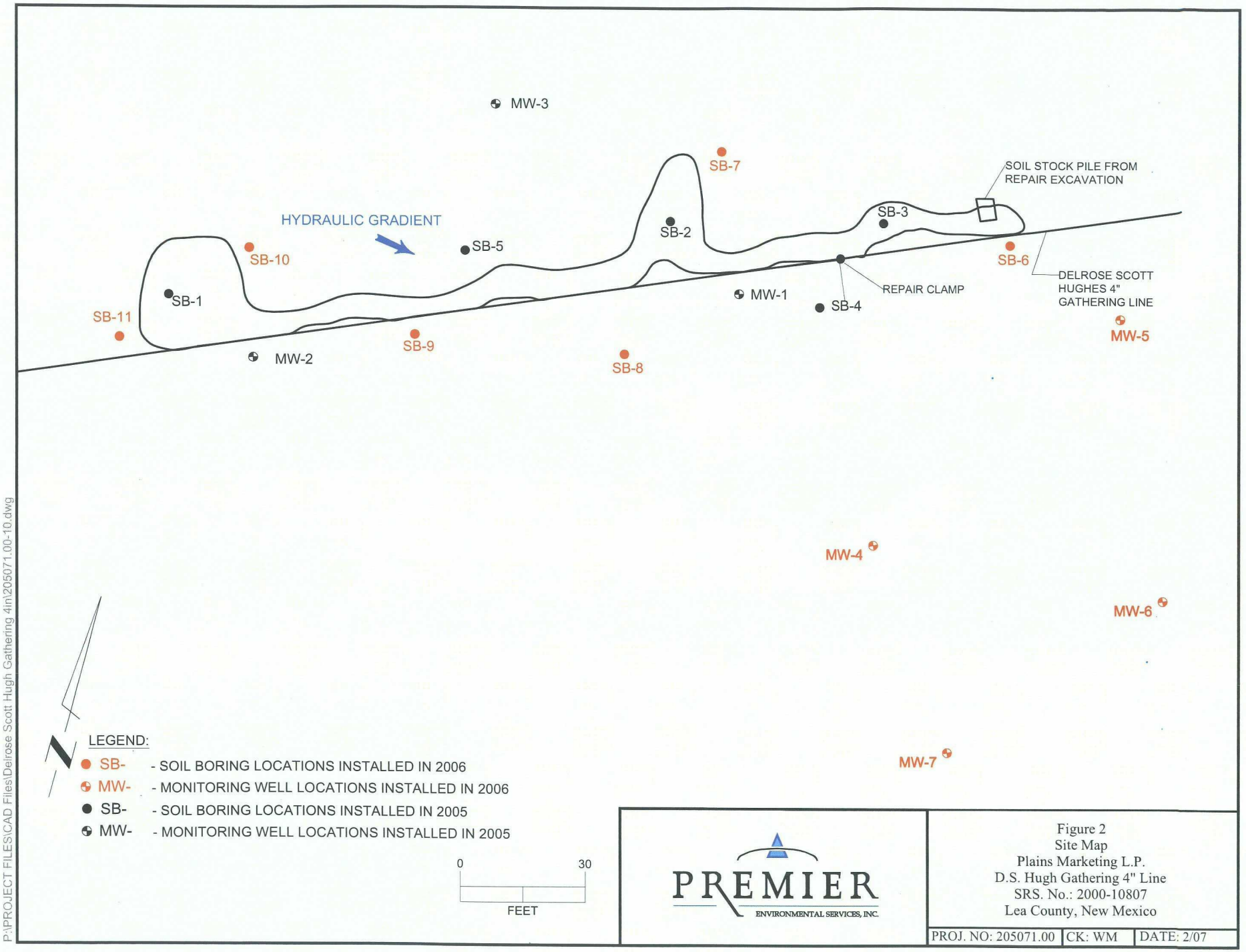

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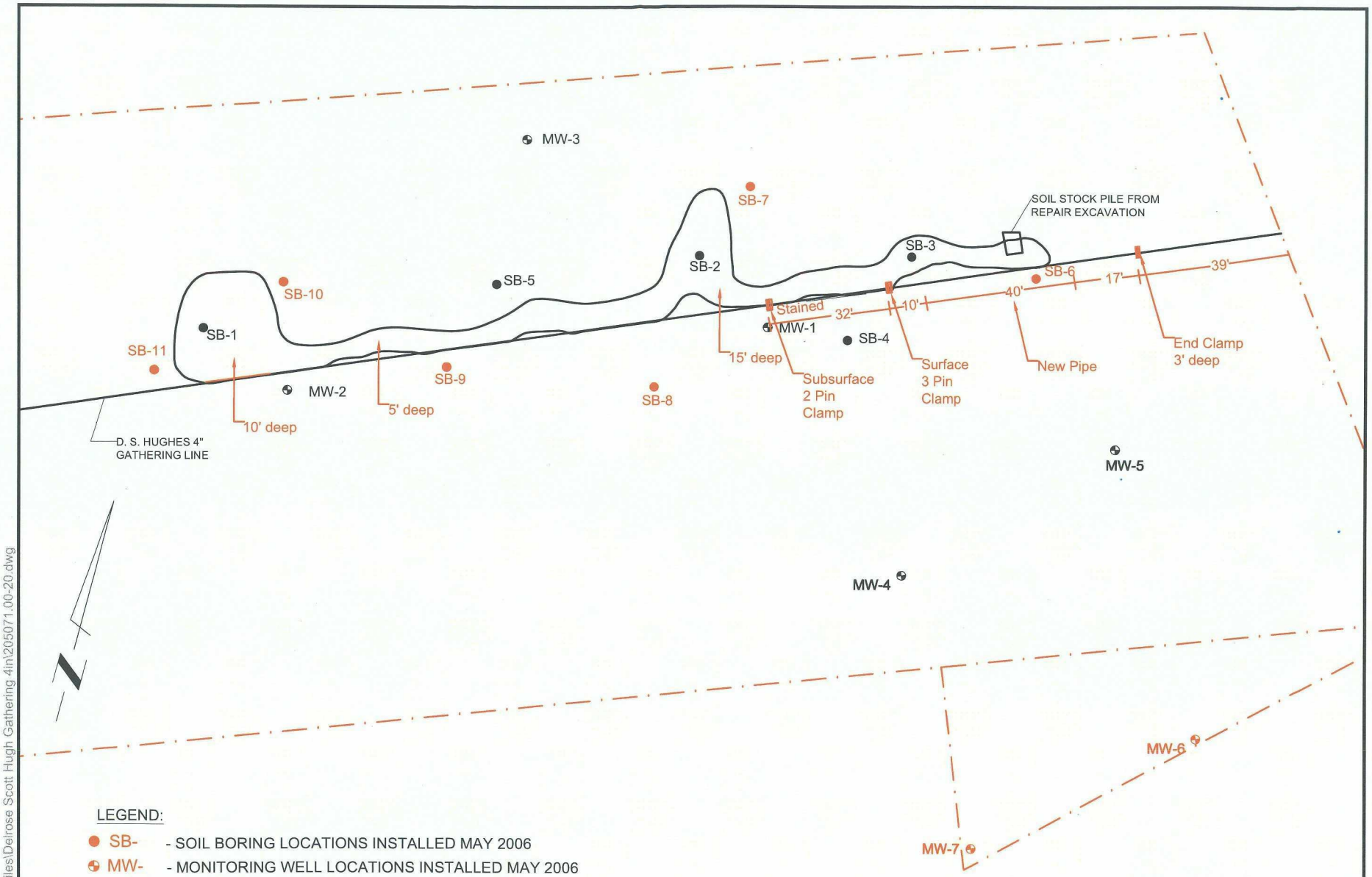
PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 2
Site Map
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
SRS. No.: 2000-10807
Lea County, New Mexico

PROJ. NO: 205071.00	CK: WM	DATE: 2/07



PREMIER
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Figure 3
Location of Clamps along Pipeline
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
SRS. No.: 2000-10807

PROJ. NO: 205071.00	CK: WM	DATE: 2/07

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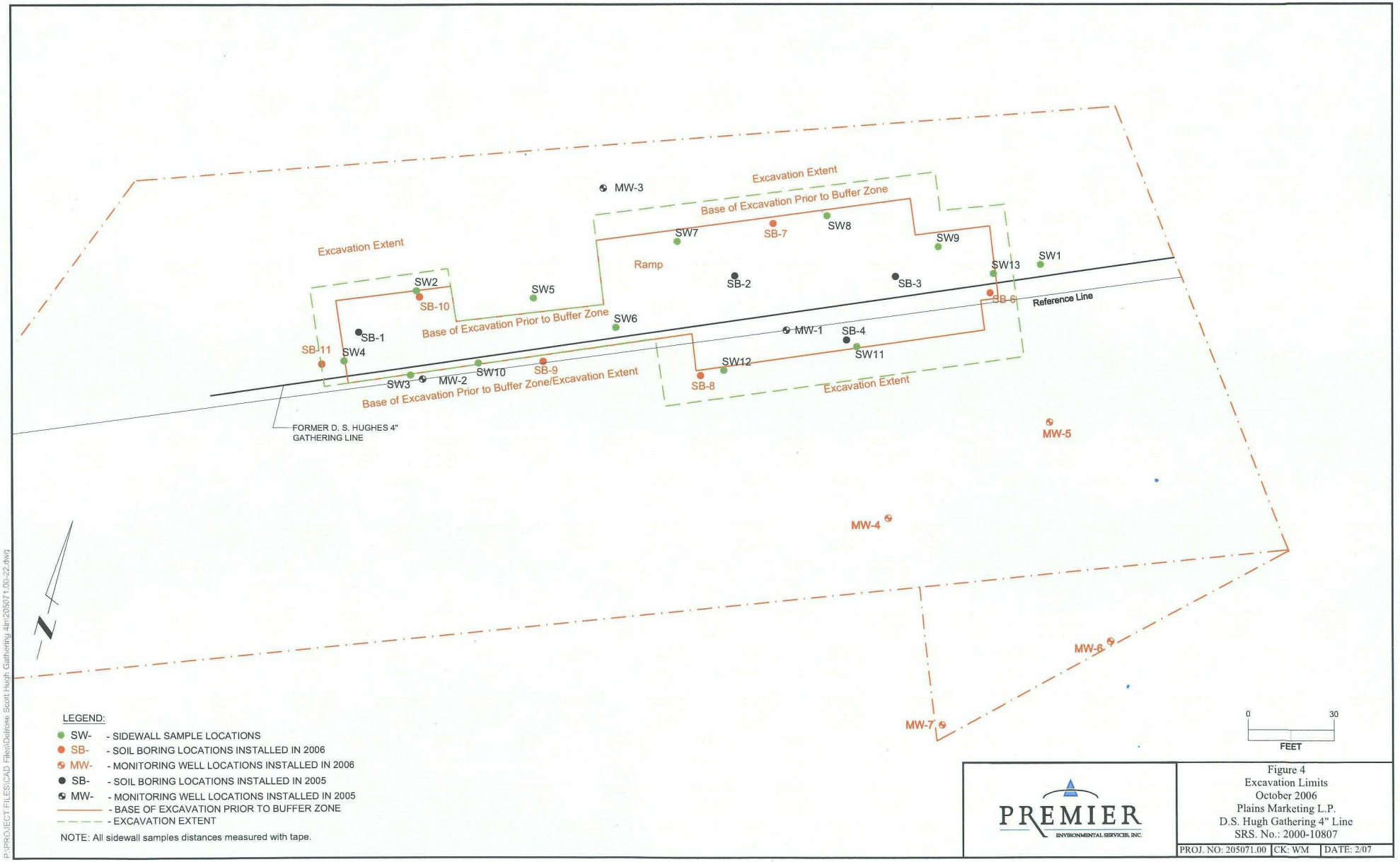

LEGEND:

- SW- - SIDEWALL SAMPLE LOCATIONS
- SB- - SOIL BORING LOCATIONS INSTALLED IN 2006
- MW- - MONITORING WELL LOCATIONS INSTALLED IN 2006
- SB- - SOIL BORING LOCATIONS INSTALLED IN 2005
- MW- - MONITORING WELL LOCATIONS INSTALLED IN 2005
- - BASE OF EXCAVATION PRIOR TO BUFFER ZONE
- - EXCAVATION EXTENT

NOTE: All sidewall samples distances measured with tape.

PREMIER ENVIRONMENTAL SERVICES, INC.

Figure 4
Excavation Limits
October 2006
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
SRS. No.: 2000-10807

PROJ. NO: 205071.00	CK: WM	DATE: 2/07

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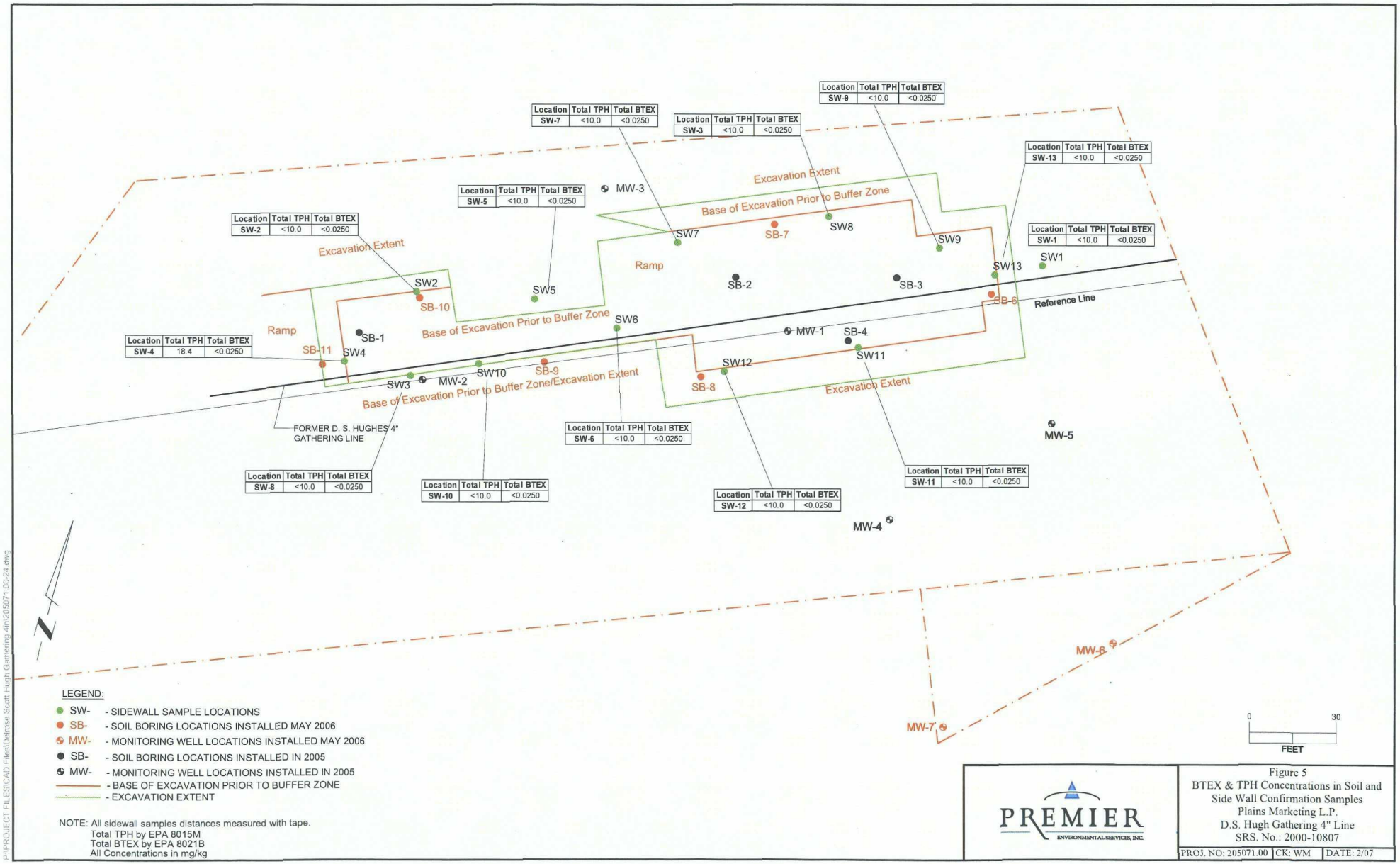

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PREMIER ENVIRONMENTAL SERVICES, INC.

Figure 5
BTEX & TPH Concentrations in Soil and Side Wall Confirmation Samples
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
SRS. No.: 2000-10807

PROJ. NO: 205071.00 | CK: WM | DATE: 2/07

Appendix B Tables

Table 2
Soil Analytical Results
May 2006
Plains Marketing, L.P.
Plains SRS No. 2000-10807
D.S. Hugh
Lea County, New Mexico

Location	Date Sampled	Interval	Laboratory Sample ID	GRO (C6-C10)	DRO (C10-C28)	Total TPH EPA 8015 m	Benzene	Toluene	Ethylbenzene	Total Xylene
		feet bgs		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Remediation Goals						100	10			
MW-6	5/18/2006	20	T13570-1	<3.3	27	27	<0.00035	<0.00023	<0.00035	<0.00069
	5/18/2006	40	T13570-2	<3.0	<3.7	<3.7	<0.00033	<0.00022	<0.00033	<0.00065
	5/18/2006	45	T13570-3	<4.0	<4.4	<4.4	<0.00038	<0.00026	<0.00038	<0.00077
MW-7	5/18/2006	10	T13570-4	<2.9	<3.6	<3.6	<0.00032	<0.00021	<0.00032	<0.00063
	5/18/2006	30	T13570-5	<2.8	<3.6	<3.6	<0.00033	<0.00022	<0.00033	<0.00065
	5/18/2006	40	T13570-6	<3.8	<4.2	<4.2	<0.00035	<0.00023	<0.00035	<0.00069
SB 6	5/18/2006	10	T13570-7	<2.9	<3.6	<3.6	<0.00033	<0.00022	<0.00033	<0.00065
	5/18/2006	15	T13570-8	<3.4	<3.9	<3.9	<0.00035	<0.00024	<0.00035	<0.00071
SB 7	5/19/2006	10	T13570-9	<3.0	<3.7	<3.7	<0.00032	<0.00021	<0.00032	<0.00064
	5/19/2006	15	T13570-10	<4.1	<4.4	<4.4	<0.00040	<0.00027	<0.00040	<0.00080
SB 8	5/19/2006	5	T13570-11	<3.6	<4.1	<4.1	<0.00037	<0.00025	<0.00037	<0.00075
	5/19/2006	15	T13570-12	<0.73	<4.0	<4.0	<0.00035	<0.00023	<0.00035	<0.00069
SB 9	5/19/2006	5	T13570-13	<3.2	<3.9	<3.9	<0.00034	<0.00023	<0.00034	<0.00068
	5/19/2006	15	T13570-14	<3.7	<4.2	<4.2	<0.00038	<0.00025	<0.00038	<0.00076
SB 10	5/19/2006	10	T13570-15	<4.1	<4.5	<4.5	<0.00040	<0.00027	<0.00040	<0.00081
	5/19/2006	15	T13570-16	<3.0	<3.7	<3.7	<0.00033	<0.00022	<0.00033	<0.00066
SB 11	5/19/2006	5	T13570-17	<3.1	<3.8	<3.8	<0.00034	<0.00023	<0.00034	<0.00068
	5/19/2006	15	T13570-18	<2.8	<3.6	<3.6	<0.00032	<0.00022	<0.00032	<0.00065

bgs - Below Ground Surface DRO - Diesel Range Organics GRO - Gasoline Range Organics
NMOCD - New Mexico Oil Conservation Division

Table 3
Soil Analytical Results
Plains Marketing, L.P.
Plains SRS No. 2000-10807
D.S. Hugh
Lea County, New Mexico

Location	Date Sampled	Feet BGS	Laboratory Sample ID	TPH C_6-C_{12} mg/Kg	TPH C_{12}-C_{28} mg/Kg	TPH C_{28}-C_{35} mg/Kg	Total TPH EPA 8015 m mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg	Xylenes Xylene (p/m) mg/Kg	Xylenes Xylene (o) mg/Kg	Total Xylenes mg/Kg	Total BTEX EPA 8021b mg/Kg
NMOCD Remediation Goals							100	10						50
SW-1	10/13/2006	3	6J14001-01	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-2	10/13/2006	7	6J14001-02	<10.0	8.71 J	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-3	10/13/2006	7	6J14001-03	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-4-DS	10/13/2006	5	6J14001-04	**1260**	**3090**	**162**	**4510**	0.147	0.858	2.32	8.75	0.808	9.558	12.8830
SW-4	10/17/2006	7	6J18008-01	<10.0	18.4	<10.0	18.4	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-5	10/17/2006	5	6J18008-02	<10.0	9.5 J	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-6	10/17/2006	9	6J18008-03	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-7	10/17/2006	8	6J18008-04	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-8	10/17/2006	5	6J18008-05	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-9	10/17/2006	12	6J18008-06	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-10	10/17/2006	5	6J18008-07	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-11	10/19/2006	10	6J20001-01	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-12	10/19/2006	11	6J20001-02	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SW-13	10/19/2006	12	6J20001-03	<10.0	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
SP-1	10/17/2006	N/A	6J18005-01	211	857	55.9	**1120**	<0.0250	0.0570	0.108	0.308	0.126	0.434	0.5990
SP-2	10/17/2006	N/A	6J18005-02	116	570	46.1	732	<0.0250	0.0559	0.0733	0.183	0.0756	0.2586	0.3878
SP-3	10/19/2006	N/A	6J20002-01	65.2	137	4.22 J	202	0.0959	0.5480	0.945	2.53	1.2	3.73	5.3189
SP-4	10/19/2006	N/A	6J20002-02	127	432	17.3	576	0.0169 J	0.221	0.384	1.13	0.738	1.868	2.4899
SP-5	10/19/2006	N/A	6J20002-03	107	405	23.7	536	0.00969 J	0.168	0.34	1.07	0.745	1.815	2.3327
SP-6	10/24/2006	N/A	6J26005-01	174	459	21.1	654	0.03	0.3830	0.746	1.97	1.08	3.05	4.2090
SP-7	10/24/2006	N/A	6J26005-02	88.3	266	12	366	0.0195 J	0.2550	0.513	1.42	0.761	2.181	2.9685
SP-8	10/24/2006	N/A	6J26005-03	85.5	249	7.46 J	334	0.0113 J	0.1340	0.294	0.821	0.426	1.247	1.6863
SP-9	10/24/2006	N/A	6J26005-04	84.3	184	4.97 J	268	0.0255	0.2890	0.517	1.4	0.674	2.074	2.9055
SP-10	10/24/2006	N/A	6J26005-05	64.7	127	6.38 J	192	0.0375	0.4930	0.936	2.4	1.46	3.86	5.3265
SP-11	10/24/2006	N/A	6J26005-06	178	399	14.7	592	0.0327	0.4790	0.927	2.4	1.68	4.08	5.5187
SP-12	10/24/2006	N/A	6J26005-07	195	525	19	739	0.0203 J	0.258	0.509	1.4	0.797	2.197	2.9843
SP-13	10/24/2006	N/A	6J26005-08	225	632	30.8	888	0.0462	0.471	0.908	2.38	1.24	3.62	5.0452
SP1-A	10/24/2006	N/A	6J26005-09	155	637	30.6	823	<0.0250	0.0567	0.13	0.335	0.246	0.581	0.7677
DSP-1	10/17/2006	N/A	6J18006-01	113	394	22.9	530	0.0754	0.370	0.565	1.37	0.497	1.867	2.8774
DSP-2	10/17/2006	N/A	6J18006-02	313	1400	97.6	**1810**	0.0244 J	0.201	0.326	0.947	0.514	1.461	2.0124
DS-1	10/17/2006	6	6J18007-01	325	941	60.9	**1330**	0.0485	0.578	1.17	3.09	1.84	4.93	6.7265
DS-2	10/17/2006	4	6J18007-02	1520	3140	151	**4810**	0.625	2.68	2.8	9.94	3.95	13.89	19.9950
DS-3	10/17/2006	4	6J18007-03	787	4260	171	**5220**	0.0229 J	0.238	0.426	1.08	0.355	1.435	2.1219

SP = Stockpile
DSP = Stockpile for Land farm
SW = Sidewall
DS = Sidewall Samples for Comparison
N//A = Not applicable

BGS - Below Ground Surface
Concentrations in bold exceed NMOCD Remedaition Goals
J = indicates an estimated value

GRO - Gasoline Range Organics
OVM - Organic Vapor Meter
DRO - Diesel Range Organics

Appendix C

May 2006 Investigation Letter Report

PREMIER
ENVIRONMENTAL SERVICES, INC

4800 Sugar Grove Blvd.
Suite 420
Stafford, TX 77477

Phone 281.240.5200
Fax 281.240.5201
www.premiercorp-usa.com

June 19, 2006

Mr. Jeff Dann
Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002

Re: Soil Investigation Results
D. S. Hugh Site – Lea County, New Mexico
Unit Letter A, Section 226, Township 21 South, Range 37 East
NMOCD File Number IR-0463
Plains EMS No. 2000-10807
Premier Project No. 205071

Dear Mr. Dann:

On May 18 and 19, 2006, Premier Environmental Services, Inc. (Premier) conducted an additional limited soil investigation at the Plains Marketing, L.P. (Plains) D. S. Hugh 6" Gathering Line Site (Site), in Lea County, New Mexico. The limited soil investigation was completed to delineate the extent of hydrocarbon contamination in soil adjacent to the flow path of the crude oil release. The investigation was conducted by advancing six soil borings to a depth of 15 feet below ground surface (bgs) along the perimeter of the crude oil release flowpath at the Site. In addition, two soil borings were advanced to a depth of approximately 55 feet bgs and converted to two-inch diameter monitor wells to delineate the downgradient extent of the dissolved phase plume. Figure 1 is a Site Map, which shows the locations of soil borings, monitor wells and Site details. This letter summarizes the results of the limited soil investigation. Please note that groundwater sampling was not conducted for the newly installed monitor wells. These monitor wells will be sampled as part of the quarterly groundwater sampling program for the Site.

Field Activities

On May 18, 2006, Mr. Will Murley, with Premier Environmental Services, met with representatives of Straub Drilling Corporation of Stanton, Texas at the site to survey site conditions and access issues. After conducting a pre-drilling site safety meeting and Health and Safety Plan review, the drilling rig was set up at the first soil boring location (MW-6). The soil borings were advanced using air rotary drilling techniques. Discrete soil samples were collected at five-foot intervals using an open ended core tool attached to the end of the drill string. The samples were divided in two portions. One portion was placed in laboratory supplied glassware and placed on ice for later selection for laboratory analyses. The second portion of each sample was placed within a self

sealing polypropylene bag, allowed to volatilize for at least fifteen minutes, then field screened for organic vapors using a photo ionization detector (PID). The soil samples were also described using a modified version of the Unified Soil Classification System, allowing for calcified soils (caliche) present in the region.

Six soil borings (SB-6 through SB-11) were advanced along the perimeter of the flow path at the site to a depth of 15 feet bgs (Figure 1). Soil boring depths were initially based on discussions with Mr. Ed Martin of the New Mexico Oil Conservation Division (NMOCD) during the onsite meeting on April 26, 2006. The soil borings were completed based on results of field screening (i.e. PID readings, odor, or visible staining). PID readings ranged from 0.0 ppm to a maximum of 4.1 ppm in all the soil borings, and are summarized in the attached Table 1. Copies of soil boring logs are provided in the attached Appendix A.

Two monitor wells MW-6 and MW-7 were installed in the hydraulic downgradient direction south of the flow path of the crude oil release. Monitor well MW-6 was installed approximately 75 feet south-southeast of MW-4 and monitor well MW-7 was installed approximately 75 feet east of MW-4. Copies of monitor well construction logs are provided in the attached Appendix A. PID readings of soil samples collected from the borings, ranged from 0.2 ppm to 5.2 ppm in MW-6 and from 0.0 ppm to 3.0 ppm in MW-7 (Table 1). Results of the soil sampling during soil borings and monitor wells installations are discussed below.

Soil Sampling and Analysis

Two soil samples from each soil boring (SB-6 through SB-11) were selected for laboratory analysis. One soil sample was collected from the interval with the elevated PID reading and the second soil sample was collected from the bottom of the soil boring. Three soil samples from monitor wells (MW-6 and MW-7) were collected for laboratory analysis. One soil sample was collected from the interval with the elevated PID reading and the remaining two soil samples were collected from the bottom of the soil boring and/or near the capillary fringe zone. The soil samples were collected in EPA-approved sample containers provided by the laboratory and placed on ice in a cooler. The cooler was shipped overnight to Accutest Laboratories in Houston, Texas under a chain of custody documentation.

The samples were analyzed for benzene, toluene, ethyl benzene, and total xylenes (BTEX) using EPA method 8021B and total petroleum hydrocarbons (TPH) diesel range organics (DRO) and gasoline range organics (GRO) using EPA method 8015. The results of the laboratory analysis are summarized in Table 2. Copy of the laboratory analytical report is provided in the attached Appendix B.

Laboratory Data Evaluation

TPH-DRO was detected at a concentration of 27 mg/kg in the soil sample collected from MW-6 at a depth of approximately 20 feet bgs. The detected concentration of TPH-DRO is well below the NMOCD remediation goal of 100 mg/kg. TPH-GRO, TPH-DRO, or BTEX were not detected above the laboratory reporting limits in the soil samples

collected from MW-6 at depths of 40 feet bgs and 45 feet bgs. TPH-GRO, TPH-DRO, or BTEX were not detected above the laboratory reporting limits in the remaining soil samples from MW-7 and SB-6 through SB-11. Therefore, the soil impact along the flow path of the crude oil release has been delineated.

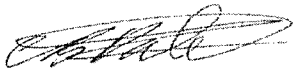
Summary

The visual observation, field screening results, and analytical data illustrate the extent of hydrocarbon contamination in soil adjacent to the flow path of the crude oil release has been delineated. The data also indicates the approximate limits of the excavation presented in the Remediation Plan (Premier Report dated May 2006) presented to the NMOCD is confirmed and additional excavation beyond the areas identified should not be required.

Groundwater samples from the new two monitor wells will be collected on June 15, 2006 as part of the quarterly groundwater sampling program for this site. Groundwater sampling results will be presented in the Annual Groundwater Report. Upon review and receipt of the groundwater data, a separate letter report will be submitted in which the extent of the dissolved phase plume will be discussed.

If you have any questions concerning the information presented in this summary letter or the attached materials, please call me at (281) 240-5200, extension 203.

Sincerely,

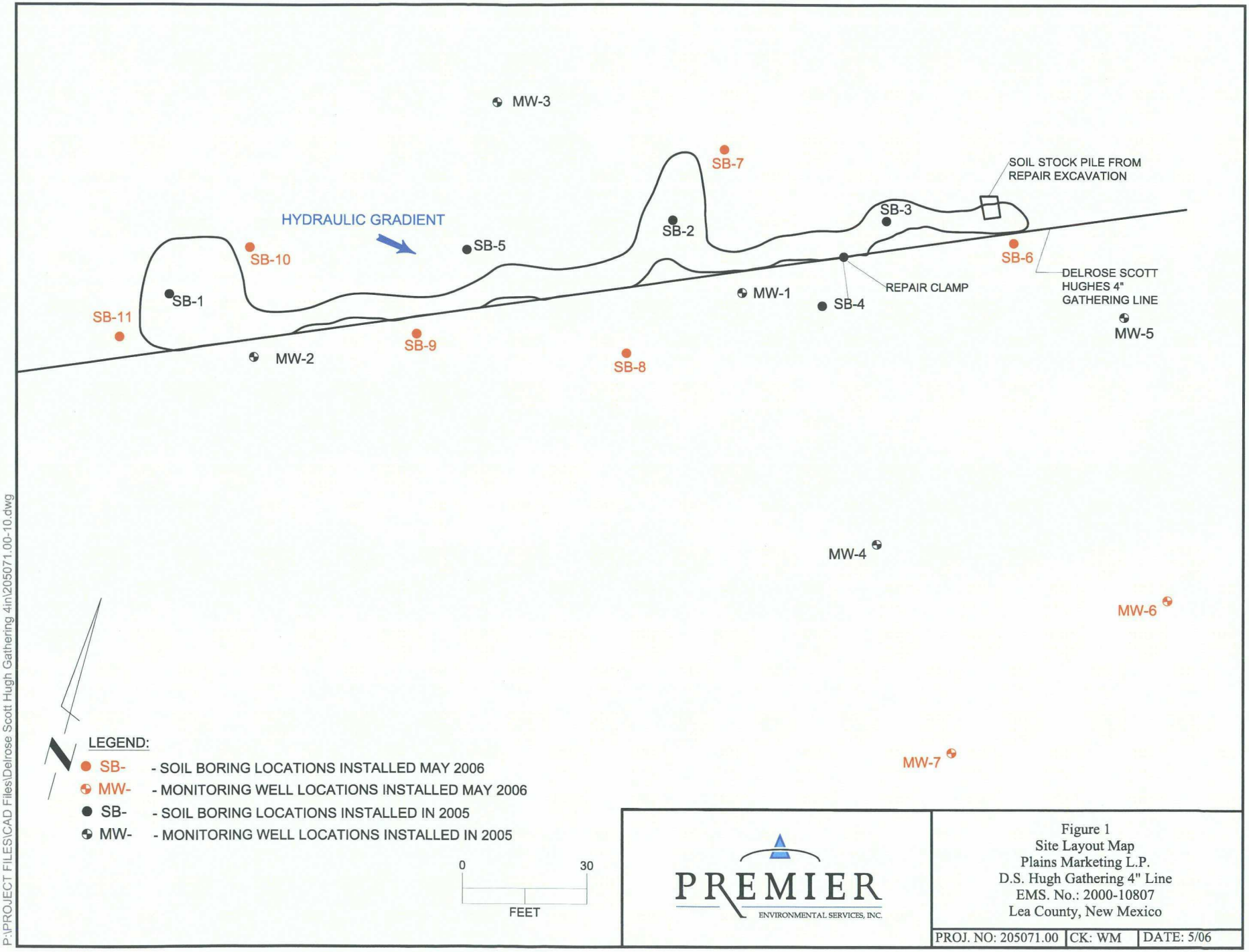


Chan Patel
Senior Project Manager

Attachments: Figure 1 - Site Map
Table 1 - Summary of PID Results
Table 2 - Soil Analytical Results
Appendix A - Soil Boring Logs and Monitor Well Construction Logs
Appendix B - Laboratory Analytical Report

cc: Daniel Bryant, Plains Marketing, L.P., Midland Office

Figure 1
Site Map



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PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 1
Site Layout Map
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
EMS. No.: 2000-10807
Lea County, New Mexico

PROJ. NO: 205071.00	CK: WM	DATE: 5/06

Table 1
Summary of PID Results

Table 1
Summary of PID Results
D.S. Hugh Site, Lea County, New Mexico
Plains EMS No. 2000-10807
Premier Project No.: 205071

Boring #	Depth	PID Reading
SB-6	5'	0.0
SB-6	10'	0.0 *
SB-6	15'	0.0 *
SB-7	5'	0.0
SB-7	10'	3.0 *
SB-7	15'	3.0 *
SB-8	5'	3.0 *
SB-8	10'	1.9
SB-8	15'	2.4 *
SB-9	5'	4.1 *
SB-9	10'	3.6
SB-9	15'	3.6 *
SB-10	5'	4.1
SB-10	10'	3.6 *
SB-10	15'	3.6 *
SB-11	5'	3 *
SB-11	10'	2.4
SB-11	15'	1.9 *

Boring #	Depth	PID Reading
MW-6	5'	0.2
MW-6	10'	1.9
MW-6	15'	2.4
MW-6	20'	5.2 *
MW-6	25'	3.6
MW-6	30'	3.6
MW-6	35'	3.0
MW-6	40'	3.6 *
MW-6	45'	2.4 *
MW-7	5'	3.0
MW-7	10'	2.4 *
MW-7	15'	0.2
MW-7	20'	0.0
MW-7	25'	0.8
MW-7	30'	1.9 *
MW-7	35'	0.0
MW-7	40'	0.0 *
MW-7	45'	0.0

"*" denotes samples selected for laboratory analyses

Table 2
Soil Analytical Results

Table 2
Soil Analytical Results
Plains Marketing, L.P.
Plains EMS No. 2000-10807
D.S. Hugh
Lea County, New Mexico

Location	Date Sampled	Interval	Laboratory Sample ID	GRO (C6-C10)	DRO (C10-C28)	Total TPH EPA 8015 m	Benzene	Toluene	Ethylbenzene	Total Xylene
		feet bgs		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Remediation Goals						100	10			
MW-6	5/18/2006	20	T13570-1	<3.3	27	27	<0.00035	<0.00023	<0.00035	<0.00069
	5/18/2006	40	T13570-2	<3.0	<3.7	<3.7	<0.00033	<0.00022	<0.00033	<0.00065
	5/18/2006	45	T13570-3	<4.0	<4.4	<4.4	<0.00038	<0.00026	<0.00038	<0.00077
MW-7	5/18/2006	10	T13570-4	<2.9	<3.6	<3.6	<0.00032	<0.00021	<0.00032	<0.00063
	5/18/2006	30	T13570-5	<2.8	<3.6	<3.6	<0.00033	<0.00022	<0.00033	<0.00065
	5/18/2006	40	T13570-6	<3.8	<4.2	<4.2	<0.00035	<0.00023	<0.00035	<0.00069
SB 6	5/18/2006	10	T13570-7	<2.9	<3.6	<3.6	<0.00033	<0.00022	<0.00033	<0.00065
	5/18/2006	15	T13570-8	<3.4	<3.9	<3.9	<0.00035	<0.00024	<0.00035	<0.00071
SB 7	5/19/2006	10	T13570-9	<3.0	<3.7	<3.7	<0.00032	<0.00021	<0.00032	<0.00064
	5/19/2006	15	T13570-10	<4.1	<4.4	<4.4	<0.00040	<0.00027	<0.00040	<0.00080
SB 8	5/19/2006	5	T13570-11	<3.6	<4.1	<4.1	<0.00037	<0.00025	<0.00037	<0.00075
	5/19/2006	15	T13570-12	<0.73	<4.0	<4.0	<0.00035	<0.00023	<0.00035	<0.00069
SB 9	5/19/2006	5	T13570-13	<3.2	<3.9	<3.9	<0.00034	<0.00023	<0.00034	<0.00068
	5/19/2006	15	T13570-14	<3.7	<4.2	<4.2	<0.00038	<0.00025	<0.00038	<0.00076
SB 10	5/19/2006	10	T13570-15	<4.1	<4.5	<4.5	<0.00040	<0.00027	<0.00040	<0.00081
	5/19/2006	15	T13570-16	<3.0	<3.7	<3.7	<0.00033	<0.00022	<0.00033	<0.00066
SB 11	5/19/2006	5	T13570-17	<3.1	<3.8	<3.8	<0.00034	<0.00023	<0.00034	<0.00068
	5/19/2006	15	T13570-18	<2.8	<3.6	<3.6	<0.00032	<0.00022	<0.00032	<0.00065

bgs - Below Ground Surface DRO - Diesel Range Organics GRO - Gasoline Range Organics
NMOCD - New Mexico Oil Conservation Division

Appendix A
Soil Boring Logs and Monitor Well Construction Logs

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER SB-6

PROJECT 205171.00 LOCATION

TOTAL WELL DEPTH 15' BOREHOLE DIA (in) 5" STICKUP (ft) --

CASING DIA (in) TYPE SCREEN LENGTH SLOT SIZE (in)

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/18/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Medium red brown, Dry, No odor.		
4				0.0	CAL	Light red brown, Poorly indurated, Dry, Sandy, Fine grained, Well sorted, Sub-angular.	SB-6 5'	
8					CAL			
10				0.0	SC	Medium red brown, Calcite cement, Poorly indurated, Dry, Very slight odor, very fine to fine grain, Poorly sorted, Sub-angular.	SB-6 10'	
14				0.0	SC	Medium red brown, Calcite cement, Poorly indurated, Dry, No odor, Very fine to fine grained, Poorly sorted, Sub-angular.	SB-6 15'	
15						T.D. 15'		
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER SB-7

PROJECT 205171.00 LOCATION

TOTAL WELL DEPTH 15' BOREHOLE DIA (in) 5" STICKUP (ft) --

CASING DIA (in) TYPE SCREEN LENGTH SLOT SIZE (in)

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/18/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Medium red brown, Loose, Dry, To 5'.		
4				0.2	CAL	Light grey, Dry, Fairly well indurated, Sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	SB-7 5'	
10				3.0	CAL	Light grey, Dry, Fairly well indurated, Silty/sandy, very fine to fine grained, Fairly well sorted, Sub-angular. Less indurated @ 12'	SB-7 10'	
14				0.0	SC	Medium red brown @ 14' Light grey, Well indurated, Silty, Very fine grained, Well sorted, Dry.	SB-7 15'	
16						T.D. 15'		

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER SB-8

PROJECT 205171.00 LOCATION

TOTAL WELL DEPTH 15' BOREHOLE DIA (in) 5" STICKUP (ft) --

CASING DIA (in) TYPE SCREEN LENGTH SLOT SIZE (in)

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/19/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Medium red brown, Loose, Dry, Very fine to fine grained, Fairly well Sorted, Sub-angular, To 4'		
4				3.8	CAL	Light red grey Poorly indurated, Dry, Sandy, Very fine to fine grained Fairly well sorted, Sub-angular. Fairly well indurated @ 7'	SB-8 5'	
10				1.9	CAL	Light red grey, Dry, Fairly well indurated, Silty/sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	SB-8 10'	
14				2.4	CAL	Light red grey, Dry, Fairly well indurated, Silty/sandy, Very fine to fine grained, Fairly well sorted.	SB-8 15'	
15						T.D. 15'		

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER SB-9

PROJECT 205171.00 LOCATION

TOTAL WELL DEPTH 15' BOREHOLE DIA (in) 5" STICKUP (ft) --

CASING DIA (in) TYPE SCREEN LENGTH SLOT SIZE (in)

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/19/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Medium red brown, Dry, Loose, Very fine to fine grained, Fairly well sorted, sub angular to 2.5'.		
4				4.1	CAL	Light grey, Dry, Fairly well indurated, Silty/Sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	SB-9 5'	
10				3.6	CAL	Light red grey, Dry, Fairly well indurated, Silty/sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	SB-9 10'	
14				3.6	CAL	Light red grey, Dry, Fairly well indurated, Silty/sandy,Very fine to fine grained, Fairly well sorted, Sub angular.	SB-9 15'	
						T.D. 15'		

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER SB-10

PROJECT 205171.00 LOCATION

TOTAL WELL DEPTH 15' BOREHOLE DIA (in) 5" STICKUP (ft) --

CASING DIA (in) TYPE SCREEN LENGTH SLOT SIZE (in)

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/19/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	Medium red brown, Dry, Loose, Very fine to fine grained, Fairly well sorted, sub angular to 2'.		
4				4.1	CAL	Light red grey, Dry, Fairly well indurated, Sandy, Fine grained, Fairly well sorted, Sub-angular.	SB-10 5'	
10				3.6	CAL	Light red grey, Dry, Fairly well indurated, Silty/sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	SB-10 10'	
14				3.6	CAL	Medium red brown, Fairly well indurated, Dry, Very sandy, Fine grained, Well sorted, Sub angular	SB-10 15'	
						T.D. 15'		

PREMIER
ENVIRONMENTAL SERVICES, INC.

LOCATION MAP

WELL NUMBER SB-11

PROJECT 205171.00 LOCATION

TOTAL WELL DEPTH 15' BOREHOLE DIA (in) 5" STICKUP (ft) --

CASING DIA (in) TYPE SCREEN LENGTH SLOT SIZE (in)

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/19/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					SC	To 2' Medium red brown,Loose, Very fine to fine grained, Fairly well sorted, sub angular, Dry.		
4	X			3.0	CAL	Medium red grey, fairly well indurated, Dry, Very sandy-fine grained, Fairly well sorted, Sub-angular.	SB-11 5'	
10	X			2.4	CAL	Light grey, Well indurated, Dry, Sandy, Fine grained, Well sorted Sub-angular.	SB-11 10'	
14	X			1.2	CAL	Medium red brown, Fairly well indurated, Dry, Very sandy, Fine grained, Well sorted, Sub angular.	SB-11 15'	
16						T.D. 15'		
18								
20								
22								
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-6

PROJECT 205071.00 LOCATION Lea County, New Mexico

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

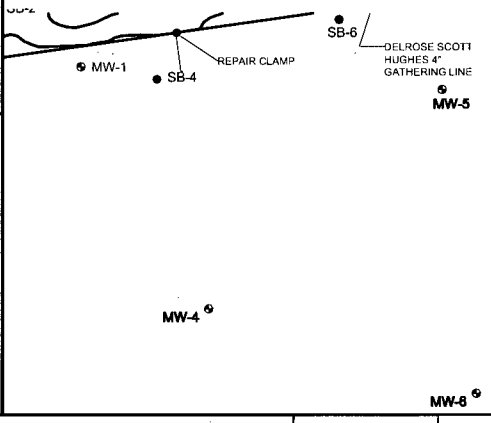
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20' SLOT SIZE (in) .010

DRILLING CO. Staub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/18/06

Top of Casing Elevation GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0–2					SC	Medium Red brown, Very fine to fine grained, Fairly well sorted, Damp.		
4–6				0.2	CAL	Light red grey, Silty/sandy, very fine to fine grained, fairly well sorted, fairly well indurated, fair staining, damp	MW6–5'	
8–10				1.9	CAL	Light red grey, Fairly well indurated, Silty/sandy, very fine to fine grained Fairly well sorted, Sub-angular, Dry	MW6–10'	
12–14				2.4	CAL	Medium red grey, Dry, fairly well indurated, Silty sandy, very fine to fine grained, fairly well sorted, sub-angular.	MW6–15'	
16–20				5.2	CAL	Light red grey, Dry, Fairly well indurated, Silty, Very fine grained, Well sorted.	MW6–20'	
22–24				3.6	CAL	Light red grey, Dry, Fairly well indurated, Silty, Very fine grained, well sorted	MW6–25'	
26–30				3.6	CAL	Light red grey, Dry, Fair to well indurated, Silty, Very fine grained, Well sorted.	MW6–30'	
32–34				3.0	CAL	Light red grey, Dry, Fair to well indurated, Silty, Very fine grained, Well sorted.	MW6–35'	
36–40				3.6	CAL	Light red grey, Dry, Fair to well indurated, Silty, Very fine grained, Well sorted.	MW6–40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-6

PROJECT 205071.00 LOCATION Lea County, New Mexico

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

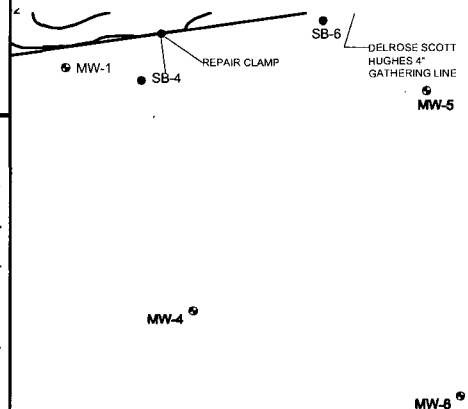
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub DRILLING METHOD

GEOLOGIST Will Murley DATE DRILLED 5/18/06

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

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42						Water @ 43'		
44	X			2.4	CAL	Light grey, Wet, Fairly well indurated, Silty, Very fine grained,	MW6-45'	
46								
48								
50					CAL			
52								
54								
56						T.D. 55'		
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-7

PROJECT 205071.00 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 Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 5/18/06

Top of Casing Elevation _____ GROUND SURFACE ELV. (ft) _____

LOCATION MAP

DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0								
2					SC	Medium red brown, Dry, Loose, Very fine to fine grained, Fairly well sorted.		
4								
5	X			3.0	CAL	Light red brown, Dry, Poorly indurated, Silty/sandy, very fine to fine grained, Fairly well sorted, Sub-angular.	MW7–5'	
6								
8								
10	X			2.4	CAL	Medium red brown, Dry, Fairly well indurated, Very sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	MW7–10'	
12								
14								
15	X			0.2	CAL	Light red grey, Dry, Poorly indurated, Sandy, Fine grained, Well sorted, Sub-angular.	MW7–15'	
16								
18								
20	X			0.0	CAL	Light red grey, Dry, fairly well indurated, Silty/sandy, Very fine to fine grained, Fairly well sorted, Sub-angular.	MW7–20'	
22								
24								
25	X			0.8	CAL	Medium red brown, Dry, Poorly indurated, Sandy, Fine grained, Well sorted, Sub-angular.	MW7–25'	
26								
28								
30	X			1.9	GC	Gravel, Medium red brown, Loose, Very sandy, Fine to course, Poorly sorted, Round.	MW7–30'	
32								
34								
35	X			0.0	GC	Medium red brown, Dry, Loose, Very sandy, Fine to course, Poorly sorted, Round.	MW7–35'	
36								
38								
40	X			0.0	SC	Medium red brown, With gravel, Damp, Fine to course, Poorly sorted, Sub-angular.	MW7–40'	
42						Water @ 42'		

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-7

PROJECT 205071.00 LOCATION Lea County, New Mexico

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

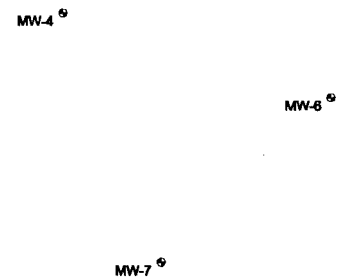
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20' SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 05/18/06

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

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42								
44	X			0.0	SC	Hole bridged, Sample off shovel, Clear bridge, Hard sand stone @ 44'	MW1–45'	
46								
48								
50								
52								
54								
56						T.D.55'		
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

Appendix B
Laboratory Analytical Report

T13570 May 2006 – Soil Boring Data
Is located in Appendix F with other analytical reports

Appendix D

NMOCD Approval Letter of Soil Remediation Plan

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

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

May 31, 2006

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

RE: Remediation Plan – D.S. Hugh Site
Unit Letter A, Section 26, Township 21 South, Range 37 East
Lea County, New Mexico
NMOCD File Number 1R-0463
Plains EMS No. 2000-10807
Premier Project No. 205071.00

Dear Mr. Bryant:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the above plan submitted, on behalf of Plains Marketing, L.P. (Plains), by Premier Environmental Services, Inc. This remediation plan is hereby approved with the following conditions and understandings:

1. Plains will install at least six additional soil borings to further delineate soil contamination at the site, both horizontally and vertically.
2. Plains will excavate affected soils along the release flow path where deeper impacted soils (i.e. 30-40 feet bgs) are present. The depth of such excavation will be as shown in Figure 4 of Appendix A of the work plan.
3. Plains will dispose of the most heavily contaminated soils at an NMOCD-approved facility.
4. Plains will install at least two additional monitor wells to complete the groundwater delineation.
5. Plains will continue to monitor the groundwater at the site and will continue to recover phase-separated hydrocarbons using an absorbent sock and bailing every two weeks.
6. Groundwater monitoring at the site, and analysis for TPH and BTEX, will continue on a quarterly basis.
7. A 2006 Annual Monitoring Report will be prepared for this site, which outlines all of the activities at the site during 2005. Such report is due in the NMOCD Santa Fe office by April 1, 2007.
8. All other activities at the site related to this remediation plan will be performed as described in the plan. Any deviation requires NMOCD approval

NMOCD approval does not relieve Plains of responsibility should its operations at this site prove to have been harmful to public health or the environment. Nor does it relieve Plains of its responsibility to comply with the rules and regulations of any other governmental agency.

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin
Environmental Bureau

Copy: Chan Patel
NMOCD, Hobbs

Appendix E

Site Photographs

Photograph 1: Buried pipeline excavated, cut and capped with end clamp.

Photograph 2: 230 feet by 12 feet excavation of entire length of release (flow path).

Photograph 3: Excavated area around monitor well MW-2.

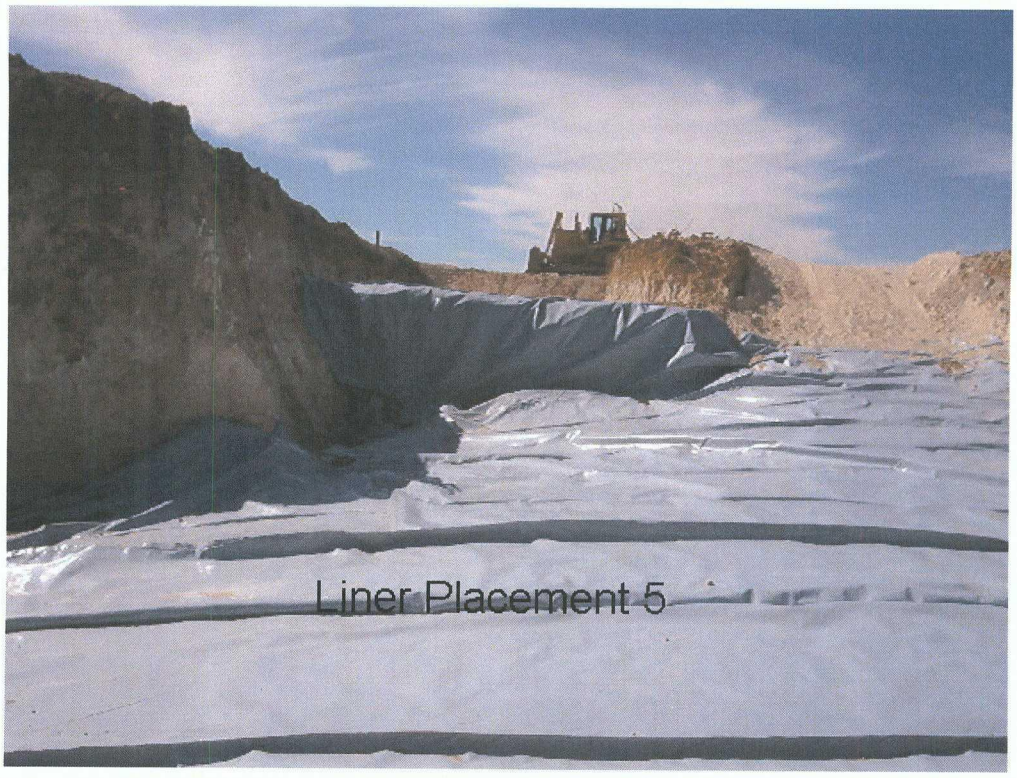
Photograph 4: Excavated area around monitor well MW-1.

Photograph 5: Clamp on pipeline and relatively new section of green pipe.

Photograph 6: Clamp on pipeline and relatively new section of green pipe.

Photograph 7: A buffer zone is created in the main excavation around monitor well MW-1.

Photograph 8: Liner placed on the base of excavation by monitor well #1.



Photograph 9: Liner placed on the base of excavation.

Photograph 10: Bentonite placed around monitor well to seal it n place.

Photograph 11: Treated soil backfilled over liner.

Photograph 12: Site returned to grade.

Appendix F

Analytical Laboratory Reports –Available Electronically on CD Only

T13570 May 2006 – Soil Boring Data
6J14001 October 2006 – Soil Side wall Data
6J18008 October 2006 – Soil Side wall Data
6J20001 October 2006 – Soil Side wall Data
6J18005 October 2006 – Soil Stockpile Data
6J20002 October 2006 – Soil Stockpile Data
6J26005 October 2006 – Soil Stockpile Data
6J18006 October 2006 – Soil Stockpile Data
6J18007 October 2006 – Soil Side wall Data

Appendix G

Analyses of Chromatograms – Kevin Jeanes

Evaluation of Data for Delrose Scott-Hugh Gathering 4"
Lab Order Number: 6J18007

Reviewed By: Kevin D. Jeanes
Chemist
Premier Environmental Services, Inc.

At the request of Chan Patel, a review of the laboratory data for Delrose Scott-Hugh Gathering 4" was conducted to try to determine relative age of the three samples.

The determination of relative age is difficult to make with the existing data; however, some information can be gleaned by making the following assumptions:

1. The data is representative and reproducible. This is important considering that contamination in solid samples may not be homogenous.

2. The TPH data is quantified correctly. Direct inject methods can show significant variability without internal standardization.

3. The contaminate comes from the same source material. A visual comparison is only applicable to same source contaminate.

4. The BTEX data is correct. The surrogate recovery for sample 2 is outside limits, which demonstrates possible bias.

The Data collected indicates a trend of volatilization that can be indicative of exposure to the environment for different lengths of time.

By comparing each samples ratio of TPH carbon range splits the following data is obtained:

1. Sample 6J18007-01 Total TPH 1330mg/kg
   % C6-C12 TPH = 24%
   % C12-C28 TPH = 71%
   % C28-C35 TPH = 5%

2. Sample 6J18007-02 Total TPH 4810mg/kg
   % C6-C12 TPH = 32%
   % C12-C28 TPH = 65%
   % C28-C35 TPH = 3%

3. Sample 6J18007-03 Total TPH 52200mg/kg
   % C6-C12 TPH = 15%
   % C12-C28 TPH = 82%
   % C28-C35 TPH = 3%

This data indicates that Sample 3 demonstrates an increased volatilization when compared to Sample 2, which could be caused by being exposed to the environment for a longer period of time.

Sample 1 data is possibly skewed due to the differences in total TPH.

By comparing each sample's BTEX concentrations compared to total TPH yields the following data:

1. Sample 6J18007-01
   BTEX/TPH = 0.47%

2. Sample 6J18007-02
   BTEX/TPH = 0.42%

3. Sample 6J18007-03
   BTEX/TPH = 0.04%

This data indicates that Sample 3 demonstrates an increased volatilization when compared to Samples 1 & 2, which could be caused by being exposed to the environment for a longer period of time.

After review of the data and Quality Control information, it is my opinion that Sample 3 is older relative to Samples 1 & 2. It is important to note that this opinion is based only on available data and additional testing is needed to be more conclusive.

Additional testing could include:

1. Analyzing the samples for TICS (8260), especially in boiling point range < Benzene.

2. Having laboratory dilute the samples to provide equivalent response for a more accurate visual comparison.

3. Analyze field duplicate to demonstrate reproducibility.

Appendix H

C-141 Release Notification Form

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

x Initial Report ☐ Final Report

Name of Company Plains Marketing, LP	Contact Daniel Bryant
Address 5805 East Hwy. 80, Midland, TX 79706	Telephone No. 432-686-1769
Facility Name D. S. Hugh Gathering	Facility Type Steel Pipeline

Surface Owner Delrose Scott	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	26	21S	37E					Lea

Latitude 32° 26' 48" **Longitude** 103° 08' 07"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 barrels	Volume Recovered 5 barrels
Source of Release Steel Pipeline	Date and Hour of Occurrence 11/10/2000	Date and Hour of Discovery 11/10/2000 13:20
Was Immediate Notice Given? Yes ☒ No ☐ Not Required	If YES, To Whom? Donna Williams	
By Whom? Wayne Brunette	Date and Hour 11/10/2000 14:25	
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.* Pipeline was clamped to mitigate the release during initial response activities.

Describe Area Affected and Cleanup Action Taken.*
NOTE: This information was obtained from historical EOTT files, Plains acquired EOTT/Link on April 1, 2004 and Plains assumes this information to be correct.

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 Coordinator	Approval Date:	Expiration Date:
E-mail Address: dmbryant@paalp.com	Conditions of Approval:	Attached ☐
Date: 4/7/2006 Phone:432-686-1769		

* Attach Additional Sheets If Necessary

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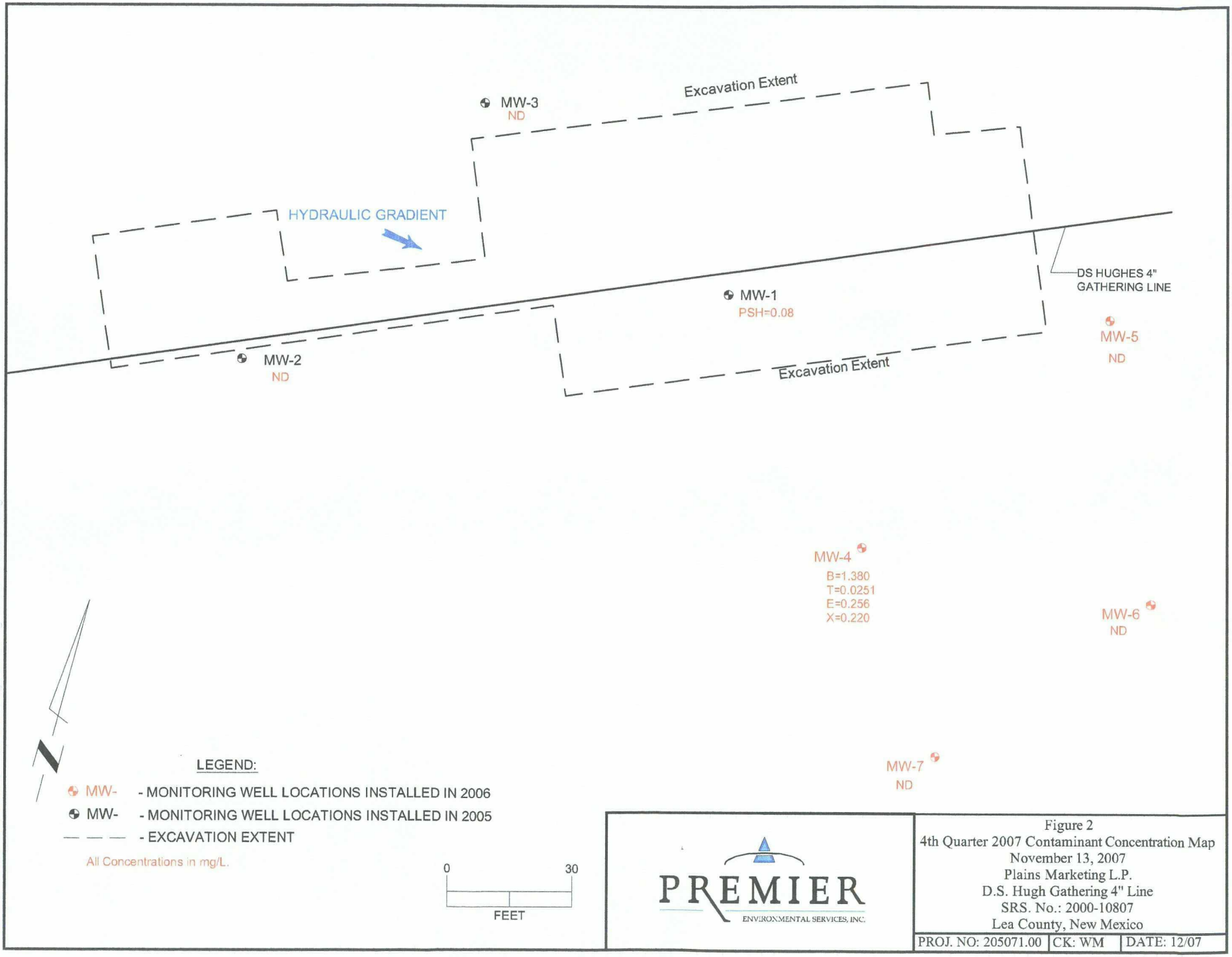

Figure 2
4th Quarter 2007 Contaminant Concentration Map
November 13, 2007
Plains Marketing L.P.
D.S. Hugh Gathering 4" Line
SRS. No.: 2000-10807
Lea County, New Mexico

PROJ. NO: 205071.00	CK: WM	DATE: 12/07

P:\PROJECT FILES\CAD Files\Delrose Scott Hugh Gathering 4in\205071.00-37.dwg

TABLE 3
Groundwater Sample Analytical Results
Plains Marketing L.P.
SRS No. 2000-10807
D. S. Hugh Site
Lea County, New Mexico

SAMPLE LOCATION	SAMPLE ID	SAMPLE DATE	BENZENE mg/L	TOLUENE mg/L	ETHYL-BENZENE mg/L	Total XYLENES mg/L	BTEX mg/L
			NMOCD Remediation Criteria				
			0.01	0.750	0.750	0.620	
MW-1		12/21/2005	NS	NS	NS	NS	Sheen
MW-1		3/28/2006	NS	NS	NS	NS	Sheen
MW-1		6/15/2006	NS	NS	NS	NS	Sheen
MW-1		9/12/2006	NS	NS	NS	NS	Sheen
MW-1		3/1/2007	NS	NS	NS	NS	Sheen
MW-2	T12186-1	12/21/2005	<0.002	<0.002	<0.002	<0.006	<0.002
MW-2	T13038-1	3/28/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-2	T13864-1	6/15/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-2	T14673-1	9/12/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-2	T15625-1	12/6/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-2	T16518-1	3/1/2007	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-2	T17666-1	6/1/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-2	T18804-1	9/7/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-2	T19746-1	11/13/2007	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-3	T12186-2	12/21/2005	<0.002	<0.002	<0.002	<0.006	<0.002
MW-3	T13038-2	3/28/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-3	T13864-2	6/15/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-3	T14673-2	9/12/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-3	T15625-2	12/6/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-3	T16518-2	3/1/2007	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-3	T17666-2	6/1/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-3	T18804-2	9/7/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-3	T19746-2	11/13/2007	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-4	T13038-3	3/28/2006	**0.2**[a]	0.0535	0.0384	0.115	0.4069
MW-4	T13864-3	6/15/2006	**0.41**[a]	0.0926	0.144[a]	0.403[a]	1.0496
MW-4	T14673-3	9/12/2006	**0.617**[a]	0.025	0.232[a]	0.208	1.082
MW-4	T15625-3	12/6/2006	**1.25**[a]	0.196	0.581[a]	0.818	2.845
MW-4	T16518-3	3/1/2007	**1.06**	0.186	0.294	0.195	1.735
MW-4	T17666-3	6/1/2007	**1.25**	0.0195J	0.349	0.192	1.791
MW-4	T18804-3	9/7/2007	**1.51**	0.0554	0.317	0.295	2.1774
MW-4	T19746-3	11/13/2007	**1.38**[a]	0.0251	0.256	0.22	0.5011
MW-5	T13038-4	3/28/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-5	T13864-4	6/15/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-5	T14673-4	9/12/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-5	T15625-4	12/6/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-5	T16518-4	3/1/2007	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-5	T17666-4	6/1/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-5	T18804-4	9/7/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-5	T19746-4	11/13/2007	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-6	T13864-5	6/15/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-6	T14673-5	9/12/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-6	T15625-5	12/6/2006	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-6	T16518-5	3/1/2007	<0.00035	<0.00020	<0.00033	<0.00036	<0.00036
MW-6	T17666-5	6/1/2007	<0.00021	<0.00023	<0.00035	0.0014J	0.0014J
MW-6	T18804-5	9/7/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-6	T19746-5	11/13/2007	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-7	T13864-6	6/15/2006	<0.00038	<0.00036	<0.00035	<0.00072	<0.00072
MW-7	T14673-6	9/12/2006	**0.0163**	<0.00020	<0.00033	0.0036	0.0199
MW-7	T15625-6	12/6/2006	**0.011**	<0.00020	<0.00033	0.004	0.015
MW-7	T16518-6	3/1/2007	<0.00035	<0.00020	<0.00033	0.0053	0.0053
MW-7	T17666-6	6/1/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-7	T18804-6	9/7/2007	<0.00021	<0.00023	<0.00035	<0.00055	<0.00055
MW-7	T19746-6	11/13/2007	<0.0005	<0.0005	<0.0005	<0.001	<0.001

(a) = Result is from Run #2
Concentration in **Bold** = above NMOCD Remediation Criteria
Note: MW-1 not sampled due to presence of hydrocarbon sheen (NS)
J = Estimated vlue