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# **REPORTS**

**DATE:**

**5/2006**

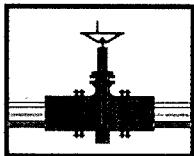
**SOIL REMEDIATION PLAN  
VACUUM TO JAL 14" MAINLINE # 5  
PLAINS EMS NO. 2003-00134**

**UL-A, SECTION 2, T22S, R37E**

**Lea County, New Mexico**

NMOCD No. IR0465  
*464*

PREPARED FOR



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**May 2006**

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## **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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## Executive Summary

On May 23, 2003, a release of approximately 20 barrels of crude oil occurred from a 14" steel pipeline at the EOTT Energy LLC (EOTT) Vacuum to Jal 14" Mainline #5 site, EMS No. 2003-00134 (Vac to Jal #5). Plains Marketing, L.P. (Plains) currently owns the pipeline. The site is located in unit letter A, NE $\frac{1}{4}$  of the NE $\frac{1}{4}$ , Section 2 Township 22S, Range 37E, or more specifically at latitude 32° 25' 39.006" N and longitude 103 ° 07' 43.155" W in Lea County, New Mexico (Figure 1, Appendix A). The land is owned by Mr. Greg Holt. Mr. Pat McCasland of Environmental Plus, Inc. (EPI) reported the release on behalf of Mr. Frank Hernandez of EOTT to the New Mexico Oil Conservation Division (NMOCD) on May 23, 2003, according to the initial Release Notification C-141. The leak was apparently caused by internal or external corrosion and was repaired. The line was being pressure tested when the leak occurred.

According to EPI documents, the irregularly shaped spill area was approximately 200 feet by 40 feet, and impacted approximately 8,885 square feet (Figure 2, Appendix A). There appeared to be a historical spill at the Site that impacted a contiguous area of approximately 2,486 square feet, evidenced by an asphaltine layer noted at the surface (Figure 2, Appendix A). The depth of this historical spill is unknown. According to Mr. Pat McCasland with EPI, emergency response excavation was completed in May and June 2003 and this soil was stockpiled onsite. File correspondence from EPI to Plains states that, during March 5 to March 11, 2004, approximately 1,466 yd<sup>3</sup> of the more heavily impacted surface soils were transported for treatment at the Lea Station Land Farm.

Based on the proximity of Vacuum to Jal 14" #5 site to area water wells, surface water bodies, and depth to groundwater, the site has an NMOCD ranking score of **20 points**.

Eight borings were completed by EPI to delineate the May 2003 spill as well as the historical spill. Analytical results from these eight delineation borings installed in May/June 2003 to 15 feet below ground surface (bgs) indicate that benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations are either below the laboratory detection limit of 0.020 mg/Kg or below the regulatory standard, except in the surface soil samples (approximately 2 feet bgs) collected from BH-2, BH-3, BH-4, BH-5, and BH-6. Total petroleum hydrocarbon (TPH) concentrations exceed the regulatory standard in the surface soil samples collected at the same locations. TPH concentrations in the soil samples collected from BH-7 at approximate depths of 2 feet bgs, 5 feet bgs and 10 feet bgs also exceed the regulatory standard for TPH.

In March 2004, prior to excavation activities to remove impacted soil, four exploratory trenches were completed to further delineate the 2003 release (Figure 3, Appendix A). Headspace analysis of soil show Volatile Organic Concentrations (VOCs) above 100 ppm, the NMOCD field screening remediation criteria, in trenches adjacent to BH-1 to 13 feet bgs, adjacent to BH-4 to 10 feet bgs, and proximal to BH-6, to 2 feet bgs (Table 1, Appendix B). These areas were further excavated and additional excavated soil was land farmed onsite. The impacted soil has been periodically tilled, and remains onsite.

On March 21, 2006, Premier supervised advancement of soil borings to further delineate hydrocarbon impact in soil. The first soil boring was located in the bottom of the deeper portion of the excavation near the leak origin. Phase separated hydrocarbons (PSH)

were noted on the sampling tool and drill rod while collecting soil samples at depths between 35 and 40 feet bgs. As a result of these observations the soil boring program was altered to further investigate the impact to the first groundwater bearing zone. A total of three recovery wells (RW-1, RW-2 and RW-3) and three monitor wells (MW-1, MW-2, and MW-3) were installed to delineate PSH and dissolved phase hydrocarbons in groundwater.

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.

Initially, the side walls in two areas exceeding NMOCD regulatory standards will be re-sampled. These areas may or may not have been over excavated subsequent to confirmation sampling. If any exceedences of TPH or BTEX is indicated by confirmation sampling of the sidewalls, those areas will be over excavated and re-sampled after field analyses indicate affected soil has been removed.

The excavation is divided into two areas consisting of Area A in the southern, deeper section, and Area B in the northern section. A 20-mil, high-density polyurethane impermeable liner will be placed at the base of all sections of the excavation where exceedences of NMOCD cleanup guidelines are observed. 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. It was decided that the land farm material with elevated concentrations of TPH can be used as backfill material for this site, if placed between two liners. Specifically, in Area A, the deeper portion of the excavation, one liner will be placed at the bottom of the excavation. Land farm material with TPH concentrations greater than 1,000 mg/kg, will be used to backfill up to the top of the bench located on the on the east side of this section of the excavation. A second liner will be placed over the bench and extended across the entire Area A.

In Area B, a liner will be installed at the base of the excavation and the entire excavation will be backfilled to grade doming upward toward the center to allow for natural subsidence. The entire excavation will be backfilled using land farmed material.

Delineation of PSH and dissolved phase hydrocarbons in groundwater will be completed after completion of backfill activities. In the interim, 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 review existing site data and to complete delineation and remediation at the Vacuum to Jal 14" Mainline #5 Site (Vac to Jal #5) (Plains EMS Nos. 2003-00134).

The leak that occurred at the Vac to Jal #5 Site (Site) on May 23, 2003 was apparently caused by corrosion. The site is located in unit letter A, NE $\frac{1}{4}$  of the NE $\frac{1}{4}$ , Section 2, Township 22S, Range 37E, or more specifically at latitude 32° 25' 39.006" N and longitude 103° 07' 43.155" W in Lea County, New Mexico (Figure 1, Appendix A). Mr. Pat McCasland of Environmental Plus, Inc. (EPI) reported the release on behalf of Mr. Frank Hernandez of Eott Energy LLC (EOTT) to the New Mexico Oil Conservation Division (NMOCD) on May 23, 2003, according to the initial Release Notification C-141. The line was being pressure tested when the leak occurred and the line was subsequently repaired. The C-141 form identified remediation standards, and outlined an initial plan to remediate the site. A copy of the C-141 is provided in Appendix E.

According to Mr. Pat McCasland with EPI, emergency response excavation was completed in May and June 2003. The irregularly shaped spill area was approximately 200 feet long by 40 feet wide, and impacted approximately 8,885 square feet (Figure 2, Appendix A). There appeared to be an historical spill at the Site that impacted a contiguous area of approximately 2,486 square feet, evidenced by an asphaltine layer (Figure 2, Appendix A). EPI collected soil samples from eight boreholes installed up to 15 feet below ground surface (bgs) in May and June 2003. According to Mr. Pat McCasland, as of March 2004, approximately 1,466 yd<sup>3</sup> were transported for treatment at the Lea Station Land Farm.

## **2.0 Environmental Characterization**

### **2.1 Geological Description**

In Lea County, 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 appears to be located primarily on Recent Age Mescalero sands. 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 but there is one residential property within approximately 500 feet of the Site. According to the City of Eunice Water/Wastewater Superintendent, the water supply for this residence is the Eunice Municipal Water Supply.

### **2.3 Groundwater**

The New Mexico Office of the State Engineer database lists one water well in Section 2, T22S R37E (Appendix D). The total depth of the water well is reported to be 1100 feet. The depth to water is not reported in the database. The City of Eunice Water/Wastewater Superintendent was not aware of a private well on the residential property located within approximately 500 feet of the Site. According to EPI, a water well used for agricultural purposes is located on this property, with a depth to groundwater of about 65 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. Primary contaminants, or COCs, associated with crude oil releases include total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and total xylenes (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:

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

These parameters illustrate that focus of the guidelines is to protect groundwater and surface water resources.

### **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 a NMOCD ranking score of **20 points**, with the soil remedial goals highlighted below in the Site Ranking Matrix.

## Site Ranking Matrix

<b>1. Groundwater</b>	<b>2. Wellhead Protection Area</b>	<b>3. Distance to Surface Water Body</b>	
If Depth to GW <50 feet: <i>20 points</i>	If <1000' from water source, or, <200' from private domestic water source: <i>20 points</i>	<200 horizontal feet: 20 points	
If Depth to GW 50 to 99 feet: <i>10 points</i>	If >1000' from water source, or, >200' from private domestic water source: <i>0 points</i>	200-100 horizontal feet: 10 points	
If Depth to GW >100 feet: <i>0 points</i>		>1000 horizontal feet: 0 points	
<i>Groundwater Score:20</i>	<i>Wellhead Protection Area Score: 0</i>	<i>Surface Water Score: 0</i>	
<b>Site Rank (1+2+3) =20+0+0=20</b>			
<b>Total Site Ranking Score and Initial Guidance Cleanup Concentrations</b>			
<b>Parameter</b>	<b>20 or &gt;</b>	<b>10</b>	<b>0</b>
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm
<sup>1</sup> 100 ppm field VOC headspace measurement may be substituted for lab analysis			

## 4.0 Soil Investigation Results

In May and June, 2003, eight boreholes were installed by EPI to a depth of 15 feet bgs to further delineate impact from the May 2003 Vac to Jal #5 release. Soil samples were collected at intervals between 2 feet and 15 feet in depth and submitted to Analysys, Inc. for laboratory analyses of TPH diesel range organics (DRO), gasoline range organics (GRO), by EPA method 8015M, and for BTEX by EPA method 8021B. Analytical results from these eight delineation borings installed in May/June 2003 to 15 feet below ground surface (bgs) indicate that benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations are either below the laboratory detection limit of 0.020 mg/Kg or below the regulatory standard, except in the surface soil samples (approximately 2 feet bgs) collected from BH-2, BH-3, BH-4, BH-5, and BH-6. Total petroleum hydrocarbon (TPH) concentrations exceed the regulatory standard in the surface soil samples collected at the same locations. TPH concentrations in the soil samples collected from BH-7 at approximate depths of 2 feet bgs, 5 feet bgs and 10 feet bgs also exceed the regulatory standard for TPH (Figure 2, Appendix A; Table 1, Appendix B).

In March 2004, prior to excavation activities to remove impacted soil, VOC headspace analysis of soil from four exploratory trenches was completed to further delineate the 2003 release (Figure 3, Appendix A). These trenches are adjacent to BH-1, BH-4, BH-6, and BH-7. Headspace analysis show VOC above 100 ppm (the NMOCD field screening remediation criteria) in trenches completed adjacent to BH-1 down to 13 feet

bgs, adjacent to BH-4 to 10 feet bgs, and proximal to BH-6, down to 2 feet bgs. These areas were further excavated and this soil was land farmed onsite. According to Mr. McCasland, the impacted soil has been periodically tilled, and remains onsite.

Confirmation samples were collected by EPI from the side walls and bottom of the excavation on April 15, 2004. Laboratory results indicated TPH concentrations exceeding NMOCD cleanup guidelines in the soil samples from the west flow path bottom hole sample at 14 feet bgs, east flow path northeast side wall, and the east flow path west side wall (Figure 3, Appendix A and Table 1 Appendix B).

Premier collected twelve soil samples (SP-1 through SP-12) from the land farm on January 12, 2006 and shipped them to Accutest Laboratories in Houston, Texas for analyses of TPH DRO, TPH GRO, and BTEX. Laboratory results indicated TPH DRO concentrations ranged from 231 mg/kg to 1180 mg/kg, with the average concentration for all samples of 605 mg/kg. BTEX concentrations were below NMOCD cleanup guidelines for the Site. Land farm soil sample analytical results are reported on Table 2, Appendix B. Laboratory analytical reports are presented in Appendix C.

## **5.0 Soil Remediation Activities Completed**

The irregularly shaped spill area reported by EPI was approximately 200 feet long by 40 feet wide and impacted approximately 8,885 square feet area (Figure 2, Appendix A). According to EPI, emergency response excavation was completed in May and June 2003, and as of March 12, 2004, approximately 1,466 yds<sup>3</sup> of the more heavily impacted surface soils were transported for treatment at the Lea Station Land Farm. After March 12, 2004, the excavated soil was land farmed onsite, and according to EPI, the impacted soil has been periodically tilled and remains onsite. The path forward to address the residual hydrocarbon concentrations in soil is depicted in Figure 4 and detailed in Section 7.

## **6.0 Groundwater Investigation**

On March 21, 2006, Premier supervised advancement of soil borings to further delineate hydrocarbon impact in soil. The first soil boring was located in the bottom of the deeper portion of the excavation near the leak origin. Field observation and testing conducted on soil samples collected from this boring indicated BTEX and TPH concentrations in excess of NMOCD cleanup guidelines for the site from five feet bgs to the first groundwater bearing zone at approximately 39.5 feet bgs (Table 3, Appendix B). PSH was noted on the sampling tool and drill rod while collecting soil samples at 35 and 40 feet bgs. After discussions with representatives of Plains, the boring was reamed to 7 7/8 – inch diameter to a total depth of 45 feet bgs. The boring was converted into a four – inch diameter recovery well (RW-1). After completion of RW-1, a bailer was lowered and retrieved and PSH was observed on groundwater. As

a result of these observations, the soil boring program was altered to further investigate the impact to the first groundwater bearing zone.

Soil samples collected during the installation of remaining monitor and recovery wells indicated no soil impact in any other borings except at the groundwater capillary zone in recovery wells RW-2, and RW-3 (Table 3, Appendix B). Laboratory analytical reports are presented in Appendix C. A total of three recovery wells (RW-1, RW-2, and RW-3) and three monitor wells (MW-1, MW-2, and MW-3) were installed. Boring logs for the wells are presented in Appendix A. The wells were developed on March 28, 2006 and monitor wells MW-1, MW-2, and MW-3 were purged and groundwater samples were collected on March 29, 2006. RW-1, RW-2, and RW-3 were not sampled as PSH was present in the three recovery wells.

Laboratory results indicated benzene concentrations in groundwater samples collected from monitor wells MW-1 and MW-3 in exceedance of NMOCD cleanup guidelines (Table 4, Appendix B). The laboratory analytical report for groundwater samples are attached in Appendix C. Groundwater gradient maps were constructed based on groundwater gauging data collected on April 13, 2006 (Figure 5, Appendix A). The groundwater gradient for the site is to the south across the Site.

Additional groundwater delineation will be conducted after the completion of soil excavation and backfilling activities. Details regarding groundwater remediation are presented in Section 7.4.

## **7.0 Proposed Remedial Approach**

### **7.1 Objective**

The objectives of the proposed remediation approach for soil are to isolate and control COCs in the soil and to prevent further impact to groundwater. To accomplish these goals, the proposed remediation approach is two fold:

1. Collection of additional confirmation samples to demonstrate the successful removal of impacted soil based on the historical analytical results collected following the initial soil remediation activities.
2. Management of potential further groundwater impact by placing an impermeable plastic liner at the base of the excavation. This will prevent precipitation from migrating down through any residual hydrocarbons in the soil column, and possibly transporting COCs to groundwater. This approach is proposed as COCs are present in the subsurface at depths that are below the maximum extent of practicable excavation.

## **7.2 Remedial Plan Details**

Confirmation soil samples previously collected by EPI indicated concentrations of TPH in exceedence of NMOCD cleanup guidelines for this Site in two sidewall samples from the east flow path portion of the excavation. Premier proposes re-sampling the side walls in these two areas. If any exceedences of TPH or BTEX standards is indicated by confirmation sampling of the sidewalls, those areas will be over excavated and re-sampled after field analyses indicate affected soil has been removed. The remaining sidewalls of the excavation will be sampled every 150 linear feet using five point composite sampling protocol.

Surface soil at the Site is relatively unstable down to a depth of 5 feet and therefore requires benching away from the deeper sections of the excavation. At approximately five feet bgs a stable caliche zone is present. Any over excavation of the sidewalls will require benching to the top of the stable caliche prior to removal of additional material. Due to the depth of the main section of the excavation, proximity to pipelines, and hard rock layers, the excavation will not be extended in depth beyond the current levels at the Site.

The excavation is divided into two areas consisting of Area A in the southern, deeper section, and Area B in the extreme northern section (Figure 6, Appendix A). Between Area A and Area B is an area where previous confirmation sampling indicated the bottom of the excavation was below NMOCD cleanup guidelines. This area will be re-sampled. Confirmation samples will be collected from the base of the excavation between the two areas on 25 by 25 foot grids. Should the laboratory results indicate no exceedences of NMOCD cleanup guidelines in these areas, the areas will be backfilled with no additional lining. Any bottom confirmation soil sample areas indicating concentrations in excess of NMOCD cleanup guidelines for the Site will be isolated by placement of a liner as described below.

A 20-mil, high-density polyurethane impermeable liner will be placed at the base of the sections of the excavation where exceedences of NMOCD cleanup guidelines are observed. If possible, the liners will be placed as single continuous barriers which may require some sealing (or welding). In Area A, the deeper portion of the excavation, one liner will be placed at the bottom of the excavation (Figure 7, Appendix A). Land farm material specifically from the cells corresponding with samples SP-3, SP-5 and SP-6 will be used to backfill up to the top of the bench located on the on the east side of this section of the excavation. A second liner will be placed over the bench and extended across the entire Area A. Both liners will be graded slightly towards the west to allow for drainage and to prevent accumulation and pooling of water on top of the liners.

In Area B, a liner will be installed at the base of the excavation and the entire excavation will be backfilled to grade doming upward toward the center to allow for natural subsidence. The entire excavation will be backfilled using the remaining land

farmed material. Figure 6 shows the approximate aerial extent of the liners and Figure 7 shows a cross section of the liner emplacement in Area A.

### **7.3 Operating and Performance Monitoring Details**

Confirmation samples will be collected from the walls and floors of the excavation. Confirmation samples will be collected based on the following protocol:

- Wall samples – one sample every 150 linear feet.
- Excavation floor samples – one sample every 625 square feet.
- Each wall sample will be analyzed for TPH-DRO and TPH-GRO by EPA method SW-846 #8015B and BTEX by EPA method 8021B.
- Each floor sample will be analyzed for TPH-DRO and TPH-GRO by EPA method SW-846 #8015B, BTEX by EPA method 8021B.
- Wall sample analytical results will be compared to Site cleanup standards.
- If one or more of the wall samples exceed the Site cleanup standards, additional excavation will be completed and re-sampled following the above confirmation sampling protocol.

If additional soil removal is necessary, confirmation samples will be collected from the excavation sidewalls based on PID readings. Performance or remediation standards for excavation sidewalls will be met when the total TPH concentrations are below 100 mg/Kg, benzene is below 10 mg/kg and total are BTEX are below 50 mg/kg.

Land farmed soil that contains greater than 1,000 mg/kg TPH will be placed back into the excavation over the initial 20 mil liner placed at the base of the excavation in the southern part of the excavation. A second liner will be placed over these soils and the remaining soil from the onsite land farm will be used to back fill the excavation to grade. In the event additional soil excavation is necessary, this impacted soil will be blended/treated to less than 1,000 mg/Kg TPH prior to reuse as backfill.

### **7.4 Groundwater Remediation**

Delineation of PSH and dissolved phase hydrocarbons in groundwater will be completed after completion of backfill activities. Proposed future monitor well and recovery well locations are illustrated on (Figure 6, Appendix A).

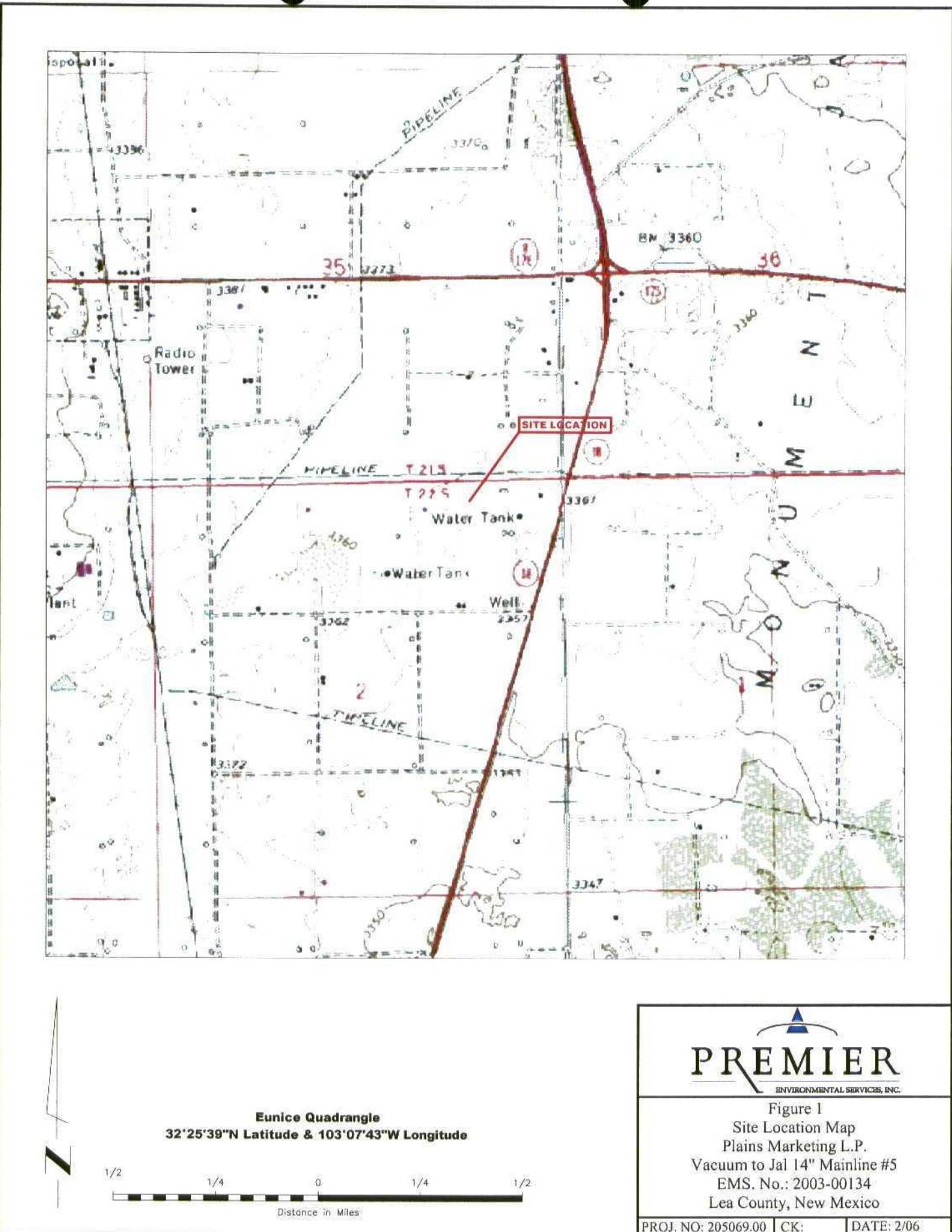
In the interim, groundwater remediation will continue by hand bailing of PSH and using oil absorbent socks between bailing events. Bailing is currently completed on a semi monthly basis. This frequency will increase or decrease based on changing PSH levels in the wells. Monitor wells without the presence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

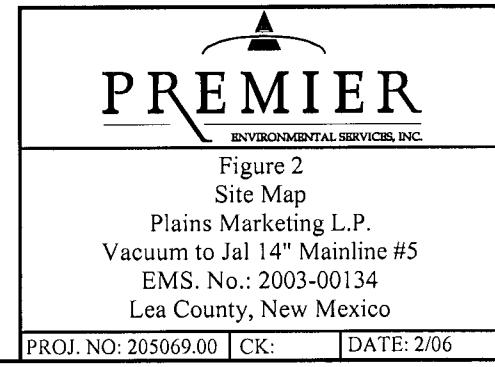
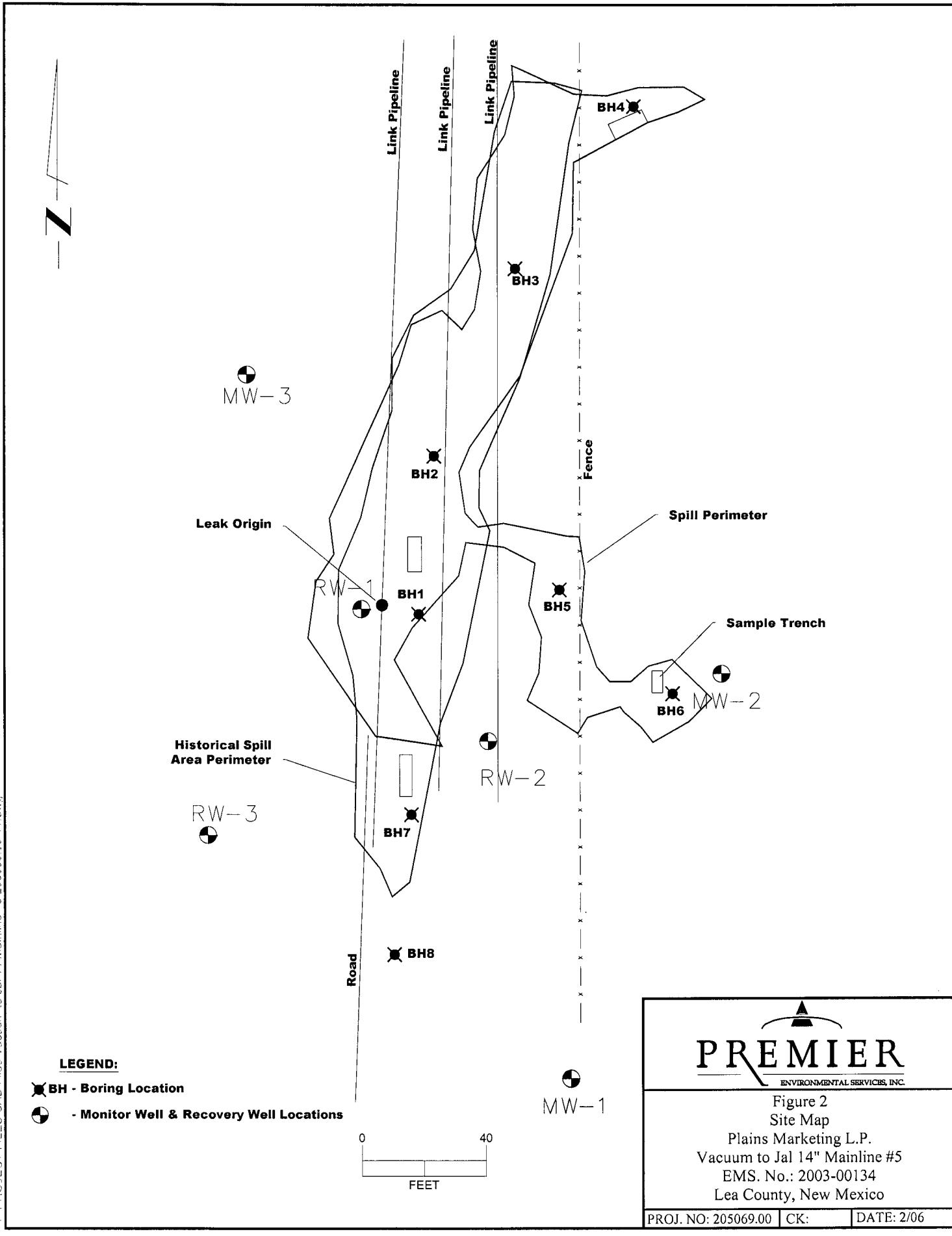
## **7.5 Schedule**

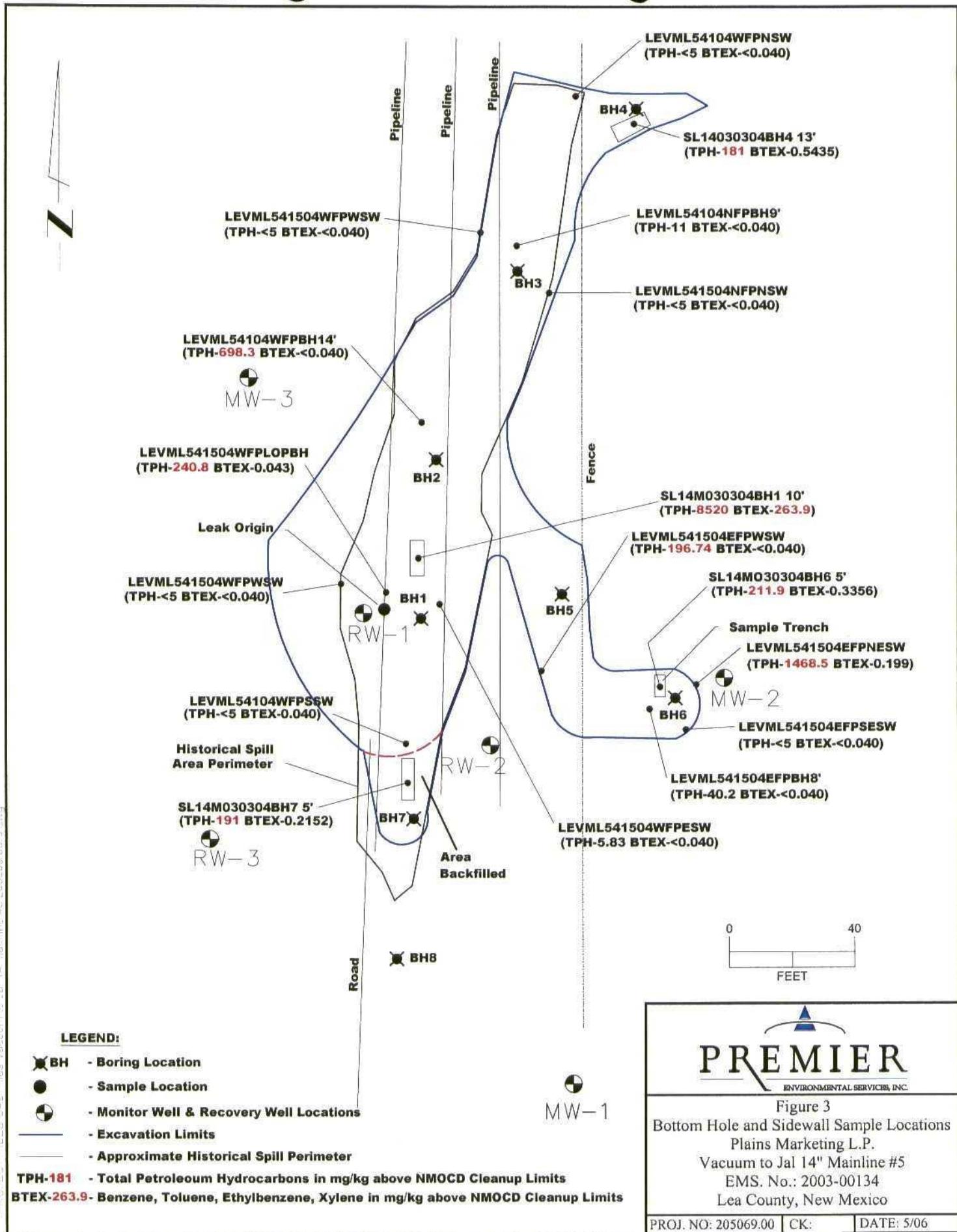
Remediation will be initiated upon receipt of written approval from the NMOCD. Confirmation sampling of side wall in the excavation will be completed prior to installation of the liner and backfilling the site. Sidewall confirmation samples will be submitted for analysis. Upon receipt of analytical results confirming that remediation standards have been met, these data will be submitted to the NMOCD for approval to backfill the excavation. Liner installation and backfilling the excavation can be completed within fifteen (15) working days. Within four (4) weeks of back filling 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 Map**
- Figure 3 – Bottom-hole and Side-wall Sample Location**
- Figure 4 – Path Forward**
- Figure 5 – Groundwater Gradient Map**
- Figure 6 – Proposed Liner and Well Locations**
- Figure 7 – Cross-section of Liner Placement**
- Boring Logs**



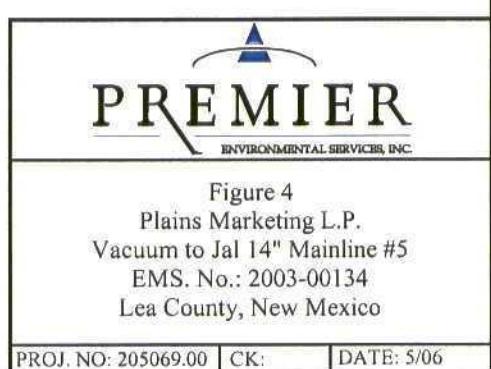
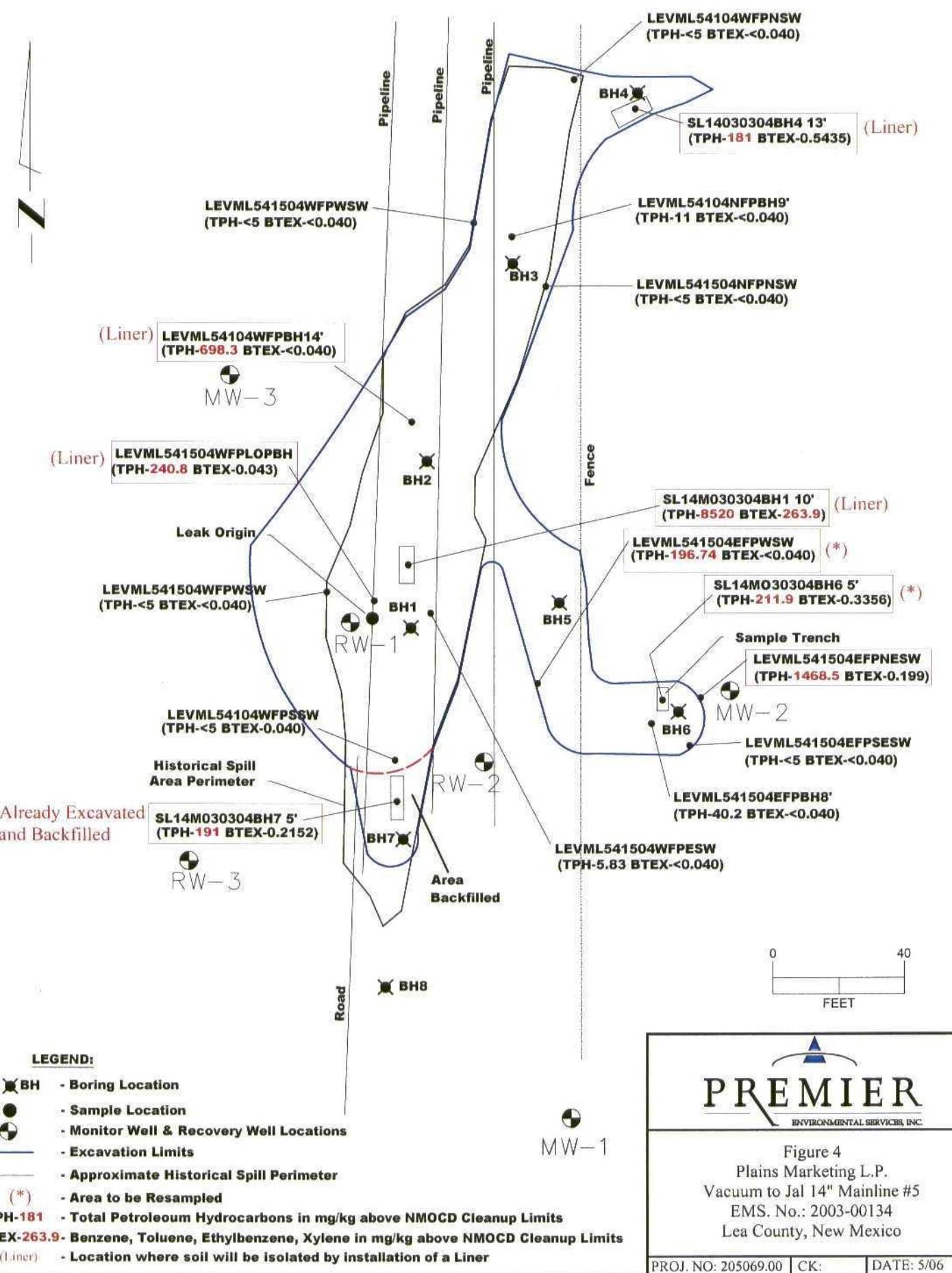


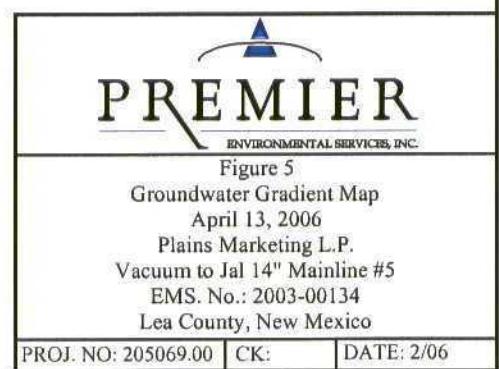
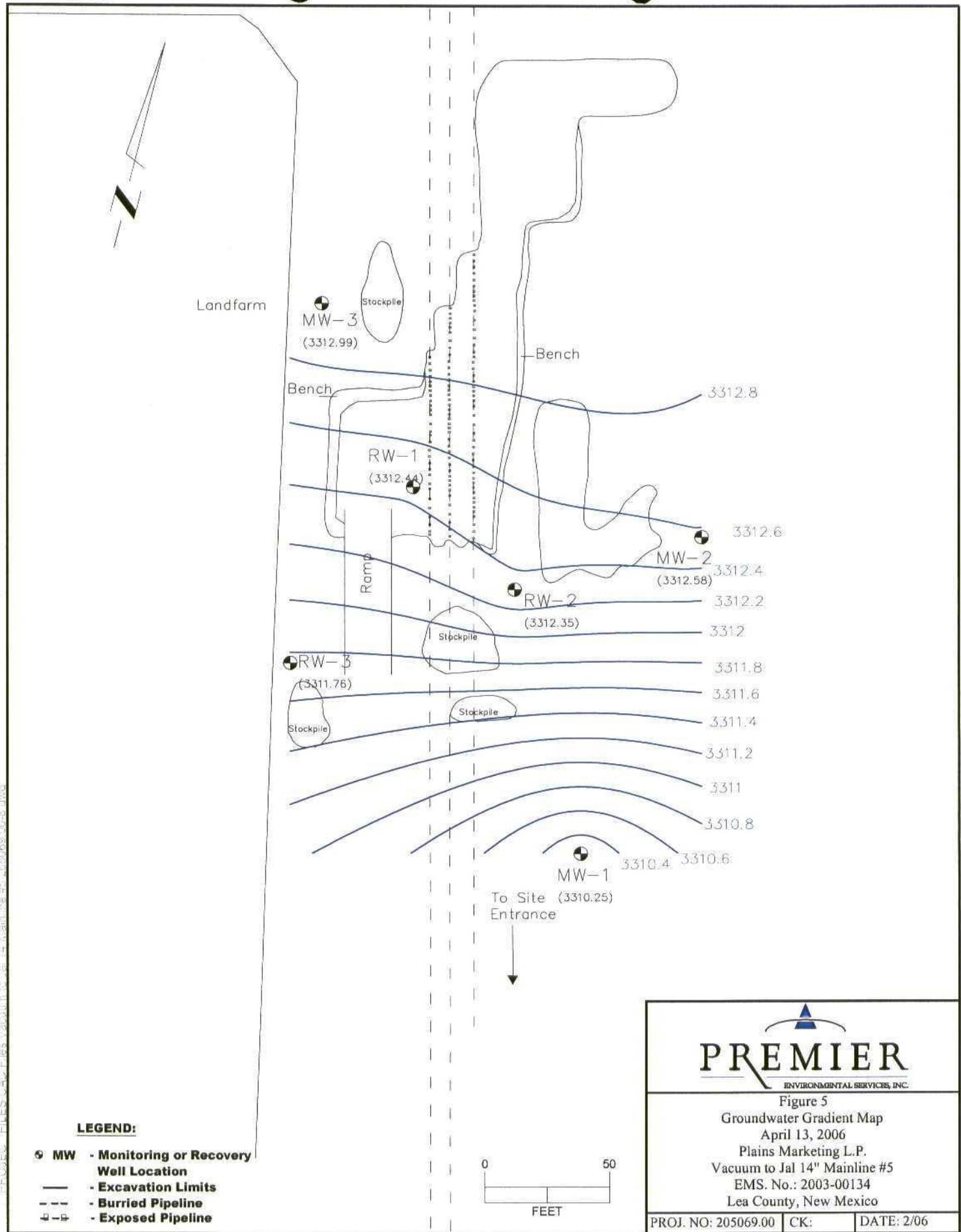


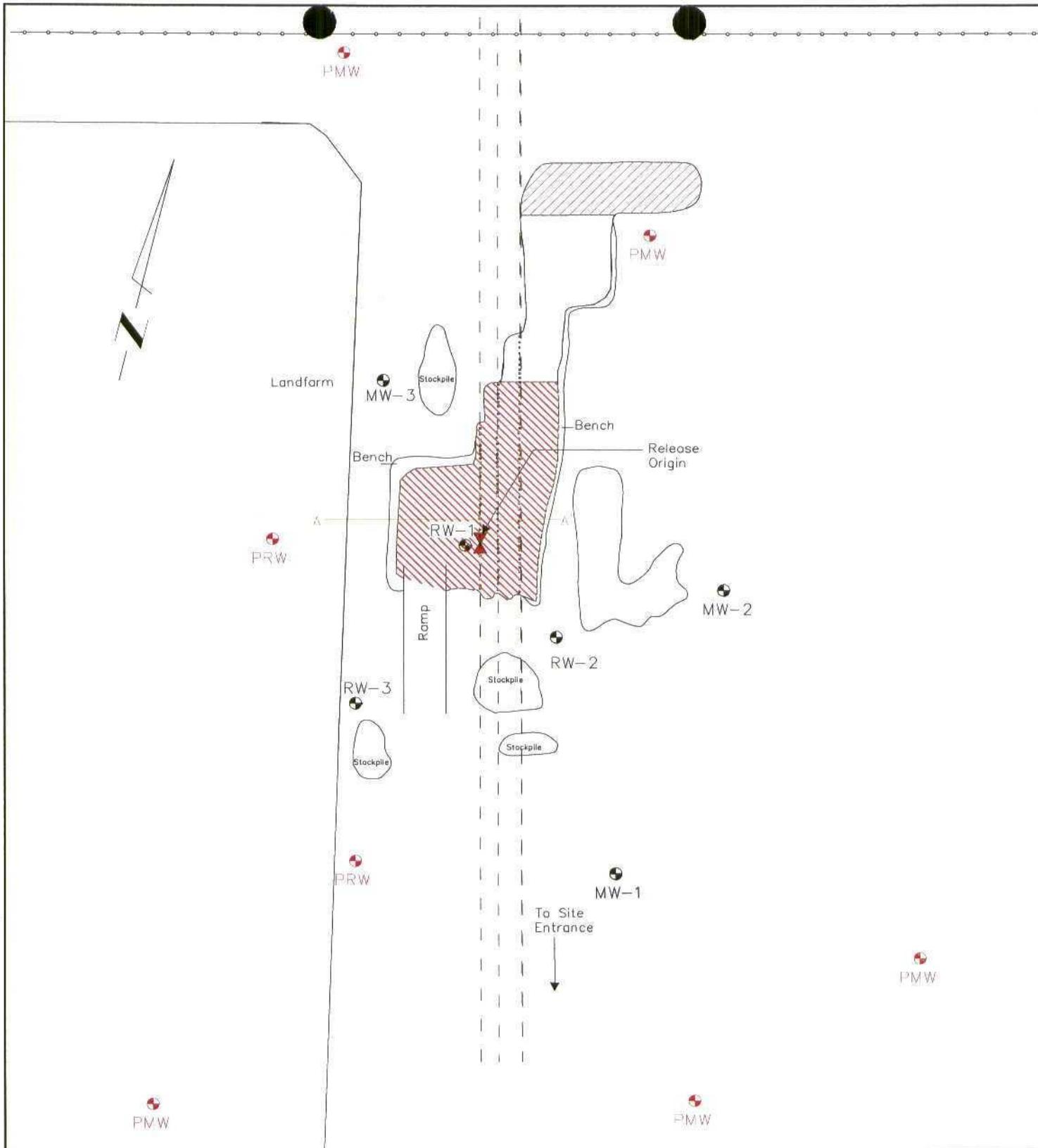
**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

Figure 3  
 Bottom Hole and Sidewall Sample Locations  
 Plains Marketing L.P.  
 Vacuum to Jal 14" Mainline #5  
 EMS. No.: 2003-00134  
 Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 5/06
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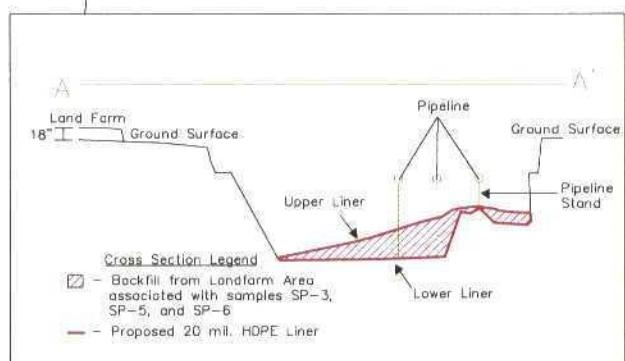






#### LEGEND:

- Area with Upper and Lower 20 mil. HDPE Liner** (diagonal hatching)
- Proposed 20 mil. HDPE Liner** (horizontal hatching)
- PMW** - Proposed Monitoring or Recovery Well Location
- MW** - Monitoring or Recovery Well Location
- Excavation Limits** (solid line)
- Buried Pipeline** (dashed line)
- Exposed Pipeline** (dash-dot line)

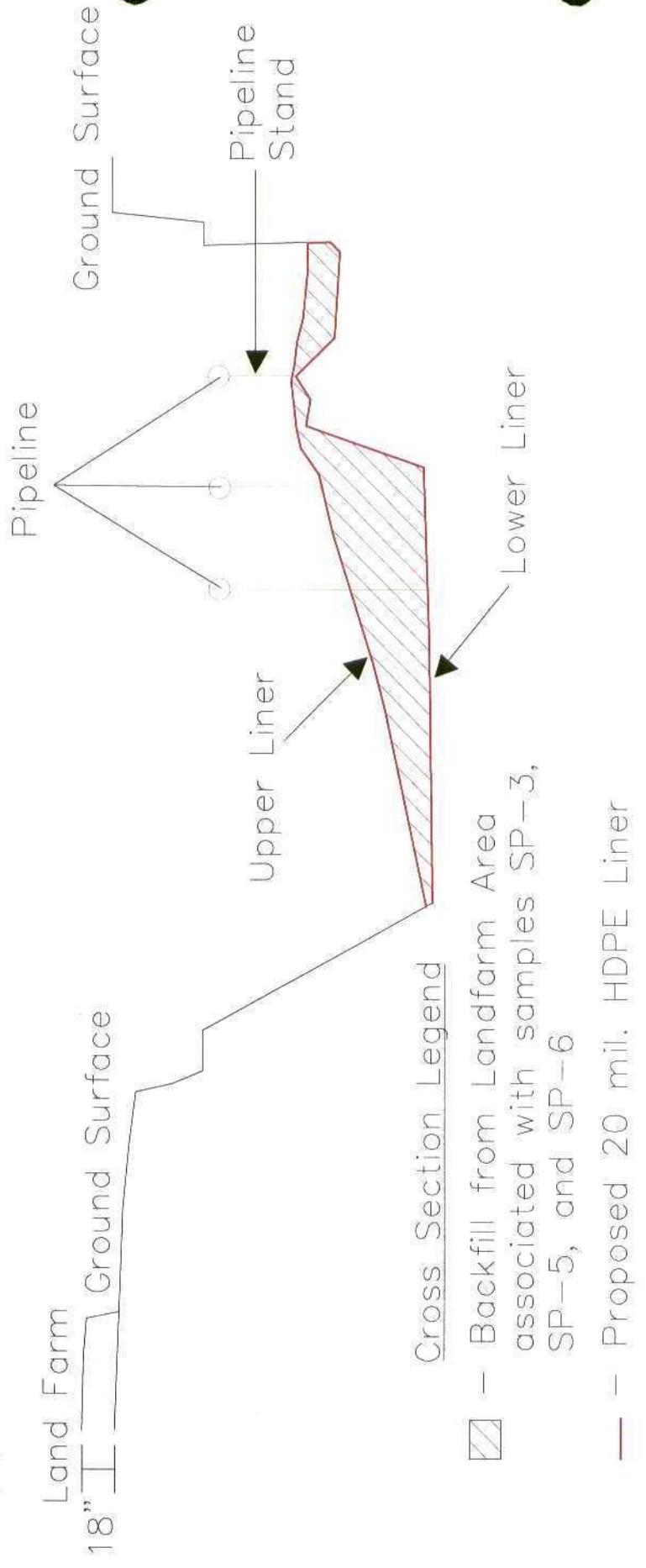


**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

Figure 6  
Proposed Liner and Proposed Monitor Well Locations  
Plains Marketing L.P.  
Vacuum to Jal 14" Mainline #5  
EMS. No.: 2003-00134  
Lea County, New Mexico

PROJ. NO: 205069.00 CK: DATE: 2/06

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**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

Figure 7  
Cross Section of Liner Placement  
Plains Marketing, L.P.  
Vacuum to Jal 14" Mainline #5  
EMS. No.: 2003-00134  
Lea County, New Mexico  
PROJ. NO: 205069.00 CK DATE: 2/06

# PREMIER ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-1

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) --

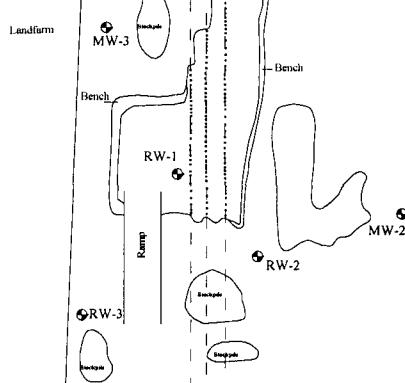
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 03/22/06 1429

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

## LOCATION MAP



**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-1

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) --

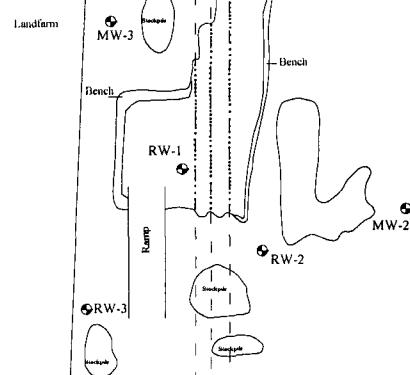
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 3/22/06 1429

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					CAL	Calciche, light reddish brown, well indurated, damp, fine grained, siliceous, poorly sorted, subangular.		
42								
44				0.6	SC	Sandstone, light reddish brown, well indurated, damp, very fine to coarse grained, poorly sorted, subangular.	MW1-45'	
46								
48						Water @ 48'		
50					SC	Sandstone, wet, no sample		
52								
54								
56								
58								
60						TD 60'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

# PREMIER

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ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-2

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

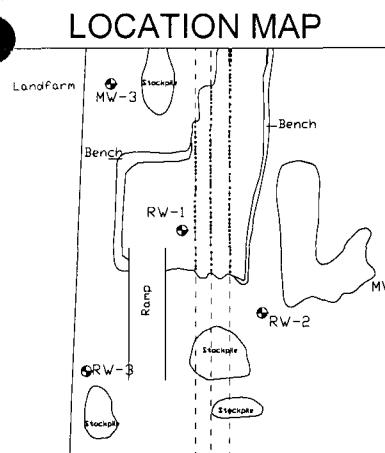
TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5 STICKUP (ft) --

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 03/22/06 1429

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



**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-2

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5 STICKUP (ft) --

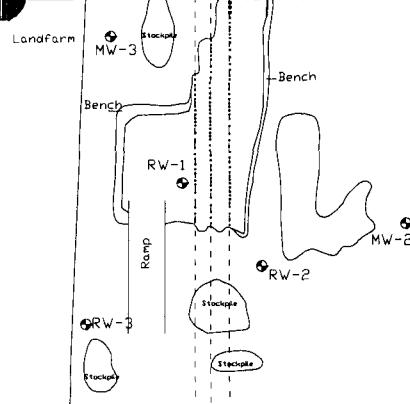
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 03/22/06 1429

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				0	CAL	Caliche, light reddish grey, well indurated, damp, very fine grained, well sorted, subangular.	MW2-40'	
42								
44				4.0	SC	Sandstone, medium reddish brown, firm damp, very fine to fine grained, poorly sorted, subangular.	MW2-45'	
46								
48						Water @ 48'		
50				0	SC	Sandstone, medium reddish brown, loose, well indurated, very fine to fine grained, poorly sorted, subangular.	MW2-50'	
52								
54								
56								
58								
60						T.D. 60'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

# PREMIER

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ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-3

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

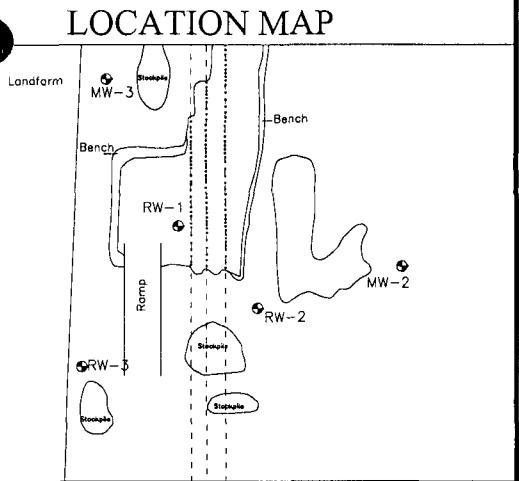
TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) --

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 03/23/06 1355

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



**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-3

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) .5" STICKUP (ft) --

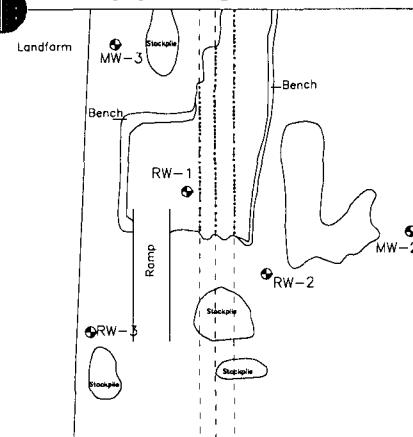
CASING DIA (in) .2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 3/26/06 1355

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				0	SC	Sandstone, light reddish brown, well indurated, damp, very fine grained, well sorted, subangular.		
42								
44	X-X			0	SC	Sandstone, light reddish grey, well indurated, damp, very fine to fine grained, poorly sorted, subangular.	MW3-45'	
46								
48								
50	X-X			0	SC	Water @ 49' Sandstone, light reddish brown, loose, wet, very fine to fine grained, poorly sorted, subangular.	MW3-50'	
52								
54								
56								
58								
60						T.D. 60'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER SB-1/RW-1

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 45 BOREHOLE DIA (in) 5" STICKUP (ft) --

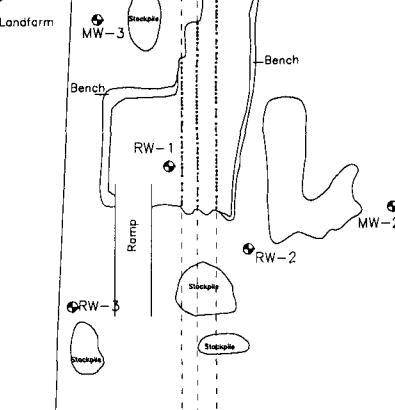
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 03/21/06 0950

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

**LOCATION MAP**



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					CAL	Fill to 1' Caliche		
2					CAL			
4					CAL	Caliche, greenish gray, firm to intermediate, damp, silty, very fine to fine grained, fairly well sorted, subangular.	SB1-5'	
6					CAL			
8					CAL			
10					CAL	Caliche, greenish grey, firm to well indurated, damp, silty, very fine to fine grained, fairly well sorted, subangular, moderate odor and staining.	SB1-10'	
12					CAL			
14					CAL	Caliche, greenish grey, well indurated, silty, sandy, very fine to fine grained, poorly sorted, subangular, strong odor, light staining.	SB1-15'	
16					CAL			
18					CAL			
20					CAL	Caliche, light greenish grey, well indurated, damp, silty, very fine grained, subangular, slight odor, light staining.	SB1-20'	
22					CAL			
24					CAL			
26					CAL	Caliche, light grey, well indurated, damp, slight odor, no staining, siliceous caliche @ 22', hard sandstone 27' to 33'.	SB1-25'	
28					SC			
30					SC	Sandstone, light reddish brown, well indurated, damp, very fine grained, well sorted, subangular, slight odor.	SB1-30'	
32					SC			
34					SC			
36					SC	Sandstone, medium reddish brown, firm, wet, very fine grained, well sorted, subangular, PSH on tool.	SB1-35'	
38					SC			
40					SC	Water @ 39.5'		
42					SC	Sandstone, medium reddish brown, well indurated, wet, very fine grained, well sorted, subangular.	SB1-40'	

**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER SB-1 RW-1

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 45 BOREHOLE DIA (in) 5 STICKUP (ft) --

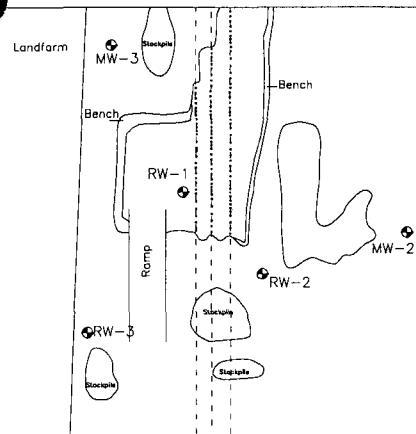
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 3/21/06 0950

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					SC	Sandstone, medium reddish brown, well indurated, wet, very fine grained, well sorted, subangular.		
42								
44					SC	Sandstone, medium reddish brown, well indurated, wet, very fine grained, well sorted, subangular.		
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

# **PREMIER**

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ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-2

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in)5 STICKUP (ft) --

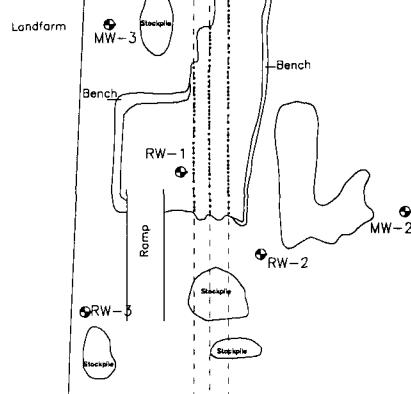
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 3/21/06 1506

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

## LOCATION MAP



**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-2

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5 STICKUP (ft) --

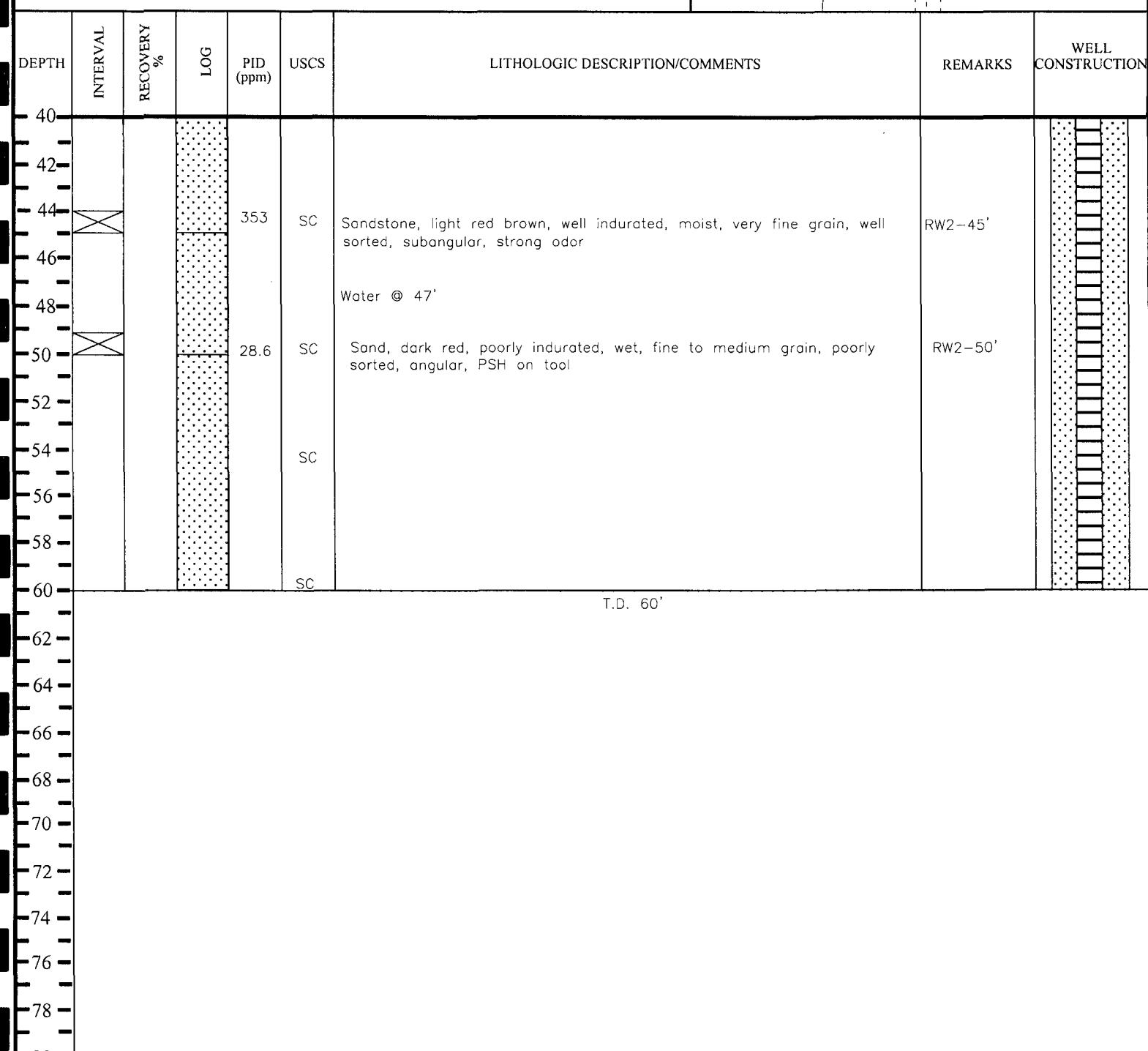
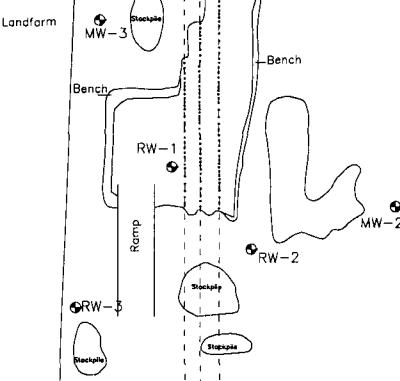
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 03/24/06 1014

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

LOCATION MAP



# PREMIER

ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-3

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

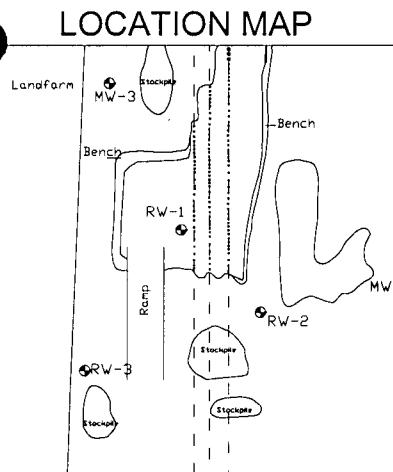
TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5 STICKUP (ft) --

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 03/24/06 1014

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



**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-3

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5 STICKUP (ft) --

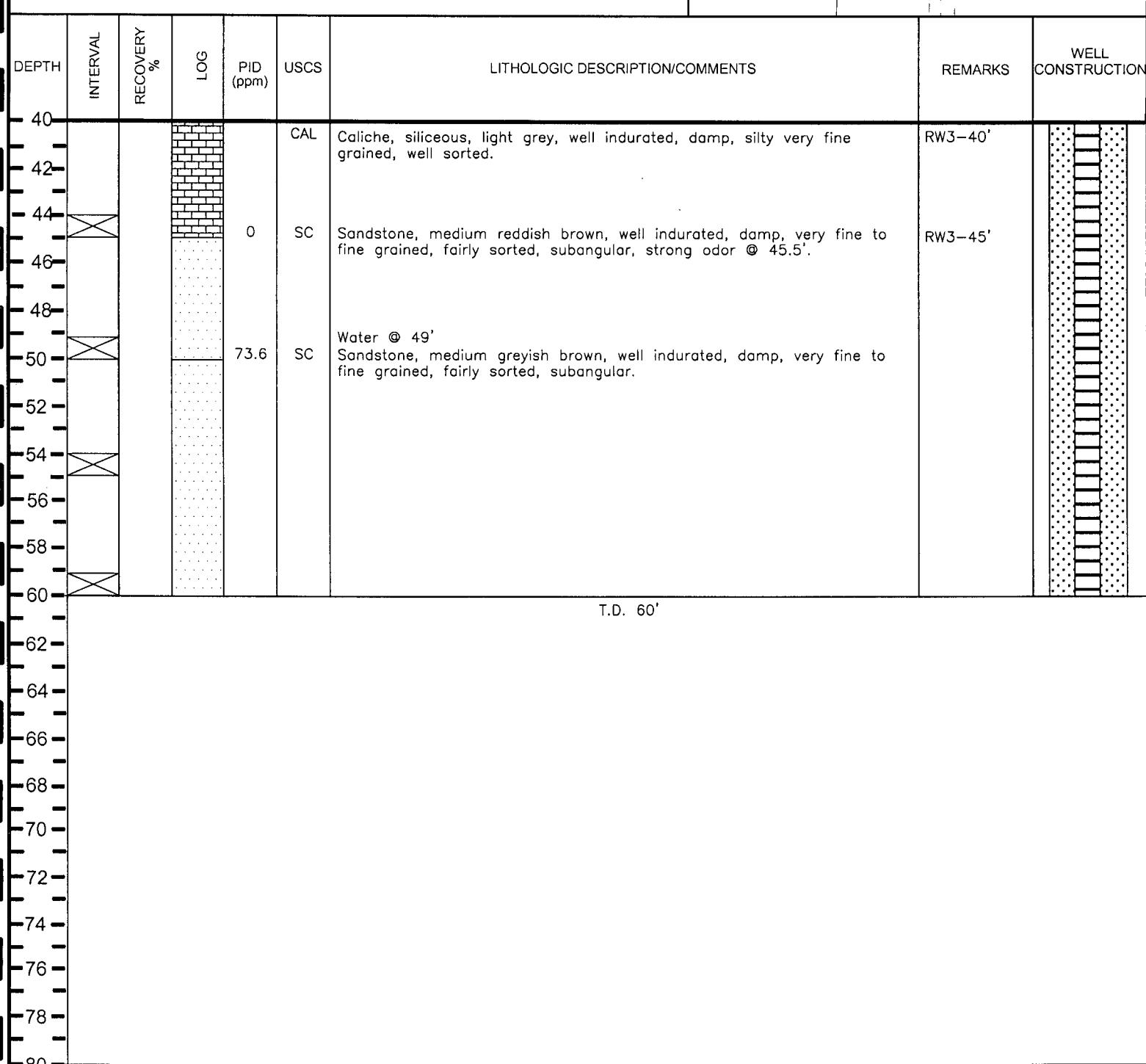
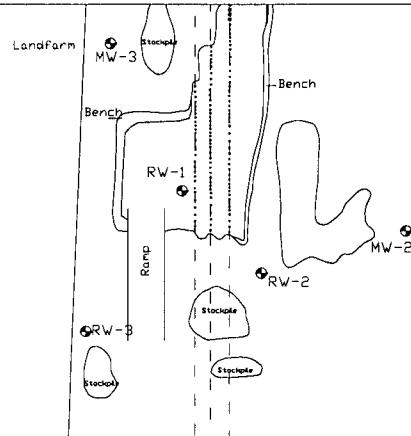
CASING DIA (in) 4 TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Will Murley DATE DRILLED 03/24/06 1014

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

**LOCATION MAP**



## ***Appendix B Tables***

**Table 1 – Soil Sample Analytical Results**

**Table 2 – Land farm Soil Sample Analytical Results**

**Table 3 – Groundwater Sample Analytical Results**

Table 1  
 Soil Analytical Results  
 Plains Marketing L.P.  
 EMS No. 2003-00134  
 Vacuum to Jai 14" Mainline #45  
 Lea County, New Mexico

Borehole ID	Date Sampled	Interval (BGS)	Sample ID	DRO mg/Kg	GRO mg/Kg	TPH mg/Kg	BTX mg/Kg	Benzene mg/Kg	Ethylbenzene mg/Kg	Total Xylenes mg/Kg	Toluene mg/Kg
BH1	5/30/2003	2	SE14M53003BH1-2	<5	237	242	0.347	0.026	0.053	0.131	0.136
	5/30/2003	5	SE14M53003BH1-5	7.98	<5	12.98	<.020	<.020	<.020	<.020	<.020
	5/30/2003	10	SE14M53003BH1-10	754	<5	759	0.025	<.020	<.020	0.025	<.020
	5/30/2003	13	SE14M53003BH1-13	NS	NS	NS	NS	NS	NS	NS	NS
	5/30/2003	20	SE14M53003BH1-20	16.2	<5	21.2	0.100	<.020	<.020	<.020	<.020
BH2	5/30/2003	2	SE14M53003BH2-2	26600	13200	39800	363.980	6.690	75.800	212.600	68.900
	5/30/2003	5	SE14M53003BH2-5	512	5.59	517.59	0.067	<.020	<.020	0.038	0.029
	5/30/2003	10	SE14M53003BH2-10	873	<5	878	0.022	<.020	<.020	<.020	0.022
	5/30/2003	15	SE14M53003BH2-15	<5	10	<5	<.020	<.020	<.020	<.020	<.020
	5/30/2003	2	SE14M53003BH3-2	13400	7670	21070	235.920	1.920	50.400	145.800	37.800
BH3	5/30/2003	5	SE14M53003BH3-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	5/30/2003	10	SE14M53003BH3-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	5/30/2003	15	SE14M53003BH3-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	2	SE14M56203BH4-2	20400	11300	31700	330.760	3.560	69.400	204.600	53.200
	6/2/2003	5	SE14M56203BH4-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020
BH4	6/2/2003	10	SE14M56203BH4-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	13	SE14M56203BH4-13	NS	NS	NS	NS	NS	NS	NS	NS
	6/2/2003	15	SE14M56203BH4-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	2	SE14M56203BH5-2	9760	6570	16330	239.470	3.470	50.200	143.700	42.100
	6/2/2003	5	SE14M56203BH5-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020
BH5	6/2/2003	10	SE14M56203BH5-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	15	SE14M56203BH5-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	2	SE14M56203BH6-2	10900	9330	20230	235.670	3.170	51.600	137.700	43.200
	6/2/2003	5	SE14M56203BH6-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	10	SE14M56203BH6-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020
BH6	6/2/2003	15	SE14M56203BH6-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	2	SE14M56203BH7-2	787	<5	792	0.2249	<.020	0.084	0.106	<.020
	6/2/2003	5	SE14M56203BH7-5	2760	1390	4150	35.166	<.020	17.200	17.926	<.020
	6/2/2003	10	SE14M56203BH7-10	1160	<5	1165	0.385	<.020	0.182	0.203	<.020
	6/2/2003	15	SE14M56203BH7-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020
BH7	6/2/2003	20	SE14M56203BH7-20	<5	<5	10	<.020	<.020	<.020	<.020	<.020
	6/2/2003	2	SE14M56203BH8-2	223	<5	228	<.020	<.020	<.020	<.020	<.020
	6/2/2003	5	SE14M56203BH8-5	302	<5	307	<.020	<.020	<.020	<.020	<.020
	6/2/2003	10	SE14M56203BH8-10	735	<5	740	<.020	<.020	<.020	<.020	<.020
	6/2/2003	15	SE14M56203BH8-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020
Test Trench Samples											
3/3/2004			SL14M030304BH7' 5'	191	<10	191	0.2152	<.0250	0.0487	0.1665	0.0195 (J)
3/3/2004			SL14M030304BH1 10'	5330	3190	8520	263.9	22.8	55.0	104.3	81.8
3/3/2004			SL14M030304BH6' 5'	195	16.9	211.9	0.3356	<.0250	0.0711	0.1879	0.0766
3/3/2004			SL14D030304BH4 13'	165	16	181	0.5435	<.0250	0.118	0.3353	0.0902

Table 1  
 Soil Analytical Results  
 Plains Marketing L.P.  
 EMS No. 2003-00134  
 Vacuum to Jal 14" Mainline #5  
 Lea County, New Mexico

Borehole ID	Date Sampled	Interval (BGS)	Sample ID	DRO mg/Kg	GRO mg/Kg	TPH mg/Kg	BTEX mg/Kg	Benzene mg/Kg	Ethylbenzene mg/Kg	Total Xylenes mg/Kg	Toluene mg/Kg
<b>Excavation Samples</b>											
BH-0	4/15/2004	LEVML54104NFPBHg'	11	<5	11	<.040	<.020	<.020	<.040	<.020	<.020
NSW	4/15/2004	LEVML541504NFPNSW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
ESW	4/15/2004	LEVML541504NFPESW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
WSW	4/15/2004	LEVML54104NFPWSW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
BH14	4/15/2004	LEVML54104WFPBH14'	645	53.3	698.3	<.040	<.020	0.329	1.915	0.1	
NSW	4/15/2004	LEVML54104WFPNSW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
SSW	4/15/2004	LEVML54104WFPSSW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
ESW	4/15/2004	LEVML541504WFPESW	5.83	<5	5.83	<.040	<.020	<.020	<.040	<.020	<.020
WSW	4/15/2004	LEVML541504WFPWSW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
WFP Bottom	4/15/2004	LEVML541504WFPLOPBH	224	16.8	240.8	0.043	<.020	<.020	<.043	<.020	<.020
EFP Bottom	4/15/2004	LEVML541504EFPBH8'	40.2	<5	40.2	<.040	<.020	<.020	<.040	<.020	<.020
EFP NESW	4/15/2004	LEVML541504EFPNESW	1380	88.5	1468.5	0.199	<.020	<.020	0.1989	<.020	<.020
EFP SESW	4/15/2004	LEVML541504EFPSESW	<5	<5	<5	<.040	<.020	<.020	<.040	<.020	<.020
EFP WSW	4/15/2004	LEVML54104EFPWSW	190	6.74	196.74	<.040	<.020	<.020	<.040	<.020	<.020
<b>Borehole</b>											
RW-1	3/21/2006	20	SB1-20'	1360	612	1972	24.904	0.0743	1.190	4.840	18.80
RW-1	3/21/2006	25	SB1-25'	948	126	1074	3.367	<.015	0.129	0.608	2.630
RW-1	3/21/2006	35	SB1-35'	477	218	695	5.030	<.018	<.012	1.250	3.780
RW-2	3/21/2006	35	PMW4-35'	<3.8	<3.1	<3.8	0.00115	<.00033	0.0003	<.00033	0.00085
RW-2	3/21/2006	40	PMW4-40'	<3.4	<2.6	<3.4	<.00061	<.0003	<.0002	<.0003	<.00061
RW-2	3/21/2006	45	PMW4-45'	179	3.36	182	0.01286	0.00068	0.00088	0.0013	0.010
MW-1	3/22/2006	5	MW1-5'	13	<2.9	13	0.0047	<.00032	<.00022	0.0011	0.0036
MW-1	3/22/2006	15	MW1-15'	<3.6	<2.9	<3.6	<.00064	<.00032	<.00021	<.00032	<.00064
MW-1	3/22/2006	45	MW1-45'	<3.8	<3.2	<3.8	0.00030	<.00033	0.00030	<.00033	<.00066
MW-2	3/23/2006	30	MW2-30'	<3.8	<3.3	<3.8	<.00036	<.00034	<.00023	0.00036	<.00068
MW-2	3/23/2006	45	MW2-45'	<3.8	<3.1	<3.8	<.00067	<.00033	<.00022	<.00033	<.00067
MW-2	3/23/2006	50	MW2-50'	<3.5	<2.8	<3.5	<.00063	<.00032	<.00021	<.00032	<.00063
MW-3	3/23/2006	30	MW3-30'	<3.8	<3.1	<3.8	0.00031	<.00033	0.00031	<.00033	<.00066
MW-3	3/23/2006	45	MW3-45'	<3.5	<2.8	<3.5	<.00063	<.00032	<.00021	<.00032	<.00063
MW-3	3/23/2006	50	MW3-50'	4.89	<2.8	4.89	<.00064	<.00032	<.00021	<.00032	<.00064
RW-3	3/24/2006	40	RW3-40'	<3.4	<2.6	<3.4	<.00061	<.0003	<.0002	<.0003	<.00061
RW-3	3/24/2006	45	RW3-45'	<3.6	<3	<3.6	<.00064	<.00032	<.00021	<.00032	<.00064
RW-3	3/24/2006	50	RW3-50'	127	3.56	131	0.02239	<.00031	0.00029	0.0042	0.0179

Lab Report T12986 for RW and MW samples enclosed in Attachment C

NS = not sampled  
BGS - Below Ground Surface

DRO - Diesel Range Organics

GRO - Gasoline Range Organics

**Table 2**  
**Land farm Soil Sample Analytical Results**  
**Plains Marketing L.P.**  
**EMS No. 2003-00134**  
**Vacuum to Jal 14" Mainline #5**  
**Lea County, New Mexico**

Date Sampled	Lab ID	Sample ID	DRO mg/Kg	GRO mg/Kg	TPH 8015m mg/Kg	BTEX 8021b mg/Kg	Benzene mg/Kg	Ethylbenzene mg/Kg	Total Xylenes mg/Kg	Toluene mg/Kg
1/12/2006	T12364-1	SP-1	475	<3.1	475	<0.00067	<0.00033	<0.00033	<0.00067	<0.0022
1/12/2006	T12364-2	SP-2	498	<3.1	498	<0.00066	<0.00033	<0.00033	<0.00066	<0.0022
1/12/2006	T12364-3	SP-3	1180	<3.1	1180	<0.00067	<0.00034	<0.00034	<0.00067	<0.0022
1/12/2006	T12364-4	SP-4	587	<2.9	587	<0.00066	<0.00033	<0.00033	<0.00066	<0.0022
1/12/2006	T12364-5	SP-5	949	<3.1	949	<0.00067	<0.00034	<0.00034	<0.00067	<0.0022
1/12/2006	T12364-6	SP-6	1010	<2.9	1010	0.0046	<0.00033	0.0013	0.0033	<0.0022
1/12/2006	T12364-7	SP-7	618	<2.9	618	<0.00065	<0.00033	<0.00033	<0.00065	<0.0022
1/12/2006	T12364-8	SP-8	611	<2.9	611	<0.00066	<0.00033	<0.00033	<0.00066	<0.0022
1/12/2006	T12364-9	SP-9	517	<3.0	517	<0.00065	<0.00033	<0.00032	<0.00065	<0.0022
1/12/2006	T12364-10	SP-10	246	<3.1	246	<0.00066	<0.00033	<0.00033	<0.00066	<0.0022
1/12/2006	T12364-11	SP-11	343	<3.0	343	<0.00063	<0.00032	<0.00032	<0.00063	<0.0021
1/12/2006	T12364-12	SP-12	231	<2.8	231	<0.00064	<0.00032	<0.00032	<0.00064	<0.0021

**Table 3**  
**Groundwater Analytical Results**  
**Plains Marketing L.P.**  
**EMS # 2003--00134**  
**Vacuum to Jal #5**  
**Lea County, New Mexico**

Well	Lab ID	Date Taken	BTEX	Benzene	Toluene	Ethylbenzene	Total Xylenes
			8260b mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	T 13036-1	3/29/2006	0.5827	0.557	0.0032	0.0133	0.0092
MW-2	T 13036-2	3/29/2006	0.00272	0.0012	0.0011	0.00042	<0.00072
MW-3	T 13036-3	3/29/2006	0.0277	0.0129	0.0089	0.0021	0.0038

Note: RW-1, RW-2 and RW-3 not sampled due to presence of Phase Separated Hydrocarbons

## ***Appendix C Analytical Reports***

T12986 Soil boring sample analytical report  
T12364 Land farm soil sample analytical report  
T13036 Groundwater sample analytical report

**(on CD only)**

## ***Appendix D Regulatory Information***

**New Mexico Office of State Engineer Water Well Report**

**New Mexico Office of the State Engineer**  
**Well Reports and Downloads**

Township: 22S Range: 37E Sections: 2

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last)  Non-Domestic  Domestic  All

**WATER COLUMN REPORT 06/20/2005**

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)

Well Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in Column
CP 00929 EXPLORE	22S	37E	02	3	3	3				1100		

Record Count: 1

***Appendix E C-141 Release Notification***

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 March 17, 1999

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 <b>EOTT Energy LLC</b>	Contact <b>Frank Hernandez</b>
Address <b>PO Box 1660 5805 East Highway 80 Midland, Texas 79702</b>	Telephone No. <b>713.253.7006</b>
Facility Name <b>Vacuum to Jal 14" Mainline #5</b>	Facility Type <b>14" Steel Pipeline</b>

Surface Owner <b>Greg Holt</b>	Mineral Owner	Lease No.
--------------------------------	---------------	-----------

### LOCATION OF RELEASE

Unit Letter <b>2</b>	Section <b>2</b>	Township <b>T22S</b>	Range <b>R37E</b>	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea Lat. 32 25' 39.006"N Lon. 103 07' 43.155"W
-------------------------	---------------------	-------------------------	----------------------	---------------	------------------	---------------	----------------	--

### NATURE OF RELEASE

Type of Release <b>Crude Oil</b>	Volume of Release <b>20 bbls barrels</b>	Volume Recovered <b>5 bbls barrels</b>
Source of Release <b>14" Steel Pipeline</b>	Date and Hour of Occurrence <b>5-23-03 @ 3:00 PM</b>	Date and Hour of Discovery <b>4:00 PM @ 5-23-03</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Buddy Hill</b>	
By Whom? <b>Pat McCasland, EPI</b>	Date and Hour <b>5-23-03 @ 8:00 PM</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>NA</b>	

If a Watercourse was Impacted, Describe Fully.\*  
**NA**

Describe Cause of Problem and Remedial Action Taken.\*

*14" Steel Pipeline. The cause was either internal or external corrosion. The line was being pressure tested at the time of the occurrence. The line was depressured and a line repair clamp installed. Contaminated soil placed on a plastic barrier.*

Describe Area Affected and Cleanup Action Taken.\*

*~200' x 100' 8,730 sqft Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be disposed of or remediated on site. Remedial Goals: TPH 8015m = 1000 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.*

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.

### OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:		
Printed Name: Frank Hernandez			
Title: District Environmental Supervisor	Approval Date:	Expiration Date:	
Date: May 27, 2003	Phone: 713.253.7006	Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary



# 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](mailto:ed.martin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Ed Martin".

Edwin E. Martin  
Environmental Bureau

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

## Martin, Ed, EMNRD

To: Daniel M Bryant  
Cc: Caperton, Patricia, EMNRD; Johnson, Larry, EMNRD; Sheeley, Paul, EMNRD  
Subject: RE:

OK. Thanks for the notice. Keep me posted.

Ed Martin  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 S. St. Francis  
Santa Fe, NM 87505  
Phone: 505-476-3492  
Fax: 505-476-3462  
email: ed.martin@state.nm.us

IR-4164 (HOBSS)  
PAT WILL SEND  
REST OF PAPERWORK  
TO S.F.

-----Original Message-----

From: Daniel M Bryant [mailto:[dmbyrant@paalp.com](mailto:dmbyrant@paalp.com)]  
Sent: Wednesday, March 22, 2006 8:14 AM  
To: Martin, Ed, EMNRD; Caperton, Patricia, EMNRD  
Subject:

Ed and Pat,

As per our discussion on 3/21/06, Plains has discovered impact to groundwater at a release located in the NE/4 of the NE/4 of S2, T22S, R37E, which occurred on 5/23/03 on the Vacuum to Jal 14" steel pipeline. During the installation of soil borings at the site location, PSH was encountered at the groundwater interface. Additional monitoring wells are currently being installed at the site and I will keep you informed of any developments as they happen.

The landowner is Greg Holt and notification has been made to him regarding the discovered impact.

The Plains site name is Vacuum to Jal Mainline #5 and the Plains reference leak number is 2003-00134. I have attached a copy of the initial C-141 for your reference. If you need any additional information just let me know.  
Thanks for your time.

<<Vacuum to Jal 14in ML No. 5 Initial C-141.pdf>>

Daniel Bryant  
E & RC Specialist  
Plains All American Pipeline

Office: 432/686-1769  
Cellular: 432/557-5865  
E-mail: [dmbyrant@paalp.com](mailto:dmbyrant@paalp.com)

#####

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.

#####

# DATA EVALUATION AND CLOSURE PROPOSAL

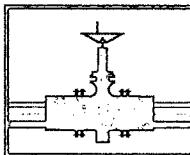
IR-464

VACUUM TO JAL 14" MAINLINE # 5  
PLAINS EMS NO. 2003-00134

UL-A SECTION 2 T22S R37E

Lea County, New Mexico

PREPARED FOR



**PLAINS**  
MARKETING, L.P.

333 CLAY STREET, SUITE 1600

HOUSTON, TEXAS 77002

PREPARED BY



4800 SUGAR GROVE BLVD., SUITE 420

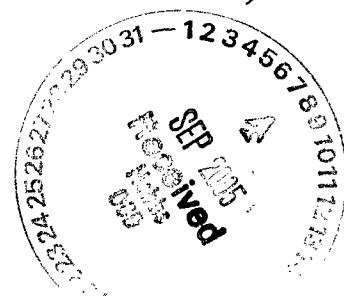
STAFFORD, TEXAS 77477

281.240.5200

Project No. 205069.00

July 2005

Plains - 231735  
facility - fPAC0603925551  
incident - nPAC0603926141  
inspect - ePAC0603926096  
application - pPAC0603926424



NEED FURTHER  
DELINEATION  
TO DO CLOSURE  
VERBIL OK  
CL. acc'd  
SEE P&I

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### Appendices:

#### *Appendix A Figures*

- Figure 1 – Site Location Map
- Figure 2 – Site Map

#### *Appendix B Tables*

##### **Table 1 – Soil Sample Analytical Results**

May June 2003 Analytical Results and March 2004 Trench VOC Headspace Analysis

#### *Appendix C Analytical Reports*

#### *Appendix D Regulatory Information*

New Mexico Office of State Engineer Water Well Report

#### *Appendix E C-141 Release Notification*

### Distribution

## **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.**

## Executive Summary

On May 23, 2003, a release of approximately 20 barrels of crude oil occurred from a 14" steel pipeline at the EOTT Energy LLC (EOTT) Vacuum to Jal 14" Mainline #5 site, EMS No. 2003-00134 (Vac to Jal #5). Plains Marketing, L.P. (Plains) currently owns the pipeline. The site is located in unit letter A, NE $\frac{1}{4}$  of the NE $\frac{1}{4}$ , Section 2 Township 22S, Range 37E, or more specifically at latitude 32° 25' 39.006" N and longitude 103 ° 07' 43.155" W in Lea County, New Mexico (Figure 1, Appendix A). The land is owned by Mr. Greg Holt. Mr. Pat McCasland of Environmental Plus, Inc. (EPI) reported the release on behalf of Mr. Frank Hernandez of EOTT to the New Mexico Oil Conservation Division (NMOCD) on May 23, 2003 at about 8:00 p.m., according to the Initial C-141. The leak was apparently caused by internal or external corrosion and was repaired. The line was being pressure tested when the leak occurred.

The irregularly shaped spill area was approximately 200 feet by 40 feet, and impacted approximately 8,885 square feet (Figure 2, Appendix A). There appeared to be a historical spill at the Site that impacted a contiguous area of approximately 2,486 square feet, evidenced by an asphaltine layer noted at the surface (Fig. 2, Appendix A). The depth of this historical spill is unknown. According to Mr. Pat McCasland with Environmental Plus, Inc. (EPI), emergency response excavation was completed in May and June 2003 and this soil was stockpiled onsite. File correspondence from EPI to Plains states that, during March 5 to March 11, 2004, approximately 1,466 yd<sup>3</sup> of the more heavily impacted surface soils had been transported for treatment at the Lea Station Land Farm.

132 BBL'S

Based on the proximity of Vacuum to Jal 14" No. 5 to area water wells, surface water bodies, and depth to groundwater, the site has an NMOCD ranking score of **10 points**.

Eight borings were placed to delineate the May 2003 spill as well as the historical spill. Analytical results from these eight delineation borings installed in May/June 2003 to 15 feet bgs indicate that Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) concentrations are either below the detection limit of 0.020 mg/Kg or below the regulatory standard, except at the surface in BH-2, BH-3, BH -4, BH-5, and BH -6. Total Petroleum Hydrocarbon (TPH) exceedances are at the surface in the same locations, and at BH-7 up to 10 feet bgs (Figure 2, Appendix A; Table 3, Appendix B; Analytical Reports, Appendix C).

In March 2004, prior to excavation activities to remove impacted soil, four exploratory trenches were completed to further delineate the 2003 release (Fig. 2, Appendix A). Headspace analysis of soil show Volatile Organic Concentrations (VOCs) above 100 ppm, the NMOCD field screening remediation criteria, in trenches adjacent to BH-1 to 13 feet bgs, adjacent to BH-4 to 10 feet bgs, and proximal to BH-6, to 2 feet bgs (Table 3, Appendix B). These areas were further excavated and additional excavated soil was land farmed onsite. According to Mr. McCasland, the impacted soil has been periodically tilled, and remains onsite.

Soil samples for laboratory analyses do not appear to have been collected from the excavation base and side walls, the onsite land farm, and onsite stockpiles.

Plains proposes completing delineation by collecting soil samples from the base of the excavation and from the side walls. If excavation analytical results are above regulatory limits, soil borings will be installed based on the location of elevated concentrations, sampled continuously and soil samples collected every 5 feet to a depth of 20 feet for laboratory analyses. Samples will be analyzed for TPH DRO and GRO, and BTEX. To demonstrate whether or not COCs could potentially impact groundwater above the NMOCD standards, (mobility of COCs in soil), the synthetic precipitate leaching procedure (SPLP) may be used with analyses for BTEX constituents on one or more of the soil samples exhibiting the highest TPH concentrations.

Composite samples will be collected at a rate of one sample per 250 cubic yards from the onsite soil stockpiles that have been land farmed, and analyzed for TPH DRO and GRO and BTEX. If necessary, one or more of these samples may be submitted for SPLP BTEX analysis. Analytical data from stockpiled material will be used to determine if the stockpiled material can be used as backfill at the Site.

## **1.0 Introduction and Site History**

Premier Environmental Services, Inc. (Premier) has been retained by Plains Marketing, L.P. (Plains) to review existing site data and prepare a Data Evaluation and Closure Proposal for the Vacuum to Jal 14" Mainline #5 Site (Vac to Jal #5) (EMS Nos. 2003-00134).

The leak that occurred at the Vac to Jal #5 Site (Site) on March 23, 2003 was apparently caused by external or internal corrosion. The site is located in unit letter A, NE $\frac{1}{4}$  of the NE $\frac{1}{4}$ , Section 2, Township 22S, Range 37E, or more specifically at latitude 32° 25' 39.006" N and longitude 103° 07' 43.155" W in Lea County, New Mexico (Figure 1, Appendix A). Mr. Pat McCasland of Environmental Plus, Inc. (EPI) reported the release on behalf of Mr. Frank Hernandez of EOTT to the New Mexico Oil Conservation Division (NMOCD) on May 23, 2003 at about 8:00 p.m., according to the Initial C-141. The line was being pressure tested when the leak occurred and the line was subsequently repaired. The C-141 form identified remediation standards, and outlined an initial plan to remediate the site. A copy of the C-141 is found in Appendix E.

The irregularly shaped spill area was approximately 200 feet by 40 feet, and impacted approximately 8,885 square feet (Figure 2, Appendix A). There appeared to be an historical spill at the Site that impacted a contiguous area of approximately 2,486 square feet, evidenced by an asphaltine layer (Fig. 2, Appendix A). Soil samples were collected from eight boreholes installed up to 15 feet below ground surface (bgs), also completed in May and June 2003. According to Mr. Pat McCasland with Environmental Plus, Inc. (EPI), emergency response excavation was completed in May and June 2003 and, as of March 2004, approximately 1,466 yd<sup>3</sup> had been transported for treatment at the Lea Station Land Farm.

## **2.0 Environmental Characterization**

### **2.1 Geological Description**

In Lea County, 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 appears to be located primarily on Recent Age Mescalero sands. 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 but there is one residential property within approximately 500 feet of the Site. According to the City of Eunice Water/Wastewater Superintendent, the water supply for this residence is the Eunice Municipal Water Supply.

## **2.3 Ground Water**

The New Mexico Office of the State Engineer database lists one water well in Section 2, T22S R37E (Appendix D). This water well is listed with an average depth to water of 1100 feet. The City of Eunice Water/Wastewater Superintendent was not aware of a private well on the residential property located within approximately 500 feet of the Site. According to EPI, a water well used for agricultural purposes is located on this property, with a depth to groundwater of about 65 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. Primary contaminants, or COCs, associated with crude oil releases include total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and total xylenes (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,

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

These parameters illustrate that focus of the guidelines is to protect groundwater and surface water resources.

### 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 **10 points**, with the soil remedial goals highlighted below in the Site Ranking Matrix.

**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  If >1000' from water source, or, >200' from private domestic water source: 0 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			>1000 horizontal feet: 0 points	
Groundwater Score: 10		Wellhead Protection Area Score: 0	Surface Water Score: 0	
<b>Site Rank (1+2+3) =10+0+0=10</b>				
<b>Total Site Ranking Score and Initial Guidance Cleanup Concentrations</b>				
Parameter	20 or >	10	0	
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm	
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm	
TPH	100 ppm	1000 ppm	5000 ppm	

<sup>1</sup>100 ppm field VOC headspace measurement may be substituted for lab analysis

During the proposed field effort, the existence and location of the water well that reportedly exists at the nearby residential property will be determined. The preliminary evaluation suggests that there is minimal risk for migration to groundwater from COCs in soil, in concentrations that would exceed the NMOCD Standards.

### 4.0 Soil Investigation Results

In May and June, 2003, eight boreholes were installed to a depth of 15 feet bgs to further delineate impact from the May 2003 Vac to Jal #5 release. Soil samples were collected at intervals between 2 feet to 15 feet in depth and submitted to Analyssys, Inc. for laboratory analyses of TPH DRO, GRO, by EPA Method 8015M, and for BTEX by EPA Method 8021B. Copies of the laboratory reports are presented in Appendix C. Impact to soil from the Vac to Jal #5 release was generally limited to less than 2 feet bgs, as indicated in laboratory results. Analytical results show that Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)

concentrations are either below the detection limit of 0.020 mg/Kg or below the regulatory standard, except at the surface in BH-2, BH-3, BH -4, BH-5, and BH -6. TPH exceedances are at the surface in the same locations, and at BH-7, up to 10 feet bgs (Figure 2, Appendix A; Table 1, Appendix B; Analytical Reports, Appendix C).

In March 2004, prior to excavation activities to remove impacted soil, VOC headspace analysis of soil from four exploratory trenches was completed to further delineate the 2003 release (Fig. 3, Appendix A). These trenches are adjacent to BH-1, BH-4, BH-6, and BH-7. VOC headspace analysis show Volatile Organic Concentrations (VOC) above 100 ppm, the NMOCD field screening remediation criteria, in trenches completed adjacent to BH-1 down to 13 feet bgs, adjacent to BH-4 to 10 feet bgs, and proximal to BH-6, down to 2 feet bgs. These areas were further excavated and this soil was land farmed onsite. According to Mr. McCasland, the impacted soil has been periodically tilled, and remains onsite.

## **5.0 Remediation Activities Completed**

The irregularly shaped spill area was approximately 200 feet by 40 feet, and impacted approximately 8,885 square feet (Figure 2, Appendix A). There appeared to be an historical spill at the Site that impacted a contiguous area of approximately 2,486 square feet, evidenced by an asphaltine layer (Fig. 2, Appendix A). According to Mr. Pat McCasland with Environmental Plus, Inc. (EPI), emergency response excavation was completed in May and June 2003 and, as of March 12, 2004, approximately 1,466 yds<sup>3</sup> of the more heavily impacted surface soils had been transported for treatment at the Lea Station Land Farm. After March 12, 2004, the excavated soil was land farmed onsite, and according to Mr. McCasland, the impacted soil has been periodically tilled and remains onsite.

## **6.0 Groundwater Investigation**

Due to the limited depth of impacted soils of less than 15 feet, and the average depth to groundwater of 65 feet bgs, it was determined that a groundwater investigation was not necessary for this site. The results of the soil investigation confirm that crude oil did not penetrate the subsurface to a significant depth, and that groundwater is not likely to be threatened by this release.

## **7.0 Remedial Approach**

Plains proposes completing delineation by collecting excavation side wall and bottom hole confirmation samples. In the excavation, six bottom hole soil samples and eight side wall samples will be collected. Samples will be analyzed for TPH DRO and GRO, and BTEX.

If analytical results from the above confirmation samples are above regulatory standards, soil borings will be installed based on the location of the excavation analytical results. If these borings are necessary, soil sampling will be done continuously and soil samples collected every 5 feet to a depth of 20 feet for laboratory analyses.

Composite samples will be collected at a rate of one sample per 250 cubic yards from the onsite soil stockpiles that have been land farmed, and analyzed for TPH DRO and GRO and BTEX. If necessary, one or more of these samples may be submitted for SPLP BTEX analysis. Analytical data from stockpiled material will be used to determine if the stockpiled material can be used as backfill at the Site.

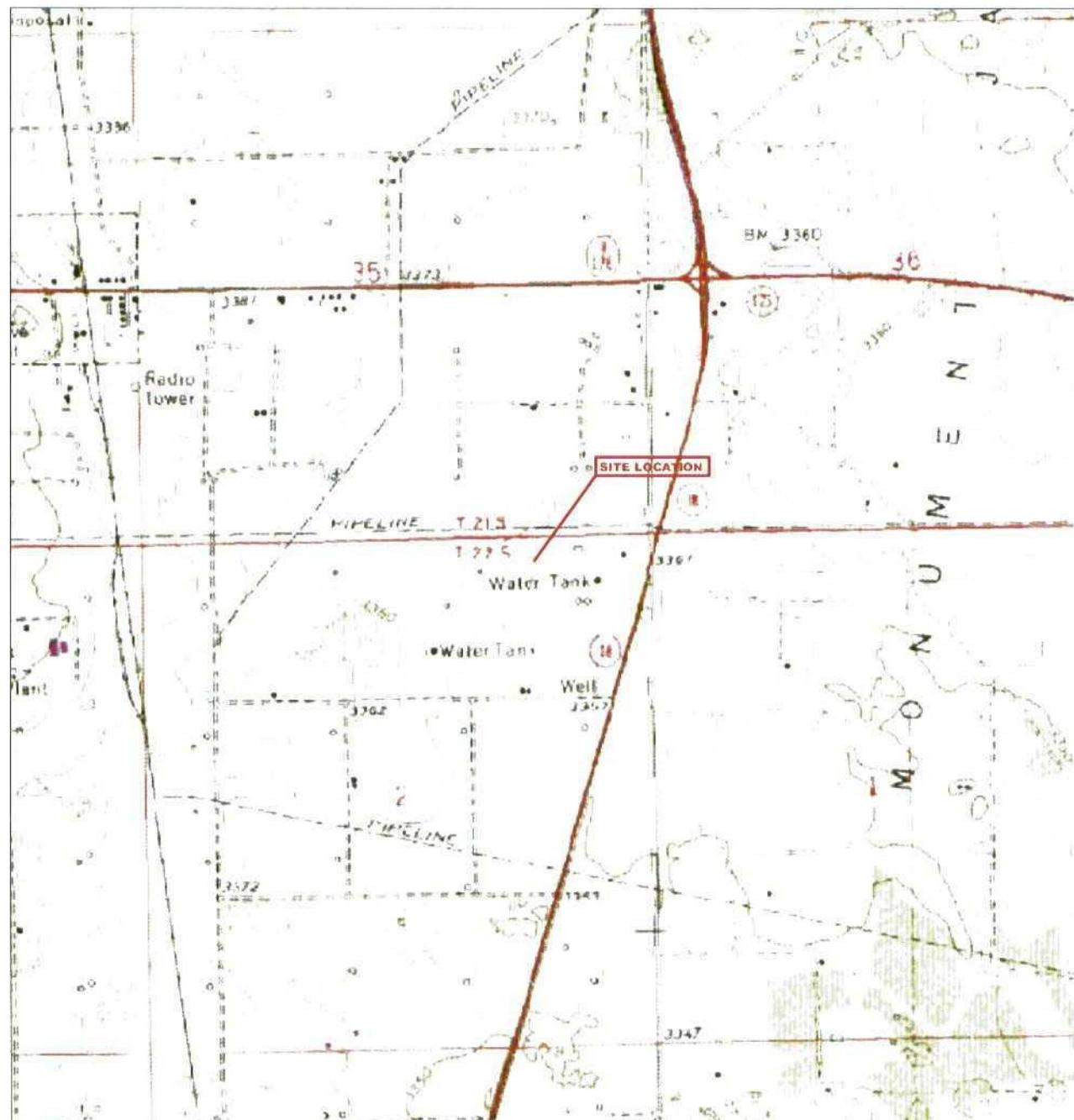
To demonstrate whether or not COCs could potentially impact groundwater above the NMOCD standards, (mobility of COCs in soil), the synthetic precipitate leaching procedure (SPLP) may be used with analyses for BTEX constituents on soil samples exhibiting BTEX concentrations above NMOCD standards.

The existence and location of the reported nearby residential water well will also be determined.

Based on the results of the proposed investigation activities, Premier, on behalf of Plains, will prepare a detailed remediation plan for approval by the NMOCD. The remediation plan will include the results of the investigation and more detailed information regarding the proposed remediation.

## ***Appendix A Figures***

**Figure 1 – Site Location Map**  
**Figure 2 – Site Map**



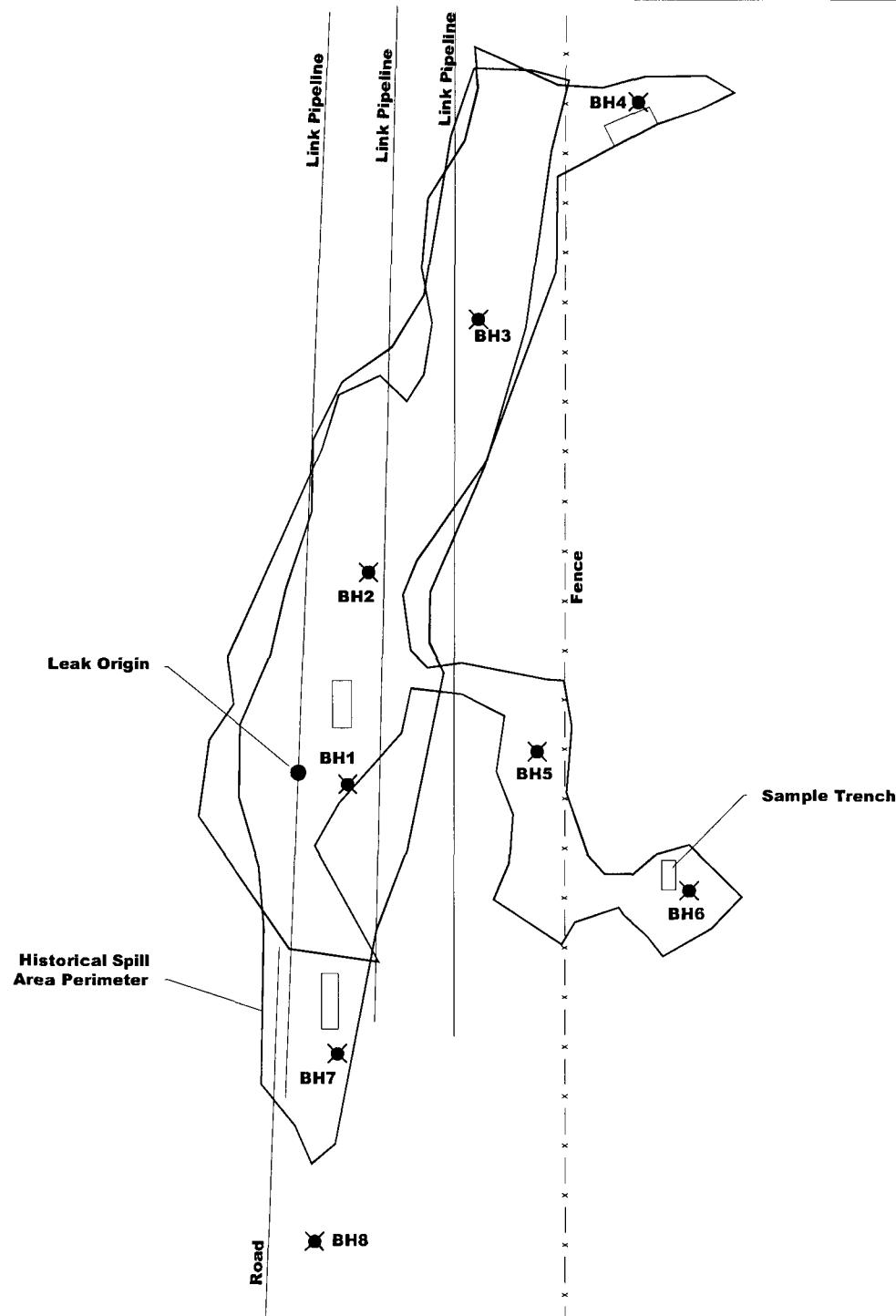
1/2      1/4      0      1/4      1/2  
Distance In Miles

Eunice Quadrangle  
32°25'39"N Latitude & 103°07'43"W Longitude

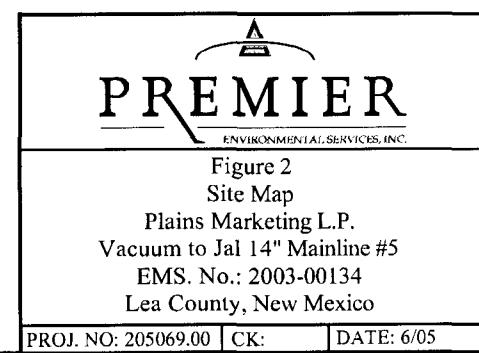
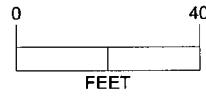
  
**PREMIER**  
ENVIRONMENTAL SERVICES, INC.

Figure 1  
Site Location Map  
Plains Marketing L.P.  
Vacuum to Jal 14" Mainline #5  
EMS. No.: 2003-00134  
Lea County, New Mexico

PROJ. NO: 205069.00 CK: DATE: 6/05



**LEGEND:**  
BH - Boring Location



## **Appendix B Tables**

**Table 1 – Soil Sample Analytical Results  
May June 2003 Analytical Results and March 2004 Trench VOC Headspace**

**Table 1**  
**Soil Analytical Results**  
**Vacuum to Jai 14 Mainline #5 #2003-00134 5-30-03 and 6-2-03**  
**Link Energy (now owned by Plains)**

BH #	Date Sampled	Interval "bgs"	Sample ID	DRO	GRO	TPH	BTEX	Benzene	Ethylbenzene	Total Xylenes	Toluene	Field Screen VOC * 5-30-03	Field Screen VOC * 5-30-03	Field Screen VOC * 5-30-03	VOC* Trench 3-3-04 ppm	
				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ppm	ppm	ppm	ppm	
BH1	5/30/2003	2	SE14M553003BH1-2	<5	237	242	0.347	0.026	0.053	0.131	0.136	59.4	2999			
	5/30/2003	5	SE14M553003BH1-5	<5	7.98	<5	12.98	<.020	<.020	<.020	<.020	13.6	1813			
BH1	5/30/2003	10	SE14M553003BH1-10	<5	754	<5	759	0.025	<.020	<.020	<.025	<.020	30.2	1537		
	5/30/2003	13	SE14M553003BH1-13											1029		
BH2	5/30/2003	20	SE14M553003BH1-20	16.2	<5	21.2	0.100	<.020	<.020	<.020	<.020	<.020	20.1	--		
	5/30/2003	2	SE14M553003BH2-2	26600	13200	39800	363,990	6,690	75,800	212,600	68,900	769	--			
BH2	5/30/2003	5	SE14M553003BH2-5	512	5.59	517.59	0.067	<.020	<.020	0.038	0.029	38.4	--			
	5/30/2003	10	SE14M553003BH2-10	873	<5	878	0.022	<.020	<.020	<.020	<.022	7.4	--			
BH3	5/30/2003	15	SE14M553003BH2-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	7	--			
	5/30/2003	2	SE14M553003BH3-2	13400	7670	21070	235,920	1,920	50,400	145,800	37,800	950	--			
BH3	5/30/2003	5	SE14M553003BH3-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020	37.4	--			
	5/30/2003	10	SE14M553003BH3-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020	7.6	--			
BH3	5/30/2003	15	SE14M553003BH3-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	4.3	--			
	6/2/2003	2	SE14M56203BH4-2	20400	11300	31700	330,760	3,560	69,400	204,600	53,200	134.1	299			
BH4	6/2/2003	5	SE14M56203BH4-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020	56.5	273			
	6/2/2003	10	SE14M56203BH4-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020	6.3	134			
BH4	6/2/2003	13	SE14M56203BH4-13									95.8				
	6/2/2003	15	SE14M56203BH4-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	5.4	--			
BH5	6/2/2003	2	SE14M56203BH5-2	9760	6570	16330	239,470	3,470	50,200	143,700	42,100	129.5	--			
	6/2/2003	5	SE14M56203BH5-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020	10.5	--			
BH5	6/2/2003	10	SE14M56203BH5-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020	8	--			
	6/2/2003	15	SE14M56203BH5-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	5.6	--			
BH5	6/2/2003	2	SE14M56203BH6-2	10900	9330	20230	235,670	3,170	51,600	137,700	43,200	140.0	572			
	6/2/2003	5	SE14M56203BH6-5	<5	<5	10	<.020	<.020	<.020	<.020	<.020	41.3	55.3			
BH6	6/2/2003	10	SE14M56203BH6-10	<5	<5	10	<.020	<.020	<.020	<.020	<.020	10.2	11.2			
	6/2/2003	15	SE14M56203BH6-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	4.9	--			
BH7	6/2/2003	2	SE14M56203BH7-2	787	<5	792	0.2249	<.020	0.084	0.106	<.020	9.8	44.6	--		
	6/2/2003	5	SE14M56203BH7-5	2760	1390	4150	35,166	<.020	17,200	17,926	<.020	131.6	13.8	--		
BH7	6/2/2003	10	SE14M56203BH7-10	1160	<5	1165	0.385	<.020	0.182	0.203	<.020	60.1	--			
	6/2/2003	15	SE14M56203BH7-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	6.5	--			
BH8	6/2/2003	20	SE14M56203BH7-20	<5	<5	10	<.020	<.020	<.020	<.020	<.020	0.4	--			
	6/2/2003	2	SE14M56203BH8-2	223	<5	228	<.020	<.020	<.020	<.020	<.020	1.4	--			
BH8	6/2/2003	5	SE14M56203BH8-5	302	<5	307	<.020	<.020	<.020	<.020	<.020	0.9	--			
	6/2/2003	10	SE14M56203BH8-10	735	<5	740	<.020	<.020	<.020	<.020	<.020	0.7	--			
BH8	6/2/2003	15	SE14M56203BH8-15	<5	<5	10	<.020	<.020	<.020	<.020	<.020	0.4	--			

Data collected by EPI, Inc.

## ***Appendix C Analytical Reports***

**AnalySys**  
INC.

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

<b>Client:</b>	Environmental Plus, Inc.
<b>Attn:</b>	Pat McCasland
<b>Address:</b>	2100 Ave. O Eunice
<b>Phone:</b>	(505) 394-3481 <b>FAX:</b> (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	23.7	mg/Kg	5	<5	06/12/03	8015 mod. 3540	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	8015 mod.	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	26.1	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	53.5	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	96.3	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	3.5	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	13.6	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

*Environmental Services*

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.  
Attn: Pat McCasland

Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M553003BH1-2'

Report# /Lab ID#: 143612  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	82.6	50-150	---
p-Terphenyl	8015 mod.	99.9	50-150	---
1,2-Dichloroethane-d4	8260b	107	65-115	---
Toluene-d8	8260b	120	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.



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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
**Eunice**  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	7.98	mg/Kg	5	<5	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	J	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

Richard Laster

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*Environmental Plus, Inc.*

Attn:  
Pat McCasland

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	80.9	50-150	---
p-Terphenyl	8015 mod.	101	50-150	---
1,2-Dichloroethane-d4	8260b	79.6	65-115	---
Toluene-d8	8260b	115	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Report#/**Lab ID#:** 143613  
**Sample Matrix:** soil

**Project ID:** 2003-00134 14 Main Line #5  
**Sample Name:** SE14M553003BH1-5'

**Exceptions Report:**

Report #/Lab ID#:143613 Matrix: soil  
Client: Environmental Plus, Inc. Attn: Pat McCasland  
Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M553003BH1-5'

**Sample Temperature/Condition  $\leq 6^{\circ}\text{C}$** 

The typical sample temperature criteria (except for metals by ICP, GFAA and AA, and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

**Sample Bottles & Preservation**

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

**J flag Discussion**

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
m,p-Xylenes	J	See J-flag discussion above.

**Notes:**



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 Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	754	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/09/03	8260b
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b
m,p-Xylenes	25.3	µg/Kg	20	<20	06/09/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b

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Respectfully Submitted,

*Richard Laster*

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Report#/Lab ID#:	143614	Report Date:	06/13/03
Project ID:	2003-00134 14 Main Line #5		
Sample Name:	SE14M553003BH1-10'		
Sample Matrix:	soil		
Date Received:	06/06/2003	Time:	10:30
Date Sampled:	05/30/2003	Time:	08:20

#### QUALITY ASSURANCE DATA<sup>1</sup>

	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
	---	14.5	72	105.6	78.5
	---	---	---	---	---
	---	17.2	72	105.3	76.6
	---	---	---	---	---

070L<sup>4</sup>S<sup>4</sup>S

3512 Montopolis Drive, Austin, TX 78744 &  
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(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.  
Attn: Pat McCasland

Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M553003BH1-10'

Report# / Lab ID#: 143614  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
I-Chlorooctane	8015 mod.	83.1	50-150	--
p-Terphenyl	8015 mod.	94.4	50-150	--
1,2-Dichloroethane-d4	8260b	84.4	65-115	--
Toluene-d8	8260b	117	50-120	--

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143614	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134 14 Main Line #5	
Sample Name: SE14M553003BH1-10'	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (e.g. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
o-Xylene	J	See J-flag discussion above.
Toluene	J	See J-flag discussion above.

Notes:

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**REPORT OF ANALYSIS**

<b>Client:</b>	Environmental Plus, Inc.
<b>Attn:</b>	Pat McCasland
<b>Address:</b>	2100 Ave. O
<b>Phone:</b>	(505) 394-3481 <b>FAX:</b> (505) 394-2601
<b>NM</b>	88231

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	16.2	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---	---	---	06/09/03	8260b	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b

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Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or PDS recoveries exceed advisory limits. S3 =MS and/or PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

Report#/Lab ID#: 143615	Report Date: 06/13/03
Project ID: 2003-00134 14 Main Line #5	
Sample Name: SE14M553003BH1-20'	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 05/30/2003	Time: 09:50

#### QUALITY ASSURANCE DATA<sup>1</sup>

	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	---	---	14.5	72	105.6
TPH by GC (as diesel-ext)	---	---	---	---	78.5
TPH by GC (as gasoline)	<5	5	17.2	72	105.3
Volatile organics-8260b/BTEX	---	---	---	---	76.6
Benzene	<20	µg/Kg	8.1	80	80.3
Ethylbenzene	<20	µg/Kg	3.5	101.5	94.6
m,p-Xylenes	<20	µg/Kg	3.1	106.5	108.6
o-Xylene	<20	µg/Kg	3.5	103.3	95.2
Toluene	<20	µg/Kg	9.4	84.5	92.8

**CHROM<sup>5</sup>**

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-0013414 Main Line #5  
**Sample Name:** SE14M553003BH1-20'

**Report# /Lab ID#:** 143615  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chloroocane	8015 mod.	80.2	50-150	---
p-Terphenyl	8015 mod.	77.9	50-150	---
1,2-Dichloroethane-d4	8260b	84.5	65-115	---
Toluene-d8	8260b	107	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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iPC

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	26600	mg/Kg	500	<500	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	13200	mg/Kg	500	<500	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	6690	µg/Kg	5000	<5000	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	75800	µg/Kg	5000	<5000	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	155000	µg/Kg	5000	<5000	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	57600	µg/Kg	5000	<5000	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	68900	µg/Kg	5000	<5000	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ('<') values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

Report#/ <b>Lab ID#:</b> 143616	<b>Report Date:</b> 06/13/03
Project ID: 2003-00134 14 Main Line #5	
Sample Name: SE14M553003BH2-2'	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 05/30/2003	Time: 10:30

**QUALITY ASSURANCE DATA<sup>1</sup>**

**Q70LY545**

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(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134 14 Main Line #5  
**Sample Name:** SE14M553003BH2-2'

**Report#/Lab ID#:** 143616  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	none/diluted	diluted @ 50X	D
p-Terphenyl	8015 mod.	none/diluted	diluted @ 50X	D
1,2-Dichloroethane-d4	8260b	none/diluted	diluted @ 250X	D
Toluene-d8	8260b	none/diluted	diluted @ 250X	D

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143616 Matrix: soil  
Client: Environmental Plus, Inc. Attn: Pat McCasland  
Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M553003BH2-2'

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner preceding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
1,2-Dichloroethane-d4	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
1,2-Dichloroethane-d4	D	Surrogate recoveries not accurately quantifiable.
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
1-Chlorooctane	D	Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	Surrogate recoveries not accurately quantifiable.
Toluene-d8	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
Toluene-d8	D	Surrogate recoveries not accurately quantifiable.

Notes:

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<b>51.2</b>	mg/Kg	5	<5	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<b>5.59</b>	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	J	3.5	101.5	94.6	100.4
m,p-Xylenes	<b>37.9</b>	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	J	3.5	103.3	95.2	105.8
Toluene	<b>28.9</b>	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2000, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

*Richard Laster*

Richard Laster

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*Environmental Plus, Inc.*

Attn: Pat McCasland

Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M553003BH2-5'

Report#/Lab ID#: 143617  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chloroocane	8015 mod. 8015 mod.	75.4 102	50-150 50-150	---
p-Terphenyl				---
1,2-Dichloroethane-d4	8260b	78	65-115	---
Toluene-d8	8260b	104	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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## Exceptions Report:

Report #/Lab ID#: 143617	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134-14 Main Line #5	
Sample Name: SE14M553003BH2-5'	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Ethylbenzene	J	See J-flag discussion above.
o-Xylene	J	See J-flag discussion above.

Notes:

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	87.3	mg/Kg	5	<5	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	--	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---		06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	J	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	21.7	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

Richard Laster

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Report#/Lab ID#: 143618	Report Date: 06/13/03
Project ID: 2003-00134 14 Main Line #5	
Sample Name: SE14M553003BH2-10'	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 05/30/2003	Time: 11:20

#### QUALITY ASSURANCE DATA<sup>1</sup>

**Q70LY5Y5**

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Client:	Environmental Plus, Inc.	Project ID:	2003-00134 14 Main Line #5
Attn:	Pat McCasland	Sample Name:	SE14M553003BH2-10'

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	84.5	50-150	---
p-Terphenyl	8015 mod.	98.2	50-150	---
1,2-Dichloroethane-d4	8260b	71.3	65-115	---
Toluene-d8	8260b	97.5	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Report#/Lab ID#: 143618  
Sample Matrix: soil

## Exceptions Report:

Report #/Lab ID#: 143618 Matrix: soil  
Client: Environmental Plus, Inc. Attn: Pat McCasland  
Project ID: 2003-00134-14 Main Line #5  
Sample Name: SE14M553003BH2-10'

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
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### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
m,p-Xylenes	J	See J-flag discussion above.

Notes:

**AnalySys**  
INC.

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/11/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
DPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/11/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL, B = Analyte detected in associated method blank(s). S1 = MS and/or MSD recovery exceed advisory limits. S2=Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M = Matrix interference.

**Q77LY545**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.  
Attn: Pat McCasland

Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M53003BH2-15'

Report#/Lab ID#: 143619  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	83	50-150	---
p-Terphenyl	8015 mod.	63.3	50-150	---
1,2-Dichloroethane-d4	8260b	83.1	65-115	---
Toluene-d8	8260b	102	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
RPLC

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<b>13400</b>	mg/Kg	500	<500	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<b>7670</b>	mg/Kg	500	<500	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<b>1920</b>	µg/Kg	100	<100	06/10/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<b>50400</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<b>106000</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<b>39800</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<b>37800</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,  
*Richard Laster*

Richard Laster

Richard Laster

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*Environmental Services*

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.  
Attn: Pat McCasland

Project ID: 2003-00134 14 Main Line #5  
Sample Name: SE14M553003BH3-2'

Report#/Lab ID#: 143620  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chloroocane	8015 mod.	none/diluted	diluted @ 50X	D
p-Terphenyl	8015 mod.	none/diluted	diluted @ 50X	D
1,2-Dichloroethane-d4	8260b	114	65-115	---
Toluene-d8	8260b	112	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143620	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134-14 Main Line #5	
Sample Name: SE14M553003BH3-2'	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
i-Chlorooctane	D	
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	

Notes:

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**AnalySys**  
INC.

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**Q77745**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134 14 Main Line #5  
**Sample Name:** SE14M553003BH3-5'

**Report#/Lab ID#:** 143621  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

<b>Surrogate Compound</b>	<b>Method</b>	<b>Recovery</b>	<b>Recovery Limit</b>	<b>Data Qualifiers</b>
1-Chlorooctane	8015 mod.	79.5	50-150	---
p-Terphenyl	8015 mod.	81.1	50-150	---
1,2-Dichloroethane-d4	8260b	81.1	65-115	---
Toluene-d8	8260b	99	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231

**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard J. Lester*

Richard Lester

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Report#/ <b>Lab ID#:</b> 143622	<b>Report Date:</b> 06/13/03
<b>Project ID:</b> 2003-00134 14 Main Line #5	
<b>Sample Name:</b> SE14M553003BH3-10'	
<b>Sample Matrix:</b> soil	
<b>Date Received:</b> 06/06/2003	<b>Time:</b> 10:30
<b>Date Sampled:</b> 05/30/2003	<b>Time:</b> 02:15
<b>QUALITY ASSURANCE DATA<sup>1</sup></b>	

**ANALYSIS**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Plus, Inc.	Project ID: 2003-00134 14 Main Line #5
Attn:	Pat McCasland	Sample Name: SE14M553003BH3-10'

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	77.5	50-150	---
p-Terphenyl	8015 mod.	79.8	50-150	---
1,2-Dichloroethane-d4	8260b	83.9	65-115	---
Toluene-d8	8260b	101	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
Analytical Services

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**070745**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134 14 Main Line #5  
**Sample Name:** SE14M553003BH3-15'

**Report#/Lab ID#:** 143623  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	80.9	50-150	---
p-Terphenyl	8015 mod.	82.8	50-150	---
1,2-Dichloroethane-d4	8260b	84.9	65-115	----
Toluene-d8	8260b	104	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Send Report To:

Company Name Environmental PlusAddress 2000 Hwy 0City Easley State/Zip SC 29623ATTN: Pat Al CastorPhone 505-334-3421 Fax 505-334-2601

Rush Status (must be confirmed with lab mgr.):

Project Name/PO#: 2003-20134 Sampler: Bonnie B.

LINE #5

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil Waste	Water Waste	Lab I.D. # (Lab only)	Comments
SE14M 553003BHI-2	5-30-03	7:30	1	X		143612	X X
SE14M 553003BHI-5	5-30-03	7:45	1	X		143613	X X
SE14M 553003BHI-105-30-3	5-30-03	8:00	1	X		143614	X X
SE14M 553003BHI-30	5-30-03	9:50	1	X		143615	X X
SE14M 553003BHI-2	5-30-03	10:30	1	X		143616	X X
SE14M 553003BHI-5	5-30-03	10:50	1	X		143617	X X
SE14M 553003BHI-10	5-30-03	11:20	1	X		143618	X X
SE14M 553003BHI-15	5-30-03	11:45	1	X		143619	X X
SE14M 553003BHI-2	5-30-03	1:30	1	X		143620	X X
SE14M 553003BHI-5	5-30-03	1:40	1	X		143621	X X

(1) Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting limits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants (ASI's HSL list at ASI's option). Specific compound lists must be supplied for all GC procedures.

$$T = 5.0^{\circ}C$$

## Sample Relinquished By

Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Bonnie B.	Environmental Plus	5-30-03		Melanie Thompson	ASI	6/4/03	10:30

[Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]

## Sample Received By

Name	Affiliation	Date	Time

## Bill to (if differ.):

Company Name Scott EnergyAddress 5805 Hwy 80City Midland State TX Zip 79701ATTN: Frank HernandezPhone 915-638-3799 Fax 915-3799

**Analyses Requested (1)**  
Please attach explanatory information as required

4221 Friedrich Lane, Suite 190, Austin, TX 78744  
(512) 444-5896



3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.      **Phone:** (505) 394-3481      **FAX:** (505) 394-2601  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice NM 88231

REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<b>204.00</b>	mg/Kg	500	<500	06/12/03	8015 mod.	---	14.5	72	105.6	78.5
TPH by GC (as diesel-ext)	---	---	---	—	06/11/03	3540	---	—	—	—	---
TPH by GC (as gasoline)	<b>113.00</b>	mg/Kg	500	<500	06/12/03	8015 mod.	---	17.2	72	105.3	76.6
Volatile organics-8260b/BTEX	---	---	---	---	06/10/03	8260b	---	—	—	—	—
Benzene	<b>356.0</b>	µg/Kg	100	<100	06/10/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<b>694.00</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<b>1480.00</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<b>566.00</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<b>532.00</b>	µg/Kg	5000	<5000	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully submitted,  
Richard Foster

Richard Laster

1. Quality assurance data is for the sample batch which included this sample.
2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements.
3. Recovery (Recover.) is the percent (%) of analyte recovered from a spiked sample.
4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix.
5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method.
6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions.
7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s).
- S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

**770L4545**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.  
Attn: Pat McCasland

Project ID: 2003-00134  
Sample Name: SE14M56203BH4-2'

Report#/Lab ID#: 143624  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

<b>Surrogate Compound</b>	<b>Method</b>	<b>Recovery</b>	<b>Recovery Limit</b>	<b>Data Qualifiers</b>
I-Chlorooctane	8015 mod.	none/diluted	diluted @ 50X	D
p-Terphenyl	8015 mod.	none/diluted	diluted @ 50X	D
1,2-Dichloroethane-d4	8260b	111	65-115	---
Toluene-d8	8260b	109	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143624	Matrix: soil	
Client: Environmental Plus, Inc.		Attn: Pat McCasland
Project ID: 2003-00134		
Sample Name: SE14M56203BH4-2		

### Sample Temperature/Condition $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fraction noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.

Notes:

**AnalySys**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

<b>Client:</b>	Environmental Plus, Inc.
<b>Attn:</b>	Pat McCasland
<b>Address:</b>	2100 Ave. O Eunice
<b>Phone:</b>	(505) 394-3481 <b>FAX:</b> (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**CHROMASYS**

Environmental Plus, Inc.  
Attn: Pat McCasland

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Report#/Lab ID#: 143625  
Sample Matrix: soil

Project ID: 2003-00134  
Sample Name: SE14M56203BH4-5

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	81.3	50-150	--
p-Terphenyl	8015 mod.	89.3	50-150	--
1,2-Dichloroethane-d4	8260b	79.5	65-115	--
Toluene-d8	8260b	101	50-120	--

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143625 Matrix: soil

Client: Environmental Plus, Inc.

Project ID: 2003-00134

Sample Name: SE14M56203BH4-5

Attn: Pat McCasland

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (e.g. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
TPH by GC (as diesel)	J	See J-flag discussion above.

Notes: \_\_\_\_\_

**AnalySys**

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---	---	---	---	06/09/03	8260b
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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Report# /Lab ID#: 143626	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH4-10'	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 08:40

**QUALITY ASSURANCE DATA<sup>1</sup>**

	Data Qual <sup>7</sup>	Prec <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	---	---	3.8	87.6	95.6
TPH by GC (as diesel-ext)	---	---	---	---	---
TPH by GC (as gasoline)	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---	---	---	---	---
Benzene	---	8.1	80	80.3	82.9
Ethylbenzene	---	3.5	101.5	94.6	100.4
m,p-Xylenes	---	3.1	106.5	108.6	108.6
o-Xylene	---	3.5	103.3	95.2	105.8
Toluene	9.4	84.5	92.8	90.5	90.5

**DATA'S**

3512 Montopolis Drive, Austin, TX 78744 &  
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(512) 385-5386 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134  
**Sample Name:** SE14M56203BH4-10'

**Report#/Lab ID#:** 143626  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	87.5	50-150	--
p-Terphenyl	8015 mod.	95.4	50-150	--
1,2-Dichloroethane-d4	8260b	87.6	65-115	--
Toluene-d8	8260b	104	50-120	--

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
INC.

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**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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**0774545**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5386 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134  
**Sample Name:** SE14M56203BH4-15'

**Report# / Lab ID#:** 143627  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	81.9	50-150	---
p-Terphenyl	8015 mod.	86.4	50-150	---
1,2-Dichloroethane-d4	8260b	84.1	65-115	---
Toluene-d8	8260b	100	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.



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**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
NM 88231  
**Phone:** (505) 394-3481      **FAX:** (505) 394-2601

REPORT OF ANALYSIS

Parameter		Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)		9.760	mg/Kg	500	<500	06/12/03	8015 mod.	--	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)		---	mg/Kg	---	---	06/11/03	3540	--	--	--	--	---
TPH by GC (as gasoline)		6.570	mg/Kg	500	<500	06/12/03	8015 mod.	--	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX		---		---	06/10/03	8260b	--	--	--	--	--	---
Benzene		34.70	µg/Kg	100	<100	06/10/03	8260b	--	8.1	80	80.3	82.9
Ethylbenzene		502.00	µg/Kg	5000	<5000	06/10/03	8260b	--	3.5	101.5	94.6	100.4
m,p-Xylenes		1050.00	µg/Kg	5000	<5000	06/10/03	8260b	--	3.1	106.5	108.6	108.6
o-Xylene		387.00	µg/Kg	5000	<5000	06/10/03	8260b	--	3.5	103.3	95.2	105.8
Toluene		421.00	µg/Kg	5000	<5000	06/10/03	8260b	--	9.4	84.5	92.8	90.5

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Richard Foster

Richard Lester

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**77014545**

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(512) 385-3886 • FAX (512) 385-7411

Report# / Lab ID#: 143628  
Sample Matrix: soil

Project ID: 2003-00134  
Sample Name: SE14M56203BH5-2'

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	none/diluted	diluted @ 50X	D
p-Terphenyl	8015 mod.	none/diluted	diluted @ 50X	D
1,2-Dichloroethane-d4	8260b	111	65-115	---
Toluene-d8	8260b	115	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#:143628	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14M56203BH5-2	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic D levels). Surrogate recoveries not accurately quantifiable.
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic D levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic D levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic D levels). Surrogate recoveries not accurately quantifiable.

Notes:

**AnalySys**

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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Report#/Lab ID#:143629	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH5-5'	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 09:30

#### QUALITY ASSURANCE DATA<sup>1</sup>

		Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
		---	---	3.8	87.6	95.6
		---	---	---	---	91.3
		---	7.6	84.3	85.5	---
		---	---	---	---	88.7

*OTNLYS*

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc. Attn: Pat McCasland	Project ID: 2003-00134 Sample Name: SE14M56203BH5-5'	Report#Lab ID#: 143629 Sample Matrix: soil
---	---	---

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	78.1	50-150	---
p-Terphenyl	8015 mod.	80.4	50-150	---
1,2-Dichloroethane-d4	8260b	81.1	65-115	---
Toluene-d8	8260b	100	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**ANALYSIS**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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QUALITY ASSURANCE DATA <sup>1</sup>											
Report#/ <b>Lab ID#:</b> 143630	<b>Report Date:</b> 06/16/03										
Project ID: 2003-00134											
Sample Name: SE14M56203BH5-10 <sup>2</sup>											
Sample Matrix: soil											
Date Received: 06/06/2003	Time: 10:30										
Date Sampled: 06/02/2003	Time: 10:00										

*Environmental Plus, Inc.*

Attn:  
Pat McCasland

Project ID: 2003-00134  
Sample Name: SE14M56203BH5-10'

Report#/Lab ID#: 143630  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chloroocane	8015 mod.	75.6	50-150	---
p-Terphenyl	8015 mod.	79.7	50-150	---
1,2-Dichloroethane-d4	8260b	82.1	65-115	---
Toluene-d8	8260b	99.6	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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**AnalySys**

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(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/09/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	8.1	80	80.3	82.9
Ethylbenzene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	101.5	94.6	100.4
m,p-Xylenes	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.1	106.5	108.6	108.6
o-Xylene	<20	µg/Kg	20	<20	06/09/03	8260b	---	3.5	103.3	95.2	105.8
Toluene	<20	µg/Kg	20	<20	06/09/03	8260b	---	9.4	84.5	92.8	90.5

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**CHROMASYS**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Plus, Inc.	Project ID:	2003-00134
Attn:	Pat McCasland	Sample Name:	SE14M56203BH5-15

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chloroocane	8015 mod.	80.7	50-150	---
p-Terphenyl	8015 mod.	86.3	50-150	---
1,2-Dichloroethane-d4	8260b	81.6	65-115	---
Toluene-d8	8260b	99.3	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Report# / Lab ID#: 143631  
Sample Matrix: soil



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 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	10900	mg/Kg	500	<500	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	---	---	---	06/11/03	3540
TPH by GC (as gasoline)	7330	mg/Kg	500	<500	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---	---	---	---	06/11/03	8260b
Benzene	3170	µg/Kg	100	<100	06/11/03	8260b
Ethylbenzene	51600	µg/Kg	5000	<5000	06/10/03	8260b
m,p-Xylenes	101000	µg/Kg	5000	<5000	06/10/03	8260b
o-Xylene	36700	µg/Kg	5000	<5000	06/10/03	8260b
Toluene	43200	µg/Kg	5000	<5000	06/10/03	8260b

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*Richard Laster*

Richard Laster

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Report#/Lab ID#: 143632	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH6-2'	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 11:30

#### QUALITY ASSURANCE DATA<sup>1</sup>

		Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	10900	mg/Kg	500	<500	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	---	---	---	06/11/03	3540
TPH by GC (as gasoline)	7330	mg/Kg	500	<500	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---	---	---	---	06/11/03	8260b
Benzene	3170	µg/Kg	100	<100	06/11/03	8260b
Ethylbenzene	51600	µg/Kg	5000	<5000	06/10/03	8260b
m,p-Xylenes	101000	µg/Kg	5000	<5000	06/10/03	8260b
o-Xylene	36700	µg/Kg	5000	<5000	06/10/03	8260b
Toluene	43200	µg/Kg	5000	<5000	06/10/03	8260b

**Q70L4545**

7/7/03

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Report#/Lab ID#: 143632  
Sample Matrix: soil

Client: Environmental Plus, Inc.  
Attn: Pat McCasland

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chloroocane	8015 mod.	none/diluted	diluted @ 50X	D
p-Terphenyl	8015 mod.	none/diluted	diluted @ 50X	D
1,2-Dichloroethane-d4	8260b	110	65-115	----
Toluene-d8	8260b	104	50-120	----

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Project ID: 2003-00134  
Sample Name: SE14M56203BH6-2'

## Exceptions Report:

Report #/Lab ID#:143632	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14fM56203BH6-2'	

### Sample Temperature/Condition $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg., the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
1-Chlorooctane	D	
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	

Notes:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**AnalySys**  
WCE

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**CHLOROSURROGATES**

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(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134  
**Sample Name:** SE14M56203BH6-5

**Report# / Lab ID#:** 143633  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

<b>Surrogate Compound</b>	<b>Method</b>	<b>Recovery</b>	<b>Recovery Limit</b>	<b>Data Qualifiers</b>
1-Chloroocane	8015 mod.	81.5	50-150	---
p-Terphenyl	8015 mod.	84.6	50-150	---
1,2-Dichloroethane-d4	8260b	83	65-115	---
Toluene-d8	8260b	99.3	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
INC.

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual 7	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

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*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard on matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

**CHROMASYS**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Plus, Inc.	Project ID:	2003-00134
Attn:	Pat McCasland	Sample Name:	SE14M56203BH6-10'

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	83.7	50-150	---
p-Terphenyl	8015 mod.	90.4	50-150	---
1,2-Dichloroethane-d4	8260b	79.5	65-115	---
Toluene-d8	8260b	100	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Report#/Lab ID#: 143634  
Sample Matrix: soil

**AnalySys**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

<b>Client:</b>	Environmental Plus, Inc.
<b>Attn:</b>	Pat McCasland
<b>Address:</b>	2100 Ave. O
	Eunice
<b>Phone:</b>	(505) 394-3481      FAX: (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ('<') values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

Report# / Lab ID#: 143635	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH6-15	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 13:30

#### QUALITY ASSURANCE DATA<sup>1</sup>

	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	---	---	3.8	87.6	95.6
TPH by GC (as diesel-ext)	---	---	---	---	---
TPH by GC (as gasoline)	<5	5	7.6	84.3	85.5
Volatile organics-8260b/BTEX	---	---	---	---	---
Benzene	<20	µg/Kg	20	0.9	81.3
Ethylbenzene	<20	µg/Kg	20	1.3	98.3
m,p-Xylenes	<20	µg/Kg	20	0.3	108.4
o-Xylene	<20	µg/Kg	20	11.4	105.2
Toluene	<20	µg/Kg	20	0.1	88.6

**ANALYSIS**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Plus, Inc.	Project ID:	2003-00134
Attn:	Pat McCasland	Sample Name:	SE14M56203BH6-15

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	82	50-150	---
	8015 mod.	86.4	50-150	---
p-Terphenyl	8260b	79.9	65-115	---
	8260b	101	50-120	---
1,2-Dichloroethane-d4				
Toluene-d8				

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
m/e

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(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	78.7	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	>5	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/10/03	8260b
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b
Ethylbenzene	83.7	µg/Kg	20	<20	06/10/03	8260b
m,p-Xylenes	109	µg/Kg	20	<20	06/10/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

Richard Laster

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QUALITY ASSURANCE DATA <sup>1</sup>						
				Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>
				---	3.8	87.6
				---	---	95.6
				---	84.3	91.3
				7.6	---	85.5
				---	---	---
				---	---	88.7
				---	---	---
				0.9	81.3	86.4
				1.3	98.3	102.3
				0.3	108.4	105.9
				11.4	105.2	104.5
				0.1	88.6	92.8
				J		87.2

**CONTYSS**

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(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134  
**Sample Name:** SE14M56203BH7-2'

**Report#/Lab ID#:** 143636  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	80.3	50-150	---
p-Terphenyl	8015 mod.	90.8	50-150	---
1,2-Dichloroethane-d4	8260b	81.4	65-115	---
Toluene-d8	8260b	115	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143636	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14M56203BH7-21	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Toluene	J	See J-flag discussion above.

Notes:

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<b>Client:</b>	Environmental Plus, Inc.
<b>Attn:</b>	Pat McCasland
<b>Address:</b>	2100 Ave. O Eunice
<b>Phone:</b>	(505) 394-3481
<b>FAX:</b>	(505) 394-2601
<b>NM</b>	88231

REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	2760	mg/Kg	50	<50	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	--	mg/Kg	--	--	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	1390	mg/Kg	50	<50	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	06/11/03	8260b	---	---	---	---	---	---
Benzene	<20	$\mu\text{g}/\text{Kg}$	20	<20	06/11/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	17200	$\mu\text{g}/\text{Kg}$	100	<100	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	17900	$\mu\text{g}/\text{Kg}$	100	<100	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	25.9	$\mu\text{g}/\text{Kg}$	20	<20	06/11/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	$\mu\text{g}/\text{Kg}$	20	<20	06/11/03	8260b	J	0.1	88.6	92.8	87.2

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Respectfully Submitted,  
*Richard Foster*

Richard Lester

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3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample.
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5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method.
6. Method numbers typically denote USEPA procedures.
7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s).
- S1 =MS and/or MSD recovery exceed advisory limits.
- S2 =Post digestion spike (PDS) recovery exceeds advisory limit.
- S3 =MS and/or MSD and PDS recoveries exceed advisory limits.
- P =Precision higher than advisory limit.
- M =Matrix interference.

**ONLYSYS**

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Client:	Environmental Plus, Inc.	Project ID:	2003-00134
Attn:	Pat McCasland	Sample Name:	SE14M56203BH7-5'

Report#/Lab ID#: 143637  
Sample Matrix: soil

#### REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	none/diluted	diluted @ 5X	D
p-Terphenyl	8015 mod.	none/diluted	diluted @ 5X	D
1,2-Dichloroethane-d4	8260b	95	65-115	---
Toluene-d8	8260b	104	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143637	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14M56203BH7-5	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg., the material causing the J flag "hit" in such situations may be nothing more than background ion/fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Toluene	J	See J-Flag discussion above.
1-Chlorooctane	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg., high non-target organic levels).
1-Chlorooctane	D	Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg., high non-target organic levels).
p-Terphenyl	D	Surrogate recoveries not accurately quantifiable.

Notes:

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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	1160	mg/Kg	10	<10	06/13/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-oil)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	182	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	203	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
MTBE	<100	µg/Kg	100	<100	06/10/03	8260b	---	11.5	88.9	110.1	92.3
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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Report# /Lab ID#: 143638	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH7-10	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 14:10

#### QUALITY ASSURANCE DATA<sup>1</sup>

**ONLY 5<sup>y5</sup>**  
/N/C

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Client: Environmental Plus, Inc. Attn: Pat McCasland	Project ID: 2003-00134 Sample Name: SE14M56203BH7-10	Report#/Lab ID#: 143638 Sample Matrix: soil
---	---	--

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	86.8	50-150	---
p-Terphenyl	8015 mod.	none/diluted	diluted @ 1X	D
1,2-Dichloroethane-d4	8260b	73.5	65-115	---
Toluene-d8	8260b	96.1	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143638	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14M56203BHT7-10	

### Sample Temperature/Condition $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFAA and AA, and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

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- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

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### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	

Notes:

**AnalySys**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b

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Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or PDS recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

Report#/Lab ID#: 143639	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH7-15	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 14:25

#### QUALITY ASSURANCE DATA<sup>1</sup>

		Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
		---	3.8	87.6	95.6	91.3
		---	---	84.3	85.5	---
		7.6	---	---	---	88.7
		---	---	---	---	---
		---	---	---	---	---
		0.9	81.3	86.4	82.1	
		1.3	98.3	102.3	98.5	
		0.3	108.4	105.9	105	
		11.4	105.2	104.5	103.8	
		0.1	88.6	92.8	87.2	
		---	---	---	---	

**ENVIRONMENTAL PLUS**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134  
**Sample Name:** SE14M56203BH7-15

**Report# / Lab ID#:** 143639  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	79.7	50-150	---
p-Terphenyl	8015 mod.	86.4	50-150	---
1,2-Dichloroethane-d4	8260b	84.9	65-115	---
Toluene-d8	8260b	98	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
INC.

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 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice NM 88231  
**Phone:** (505) 394-3481 **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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Report# /Lab ID#: 143640	Report Date: 06/16/03
Project ID: 2003-00134	
Sample Name: SE14M56203BH7-20	
Sample Matrix: soil	
Date Received: 06/06/2003	Time: 10:30
Date Sampled: 06/02/2003	Time: 14:40

**QUALITY ASSURANCE DATA<sup>1</sup>**

**Environmental Plus, Inc.**

Pat McCasland

Project ID: 2003-00134  
Sample Name: SE14M56203BH7-20

Report# /Lab ID#: 143640  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	74.4	50-150	---
p-Terphenyl	8015 mod.	80.6	50-150	---
1,2-Dichloroethane-d4	8260b	90	65-115	---
Toluene-d8	8260b	105	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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<b>Client:</b>	Environmental Plus, Inc.	<b>Phone:</b>	(505) 394-3481
<b>Attn:</b>	Pat McCasland	<b>FAX:</b>	(505) 394-2601
<b>Address:</b>	2100 Ave. O Eunice	<b>NM</b>	88231

REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	22.3	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	--	---	--	--	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	--		---		06/10/03	8260b	---	---	---	---	---
Benzene	>20	µg/Kg	20	>20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	>20	µg/Kg	20	>20	06/10/03	8260b	J	1.3	98.3	102.3	98.5
m,p-Xylenes	>20	µg/Kg	20	>20	06/10/03	8260b	J	0.3	108.4	105.9	105
o-Xylene	>20	µg/Kg	20	>20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	>20	µg/Kg	20	>20	06/10/03	8260b	J	0.1	88.6	92.8	87.2

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3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample.
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5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method.
6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions.
7. Data Qualifiers are J = analytic potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 = MS and/or MSD recovery exceed advisory limits. S2 = Post digestion spike (PDS) recovery exceeds advisory limit. S3 = MS and PDS recoveries exceed advisory limits. P = Precision higher than advisory limit. M = Matrix interference.

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Richard I aster

Page#: 1

**Environmental Plus, Inc.**

Attn: Pat McCasland

Project ID: 2003-00134  
Sample Name: SE14M56203BH8-2

Report#/Lab ID#: 143641  
Sample Matrix: soil

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	85.6	50-150	---
p-Terphenyl	8015 mod.	91.7	50-150	---
1,2-Dichloroethane-d4	8260b	87.7	65-115	---
Toluene-d8	8260b	107	50-120	---

Data Qualifiers: D = Surrogates diluted and X = Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#:143641	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14M56203BH8-2'	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <=6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Ethylbenzene	J	See J-flag discussion above.
m,p-Xylenes	J	See J-flag discussion above.
Toluene	J	See J-flag discussion above.

### Notes:



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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	302	mg/Kg	25	<25	06/13/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

#### QUALITY ASSURANCE DATA<sup>1</sup>

	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	302	mg/Kg	25	<25	06/13/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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**Q70L4545**

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Client: Environmental Plus, Inc.  
Attn: Pat McCasland

Project ID: 2003-00134  
Sample Name: SE14M56203BH8-5'

Report#/Lab ID#: 143642  
Sample Matrix: soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	77.6	50-150	---
p-Terphenyl	8015 mod.	none/diluted	diluted @ 2.5X	D
1,2-Dichloroethane-d4	8260b	82.3	65-115	---
Toluene-d8	8260b	105	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143642	Matrix: soil
Client: Environmental Plus, Inc.	Attn: Pat McCasland
Project ID: 2003-00134	
Sample Name: SE14M56203BH8-5'	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA, and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	

Notes:



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**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	735	mg/Kg	10	<10	06/13/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---	µg/Kg	---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

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*Richard Laster*

Richard Laster

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**Q7DL4545**

*17C.*

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Report# /Lab ID#: 143643  
Sample Matrix: soil

Project ID: 2003-00134  
Sample Name: SE14M56203BH8-10'

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	80.8	50-150	---
p-Terphenyl	8015 mod.	none/diluted	diluted @ 1X	D
1,2-Dichloroethane-d4	8260b	82.3	65-115	---
Toluene-d8	8260b	102	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 143643 Matrix: soil

Client: Environmental Plus, Inc.

Project ID: 2003-00134

Sample Name: SE14M56203BH8-10'

### Sample Temperature/Condition $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

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- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

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### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic levels). Surrogate recoveries not accurately quantifiable.
p-Terphenyl	D	

Notes:

**AnalySys**

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland  
**Address:** 2100 Ave. O  
 Eunice  
**Phone:** (505) 394-3481    **FAX:** (505) 394-2601

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	3.8	87.6	95.6	91.3
TPH by GC (as diesel-ext)	---	mg/Kg	---	---	06/11/03	3540	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	06/12/03	8015 mod.	---	7.6	84.3	85.5	88.7
Volatile organics-8260b/BTEX	---		---	---	06/10/03	8260b	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.9	81.3	86.4	82.1
Ethylbenzene	<20	µg/Kg	20	<20	06/10/03	8260b	---	1.3	98.3	102.3	98.5
m,p-Xylenes	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.3	108.4	105.9	105
o-Xylene	<20	µg/Kg	20	<20	06/10/03	8260b	---	11.4	105.2	104.5	103.8
Toluene	<20	µg/Kg	20	<20	06/10/03	8260b	---	0.1	88.6	92.8	87.2

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2000, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or PDS recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

**DATA'S**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Plus, Inc.  
**Attn:** Pat McCasland

**Project ID:** 2003-00134  
**Sample Name:** SE14M56203BH8-15

**Report#/Lab ID#:** 143644  
**Sample Matrix:** soil

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	89.2	50-150	---
p-Terphenyl	8015 mod.	96.9	50-150	---
1,2-Dichloroethane-d4	8260b	83	65-115	---
Toluene-d8	8260b	99.3	50-120	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

100

Send Report:

Bill to (if differ):

Company Name Environmental Plus

Address 2100 Ave O

City San Jose State/Zip 95123-1

ATTN: Brian Casland

Phone (408) 348-3255 Fax 523-3260

Rush Status (must be confirmed with lab mgr.):

Project Name/PO#: 2003-00134 Sampler: Bradley Bell

Company Name East Energy  
Address 5805 Hwy 50  
City Melrose State TX Zip 77011  
ATTN: Frank Hernandez  
Phone (281) 638-3799 Fax 638-3799

4221 Friedrich Lane, Suite 190, Austin, TX 78744  
(512) 444-5896

**Analyses Requested (1)**  
Please attach explanatory information as required

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water/Waste	Lab I.D.# (Lab only)	Comments
SE14M56203BH4-2'	6-2-03	7:50	1	X		143624	X X
SE14M56203BH4-5	6-2-03	8:10	1	X		143625	X X
SE14M56203BH4-10'	6-2-03	8:40	1	X		143626	X X
SE14M56203BH4-15'	6-2-03	9:00	1	X		143627	X X
SE14M56203BH5-2'	6-2-03	9:15	1	X		143628	X X
SE14M56203BH5-5'	6-2-03	9:30	1	X		143629	X X
SE14M56203BH5-10'	6-2-03	10:00	1	X		143630	X X
SE14M56203BH5-15'	6-2-03	10:20	1	X		143631	X X
SE14M56203BH6-2'	6-2-03	11:30	1	X		143632	X X
SE14M56203BH6-5	6-2-03	11:50	1	X		143633	X X

(1) Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting limits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants ASI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

**Sample Relinquished By**

Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Bradley Bell	Environmental Plus	6-2-03		Melvin Hernandez	ASI	6-2-03	10:30

[Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]

T = 5.0 °C

Send Report To:

Company Name Environmental Plus

Address 200 Ave C

City El Paso State TX Zip 79923

ATTN: Pat McDaniel

Phone (505) 348-3621 Fax (505) 348-3799

Rush Status (must be confirmed with lab mgr.):

Project Name/PO#: 2003-00134 Sampler: Bethany B.

Bill to (if different):

Company Name East Energy

Address 5805 Hwy 80

City El Paso State TX Zip 79911

ATTN: Frank Hernandez

Phone (505) 658-3799 Fax (505) 658-3621

Comments

1/8/03 1/10/03

1/10/03 1/10/03

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4221 Friedrich Lane, Suite 190, Austin, TX 78744  
(512) 444-5896

**Analyses Requested (1)**

Please attach explanatory information as required

Client Sample No. Document Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	Comments
SE14M56203BH7-10	6-2-03	1:00	1	X			143634	1/10/03
SE14M56203BH7-15	6-2-03	1:30	1	X			143635	1/10/03
SE14M56203BH7-2	6-2-03	1:40	1	X			143636	1/10/03
SE14M56203BH7-5	6-2-03	1:55	1	X			143637	1/10/03
SE14M56203BH7-10	6-2-03	2:10	1	X			143638	1/10/03
SE14M56203BH7-15	6-2-03	2:25	1	X			143639	1/10/03
SE14M56203BH7-20	6-2-03	2:40	1	X			143640	1/10/03
SE14M56203BH7-2	6-2-03	2:55	1	X			143641	1/10/03
SE14M56203BH7-5	6-2-03	3:05	1	X			143642	1/10/03
SE14M56203BH7-10	6-2-03	3:20	1	X			143643	1/10/03

(1) Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting limits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants c ASI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

T = 5.0%

**Sample Relinquished By**

Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
<u>Bethany B.</u>	<u>Environmental Plus</u>	<u>6-2-03</u>		<u>Melanie Thompson</u>	<u>ASI</u>	<u>6/6/03</u>	<u>10:30</u>

[Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sample to AnalySys, Inc.'s standard terms.]



## ***Appendix D Regulatory Information***

**New Mexico Office of State Engineer Water Well Report**

**New Mexico Office of the State Engineer**  
**Well Reports and Downloads**

Township: 22S Range: 37E Sections: 2

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last)  Non-Domestic  Domestic  All

[Well / Surface Data Report](#)

[Avg Depth to Water Report](#)

[Water Column Report](#)

[Clear Form](#)

[WATERS Menu](#)

[Help](#)

WATER COLUMN REPORT 06/20/2005

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are biggest to smallest)

Well Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth	Depth	Water (in
										Well	Water	Column
CP 00929 EXPLORE	22S	37E	02	3	3	3				1100		

Record Count: 1

## ***Appendix E C-141 Release Notification***



ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

Micro-Blaze

May 27, 2003

Mr. Larry Johnson  
Environmental Engineer  
New Mexico Oil Conservation Division  
1625 North French  
Hobbs, New Mexico 88240

Subject: EOTT Energy LLC Initial C-141

Re: Vacuum to Jal 14" Mainline #5, 2003-00134  
UL A, NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 2 T22S R37E  
Latitude 32 25' 39.006"N and Longitude 103 07' 43.155"W

Dear Mr. Johnson,

Environmental Plus, Inc. (EPI), on behalf of Mr. Frank Hernandez, EOTT Energy LLC, submits the attached New Mexico Oil Conservation Division (NMOCD) form C-141 for the above referenced leak site located on land owned by the Greg Holt, approximately ~2 miles southeast of Eunice, New Mexico. The New Mexico Tech Geo-Information Database records water wells in the area with a water level of 59.78'bgs. The attached site information and metrics form ranks the site in accordance with the "NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)."

EOTT will implement the New Mexico Oil Conservation Division (NMOCD) approved "General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000" and develop and submit a site specific remediation plan for NMOCD approval to address issues identified during delineation of the vertical and horizontal extents of contamination of the Constituents of Concern (CoCs), i.e., Total Petroleum Hydrocarbon EPA method 8015m (TPH<sup>8015m</sup>), Benzene, and BTEX, i.e., the mass sum of Benzene, Toluene, Ethyl Benzene, and Xylenes. The contaminated soil is not exempted from RCRA 40 CFR Part 261 and will be characterized accordingly.

If there are any questions please call Mr. Ben Miller or myself at the office or at 505.390.0288 and 505.390.7864, respectively or Mr. Frank Hernandez at 713.253.7006. All official communication should be addressed to:



ENVIRONMENTAL PLUS, INC. *Micro-Blaze*  
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

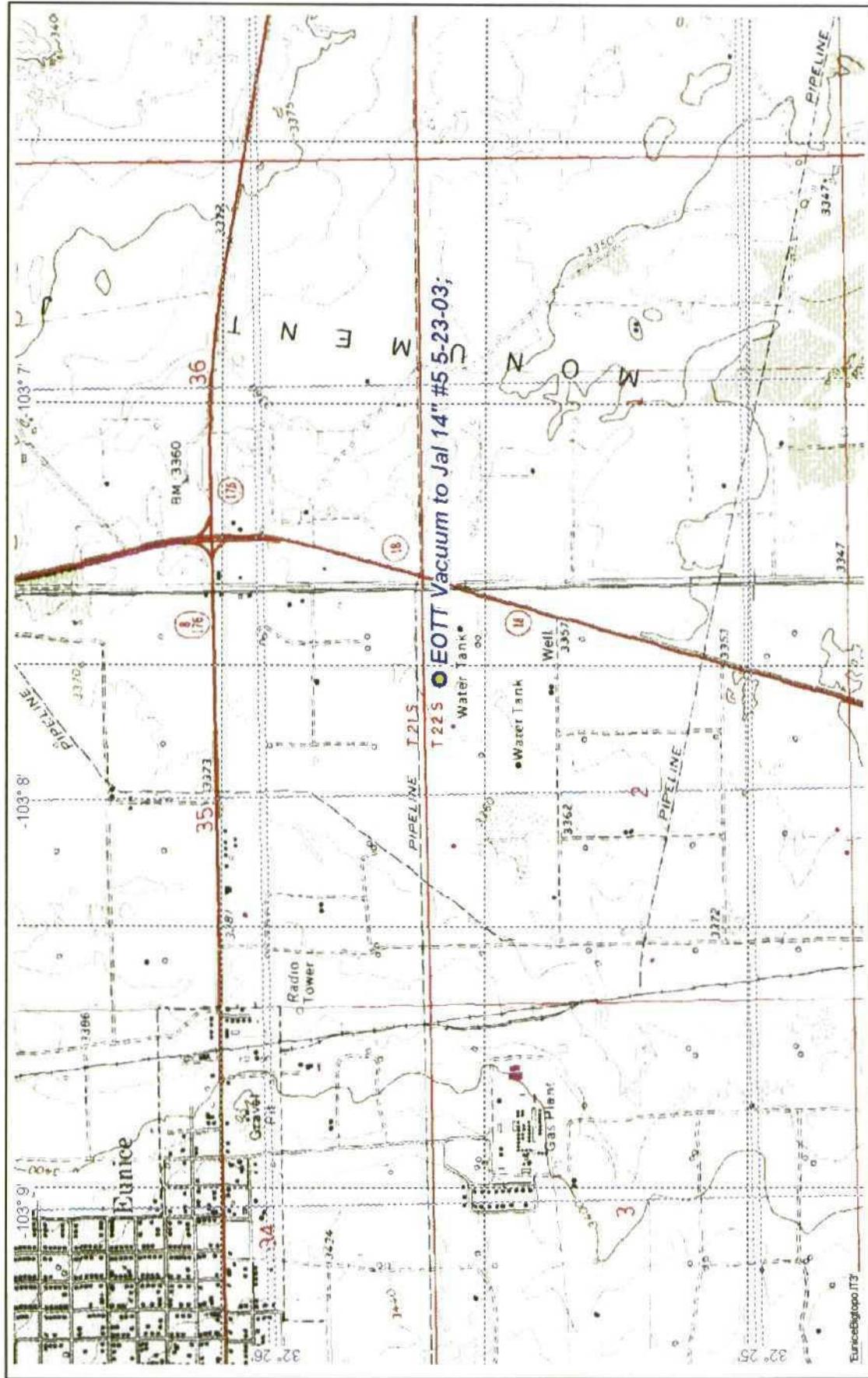
Mr. Frank Hernandez  
EOTT Energy LLC  
PO Box 1660  
5805 East Highway 80  
Midland, Texas 79702

Sincerely,

Pat McCasland  
EPI Technical Services Manager

cc: Frank Hernandez, EOTT Energy LLC, w/enclosure  
William Von Drehle, EOTT Energy LLC, w/enclosure  
Ben Miller, EPI Vice President and General Manager  
Sherry Miller, EPI President  
File

ENVIRONMENTAL PLUS, INC.

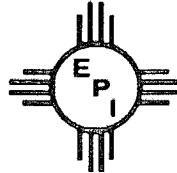




2100 West Ave. O  
P.O. Box 1558  
Eunice, New Mexico 88231  
TEL: 505.394.3481  
FAX: 505.394.2601

## ENVIRONMENTAL PLUS, INC.

# Fax



*Micro-Blaze*

---

**To:** Larry Johnson / NMOCD      **From:** Pat McCasland

**Fax:** 505.393.0720      **Pages:**

**Phone:** 505.393.6161      **Date:** 2003-05-27 00:00:00

**Re:** C-138 Transmittal: EOTT Energy LLC Vacuum to Jal 14"      **CC:**  
Mainline #5 2003-00134

---

**Urgent**     **For Review**     **Please Comment**     **Please Reply**     **Please Recycle**

---

**Buddy Hill submit to Larry Johnson,**

Attached herewith is the C-138 and supporting documentation for receipt of "non-exempt" crude oil contaminated soil into the EPI landfarm. The original will be completed and forwarded to you when the project is completed.

Sincerely,

Pat McCasland EPI

# ENVIRONMENTAL PLUS, INC.

Land Farm  
PERMIT # NM-01-0013

## CERTIFICATE OF WASTE STATUS

"NON - EXEMPT WASTE"

COMPANY EOTT ENERGY LLC

ORIGIN UL-A NE¼ OF THE NE¼ OF SECTION 2  
TOWNSHIP: T22S RANGE:R37E

SOURCE DESCRIPTION (PIPELINE, LEASE, BATTERY, FLOWLINE,  
ETC.) 14" STEEL PIPELINE VACUUM TO JAL 14" MAINLINE #5 2003-00134

AS A CONDITION OF ACCEPTANCE FOR DISPOSAL,  
I HEREBY CERTIFY THAT THIS WASTE IS A NON-EXEMPT WASTE  
AS DEFINED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) JULY 1988  
REGULATORY DETERMINATION AND TO MY KNOWLEDGE, THIS WASTE BEEN  
CHARACTERIZED AS "NON-HAZARDOUS" PURSUANT TO THE PROVISIONS OF EPA 40 CFR  
PART 261 SUBPART C AND HAS NOT BEEN COMINGLED WITH AN EPA 40 CFR PART 261  
SUBPART D "LISTED WASTE." LIKEWISE, THIS WASTE DOES NOT CONTAIN NATURALLY  
OCCURRING RADIOACTIVE MATERIAL (NORM) PURUSANT TO 20 NMAC 3.1 SUBPART  
1403 AND CONTAINS NO FREE LIQUID PURSUANT TO THE "PAINT FILTER TEST" EPA  
METHOD 9095A.

NORM EXPOSURE RATE: 10-13  $\mu$ R/HR

I, FRANK HERNANDEZ, THE UNDERSIGNED AGENT  
FOR, EOTT ENERGY LLC, HEREBY CERTIFY THAT,  
BASED ON PERSONAL KNOWLEDGE, THE ABOVE STATEMENT IS TRUE AND CORRECT.

NAME FRANK HERNANDEZ  
TITLE DISTRICT ENVIRONMENTAL SUPERVISOR  
ADDRESS 5805 EAST HIGHWAY 80  
MIDLAND, TEXAS 79702

SIGNATURE Frank Hernandez  
DATE 2003-05-27 00:00:00

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  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-138  
Revised March 17, 1999

Submit Original  
Plus 1 Copy  
to Appropriate  
District Office

## REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <b>EOTT Energy LLC</b>
Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/>	5. Originating Site <b>Vacuum to Jal 14" Mainline #5 2003-00134</b>
2. Management Facility Destination: Environmental Plus, Inc. #NM-01-0013	6. Transporter Environmental Plus, Inc.
3. Address of Facility Operator: Environmental Plus, Inc.	8. State New Mexico
7. Location of Material (Street Address or ULSTR) <b>UL A, NE 1/4 of the NE 1/4 of Section 2 T22S R37E</b>	
9. <u>Circle One:</u>  A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.  All transporters must certify the wastes delivered are only those consigned for transport.	

### BRIEF DESCRIPTION OF MATERIAL:

Crude Oil Contaminated Soil

Estimated Volume 100 cy Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_ cy

SIGNATURE Pat McCasland TITLE: Technical Manager DATE: \_\_\_\_\_  
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Pat McCasland TELEPHONE NO. 505.394.3481

(This space for State Use)

APPROVED BY: _____	TITLE: _____	DATE: _____
APPROVED BY: _____	TITLE: _____	DATE: _____

## **Distribution**

Larry Johnson  
Environmental Engineer  
1625 North French Drive  
Hobbs, New Mexico 88240  
505-393-6161 ext 111  
[lwjohnson@state.nm.us](mailto:lwjohnson@state.nm.us)

Jeffrey Dann, PG  
Senior Environmental Specialist  
Plains Marketing, L.P.  
333 Clay Street, Suite 1600  
Houston, Texas 77002  
713-646-4100  
[jpdann@paalp.com](mailto:jpdann@paalp.com)

Camille Reynolds  
Remediation Coordinator  
Plains All American  
214 West C61  
Hobbs, New Mexico 88240  
505-393-5611  
[cjreynolds@paalp](mailto:cjreynolds@paalp)

Will Murley, PG  
Senior Geologist  
Premier Environmental Services, Inc.  
30 West Industrial Loop, Suite I  
Midland, Texas 79701  
[wmurley@premiercorp-usa.com](mailto:wmurley@premiercorp-usa.com)

Chan Patel  
Senior Project Manager  
Premier Environmental Services, Inc.  
4800 Sugar Grove Blvd, Suite 420  
Stafford, Texas 77477  
281-240-5201  
[cpatel@premiercorp-usa.com](mailto:cpatel@premiercorp-usa.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

Form C-141  
 Revised March 17, 1999

Oil Conservation Division  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

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 <b>EOTT Energy LLC</b>	Contact <b>Frank Hernandez</b>
Address <b>PO Box 1660 5805 East Highway 80 Midland, Texas 79702</b>	Telephone No. <b>713.253.7006</b>
Facility Name <b>Vacuum to Jal 14" Mainline #5</b>	Facility Type <b>14" Steel Pipeline</b>

Surface Owner <b>Greg Holt</b>	Mineral Owner	Lease No.
--------------------------------	---------------	-----------

### LOCATION OF RELEASE

Unit Letter 2	Section 2	Township T22S	Range R37E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea Lat. 32 25' 39.006"N Lon. 103 07' 43.155"W
------------------	--------------	------------------	---------------	---------------	------------------	---------------	----------------	--

### NATURE OF RELEASE

*BAD ESTIMATE  
100' x 100' low*

Type of Release <b>Crude Oil</b>	Volume of Release <b>7, 20 bbls barrels</b>	Volume Recovered <b>5 bbls barrels</b>
Source of Release <b>14" Steel Pipeline</b>	Date and Hour of Occurrence <b>5-23-03 @ 3:00 PM</b>	Date and Hour of Discovery <b>4:00 PM @ 5-23-03</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Buddy Hill</b>	
By Whom? <b>Pat McCasland, EPI</b>	Date and Hour <b>5-23-03 @ 8:00 PM</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>NA</b>	

If a Watercourse was Impacted, Describe Fully.\*  
**NA**

Describe Cause of Problem and Remedial Action Taken.\*  
**14" Steel Pipeline. The cause was either internal or external corrosion. The line was being pressure tested at the time of the occurrence. The line was depressured and a line repair clamp installed. Contaminated soil placed on a plastic barrier.**

Describe Area Affected and Cleanup Action Taken.\*  
**~200' x 100' 8,730 sqft Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be disposed of or remediated on site. Remedial Goals: TPH 8015m = 1000 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.**

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.

### OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:	
Printed Name: <b>Frank Hernandez</b>		
Title: District Environmental Supervisor	Approval Date:	Expiration Date:
Date: <b>May 27, 2003</b>	Phone: <b>713.253.7006</b>	
Conditions of Approval:		Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

EOTT Energy LLC Site Information and Metrics		Incident Date: <b>5-23-03 @ 3:00 PM</b>	NMOCD Notified: <b>5-23-03 @ 8:00 PM</b>	
SITE: Vacuum to Jal 14" Mainline #5		Assigned Site Reference #: 2003-00134		
Company: EOTT Energy LLC				
Street Address: PO Box 1660				
Mailing Address: 5805 East Highway 80				
City, State, Zip: Midland, Texas 79702				
Representative: Frank Hernandez				
Representative Telephone: 713.253.7006				
Telephone:				
Fluid volume released (bbls): 20 bbls		Recovered (bbls): 5 bbls		
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)				
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)				
Leak, Spill, or Pit (LSP) Name: Vacuum to Jal 14" Mainline #5				
Source of contamination: 14" Steel Pipeline				
Land Owner, i.e., BLM, ST, Fee, Other: Greg Holt				
LSP Dimensions ~200' x 100'				
LSP Area: 8,730 sqft ft <sup>2</sup>				
Location of Reference Point (RP)				
Location distance and direction from RP				
Latitude: 32 25' 39.006"N				
Longitude: 103 07' 43.155"W				
Elevation above mean sea level: 3,370' amsl				
Feet from South Section Line				
Feet from West Section Line				
Location- Unit or 1/4: NE 1/4 of the NE 1/4		Unit Letter: A		
Location- Section: 2				
Location- Township: T22S				
Location- Range: R37E				
Surface water body within 1000' radius of site: none				
Domestic water wells within 1000' radius of site: none				
Domestic water wells within 1000' radius of site:				
Agricultural water wells within 1000' radius of site: none				
Agricultural water wells within 1000' radius of site:				
Public water supply wells within 1000' radius of site: none				
Depth from land surface to ground water (DG) Average 59.78'bgs New Mexico Tech Geoinformation Database				
Depth of contamination (DC) - ?				
Depth to ground water (DG - DC = DtGW) - ?				
<b>1. Ground Water</b>		<b>2. Wellhead Protection Area</b>		<b>3. Distance to Surface Water Body</b>
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
Ground water Score = 10		Wellhead Protection Area Score = 0		Surface Water Score = 0
Site Rank (1+2+3) = 10				
<b>Total Site Ranking Score and Acceptable Concentrations</b>				
Parameter	>19	10-19	0-9	
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm	
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm	
TPH	100 ppm	1000 ppm	5000 ppm	

<sup>1</sup>100 ppm field VOC headspace measurement may be substituted for lab analysis