

AP - 41

# STAGE 1 & 2 WORKPLANS

DATE:

MAY, 2005



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STAGE 1 AND STAGE 2  
ABATEMENT PLAN (REVISED)

FOR THE

HUGH GATHERING 090402  
Ref. # 2002-10235

Unit Letter-M (SW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$ ) of Section 12  
Latitude: 32°29'11.080"N/Longitude: 103°07'29.637"W  
and

Unit Letter-P (SE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$ ) of Section 11  
Latitude: 32°29'11.007"N/Longitude: 103°07'33.864"W,

Township 21 South and Range 37 East

~3 miles northeast of  
Eunice, Lea County, New Mexico

MAY 2005

PREPARED BY

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NMOCD - New Mexico Oil Conservation Division

Plains - Plains Pipeline, L.P.

EPI - Environmental Plus, Inc.

## STANDARD OF CARE

Stage 1 and Stage 2 Abatement Plan (Revised)

Hugh Gathering 090402  
Ref. # 2002-10235

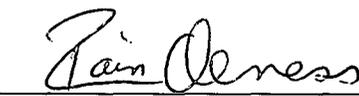
The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality Assurance/Quality Control Plan. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered EPI professional with a background in engineering, environmental, and/or the natural sciences.

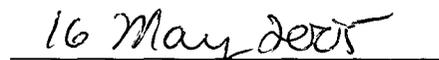
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## 1.0 INTRODUCTION

Environmental Plus, Inc. (EPI), on behalf of Plains Pipeline, L.P. (Plains), submits this revised Stage 1 and Stage 2 Abatement Plan to the New Mexico Oil Conservation Division for the investigation and remediation of the Plains Pipeline, L.P. Hugh Gathering 090402 (Ref.#2002-10235) pursuant to your written request dated April 1, 2005. This plan will serve as a "Work Plan Supplement" as referenced in the "General Work Plan for Remediation of EOTT Energy Pipeline Spills, Leaks, and Releases in New Mexico" approved by the New Mexico Oil Conservation Division (NMOCD) on August 1, 2000.

## 2.0 "RESPONSIBLE PERSON"

The "Responsible Person" for the Stage 1 and Stage 2 Abatement Plans is:

Camille Reynolds  
Plains Pipeline, L.P.  
3705 East Highway 158 (PO Box 3319)  
Midland, Texas 79706 (79702)

## 3.0 STAGE 1 ABATEMENT PLAN

The release occurred on September 4, 2002. On September 12, 2002, during initial delineation of the vertical extent of crude oil impact, non-aqueous phase hydrocarbon was observed on the surface of the groundwater at approximately 58-feet below ground surface (bgs) in excess of the standards set forth in 20 NMAC 6.2.3103, i.e., "Non-aqueous phase liquid shall not be present floating atop or immersed within groundwater, as can be reasonably measured." The NMOCD offices in Santa Fe and Hobbs, New Mexico were notified of the impact. This proposal identifies Stage 1 Abatement Plan objectives consistent with Rule 19 of the NMOCD regulations that will be used to develop the remediation strategies required for the Stage 2 Abatement Plan and are being submitted coincidentally.

### 3.1 BACKGROUND

The site is located approximately 3-miles northeast of Eunice, New Mexico adjacent to NMSR 18 at a latitude of 32°29'11"N and a longitude of 103°07'33"W. The initial form C-141 submitted to the NMOCD on September 12, 2002, by EOTT Energy Pipeline (EOTT), the asset owner at that time (Plains Pipeline, L.P. is the current owner), reported an estimated 50 barrels (bbls) of crude oil was released with no recovery. Because of the small diameter surface impact, the release was initially reported internally to be less than 1 bbl of crude oil; however, during replacement of the line, EOTT upgraded the release to 50 bbls. The leak was due to internal/external corrosion and occurred in a section of pipe inside the conduit under New Mexico State Road 18 (NMSR 18). Crude oil was reported to be coming from the conduit vents on the east and west sides of the highway (i.e., East Site in Unit Letter-M (UL-M) (SW¼ of the SW¼) of Section 12, Township 21 South (T21S) and Range 37 East (R37E) on property owned by William McNeill and the West Site in UL-P (SE¼ of the SE¼) of Section 11, T21S, R37E on property owned by James A. Bryant. During replacement of the pipeline, 168 cubic yards (yd<sup>3</sup>) of impacted soil was disposed of in the Environmental Plus, Inc. (EPI) Landfarm.

The **east release** was delineated in September 2002 and characterized as not having impacted groundwater. The horizontal extent of soil impact appears to be conical in shape and extends laterally from the point of release approximately 25-feet. The vertical extent of soil impact was delineated to be 25-feet below ground surface (bgs).

The **west release** delineation in September of 2002, determined that groundwater had been impacted and is the primary focus of the Stage 1 and 2 Abatement Plans. Soil impacts appear conical in shape in the area of the leak origin and extend 58' bgs to the groundwater. Laterally, within 10-feet of the leak origin, the impacts extend to approximately 25' bgs and laterally from 10-feet to 30-feet from the leak origin soil impacts extend only to 10' bgs. Groundwater delineation efforts have resulted in the installation of 12 groundwater monitor wells, 11 on the site and 1 down gradient well east of NMSR 18. The dissolved phase impact has been delineated and crude oil recovery and groundwater monitoring has been ongoing under the purview of the NMOCD. The site soil and groundwater delineation information is discussed in the Stage 2 Abatement Plan (Section 4.0).

### 3.2 INITIAL SPILL MITIGATION

Initial response to the release was to deactivate the pipeline and excavate the release areas. Once it was determined that the leak was inside the conduit, the decision was made to replace the section of pipe. The pipeline section was replaced the following day and placed back in service. Approximately 168 cubic yards (yd<sup>3</sup>) of impacted soil, excavated during replacement of the pipeline, was disposed of at the Environmental Plus, Inc. (EPI) Landfarm.

### 3.3 STAGE 1 ABATEMENT PLAN OBJECTIVES AS PER NEW MEXICO OIL CONSERVATION DIVISION REGULATION 19.E (3)

This plan, when implemented, will provide adequate information to characterize the hydrocarbon impacts (i.e., horizontal and vertical extents) of the vadose zone and groundwater and identify site-specific geologic and hydrologic metrics for this site. The Quality Assurance Plan included as Attachment III will guide implementation of critical protocols and ensure credibility and usability of all data and information. The primary objective of this investigation was to collect adequate information to bound the vertical and horizontal extent of crude oil contamination in the vadose zone and the areal distribution in the groundwater underlying the site. The focus and scope are as follows:

- Designate "responsible person" relative to plan submittal,
- Describe and map site, provide historical information including previous investigations
- Characterize Site:
  1. Defined Geology and Hydrogeology, i.e., Hydraulic Conductivity, Transmissivity, and Storativity;
  2. Determined vertical and horizontal extent and magnitude of vadose-zone and groundwater contamination:
    - a) Collect discrete soil samples with a sample probe from depths as necessary below ground surface (bgs) to determine vertical extent of hydrocarbon contamination;
    - b) Screen all samples using a photoionization detector (PID) and record results;
    - c) Analyze samples for total petroleum hydrocarbon (TPH<sup>8015m</sup>), i.e., gasoline range organics (GRO) and diesel range organics (DRO) using EPA method 8015M and benzene, toluene, ethylbenzene, and m, p, & o xylenes (BTEX) using EPA method 8020;
    - d) Future samples may be collected from the interval exhibiting the highest TPH<sup>8015m</sup> concentrations for synthetic precipitate leaching procedure (SPLP) analyses for TPH<sup>8015m</sup> and BTEX.
  3. Determined rate and direction of contaminant migration;

4. Provided inventory of water wells inside and within one (1) mile from the perimeter of the three-dimensional body where the NMWQCC standards are exceeded;
  5. Provided location and number of wells actually or potentially affected by the pollution;
  6. Defined surface-water hydrology;
  7. Determined seasonal stream flow characteristics;
  8. Determined groundwater/surface water relationships; and
  9. Determined the vertical and horizontal extent and magnitude of contamination and impacts to surface water and stream sediments.
- Establish Monitoring Program
    1. Sampling station locations
    2. Sampling frequencies
  - Establish a Quality Assurance Plan consistent with 20 NMAC 6.3107.B and 20 NMAC 6.1 for all work pursuant to this abatement plan.
  - Submit a schedule of Stage 1 abatement plan activities, i.e., submission of quarterly progress reports and the detailed final site investigation report.

### **3.3.1 Project Organization and Responsibility**

Environmental Plus, Inc., Eunice, New Mexico (EPI) conducted the field investigation with Plains Pipeline, L.P. personnel providing operational support and coordination. AnalySys, Inc. of Austin, Texas and Environmental Lab of Texas of Odessa, Texas performed the laboratory analyses and provided analytical reports.

### **3.3.2 Project Safety**

Hazards that were encountered at the site included the following:

- Moving equipment
- Buried pipelines
- Rotary Equipment
- Highway ingress/egress
- Excavation
- Potential Hydrogen Sulfide Gas

Prior to drilling or excavation, NEW MEXICO ONE CALL was notified of activities, which provided a list of Companies they notified and a ONE CALL confirmation number. Employees and subcontractors were required to confirm current training in these hazards. Standard personal protective equipment included:

- Personal H<sub>2</sub>S Monitor
- Hard-hat
- Steel Toed Boots/Shoes and gloves

### **3.3.3 Site Description**

The site is located approximately three miles northeast of Eunice, New Mexico.

#### **3.3.3.1 Historical Use**

The area has been used historically for livestock grazing and access to oil/gas production facilities.

### 3.3.3.2 Legal Descriptions

The release surfaced on opposite sides of the four-lane NMSR 18 highway that runs north and south along the section line between Sections 11 and Section 12 of T21S R37E. The site is located approximately 3-miles northeast of Eunice, Lea County, New Mexico.

#### 3.3.3.2.1 Release on the east side of NMSR 18

This portion of the site is located east of NMSR 18 in UL-M (SW $\frac{1}{4}$  of the SW $\frac{1}{4}$ ) of Section 12, T21S, R37E at a latitude of 32°29'11.080"N and at a longitude of 103°07'29.637"W on property owned by William McNeill.

#### 3.3.3.2.2 Release on the west side of NMSR 18

This portion of the site is located west of NMSR 18 in UL-P (SE $\frac{1}{4}$  of the SE $\frac{1}{4}$ ) of Section 11, T21S, R37E at a latitude of 32°29'11.007"N and a longitude of 103°07'33.864"W on property owned by James A. Bryant.

### 3.3.3.3 Photographic documentation

Photographs are provided in Attachment II.

### 3.3.3.4 Ecological Description

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of Honey Mesquite (*Prosopis glandulosa*) along with typical desert grasses and weeds. Mammals represented include Orrd's and Merriam's kangaroo rats, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit and the Mule Deer. Reptiles, amphibians, and birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

### 3.3.4 Environmental Media Characterization

Chemical parameters of the soil and groundwater were characterized consistent with the New Mexico Oil Conservation Division (NMOCD) guidelines published in the following documents as applicable:

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants of concern (CoC), i.e., TPH and BTEX are determined based on the following:

- Depth to Groundwater, i.e., distance from the lower most acceptable concentration to the groundwater.
- Wellhead Protection Area, i.e., distance from fresh water supply wells.
- Distance to Surface Water Body, i.e., horizontal distance to down gradient surface water bodies.

Site specific risk-based thresholds may be developed and proposed along with alternative remediation technologies as allowed by the NMOCD.

#### 3.3.4.1 Area Groundwater Levels

According to The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico" (A. Nicholson and A Clebsch,

1961), and the New Mexico Office of the State Engineer (NMOSE), the uppermost aquifer occurs in the area between 53-foot bgs and 100-footbgs (reference the NMOSE Well Report in Attachment D). The site water level was measured to be approximately 58' bgs.

### 3.3.4.2 Water Well Inventory

The matrix below lists area water wells recorded by the New Mexico Office of the State Engineer and by the USGS. There are no wells recorded to be in section 11 or adjacent sections 2, 3, 10, 12, and 15 in T21S R37E. The topographical map included in Attachment I is annotated with the well locations.

Plains Hugh Gathering Area Water Wells							
Well No.#	Tws	Rng	Sec	Easting	Northing	Well	Water
CP 00137	21S	37E	13	676912	3595573		na
CP 00197	21S	37E	1	676660	3598390		na
CP 00212	21S	37E	14	675305	3595545		na

Shape	Point	Point	Point	Point	Point
Area	0.000	0.000	0.000	0.000	0.000
Perimeter	0.000	0.000	0.000	0.000	0.000
Water_wells#	4876	4981	4990	4954	5150
Water_wells-id	4876	4981	4990	4954	5150
Index_no	4876	4981	4990	4954	5150
Siteid	322801103073101	322901103071101	322909103070601	322849103080601	323025103062501
Latitude	322801	322901	322909	322849	323025
Longitud	1030731	1030711	1030706	1030806	1030625
Locname	11516	11490	05053	11492	12779
Altitude	3411	3437	3441	3399	3559
Use	H	U	S	S	U
Depth	85.00	100.00	0.00	48.00	90.00
Geo-unit	No Data				
Waterlev	54.53	64.95	68.71	30.30	76.56
WI-date	19651130	19680312	19910123	19910424	19910117
Wlingwsi	1	3	2	7	6
Sitestat	No Data				
Discharg	0.00	0.00	0.00	0.00	0.00
Spc	0	0	0	0	0
Spc-date	No Data				
Qwyear	1965	1966	No Data	1965	1970
Temp	0.0	0.0	0.0	0.0	0.0
Tempdate	No Data				
Obs-well	No Data				

Area water well levels  
T21 R37E

### **3.3.4.3 Water Wells Actually or Potentially Affected by the Pollution**

There are no water wells located within a 1,000-foot radius of the site.

### **3.3.4.4 Aquifer Recharge**

According to The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico" (A. Nicholson and A Clebsch, 1961), the relatively shallow occurrence of groundwater in the area, suggests the upper most unconfined aquifer is recharged from the surface.

### **3.3.4.5 Depth to Groundwater Calculation**

The NMOCD requires the site be ranked to determine which soil TPH threshold will apply and defines depth to groundwater as, "the vertical distance from the lowermost contaminants to the seasonal high water elevation of the groundwater." The uppermost occurrence of groundwater is approximately 58' bgs. The lowest most contamination occurs at the interface of the vadose zone and the water table. The calculated NMOCD depth to groundwater is 0.0-feet.

### **3.3.4.6 Groundwater Gradient**

According to the USGS (Nicholson & Clebsch), the upper most aquifer occurs as Quaternary alluvium and Ogallala formations with the flow gradient to the southeast.

### **3.3.4.7 Wellhead Protection Area**

There are no water wells within a 1,000-foot radius of the site perimeter.

### **3.3.4.8 Distance to Nearest Surface Water Body**

There are no surface water bodies located within a 1,000-foot radius of the site.

### **3.3.4.9 Seasonal Stream Flow Characteristics**

There are no streams located within a 1,000-foot radius of the site.

## **3.3.5 Delineation of Nature, Extent, and Magnitude of Contamination (19NMAC15.A.19.E(3)(b)(i), (ii))**

This section discusses the nature, extent, and magnitude of crude oil contamination of the east and west sides of the site separately.

### **3.3.5.1 Release on the east side of NMSR 18**

The horizontal extent of soil impact appears to be conical in shape and extends laterally from the point of release approximately 25-feet radially. The vertical extent of soil impact was delineated to be 25-feet below ground surface ('bgs). The unexcavated soil impacted above the NMOCD CoC remedial goals is estimated to be approximately 578 yd<sup>3</sup>.

#### **3.3.5.1.1 Highly Contaminated/Saturated Soils**

The soil boring at the leak origin delineated the vertical extent of crude oil impact to be 25' bgs. The highly contaminated/saturated soils have been disposed of off-site.

#### **3.3.5.1.2 Unsaturated Contaminated Soils**

The "in-situ" soil within the release area is impacted above the NMOCD guideline thresholds for the CoCs, but is unsaturated.

#### 3.3.5.1.3 Groundwater Contamination

The groundwater in this portion of the site is not impacted.

#### 3.3.5.1.4 Other Relevant Media Contamination

The remaining crude oil source term does not present a risk to any other environmental media.

#### 3.3.5.1.5 Background (Up-gradient) Sample Results

The soil samples collected during installation of the up-gradient groundwater monitoring well MW6 were considered as representative background samples for the location, as is evidenced by the non-detections for the CoCs in the soil and groundwater samples.

### 3.3.5.2 Release on the west side of NMSR 18

Soil impacts appear conical in shape in the area of the leak origin soil impacts and extend 58' bgs to the groundwater. Laterally within 10-feet of the leak origin the impacts extend to approximately 25' bgs and laterally from 10-feet to 30-feet from the leak origin soil impacts extend only to 10' bgs. The unexcavated impacted soil is estimated to be approximately 936 yd<sup>3</sup> of contaminated soil.

#### 3.3.5.2.1 Highly Contaminated/Saturated Soils

The soil boring at the leak origin identified free product at the interface of the non-saturated vadose zone and the saturated zone. The highly contaminated/saturated soils down to 4' bgs have been disposed of off-site. The "smear zone" at 53 to 55' bgs, just above the interface of the vadose zone and water table, is saturated with phase separated hydrocarbon (PSH).

#### 3.3.5.2.2 Unsaturated Contaminated Soils

The "in-situ" soil within the release area is impacted above the NMOCD guideline thresholds for the CoCs but is unsaturated. Soils from the surface down to 3 to 5 feet above the interface of the vadose zone and the water table (i.e., 53 to 55' bgs) are unsaturated.

#### 3.3.5.2.3 Groundwater Contamination

The groundwater at this site is impacted. Monitoring results from perimeter monitor wells, MW6, MW7, MW11 and MW12, have bounded the extents of the dissolved phase hydrocarbon plume. As of October 2004, dissolved phase hydrocarbons (i.e., benzene, toluene, ethylbenzene and xylenes) have not been detected above the method detection limits in monitor wells MW6, located approximately 170-feet west northwest of the leak origin, MW7, located approximately 157-feet south of the leak origin, MW11 located approximately 100-feet north of the leak origin, and MW12, located approximately 230-feet southeast of the leak origin. Interior monitor well MW5, the only other well not impacted with PSH, being monitored quarterly and has detectable dissolved phase hydrocarbon in excess of the NMWQCC benzene standard 0.01 mg/L at 0.312 mg/L (October 2004). Toluene, ethylbenzene, and xylenes were detected, but not above the respective NMWQCC standards.

In December 2004, the PSH pool on the water table had thicknesses ranging from 5.97-feet in monitor well MW4, located approximately 30-feet north of the leak origin, 1.40-feet in monitor well MW3, located approximately 75-feet south of the leak origin, 3.22-feet in monitor well MW9, located approximately 50-feet southwest of the leak origin, and 1.34-feet in monitor well MW10, located approximately 50 northwest of the leak origin. Delineation of the eastern extents of the PSH pool is precluded by roadway. A groundwater delineation map is included in Attachment I illustrating the estimated extents of the dissolved phase hydrocarbon plume and the estimated extents of the PSH pool.

#### 3.3.5.2.4 Other Relevant Media Contamination

The remaining crude oil source term does not present a risk to any other environmental media.

#### 3.3.5.2.5 Background (Up-gradient) Sample Results

The soil samples collected during installation of the up-gradient groundwater monitor well MW6 is a representative background sample location, as is evidenced by the non-detections for the CoCs in the soil and groundwater samples.

### 3.3.6 Identification of Remedial Action Levels

Remedial goals for soil in this area are stratified with depth. The New Mexico Water Quality Control Commission (WQCC) groundwater Maximum Contaminant Levels for the CoCs will apply to site groundwater.

#### 3.3.6.1 Site Ranking - Soil from the surface to 8' bgs

The soil from the surface to 8-foot bgs has the following score and site ranking;

Depth to Groundwater / >50' bgs and <100' bgs = 10

Wellhead Protection Area / >200 = 0

Distance to Surface Water Body / >200' = 0

Site Ranking = 10

Remedial Action Levels

- TPH – 1000 mg/Kg
- BTEX – 50 mg/Kg
- Benzene – 10 mg/Kg

#### 3.3.6.2 Site Ranking - Soil from 8' bgs to 58' bgs

The soil from 8-foot bgs to 58-foot bgs has the following score and site ranking;

Depth to Groundwater / <50' = 20

Wellhead Protection Area / >200' = 0

Distance to Surface Water Body / >200' = 0

Site Ranking = 20

Remedial Action Levels

- TPH – 100 mg/Kg
- BTEX – 50 mg/Kg
- Benzene – 10 mg/Kg

#### 3.3.6.3 Risk-Based Closure

The NMOCD Guidelines allow risk-based closure as an alternative to total removal of soils impacted above the site specific NMOCD remedial goals and is being proposed at this site. Risk-based closures typically rely on the installation of an oversized engineered barrier designed to isolate the subsurface crude oil source term, permanently cutting-off and eliminating the groundwater exposure pathway (vertical transport mechanism) for perpetuity, providing the barrier, whether of compacted clay or 20-mil polyethylene, remains intact (i.e. protected from human intrusion or erosion).

#### 3.3.7 Proposed Borehole Sampling Locations

Additional boreholes are not anticipated.

### 3.3.8 Monitoring Program (19NMAC15.A.19.E(3)(c))

The Monitoring Program is a part of the Stage 2 Abatement Plan. The monitor wells installed at the site are sampled quarterly for the BTEX compounds and annually for Polynuclear Aromatic Hydrocarbons (PAHs). Product and water extracted/recovered volumes are routinely logged and reported along with disposal information. Data is summarized into an annual report documenting progress and status and submitted to the Santa Fe and Hobbs offices of the NMOCD Environmental Bureau.

### 3.3.9 Schedule for Stage 1 Abatement Plan Implementation

The delineation efforts to date have collected sufficient information to satisfy the Stage 1 Abatement Plan requirements so that a viable Stage 2 Abatement Plan can be developed.

## 4.0 STAGE 2 ABATEMENT PLAN

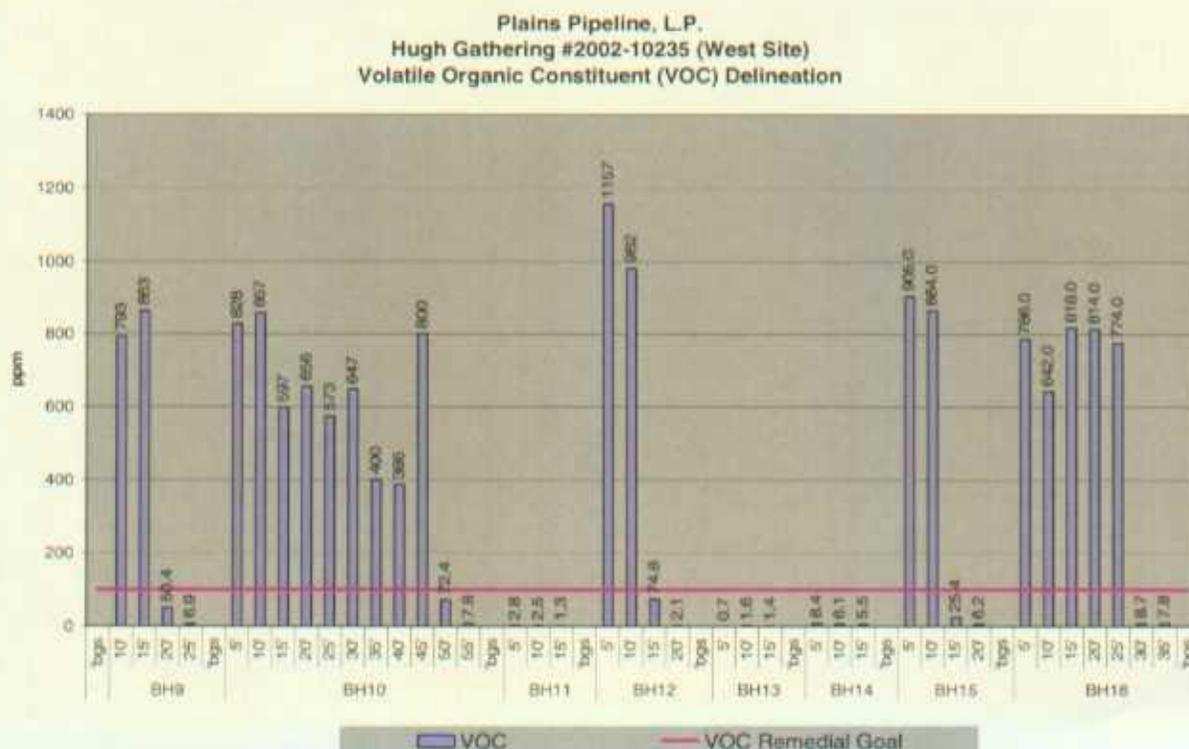
The objective of the Stage 2 Abatement Plan is to remediate soil and groundwater contamination to acceptable levels as identified during the Stage 1 Abatement Plan. The information collected to date provides information sufficient to select an abatement strategy and develop a plan for the site.

### 4.1 SOIL INVESTIGATION

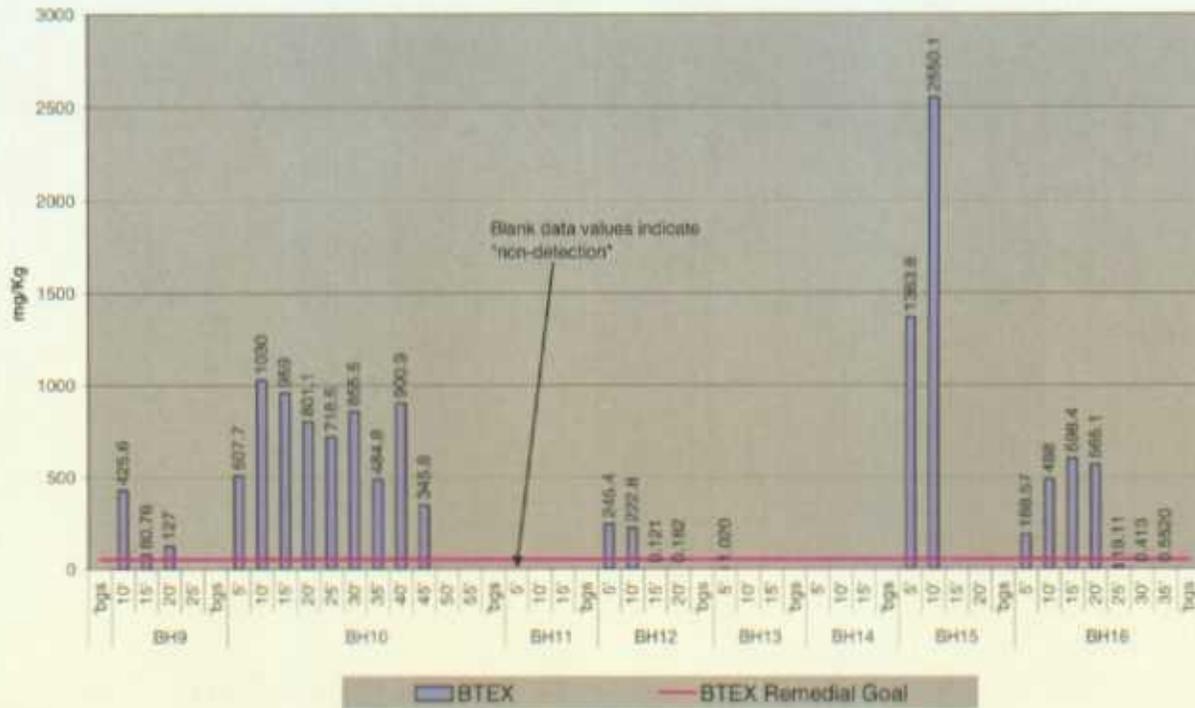
Based on information collected during the preliminary soil delineation phase of the project, Plains proposes to isolate the remaining crude oil source term by installing an engineered 2-foot thick clay barrier installed between 15' bgs and 13' bgs.

#### 4.1.1 Subsurface Soil Investigation – West side of NMSR 18

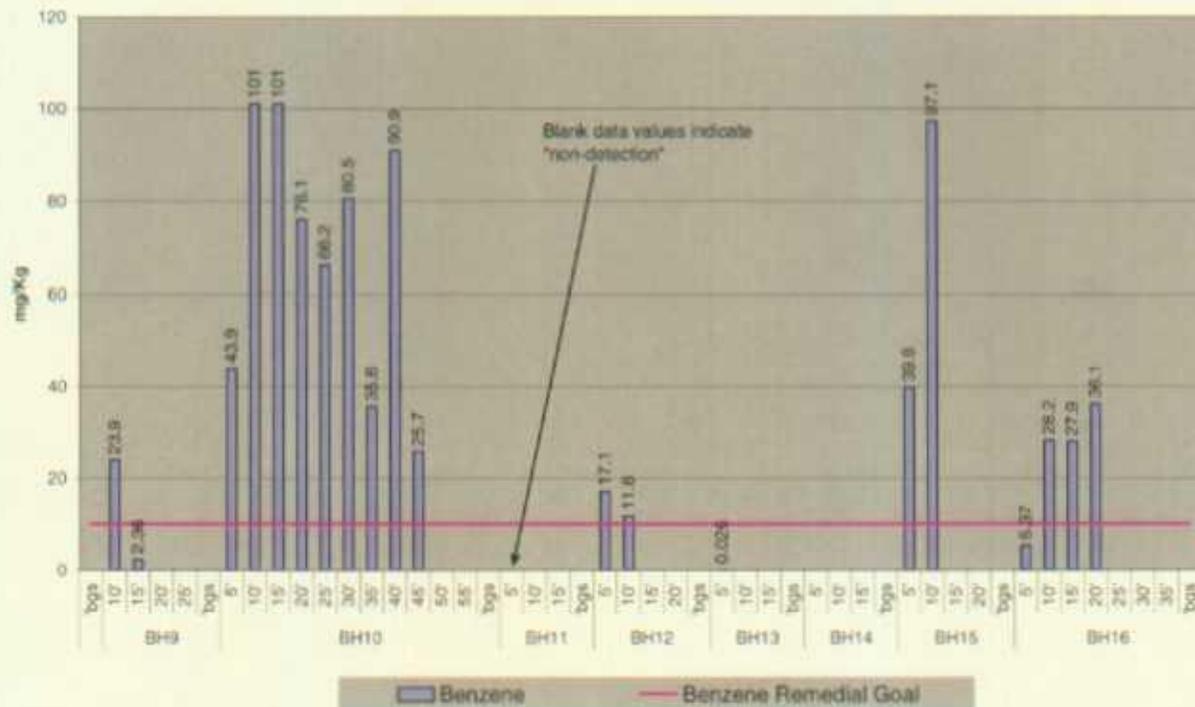
The preliminary investigation conducted in September 2002 advanced and sampled 8 boreholes (BH9-BH16), one of which was converted into a groundwater monitor well (i.e. BH10 was completed as monitor well MW2). The site borehole map is included in Attachment I. The analytical results are presented and summarized in Attachment III and illustrated below.



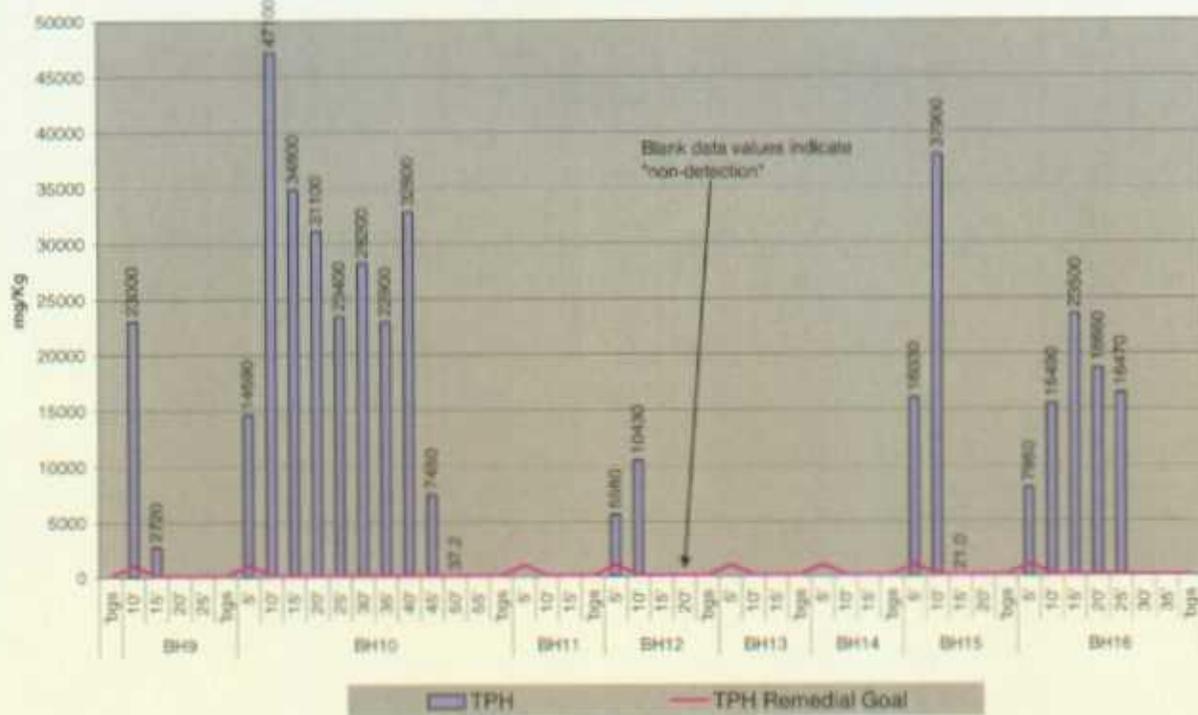
Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (West Site)  
BTEX Delineation



Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (West Site)  
Benzene Delineation



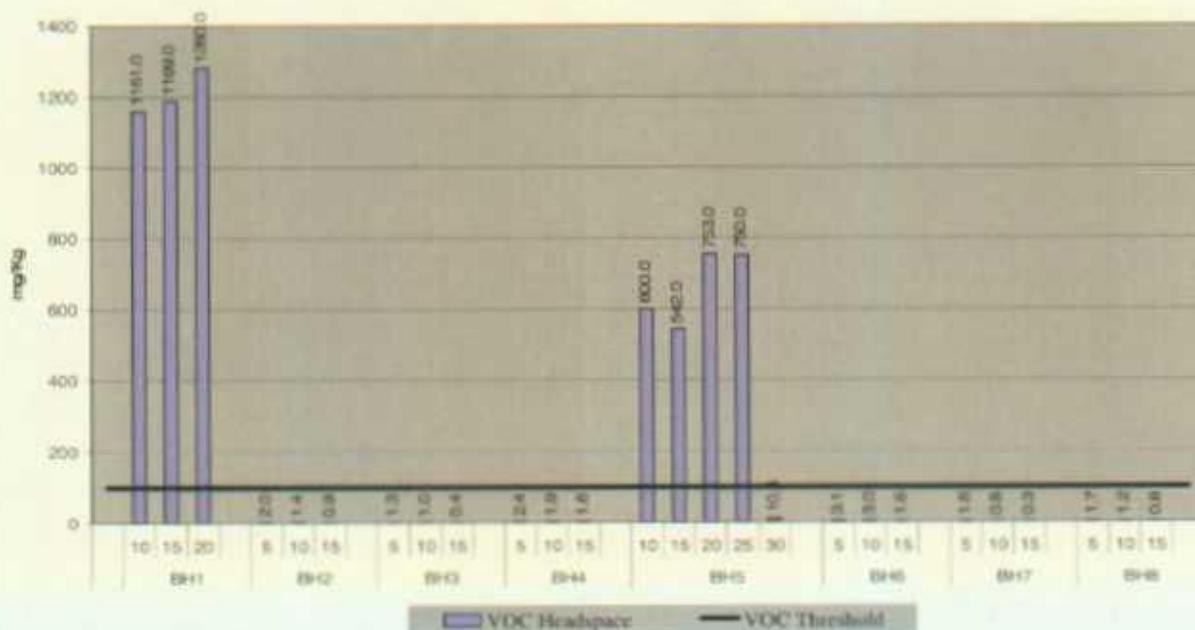
Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (West Site)  
Total Petroleum Hydrocarbon 8015M (TPH) Delineation



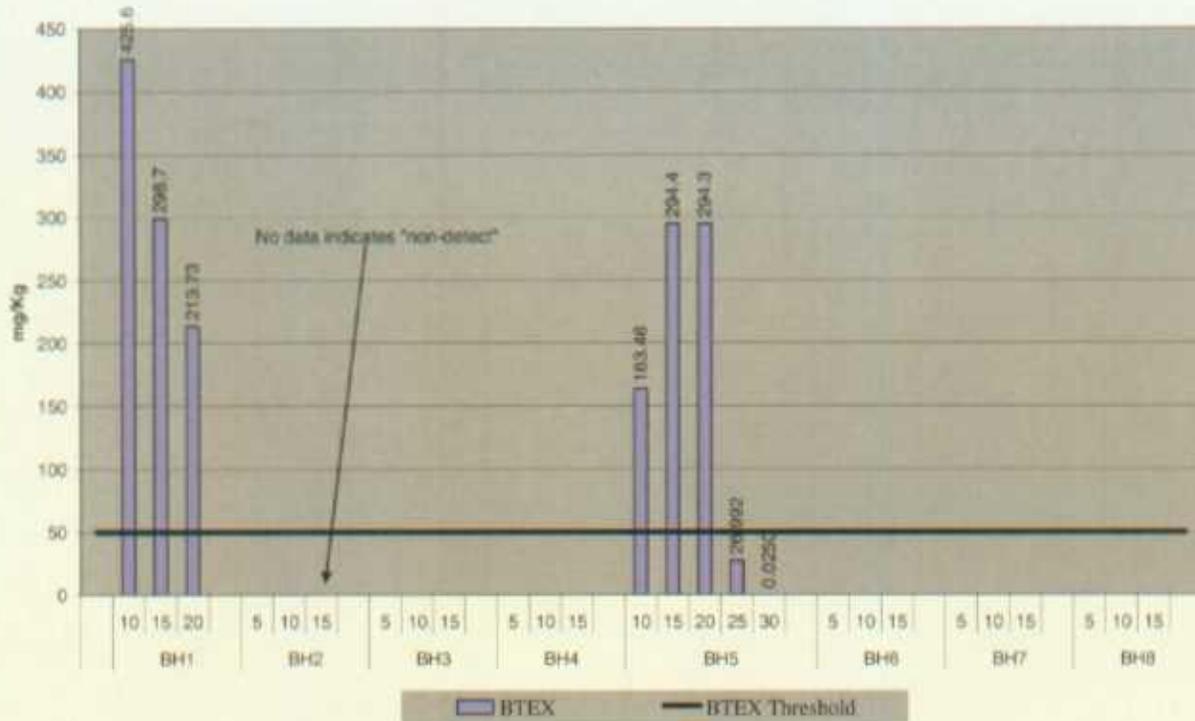
#### 4.1.2 Subsurface Soil Investigation - East side of NMSR 18

The preliminary investigation conducted in September 2002 advanced and sampled 8 boreholes. The annotated site borehole map is included in Attachment I. The analytical results are presented and summarized in Attachment III and illustrated below.

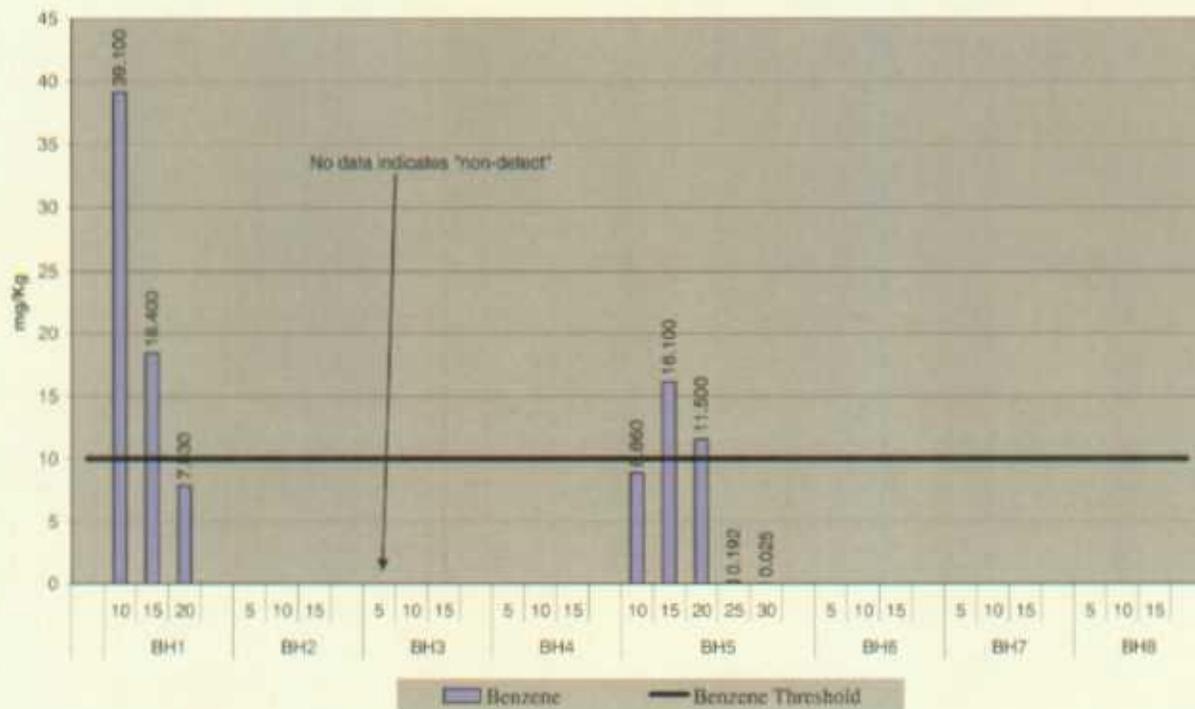
Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (East Site)  
VOC Headspace Delineation



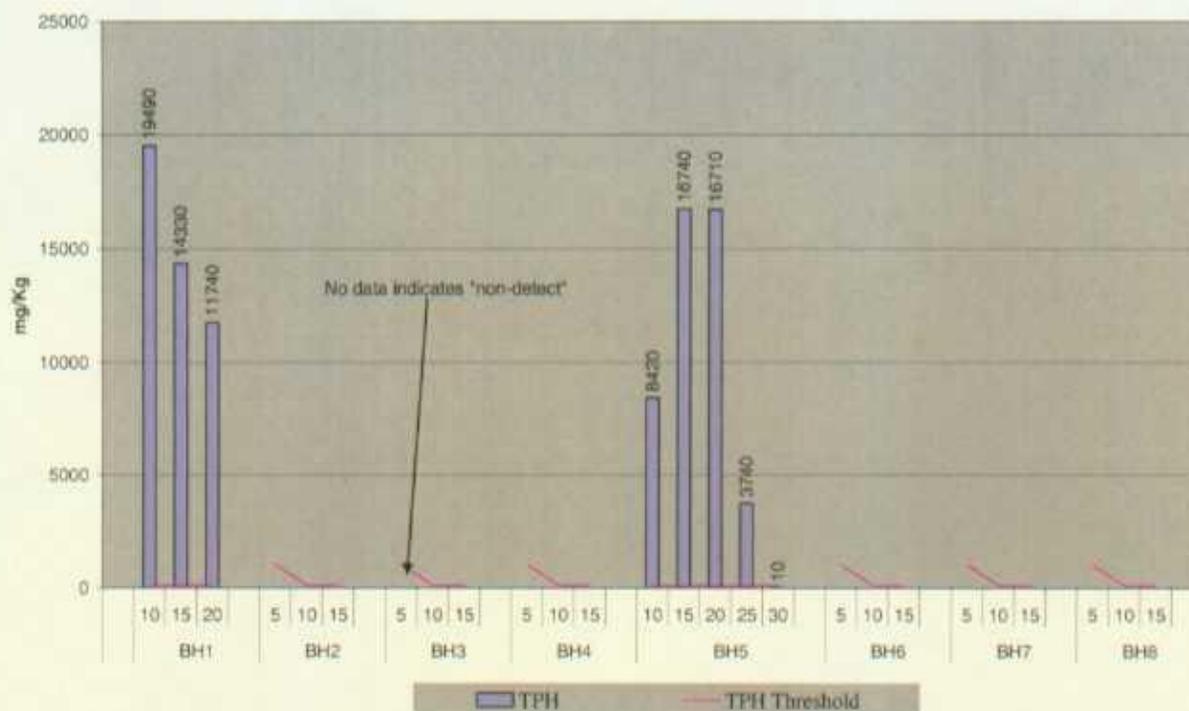
Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (East Site)  
BTEX Delineation



Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (East Site)  
Benzene Delineation



Plains Pipeline, L.P.  
Hugh Gathering #2002-10235 (East Site)  
Total Petroleum Hydrocarbon 8015M Delineation



## 4.2 REMEDIATION STRATEGY

Plains proposes to excavate and dispose of impacted soils to a depth of 15-feet bgs in the Plains Lea Station Landfarm and permanently isolate the remaining soils impacted above the NMOCD guidelines below 15' bgs with a 5-foot oversized, compacted and engineer tested, 2-foot thick clay barrier, relying on risk assessment conclusions to demonstrate adequate isolation. To accelerate attenuation of the impacted soil below the clay barrier, the floor of the excavations will be saturated with a 6% solution of MicroBlaze Spill Control® (MicroBlaze) prior to installation of the clay barrier. MicroBlaze is a phosphate based detergent solution inoculated with petrophilic facultative bacteria that can utilize petroleum hydrocarbon as a substrate. Because of the four-lane highway adjacent to the sites, (i.e., New Mexico State Road 18 (NMSR18)), the maximum encroachment of the excavation onto the right-of-way will not exceed 5-feet. If, after excavating, samples of the sidewalls adjacent to NMSR18 indicate petroleum hydrocarbon levels in excess of the NMOCD remedial goals, MicroBlaze will be injected into the impacted sidewalls to a horizontal depth of at least 4-feet on 10-foot horizontal and 3-foot vertical centers.

Passive soil vapor ventilation systems will be installed below the clay barriers to evacuate volatile organic vapors and, at the westside site, will be in addition to the dual phase (i.e., crude oil and vapor) eductor recovery system proposed for the site. The injection points and passive vapor ventilation systems are illustrated on the Proposed Excavation Schematic Cross-Section #1 & #2 diagrams for the east and west release sites included in Attachment I.

### 4.2.1 West Release Soil Remediation

Remediation of the west release site will rely on disposal, treatment with MicroBlaze, isolation and extraction and ventilation of organic vapors in the vadose zone.

#### 4.2.1.1 Disposal

Soil impacted above the NMOCD remedial action levels down to 15'bgs will be removed and disposed of in the Plains Lea Station Landfarm. The excavation will be expanded laterally to ensure at least a 5-foot clean buffer around the impacted floor. The estimated disposal volume should not exceed 1,100 yd<sup>3</sup> (i.e., 40'x40'x15' = 889 yd<sup>3</sup> x 1.2 expansion factor = 1,067 yd<sup>3</sup>). Grab samples of the sides and bottom of the excavation will be collected and analyzed to verify the 5-foot clean buffer.

#### 4.2.1.2 Vapor Extraction

To promote attenuation and remediate the impacted vadose zone soil isolated below the compacted clay barrier, a passive organic vapor ventilation system will be installed in the floor of the excavation. Organic vapors will also be extracted via the dual phase (i.e., crude oil and vapor) eductor recovery system proposed for installation at the site.

##### 4.2.1.2.1 Passive Organic Vapor Ventilation System

The system will be constructed of solid and slotted 4" PVC pipe with cemented slip joints. Two equally spaced trenches, 2' wide x 2' deep x 95'-100' long, will be excavated east to west in the impacted portion of the floor of the excavation and partially filled with coarse sand. The slotted 4" PVC pipe will be wrapped with an inert fabric, to prevent sand from filling the laterals, then be laid on top of the sandpack and the trenches brought to grade with additional coarse sand. A riser will be installed at the west end of each slotted lateral to approximately 10-feet above the site grade. A 14-inch diameter wind turbine will be permanently affixed to the 4" PVC riser. The wind turbines, when rotated by the wind, create a negative pressure inside the slotted laterals, pulling vadose zone vapors into the system and exhausting the vapor to the atmosphere. The system is illustrated Proposed Excavation Schematic Cross-Section #1 included in Attachment I.

##### 4.2.1.2.2 Vapor Extraction

A permanent eductor type recovery system is being proposed for the site. The eductors do not differentiate between fluids (i.e., crude oil and groundwater) and wellbore vapors and will evacuate either with equal efficiency. During normal crude oil recovery operations, the eductor is positioned in the wellbore approximately 0.2-feet above the stabilized groundwater level. Because the eductor rate of recovery exceeds the rate of crude oil entering the wellbore, the eductor will also be extracting wellbore vapors from the interface of the crude oil and wellbore vapor space. If the recovery well casing is sealed at the surface, a negative pressure will be generated that can only be relieved through the portion of the well screen set above the groundwater, resulting in the extraction of organic vapors present in the pore space in the vicinity of the screen. A single eductor with a circulating pressure of 40 to 70 psi is capable, at a minimum, of evacuating 0.06 cubic feet per minute or 89.76 cubic feet per day of air/vapor or fluid with the specific gravity of water.

##### 4.2.1.3 MicroBlaze Treatment

Prior to installation of the compacted clay barrier, the floor of the excavation will be saturated with 6% MicroBlaze at a minimum rate of 1-gallon per yd<sup>3</sup> (i.e., approximately 936 gallons). If, after excavation activities are completed, samples of the sidewalls adjacent to NMSR18 indicate petroleum hydrocarbon levels in excess of the NMOCD remedial goals, MicroBlaze will be injected into the impacted sidewall to a horizontal depth of at least 4-feet on 10-foot horizontal and 3-foot vertical centers.

#### **4.2.1.4 Clay Barrier Installation**

The 2-foot thick clay barrier will be installed in 1-foot thick lifts, compacted to 95% of the proctor density and the compaction tested by a qualified engineering firm. The clay barrier will extend at least 5-feet beyond the contaminated soil in the floor of the excavation and will be contoured to shed water.

#### **4.2.1.5 Backfilling, Contouring and Reseeding**

Upon confirmation that the compaction is acceptable, the excavation will be brought to grade with clean soil, contoured and reseeded with a seed blend preferred by the landowner.

### **4.2.2 East Release Soil Remediation**

Remediation of the east release site will rely on disposal, treatment with MicroBlaze, passive vapor ventilation and source term isolation.

#### **4.2.2.1 Disposal**

Soil impacted above the NMOCD remedial action levels to a depth of 15' bgs will be removed and disposed of in the Plains Lea Station Landfarm. The excavation will be expanded laterally to ensure at least a 5-foot clean buffer around the impacted floor. The estimated disposal volume should not exceed 450 yd<sup>3</sup> (i.e., 25' by 25' by 15' = 347 yd<sup>3</sup> x 1.2 expansion factor = 417 yd<sup>3</sup>). Grab samples of the sides and bottom of the excavation will be collected and analyzed to verify the 5-foot clean buffer.

#### **4.2.2.2 MicroBlaze Treatment**

Prior to installation of the compacted clay barrier, the floor of the excavation will be saturated with 6% MicroBlaze at a minimum rate of 1-gallon per yd<sup>3</sup> (i.e., approximately 250 gallons). If, after excavating, samples of the sidewalls adjacent to NMSR18 indicate petroleum hydrocarbon levels in excess of the NMOCD remedial goals, MicroBlaze will be injected into the impacted sidewall to a horizontal depth of at least 4-feet on 10-foot horizontal and 3-foot vertical centers.

#### **4.2.2.3 Passive Organic Vapor Ventilation System**

The system will be constructed of solid and slotted 4" PVC pipe with cemented slip joints. Two equally spaced trenches, 2' wide x 2' deep x 25' long, will be excavated east to west in the impacted portion of the floor of the excavation and partially filled with coarse sand. The slotted 4" PVC pipe will be wrapped with an inert fabric to prevent sand from filling the laterals then be laid on top of the sandpack and the trenches brought to grade with additional coarse sand. A riser will be installed at the east end of each slotted lateral to approximately 10-feet above the site grade. A 14-inch diameter wind turbine will be permanently affixed to the 4" PVC risers. The wind turbines, when rotated by the wind, create a negative pressure inside the slotted laterals, pulling vadose zone vapors into the system and exhausting the vapor to the atmosphere. The system is illustrated on the Proposed Excavation Schematic Cross-Section #2 included in Attachment I.

#### **4.2.2.4 Clay Barrier Installation**

The 2-foot thick clay barrier will be installed in 1-foot thick lifts, compacted to 95% of the proctor density and the compaction tested by a qualified engineering firm. The clay barrier will extend at least 5-feet beyond the contaminated soil in the floor of the excavation and will be contoured to shed water.

#### **4.2.2.5 Backfilling, Contouring and Reseeding**

Upon confirmation that the compaction is acceptable, the excavation will be brought to grade with clean soil, contoured and reseeded with a seed blend preferred by the landowner.

### **4.3 PRODUCT RECOVERY AND GROUNDWATER REMEDIATION**

The free phase hydrocarbon will be removed via extraction wells and reintroduced to the Plains system at their Lea Station Facility. Contaminated groundwater generated during monitoring or recovery activities will be disposed of at an NMOCD approved facility.

#### **4.3.1 Product Recovery**

Monitor wells MW1, MW2, MW3, MW4, MW8, MW9, and MW10 are impacted with PSH and are being used as PSH recovery wells. An automated eductor type recovery system, being used successfully at other Plains sites, will be installed within a lined and bermed area central to the site and secured with a chainlink fence with a lockable gate. Electrical power will be provided by a propane fueled 8,000 kilowatt generator designed for continuous operation. The system will be checked daily until the system and recovery rates have stabilized and twice weekly thereafter. A site diagram is included in Attachment I.

#### **4.3.2 Groundwater Remediation**

After the recoverable portions of free-product have been removed from the surface of the groundwater it is proposed that the natural attenuation of the dissolved phase hydrocarbons be monitored quarterly in accordance with the NMOCD guidelines. This is reasonable given that there are no domestic or agricultural water wells currently at risk.

### **4.4 SITE SURFACE RESTORATION**

During the spring of the year the surface will be reseeded with grasses native to the area (i.e., blue gramma and black gramma) or a seed mix preferred by the landowner.

### **4.5 ABATEMENT AND MONITORING SCHEDULE**

Sampling of the monitor wells will continue quarterly and annual monitoring reports submitted to the NMOCD Environmental Bureau offices in Hobbs and Santa Fe, New Mexico. Extraction of the non-aqueous phase hydrocarbon will cease after no observable sheen on the produced water surface and these wells will subsequently be placed in the groundwater sampling program. Abatement of the groundwater will cease after receipt of 4 consecutive quarters of monitoring well data below regulatory limits. At that time the monitor wells will be abandoned.

### **4.6 PUBLIC NOTIFICATION**

Prior to issuance of the Public Notice, the following individuals and entities will be notified in writing of the Stage 1 and Stage 2 Abatement Plans.

- Surface owners of record with one (1) mile of the perimeter of the affected area;
- The Lea County Commission;
- Individuals or organizations requesting notification;
- The New Mexico Trustee for Natural Resources and other affected agencies; and
- All others as directed by the Director of the New Mexico Energy Minerals and Natural Resources Department.

Within fifteen days after receiving notice from the NMOCD that the Stage 1 Abatement Plan and/or the Stage 2 Abatement Plan are administratively complete, Plains will issue public notice in newspapers with county and state wide circulation's, (i.e., Hobbs Daily News Sun, Lovington Leader, and Albuquerque Journal).

The Public Notice will be developed to include:

- Name and address of the responsible person;
- Location of the proposed abatement;
- Descriptions of the source extent, release volume, and affected environmental media;
- Description of the Stage 1 and Stage 2 Abatement Plans;
- Description of the procedure required by the Director before making a final determination;
- State that the abatement plan can be viewed at the Division office in Hobbs or electronically from a Division maintained site; and
- State that the Director will consider the following comments and requests if received within 30 days after publication of the public notice;
  - a) Written comments on the abatement plan;
  - b) For a Stage 2 abatement plan, written requests for a public hearing that includes reasons why a hearing should be held; and
  - c) Address and telephone number at which interested persons may obtain further information.

**Attachment I: Well Report, Maps and Figures**

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

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Township:  Range:  Sections:

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

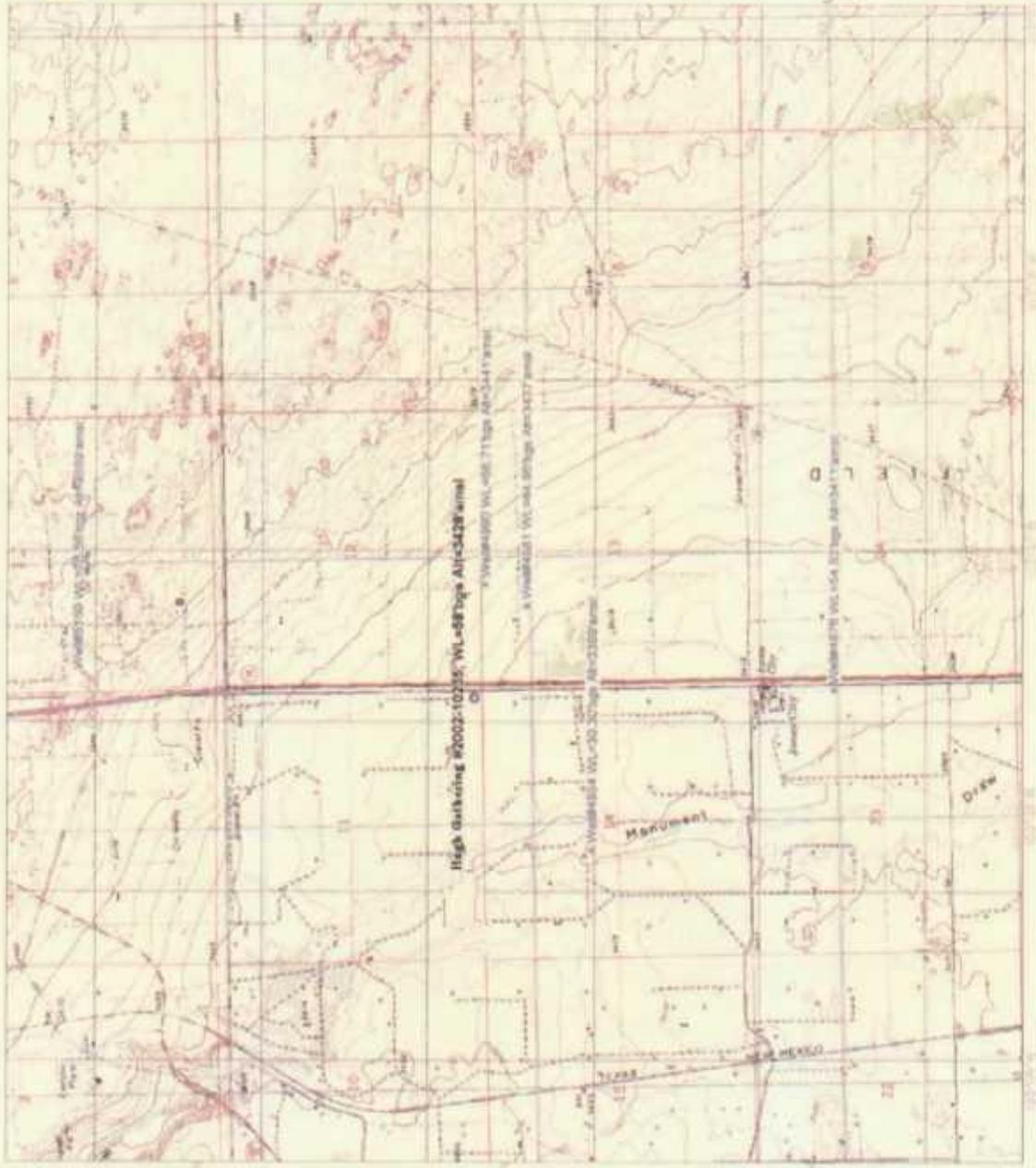
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**AVERAGE DEPTH OF WATER REPORT 03/11/2005**

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
CP	21S	37E	04				2	75	75	75
CP	21S	37E	06				1	73	73	73
CP	21S	37E	16				1	70	70	70
CP	21S	37E	22				1	53	53	53
CP	21S	37E	23				1	65	65	65
CP	21S	37E	23		924000	6600000	1	65	65	65
CP	21S	37E	27				1	76	76	76
CP	21S	37E	28				3	65	75	71
CP	21S	37E	33				1	100	100	100

Record Count: 12

**Plains All  
American  
HUGH GATHERING  
#2002-10235  
UL-P SEC11  
AND  
UL-M SEC12  
T21S R37E  
LEA CO. NM**



UNIVERSAL TRANSVERSE MERCATOR  
G NORTN  
NAD 1983 HPDM (NEW MEXICO)

MULTIPLE FILES  
9/13/2002



Figure 1 Topographical Map with Area Water Wells

Plains All American Pipeline Hugh Gathering 090402 #2002-10235 UL-P Sec 11 T21E R37E Lea Co NM Borehole Map

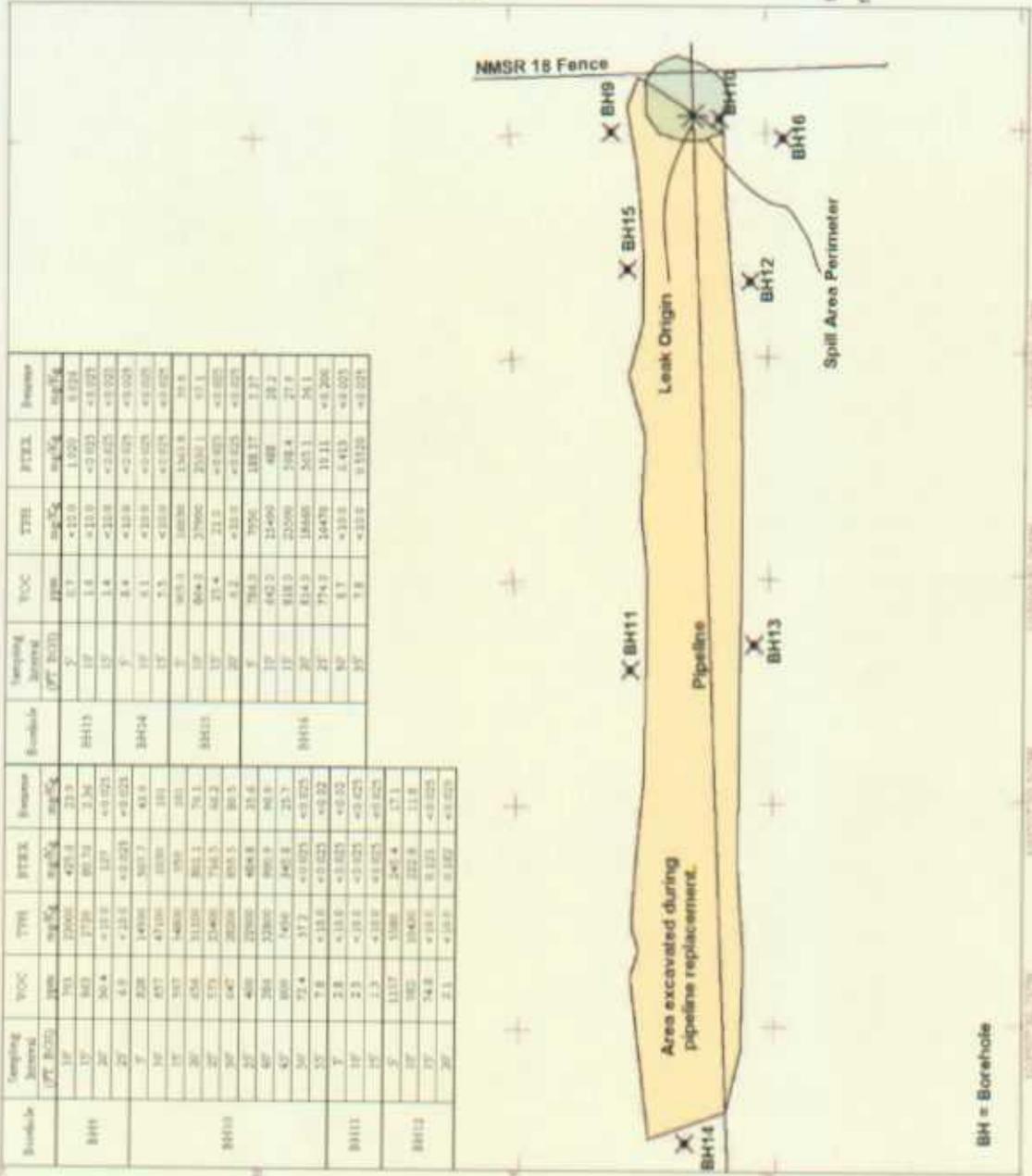


Scale 1:2000



Universal Transverse Mercator  
13 North  
NAD 1983 WGS84 (New Mexico)

Hugh Gathering West Borehole  
3/10/2005



Borehole	Sampling Interval (FT - B20)	VOC	TTH	PTCL	Reserve	Borehole	Sampling Interval (FT - B20)	VOC	TTH	PTCL	Reserve
BH11	10'	703	2000	473.4	23.5	BH11	5'	5.1	<10.0	1.020	0.024
	20'	843	1710	80.30	3.36		10'	1.4	<10.0	<2.00	<1.001
	30'	20.4	<10.0	1.17	<0.025		15'	1.4	<10.0	<2.025	<1.021
BH12	10'	4.5	<10.0	<0.025	<0.021	BH12	5'	4.4	<10.0	<2.025	<1.020
	20'	2.8	14500	507.7	43.6		10'	5.1	<10.0	<0.025	<0.020
	30'	657	47100	1030	101		15'	5.5	<10.0	<1.025	<0.020
BH13	10'	517	14000	359	201	BH13	5'	953.3	10020	1361.8	35.8
	20'	656	11100	802.1	79.1		10'	804.2	27900	2530.1	57.1
	30'	576	23400	716.5	66.2		15'	33.4	31.0	<1.025	<1.020
BH14	10'	647	20200	655.5	30.5	BH14	5'	6.2	<10.0	<0.025	<0.020
	20'	400	27000	484.8	35.6		10'	708.3	7020	1083.7	37.7
	30'	283	23000	895.1	90.8		15'	462.5	12400	400	28.2
BH15	10'	808	7450	145.1	25.7	BH15	5'	118.5	22500	588.4	21.8
	20'	71.4	37.2	<0.025	<0.025		10'	814.5	18600	503.1	26.1
	30'	7.8	<10.0	<0.025	<0.022		15'	774.9	16470	11.11	<0.200
BH16	10'	2.3	<10.0	<0.025	<0.020	BH16	5'	8.1	<10.0	5.415	<0.021
	20'	2.3	<10.0	<0.025	<0.020		10'	7.8	<10.0	0.1020	<0.021
	30'	2.1	<10.0	0.102	<0.020						

Figure 2 West Release Site Borehole Sample Location Map

PLAINS ALL AMERICAN PIPELINE  
 HUGH GATHERING #2002-10235  
 EASTSIDE RELEASE  
 UL-M SEC 12 T2IS R37E  
 LEA CO NM  
 AFFECTED AREA  
 ~326 SQFT



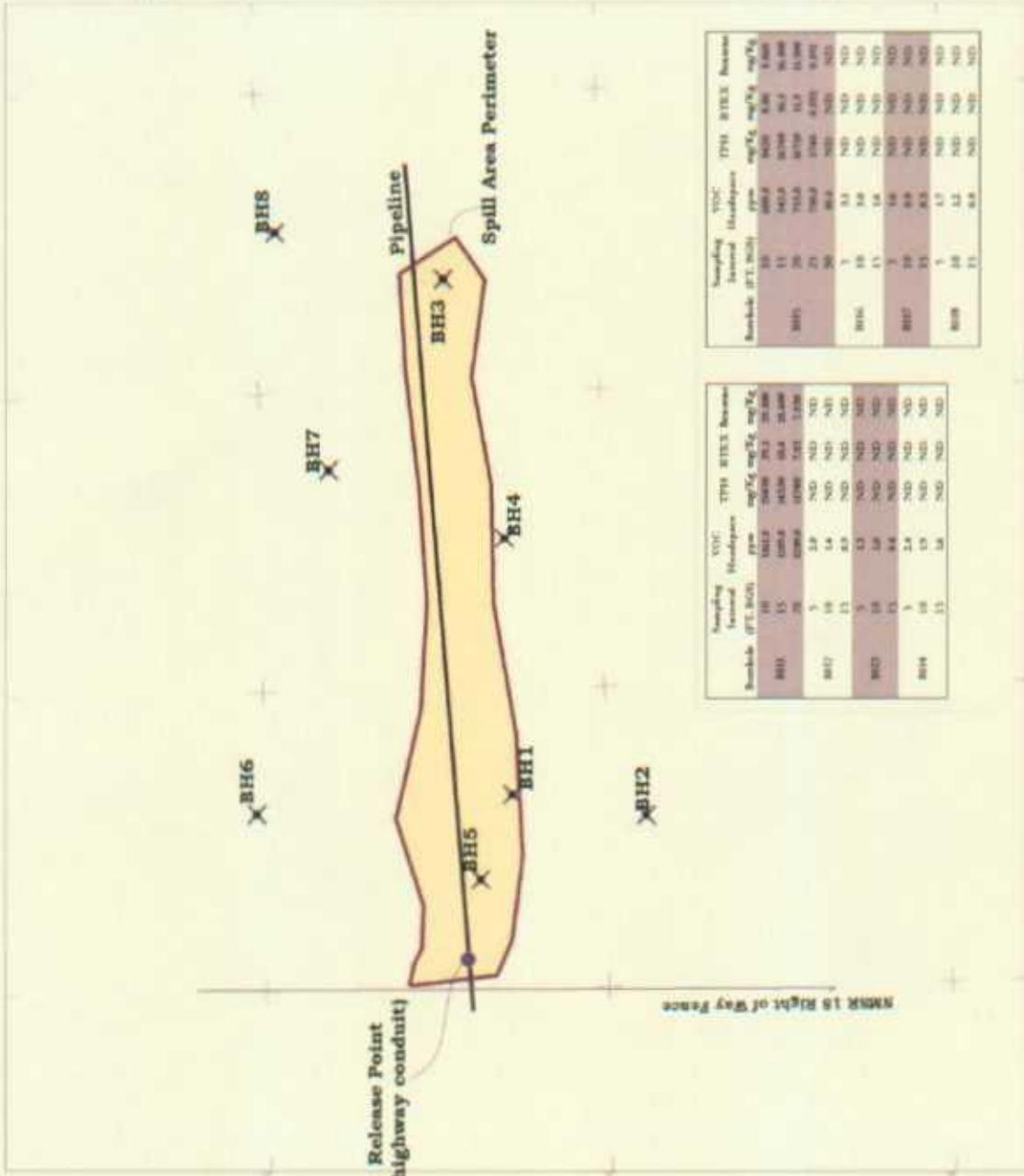
SCALE 1:150



FEET

Location: Thompson release for  
 US NHPN  
 AND NCT (WESTERN LAB)

Line&East.com  
 (5/15/2004)



Borehole (FT, MGS)	Sampling Interval	VOC Headspaces	TPH	BTEX	Benzene	TPH	BTEX	Benzene
BH1	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH2	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH3	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH4	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH5	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH6	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH7	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BH8	10	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Borehole (FT, MGS)	Sampling Interval	VOC Headspaces	TPH	BTEX	Benzene
BH1	10	100.0	100.0	100.0	100.0
BH2	10	100.0	100.0	100.0	100.0
BH3	10	100.0	100.0	100.0	100.0
BH4	10	100.0	100.0	100.0	100.0
BH5	10	100.0	100.0	100.0	100.0
BH6	10	100.0	100.0	100.0	100.0
BH7	10	100.0	100.0	100.0	100.0
BH8	10	100.0	100.0	100.0	100.0

Figure 3 East Release Site Borehole Sample Location Map

Plains Hugh  
Gathering  
#2002-10235  
UL-M Sec 12  
UL-P Sec 11  
T21S R37E  
Lea Co NM  
Monitor Well  
Location Map

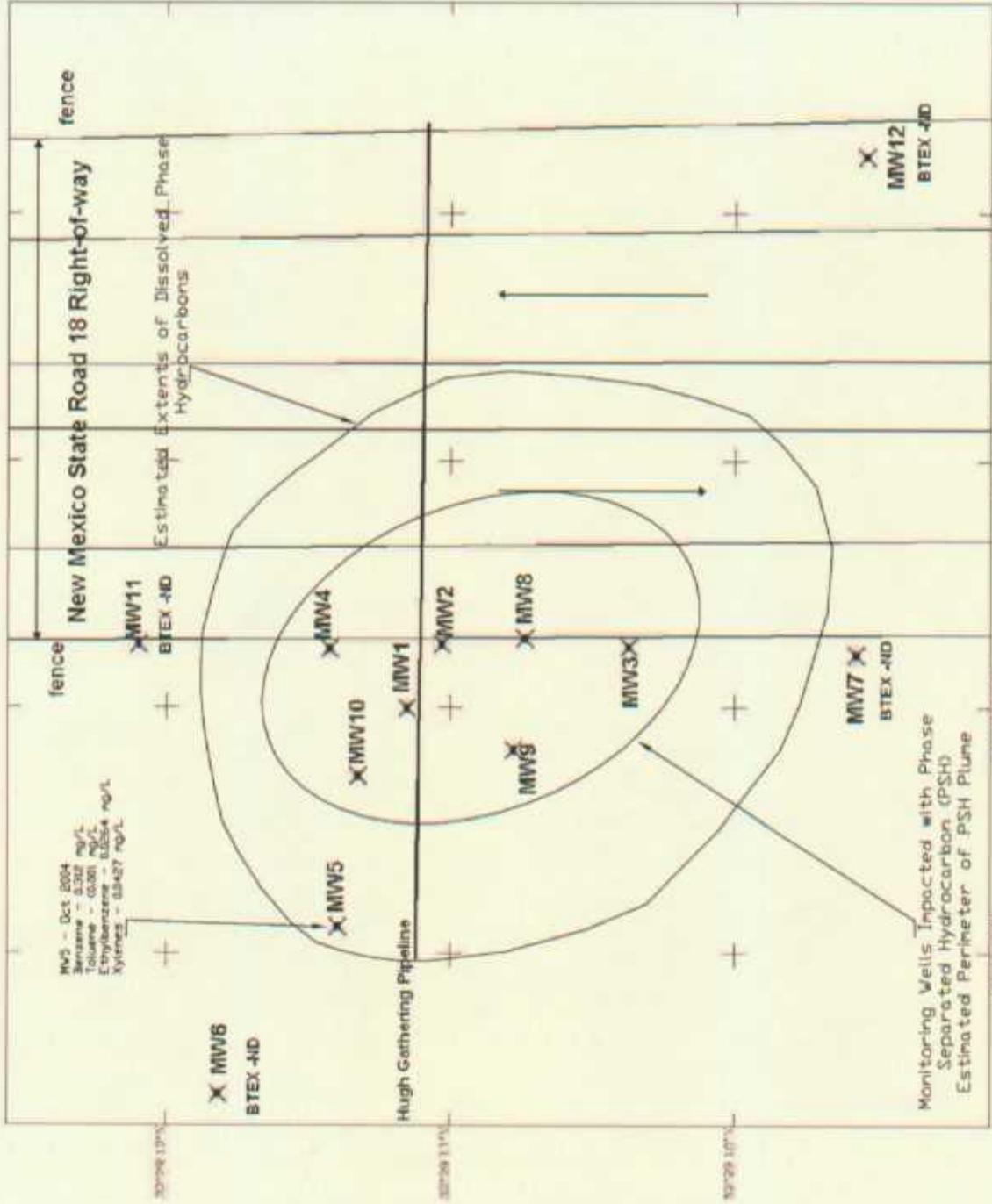


Figure 4 Monitor Well Location Map

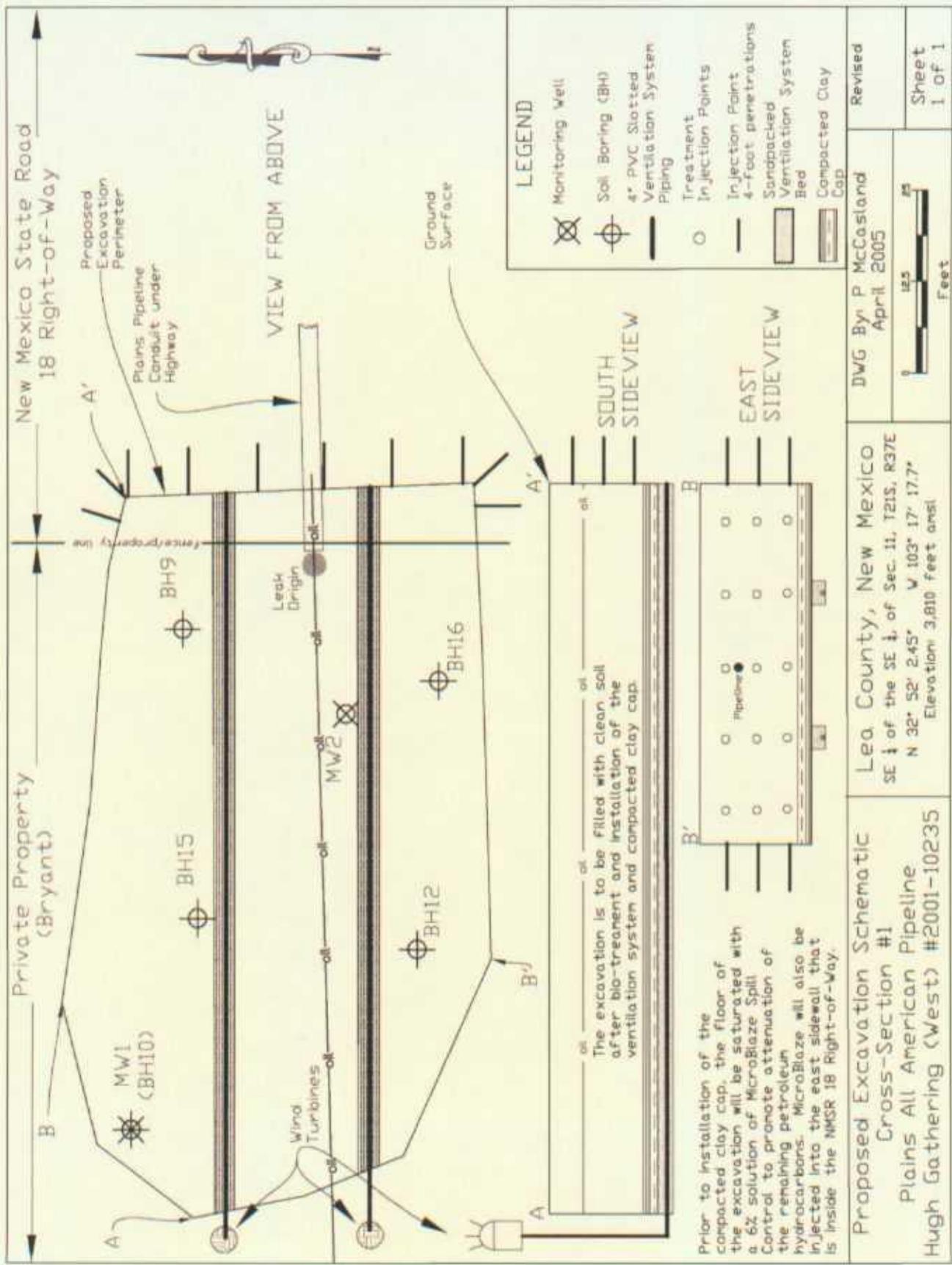


Figure 5 Proposed Excavation Schematic Cross-Section #1

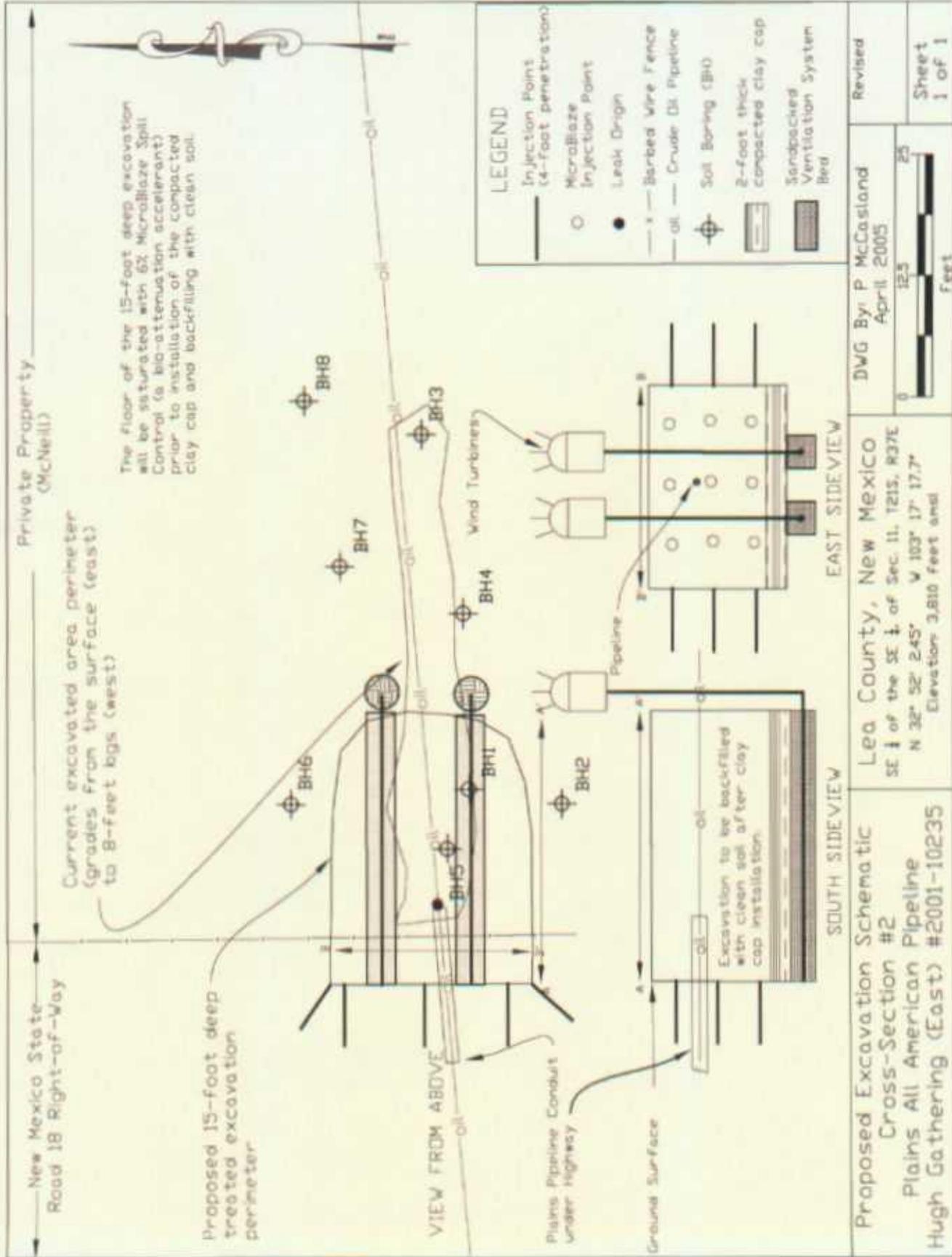


Figure 6 Proposed Excavation Schematic Cross-Section #2

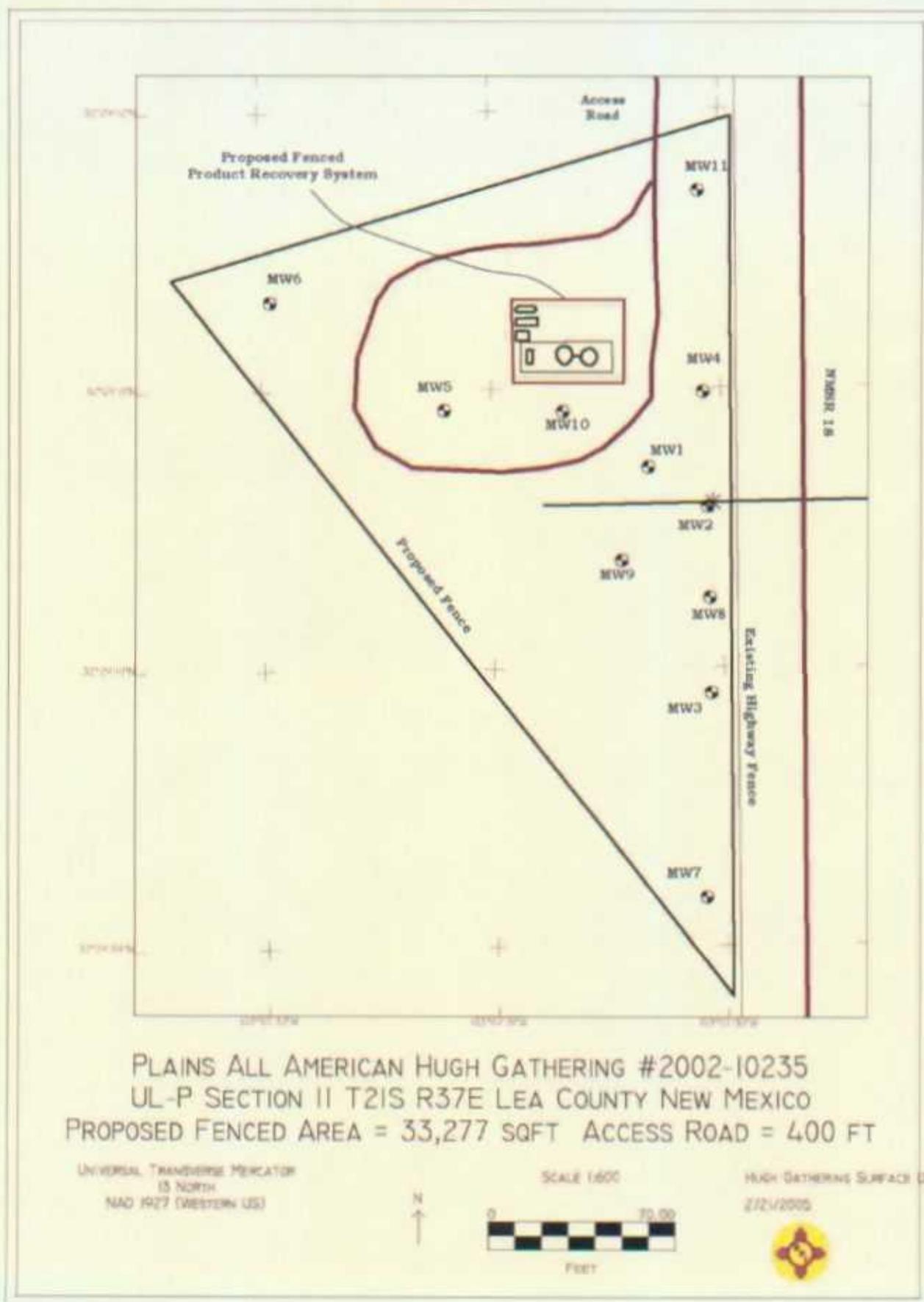


Figure 7

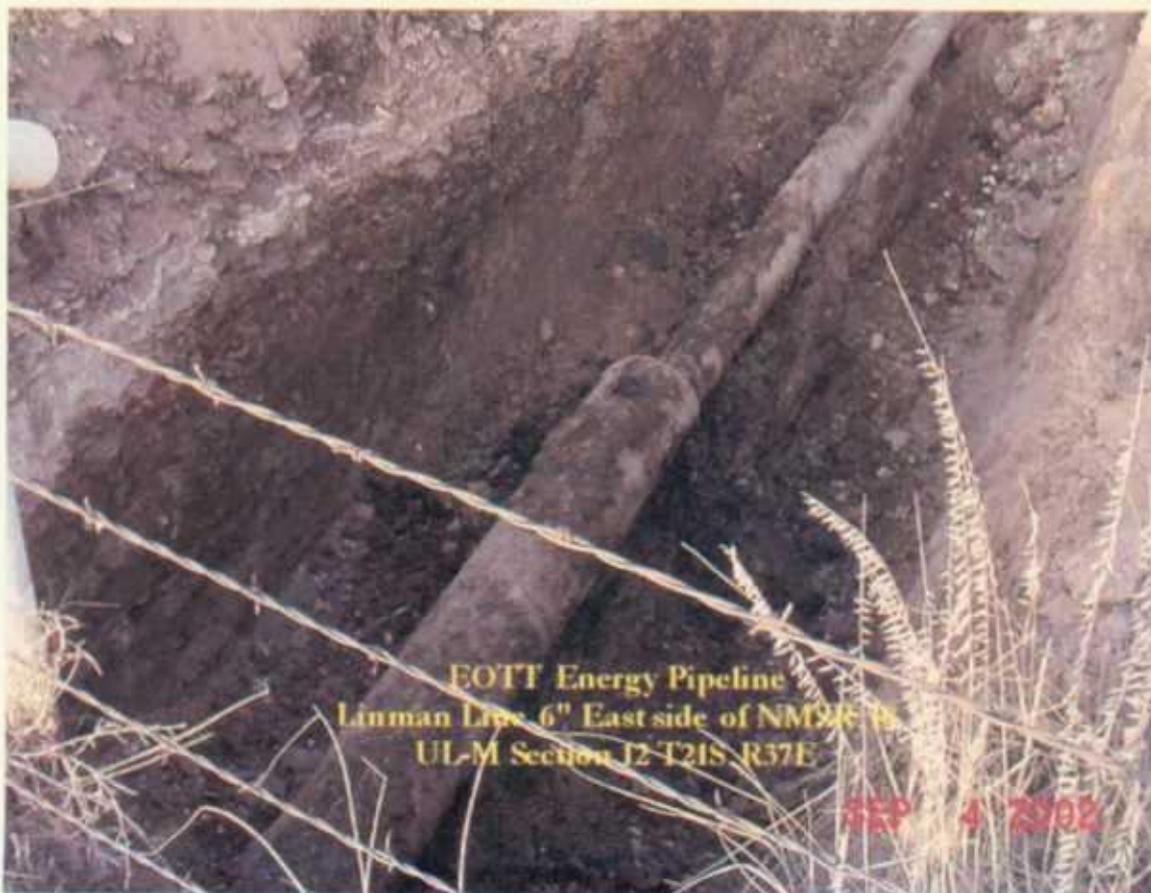
West Release Site Proposed Land Use Area

**Attachment II: Site Photographs**



EOTT Energy Pipeline  
Linman Line 6" West side of NMSR 18  
UL-M Section 11 TMS R37E

SEP 4 2002



EOTT Energy Pipeline  
Linman Line 6" East side of NMSR 18  
UL-M Section 12 T21S R37E

SEP 4 2002

**Attachment III: Quality Assurance Plan**

## 1.0 QUALITY ASSURANCE PROJECT PLAN

This Quality Assurance Plan (QAP) will ensure the quality and usability of information and data used to support a successful site investigation and subsequent environmental management decisions.

### 1.1.1 Data Quality Objectives

For analytical information derived from samples, the following quality controls will be documented and verified. If data is within the specifications it will be deemed quantitative and acceptable for use in making environmental management decisions.

- Laboratory data must have extraction recovery for TPH, BTEX and general chemistry parameters  $\leq 30.0\%$ . Or a “%Extraction Accuracy” between 70 and 130%.
- Laboratory data must have  $<30\%$  Relative Percent Difference or a “%Instrument Accuracy” between 70 and 130%.
- Field headspace analyses must be supported with instrument calibration data and calibration gas certification.

### 1.1.2 Methods

Collecting representative site samples and information requires that the sampling and observational processes and procedures be implemented within strict bounds. These control procedures will further ensure the quality of site data and information and are consistent with the Plains standard operating procedures as referenced in the NMOCD approved “General Work Plan for Remediation of EOTT Pipeline Spills, Leaks, and Releases in New Mexico.” Likewise, personnel will implement standard environmental and occupational safety protocols.

#### 1.1.2.1 Borehole Drilling, Lithologic Sampling, Logging, and Abandonment

Boreholes will be located strategically to best determine vertical and horizontal extent of contamination in the vadose zone and groundwater. Borelogs will be developed for each boring noting site lithology. Likewise, laboratory samples may be collected to determine more detailed lithologic characteristics, i.e., porosity, transmissivity, etc. Each borehole not developed into a permanent monitor well will be plugged with Sodium Bentonite in accordance with the NMOCD guidelines.

##### 1.1.2.1.1 General Drilling Procedures

The investigation will use the Environmental Plus, Inc. drill rig with hollow stem auger and “thin-wall probe” method of discrete sampling.

##### 1.1.2.1.2 Soil Sampling and Logging

Upon advancing to the desired sampling interval the probe will be extended through the end of the hollow stem auger and pushed into the soil matrix to collect the sample. As the 1.5” X 48” stainless steel probe with a vinyl sampling sleeve is detached from the sampling bar, it will be immediately placed on the rack and logged. A 4 oz. sample will then be decanted into the sample jar for refrigeration and preparation with the remainder (~1 Kg) placed in a 1 gallon Ziplock bag, warmed to ambient ~ 70-80 °F and VOC Headspace concentration measured and recorded. All pertinent information will be recorded on the field borelog data sheet.

##### 1.1.2.1.3 Monitor and Pollution Abatement Well Installation

Boreholes exhibiting contamination from the surface to groundwater will be abandoned. Those advanced down gradient of the site for the purpose of plume delineation and found to be unimpacted will be completed and developed as monitor wells. Some boreholes may be temporarily abandoned, i.e., covered but not plugged, for future development as pollution abatement wells. The New Mexico State Engineers Office will be notified in

writing of all pollution abatement well installations. All monitor and pollution abatement wells will be installed and developed in accordance with the NMOCD guidelines.

#### 1.1.2.1.4 Groundwater Sampling

Groundwater will be sampled within 24 hours of well development using a new and certifiably clean one-liter weighted baler. The water will be immediately decanted into the appropriate containers and prepared for ascension to the laboratory.

#### 1.1.2.1.5 Borehole Abandonment

The boreholes will be filled with a mixture of distilled water and Sodium Bentonite and a wooden marker denoting the borehole number driven into the center of each backfilled hole.

### 1.1.2.2 Sample Handling

Soil and water samples will be collected and prepared in accordance with accepted ASTM and EPA SW846 methods.

#### 1.1.2.3 Sampling protocols

1. Decontaminate sampling equipment and area with Alconox distilled water after each sample.
2. Prepare samples and refrigerate as soon as practicable.

Duplicates or blanks may be submitted to the laboratory to establish reproducibility and identify laboratory contamination, respectively.

#### 1.1.2.4 Sample Containers

Laboratory and field analyses of soil and water require specific containers and are listed in the matrix below.

	TPH	BTEX	VOC Headspace	Metals	PAH	General Chemistry
Soil	4 oz. Jars with Teflon seal	4 oz. Jars with Teflon seal	1-gallon Ziplock® bags			
Water	1 liter amber glass w/HCL	2-40 ml VOA vials w/ HCL		16 oz. Plastic w/ 1ml HNO <sub>3</sub>	1 liter Amber Glass	1 liter Plastic

#### 1.1.2.5 Sample Custody

All analytical request forms will be completed and signed by EPI as sampler. EPI personnel will ascension the samples to the AnalySys, Inc. sample-receiving personnel under chain-of-custody signature.

#### 1.1.2.6 Quality Control Samples

Quality control samples will be analyzed to ensure data quality.

##### 1.1.2.6.1 Field Blank

A field blank for soil or water is not deemed necessary.

##### 1.1.2.6.2 Equipment Blank

None will be collected.

#### 1.1.2.6.3 Field Duplicate or Co-located Samples

For water and soil samples, one duplicate or co-located sample will be collected for analysis every 10<sup>th</sup> sample.

#### 1.1.2.6.4 Trip Blank

A laboratory prepared trip blank will accompany each water sample batch.

### 1.1.2.7 Field Measurements

The VOC Headspace concentration for each soil sample will be measured. The instrument used will be the Ultra-Rae PID manufactured by Rae Systems. The calibration gas will be 100.0 ppm isobutylene standard from Scott Specialty Gases, Freemont, Colorado.

#### 1.1.2.7.1 Equipment Calibration and Quality Control

The PID will be calibrated at least 3 times daily and checked with the calibration gas hourly. When a check with the calibration gas indicates the instrument reading is 10 ppm too high or low it will be calibrated. Variation in the daytime ambient temperature will cause the variation.

#### 1.1.2.7.2 Equipment Maintenance and Decontamination

All sampling and survey equipment will be routinely decontaminated between samples. Nitrile gloves will be worn and changed with each sampling iteration.

#### 1.1.2.7.3 Groundwater Level Measurements

Groundwater levels will be taken with an accurate water level meter at each borehole where groundwater is encountered and may require the use of an interface meter. Levels will be recorded as "feet below ground surface" to the nearest ".1 ft."

### 1.1.2.8 Analyses

Soil and groundwater will be analyzed in accordance with the following EPA Methods.

The analytical suite for soil samples will include;

- TPH (EPA method 8015M)
- BTEX (EPA method 8020 or equivalent)
- SPLP for selected samples

The analytical suite for water samples will include:

- TPH (EPA method 8015B)
- BTEX (EPA method 8021B)
- Total Dissolved Solids (EPA method 150.1)
- PAH (EPA method 8270)

### 1.1.2.9 Sample Identification

Sample identification numbers will be designated as follows;

Site: Plains	Date	Borehole #	Interval bgs	Qualification: Cutting/Probe Sample
Hugh Gathering	2-2-04	BH1	20'	C or P

Example: PHG2204BH1-20C

### 1.1.2.10 Data Evaluation

All data will be reviewed based on the Data Quality Objectives in section 1.1.1.

**Attachment IV: Site Soil Delineation Information**

**Plains All American Pipeline  
Hugh Gathering #2002-10235  
Soil Boring Delineation Data Eastside of NMSR 18**

Sample Location	Sample Description	Sampling Interval (FT. BGS <sup>1</sup> )	SAMPLE ID#	Date	Lithology	VOC Headspace ppm	GRO <sup>3</sup> mg/Kg	DRO <sup>4</sup> mg/Kg	TPH <sup>5</sup> mg/Kg	BTEX <sup>6</sup> mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg
BH1	Probe	10	SEL6902BH1-10	9/9/02	Brown Coarse Sand	1161.0	9580	9910	19490	425.6	39.100	96.400	102.000
	Probe	15	SEL6902BH1-15	9/9/02	Brown Coarse Sand	1189.0	6850	7480	14330	298.7	18.400	71.200	70.800
	Probe	20	SEL6902BH1-20	9/9/02	Brown Coarse Sand	1280.0	5370	6370	11740	213.73	7.830	50.100	41.500
BH2	Probe	5	SEL6902BH2-5	9/9/02	Brown Coarse Sand	2.0	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	10	SEL6902BH2-10	9/9/02	Brown Coarse Sand	1.4	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	15	SEL6902BH2-15	9/9/02	Brown Coarse Sand	0.9	<10	<10	ND	ND	<0.025	<0.025	<0.025
BH3	Probe	5	SEL6902BH3-5	9/9/02	Tan Coarse Sand	1.3	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	10	SEL6902BH3-10	9/9/02	Tan Coarse Sand	1.0	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	15	SEL6902BH3-15	9/9/02	Brown Coarse Sand	0.4	<10	<10	ND	ND	<0.025	<0.025	<0.025
BH4	Probe	5	SEL691002BH4-5	9/10/02	Tan Coarse Sand	2.4	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	10	SEL691002BH4-10	9/10/02	Tan Coarse Sand	1.9	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	15	SEL691002BH4-15	9/10/02	Brown Coarse Sand	1.6	<10	<10	ND	ND	<0.025	<0.025	<0.025
BH5	Cutting	10	SEL691002BH5-10	9/10/02	Oil Stained Caliche	600.0	3210	5210	8420	163.46	8.860	34.100	35.100
	Probe	15	SEL691002BH5-15	9/10/02	Brown Coarse Sand	542.0	7730	9010	16740	294.4	16.100	67.400	71.000
	Probe	20	SEL691002BH5-20	9/10/02	Brown Coarse Sand	753.0	7580	9130	16710	294.3	11.500	64.600	68.400
BH6	Probe	25	SEL691002BH5-25	9/10/02	Tan Coarse Sand	750.0	1340	2400	3740	26.992	0.192	3.570	6.210
	Probe	30	SEL691002BH5-30	9/10/02	Sandy Red Clay	10.4	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	5	SEL691102BH6-5	9/11/02	Tan Coarse Sand	3.1	<10	<10	ND	ND	<0.025	<0.025	<0.025
BH7	Probe	10	SEL691102BH6-10	9/11/02	Brown Caliche Sand	3.0	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	15	SEL691102BH6-15	9/11/02	Brown Coarse Sand	1.6	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	5	SEL691102BH7-5	9/11/02	Tan Coarse Sand	1.6	<10	<10	ND	ND	<0.025	<0.025	<0.025
BH8	Probe	10	SEL691102BH7-10	9/11/02	Tan Coarse Sand	0.8	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	15	SEL691102BH7-15	9/11/02	Tan Coarse Sand	0.3	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	5	SEL691102BH8-5	9/11/02	Tan Coarse Sand	1.7	<10	<10	ND	ND	<0.025	<0.025	<0.025
BH8	Probe	10	SEL691102BH8-10	9/11/02	Brown Caliche Sand	1.2	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Probe	15	SEL691102BH8-15	9/11/02	Tan Coarse Sand	0.8	<10	<10	ND	ND	<0.025	<0.025	<0.025
	Method Detection Limit												
Remedial Goals for soil from the surface to ~8' bgs													
Remedial Goals for soil from ~8' bgs to the groundwater at ~58' bgs													

<sup>5</sup>TPH-Total Petroleum Hydrocarbon = GRO+DRO.

<sup>1</sup>100 ppm Isobutylene calibration gas = 101 ppm

<sup>2</sup>bgs - below ground surface

<sup>3</sup>VOC-Volatile Organic Contaminants/Constituents

<sup>4</sup>GRO-Gasoline Range Organics C<sub>6</sub>-C<sub>12</sub>

<sup>5</sup>DRO-Diesel Range Organics C<sub>12</sub>-C<sub>35</sub>

na - not analyzed

<sup>6</sup>BTEX - Mass sum of benzene, toluene, ethylbenzene, and xylenes

ND - not detected above the method detection limit.



Plains All American Pipeline  
Hugh Gathering #2002-10235

Soil Boring Delineation Data Westside of NMSR 18

Sample Location	Sample Description	Sampling Interval (FT., BGS <sup>1</sup> )	SAMPLE ID#	Date	Lithology	VOC		DRO <sup>4</sup> mg/kg	TPH <sup>5</sup> mg/kg	BTEX <sup>9</sup> mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg							
						Headspace ppm	ppm													
BH9	Probe	10'	SEL691102BH9	9/11/02	Brown Oily Sand															
	Probe	15'	SEL691102BH9	9/11/02	Lt. Brown Oily Sand	793	10600	12400	23000	425.6	23.9	111	73.8							
	Probe	20'	SEL691102BH9	9/11/02	Lt. Brown Oily Sand	863	1220	1500	2720	80.76	2.36	17.7	17.7							
	Probe	25'	SEL691102BH9	9/11/02	Lt. Brown Oily Sand	56.4	<10.0	<10.0	<10.0	127	<0.025	<0.025	<0.031							
	Probe	5'	SEL691202BH10	9/12/02	Brown Oily Sand	828	7560	7030	14590	507.7	43.9	160	99							
BH10	Probe	10'	SEL691202BH10	9/12/02	Brown Oily Sand	857	22000	25100	47100	1030	101	325	197							
	Probe	15'	SEL691202BH10	9/12/02	Brown Oily Sand	597	16700	18100	34800	959	101	308	173							
	Probe	20'	SEL691202BH10	9/12/02	Brown Oily Sand/Prod.	656	15300	15800	31100	801.1	76.1	252	146							
	Probe	25'	SEL691202BH10	9/12/02	Brown Oily Sand	573	12000	11400	23400	716.5	66.2	234	132							
	Probe	30'	SEL691202BH10	9/12/02	Brown Sandy Clay	647	13800	14400	28200	855.5	80.5	271	164							
	Probe	35'	SEL691202BH10	9/12/02	Red Clay	400	10600	12300	22900	484.8	35.6	143	98.1							
	Probe	40'	SEL691202BH10	9/12/02	Red Clay	386	16400	16400	32800	900.9	90.9	285	168							
	Probe	45'	SEL691202BH10	9/13/02	Red Clay	800	3480	3970	7450	345.8	25.7	109	66.4							
	Probe	50'	SEL691202BH10	9/13/02	Red Clay	72.4	15.3	21.9	37.2	<0.025	<0.025	<0.025	<0.025							
	Probe	55'	SEL691602BH11	9/16/02	Lt. Brown Sand	7.8	<10.0	<10.0	<10.0	<0.025	<0.02	<0.025	<0.025							
BH11	Probe	10'	SEL691602BH11	9/16/02	Lt. Brown Sand	2.8	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	15'	SEL691602BH11	9/16/02	Lt. Brown Sand	2.5	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
BH12	Probe	5'	SEL691602BH12	9/16/02	Lt. Brown Sand	1.3	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	10'	SEL691602BH12	9/16/02	Brown Oily Sand & Rk	1157	2740	2840	5580	245.4	17.1	73.5	46.5							
	Probe	15'	SEL691602BH12	9/16/02	Brown Oily Sand	982	4500	5930	10430	222.8	11.8	60.3	45.7							
	Probe	20'	SEL691602BH12	9/16/02	Lt. Brown Sand	74.8	<10.0	<10.0	<10.0	0.121	<0.025	0.028	0.03							
	Probe	25'	SEL691602BH12	9/16/02	Lt. Brown Sand	2.1	<10.0	<10.0	<10.0	0.182	<0.025	0.045	0.038							
BH13	Probe	5'	SEL691602BH13	9/16/02	Lt. Brown Sand	0.7	<10.0	<10.0	<10.0	1.020	0.026	0.164	0.188							
	Probe	10'	SEL691602BH13	9/16/02	Lt. Brown Sand	1.6	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	15'	SEL691602BH13	9/16/02	Lt. Brown Sand	1.4	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
BH14	Probe	5'	SEL691602BH14	9/16/02	Lt. Brown Sand & Rk	8.4	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	10'	SEL691602BH14	9/16/02	Lt. Brown Sand	6.1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	15'	SEL691602BH14	9/16/02	Lt. Brown Sand	5.5	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	5'	SEL691702BH15	9/17/02	Brown Sand & Rk	905.0	8060	7970	16030	1363.8	39.8	296	248							
	Probe	10'	SEL691702BH15	9/17/02	Brown Sand & Rk	864.0	19600	18300	37900	2550.1	97.1	572	474							
BH15	Probe	15'	SEL691702BH15	9/17/02	Lt. Brown Sand	25.4	<10.0	21.0	21.0	<0.025	<0.025	<0.025	<0.025							
	Probe	20'	SEL691702BH15	9/17/02	Lt. Brown Sand	6.2	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025							
	Probe	5'	SEL691702BH16	9/17/02	Brown Sand	786.0	3950	4000	7950	188.57	5.37	43.2	35.9							
	Probe	10'	SEL691702BH16	9/17/02	Lt. Brown Sand	642.0	7630	7860	15490	488	28.2	140	98.0							
	Probe	15'	SEL691702BH16	9/17/02	Lt. Brown Sand	818.0	11400	12100	23500	598.4	27.9	187	120							
BH16	Probe	20'	SEL691702BH16	9/17/02	Brown Sand	814.0	8880	9780	18660	565.1	36.1	161	107							
	Probe	25'	SEL691702BH16	9/17/02	Brown Sand	774.0	7520	8950	16470	19.11	<0.200	2.72	5.37							
	Probe	30'	SEL691702BH16	9/17/02	Red Clay	8.7	<10.0	<10.0	<10.0	0.413	<0.025	0.063	0.09							
Probe	35'	SEL691702BH16	9/17/02	Red Clay	7.8	<10.0	<10.0	<10.0	0.5520	<0.025	0.100	0.100								
Remedial Goals for soil from ~8' bgs to the surface to ~8' bgs													1000	1000	50.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Remedial Goals for soil from ~8' bgs to the groundwater at ~58' bgs													100	100	50.0000	10.0000	10.0000	10.0000	10.0000	

100 ppm Isobutylene calibration gas = 101 ppm  
bgs - below ground surface  
<sup>1</sup>VOC-Volatile Organic Contaminants/Constituents  
<sup>2</sup>GRO-Gasoline Range Organics C<sub>6</sub>-C<sub>12</sub>  
<sup>3</sup>DRO-Diesel Range Organics C<sub>12</sub>-C<sub>35</sub>  
<sup>4</sup>TPH-Total Petroleum Hydrocarbon = GRO+DRO.  
na - not analyzed  
<sup>9</sup>BTEX - Mass sum of benzene, toluene, ethylbenzene, and xylenes  
ND - not detected above the method detection limit.

COPY

# ANALYTICAL REPORT

**Prepared for:**

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project:** Linman 6"  
**PO#:** 2002-10235  
**Order#:** G0204500  
**Report Date:** 09/18/2002

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>		<u>Container</u>	<u>Preservative</u>
			<u>Collected</u>	<u>Received</u>		
0204500-01	SEL69902BH1-10'	SOIL	9/9/02 9:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-02	SEL69902BH1-15'	SOIL	9/9/02 9:20	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-03	SEL69902BH1-20'	SOIL	9/9/02 9:40	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-04	SEL69902BH2-5'	SOIL	9/9/02 11:30	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-05	SEL69902BH2-10'	SOIL	9/9/02 11:45	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-06	SEL69902BH2-15'	SOIL	9/9/02 12:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-07	SEL69902BH3-5'	SOIL	9/9/02 13:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
	8015M 8021B/5030 BTEX					
0204500-08	SEL69902BH3-10'	SOIL	9/9/02 13:35	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204500-09	SEL69902BH3-15'	SOIL	9/9/02 14:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-01  
 Sample ID: SEL69902BH1-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u> </u>	<u> </u>
		9/13/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	9580	100
DRO, >C12-C35	9910	100
TOTAL, C6-C35	19490	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u> </u>	<u> </u>
0003173-02		9/14/02 22:15	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	39.1	0.200
Ethylbenzene	102	0.200
Toluene	96.4	0.200
p/m-Xylene	130	0.200
o-Xylene	58.1	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1090%	80	120
Bromofluorobenzene	132%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-02  
 Sample ID: SEL69902BH1-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	10		

Parameter	Result mg/kg	RL
GRO, C6-C12	6850	100
DRO, >C12-C35	7480	100
TOTAL, C6-C35	14330	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/14/02 22:38	1	200		

Parameter	Result mg/kg	RL
Benzene	18.4	0.200
Ethylbenzene	70.8	0.200
Toluene	71.2	0.200
p/m-Xylene	96.9	0.200
o-Xylene	41.4	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	762%	80	120
Bromofluorobenzene	125%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-03  
 Sample ID: SEL69902BH1-20'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	10		

Parameter	Result mg/kg	RL
GRO, C6-C12	5370	100
DRO, >C12-C35	6370	100
TOTAL, C6-C35	11740	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/14/02 23:00	1	200		

Parameter	Result mg/kg	RL
Benzene	7.83	0.200
Ethylbenzene	41.5	0.200
Toluene	50.1	0.200
p/m-Xylene	81.2	0.200
o-Xylene	33.1	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	606%	80	120
Bromofluorobenzene	129%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-04  
 Sample ID: SEL69902BH2-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 0:29	1	25	CK	

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	104%	80	120
Bromofluorobenzene	104%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-05  
 Sample ID: SEL69902BH2-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 0:51	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	105%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-06  
 Sample ID: SEL69902BH2-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02	1	25		
		1:13				

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylenc	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	106%	80	120

DL = Diluted out    N/A = Not Applicable    RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-07  
 Sample ID: SEL69902BH3-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 1:35	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	91%	80	120
Bromofluorobenzene	97%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-08  
 Sample ID: SEL69902BH3-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 1:57	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylenc	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	97%	80	120
Bromofluorobenzene	104%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204500  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204500-09  
 Sample ID: SEL69902BH3-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/13/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02	1	25		
		2:19				

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	107%	80	120
Bromofluorobenzene	112%	80	120

Approval: Raland K Tuttle 9-19-02  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8015M**

Order#: G0204500

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003146-02			<10.0		
TOTAL, C6-C35-mg/kg		0003147-02			<10.0		
<b>MS</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0204496-07	38.1	1053.86	1130	103.6%	
TOTAL, C6-C35-mg/kg		0204500-04	0	1101.46	1080	98.1%	
<b>MSD</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0204496-07	38.1	1053.86	1120	102.7%	0.9%
TOTAL, C6-C35-mg/kg		0204500-04	1080	1101.46	1100	99.9%	1.8%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003146-05		1000	995	99.5%	
TOTAL, C6-C35-mg/kg		0003147-05		1000	1040	104.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

Order#: G0204500

<b>BLANK</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0003173-02			<0.025		
Ethylbenzene-mg/kg		0003173-02			<0.025		
Toluene-mg/kg		0003173-02			<0.025		
p/m-Xylene-mg/kg		0003173-02			<0.025		
o-Xylene-mg/kg		0003173-02			<0.025		
<b>MS</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0204501-08	0	0.1	0.094	94.%	
Ethylbenzene-mg/kg		0204501-08	0	0.1	0.096	96.%	
Toluene-mg/kg		0204501-08	0	0.1	0.096	96.%	
p/m-Xylene-mg/kg		0204501-08	0	0.2	0.198	99.%	
o-Xylene-mg/kg		0204501-08	0	0.1	0.095	95.%	
<b>MSD</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0204501-08	0.094	0.1	0.093	93.%	1.1%
Ethylbenzene-mg/kg		0204501-08	0.096	0.1	0.093	93.%	3.2%
Toluene-mg/kg		0204501-08	0.096	0.1	0.096	96.%	0.%
p/m-Xylene-mg/kg		0204501-08	0.198	0.2	0.193	96.5%	2.6%
o-Xylene-mg/kg		0204501-08	0.095	0.1	0.093	93.%	2.1%
<b>SRM</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0003173-05		0.1	0.086	86.%	
Ethylbenzene-mg/kg		0003173-05		0.1	0.085	85.%	
Toluene-mg/kg		0003173-05		0.1	0.085	85.%	
p/m-Xylene-mg/kg		0003173-05		0.2	0.174	87.%	
o-Xylene-mg/kg		0003173-05		0.1	0.085	85.%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

**Order#: G0204500**

**Project: Linman 6"**

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL69902BH1-10'	0204500-01	SOIL	09/09/2002	09/12/2002
SEL69902BH1-15'	0204500-02	SOIL	09/09/2002	09/12/2002
SEL69902BH1-20'	0204500-03	SOIL	09/09/2002	09/12/2002
SEL69902BH2-5'	0204500-04	SOIL	09/09/2002	09/12/2002
SEL69902BH2-10'	0204500-05	SOIL	09/09/2002	09/12/2002
SEL69902BH2-15'	0204500-06	SOIL	09/09/2002	09/12/2002
SEL69902BH3-5'	0204500-07	SOIL	09/09/2002	09/12/2002
SEL69902BH3-10'	0204500-08	SOIL	09/09/2002	09/12/2002
SEL69902BH3-15'	0204500-09	SOIL	09/09/2002	09/12/2002

The surrogate recoveries are higher than the control limits on samples 1-3 because of interference from coeluting compounds.

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: Roland K. J. [Signature] Date: 9-19-02  
 Environmental Lab of Texas I, Ltd.

# Environmental Lab of Texas, Inc.

12600 West 1-20 East  
Odessa, Texas 79763  
Phone: 915-563-1800  
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Pat Alford Frank Hernandez  
 Company Name: Environmental Plus Inc Satt  
 Company Address: 200 Ave 0  
 City/State/Zip: 50016 N.M. 88231  
 Telephone No: 505-394-3881  
 Sampler Signature: Bradley B...

Project Name: Limans 6"  
 Project #: 2002-10235  
 Project Loc: \_\_\_\_\_  
 PO #: \_\_\_\_\_

Fax No: 505-394-2601

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative										Matrix					Analyze For										RUSH TAT (Pre-Schedule)	Standard TAT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416

COPY

## ANALYTICAL REPORT

**Prepared for:**

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project: Linman 6"**  
**PO#: 2002-10235**  
**Order#: G0204501**  
**Report Date: 09/18/2002**

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0204501-01	SEL691002BH4-5'	SOIL	9/10/02 8:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204501-02	SEL691002BH4-10'	SOIL	9/10/02 8:15	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204501-03	SEL691002BH4-15'	SOIL	9/10/02 8:35	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204501-04	SEL691002BH15-10'	SOIL	9/10/02 9:30	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204501-05	SEL691002BH5-15'	SOIL	9/10/02 10:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204501-06	SEL691002BH5-20'	SOIL	9/10/02 11:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204501-07	SEL691002BH5-25'	SOIL	9/10/02 12:30	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
	8015M 8021B/5030 BTEX					
0204501-08	SEL691002BH5-30'	SOIL	9/10/02 13:40	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-01  
 Sample ID: SEL691002BH4-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 2:41	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	105%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-02  
 Sample ID: SEL691002BH4-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8015M</u>
		9/14/02	1	1	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8021B</u>
0003173-02		9/15/02 3:03	1	25	CK	

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	108%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-03  
 Sample ID: SEL691002BH4-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 3:25	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	92%	80	120
Bromofluorobenzene	99%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-04  
 Sample ID: SEL691002BIIS-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	10	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	3210	100
DRO, >C12-C35	5210	100
TOTAL, C6-C35	8420	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 3:47	1	100	CK	

Parameter	Result mg/kg	RL
Benzene	8.86	0.100
Ethylbenzene	35.1	0.100
Toluene	34.1	0.100
p/m-Xylene	57.1	0.100
o-Xylene	28.3	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	846%	80	120
Bromofluorobenzene	166%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-05  
 Sample ID: SEL691002BH5-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	7730	100
DRO, >C12-C35	9010	100
TOTAL, C6-C35	16740	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 4:09	1	100	CK	8021B

Parameter	Result mg/kg	RL
Benzene	16.1	0.100
Ethylbenzene	71.0	0.100
Toluene	67.4	0.100
p/m-Xylene	96.2	0.100
o-Xylene	43.7	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1400%	80	120
Bromofluorobenzene	163%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-06  
 Sample ID: SEL691002BH5-20'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	10		

Parameter	Result mg/kg	RL
GRO, C6-C12	7580	100
DRO, >C12-C35	9130	100
TOTAL, C6-C35	16710	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 4:32	1	100		

Parameter	Result mg/kg	RL
Benzene	11.5	0.100
Ethylbenzene	68.4	0.100
Toluene	64.6	0.100
p/m-Xylene	103	0.100
o-Xylene	46.8	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1280%	80	120
Bromofluorobenzene	162%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-07  
 Sample ID: SEL691002BH5-25'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	1,340	10.0
DRO, >C12-C35	2,400	10.0
TOTAL, C6-C35	3,740	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003173-02		9/15/02 4:54	1	25		

Parameter	Result mg/kg	RL
Benzene	0.192	0.025
Ethylbenzene	6.21	0.025
Toluene	3.57	0.025
p/m-Xylenc	11.9	0.025
o-Xylene	5.12	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	165%	80	120
Bromofluorobenzene	168%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204501  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204501-08  
 Sample ID: SEL691002BH5-30'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/14/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003173-02		9/16/02 10:08	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylenc	<0.025	0.025
o-Xylenc	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	108%	80	120
Bromofluorobenzene	111%	80	120

Approval: *Raland K Tuttle* 9-18-02  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0204501

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003147-02			<10.0		
<b>MS</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0204500-04	0	952	1100	115.5%	
<b>MSD</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0204500-04	0	952	1080	113.4%	1.8%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003147-05		1000	1040	104.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

**Order#: G0204501**

<b>BLANK</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003173-02			<0.025		
Ethylbenzene-mg/kg		0003173-02			<0.025		
Toluene-mg/kg		0003173-02			<0.025		
p/m-Xylene-mg/kg		0003173-02			<0.025		
o-Xylene-mg/kg		0003173-02			<0.025		
<b>MS</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204501-08	0	0.1	0.093	93.0%	
Ethylbenzene-mg/kg		0204501-08	0	0.1	0.093	93.0%	
Toluene-mg/kg		0204501-08	0	0.1	0.096	96.0%	
p/m-Xylene-mg/kg		0204501-08	0	0.2	0.193	96.5%	
o-Xylene-mg/kg		0204501-08	0	0.1	0.093	93.0%	
<b>MSD</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204501-08	0	0.1	0.094	94.0%	1.1%
Ethylbenzene-mg/kg		0204501-08	0	0.1	0.096	96.0%	3.2%
Toluene-mg/kg		0204501-08	0	0.1	0.096	96.0%	0.0%
p/m-Xylene-mg/kg		0204501-08	0	0.2	0.198	99.0%	2.6%
o-Xylene-mg/kg		0204501-08	0	0.1	0.095	95.0%	2.1%
<b>SRM</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003173-05		0.1	0.086	86.0%	
Ethylbenzene-mg/kg		0003173-05		0.1	0.085	85.0%	
Toluene-mg/kg		0003173-05		0.1	0.085	85.0%	
p/m-Xylene-mg/kg		0003173-05		0.2	0.174	87.0%	
o-Xylene-mg/kg		0003173-05		0.1	0.085	85.0%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

**Order#:** G0204501  
**Project:** Linman 6"

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL691002BH4-5'	0204501-01	SOIL	09/10/2002	09/12/2002
SEL691002BH4-10'	0204501-02	SOIL	09/10/2002	09/12/2002
SEL691002BH4-15'	0204501-03	SOIL	09/10/2002	09/12/2002
SEL691002BH5-10'	0204501-04	SOIL	09/10/2002	09/12/2002
SEL691002BH5-15'	0204501-05	SOIL	09/10/2002	09/12/2002
SEL691002BH5-20'	0204501-06	SOIL	09/10/2002	09/12/2002
SEL691002BH5-25'	0204501-07	SOIL	09/10/2002	09/12/2002
SEL691002BH5-30'	0204501-08	SOIL	09/10/2002	09/12/2002

**The surrogate recoveries are higher than the control limits on samples 4-7 because of interference from the coeluting compounds.**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: Robert K. Jurek Date: 9-18-02  
 Environmental Lab of Texas I, Ltd.



COPY

## ANALYTICAL REPORT

**Prepared for:**

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project:** Linman 6"  
**PO#:** 2002-10235  
**Order#:** G0204502  
**Report Date:** 09/17/2002

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0204502-01	SEL691102BH6-5'	SOIL	9/11/02 8:20	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204502-02	SEL691102BH6-10'	SOIL	9/11/02 8:40	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204502-03	SEL691102BH6-15'	SOIL	9/11/02 9:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204502-04	SEL691102BH7-5'	SOIL	9/11/02 9:30	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204502-05	SEL691102BH7-10'	SOIL	9/11/02 10:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204502-06	SEL691102BH7-15'	SOIL	9/11/02 10:25	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
0204502-07	SEL691102BH8-5'	SOIL	9/11/02 11:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
	8015M 8021B/5030 BTEX					
<b>0204502-08</b>	SEL691102BH8-10'	SOIL	9/11/02 11:25	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
<b>0204502-09</b>	SEL691102BH8-15'	SOIL	9/11/02 12:00	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
<b>0204502-10</b>	SEL691102BH9-10'	SOIL	9/11/02 13:20	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
<b>0204502-11</b>	SEL691102BH9-15'	SOIL	9/11/02 13:45	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
<b>0204502-12</b>	SEL691102BH9-20'	SOIL	9/11/02 14:20	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		
<b>0204502-13</b>	SEL691102BH9-25'	SOIL	9/11/02 15:15	9/12/02 10:55	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-01  
 Sample ID: SEL691102BH6-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003161-02		9/16/02 23:39	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	96%	80	120
Bromofluorobenzene	97%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-02  
 Sample ID: SEL691102BH6-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003161-02		9/17/02 0:01	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	101%	80	120
Bromofluorobenzene	105%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-03  
 Sample ID: SEL691102BH6-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/14/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003161-02		9/17/02 0:23	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	94%	80	120
Bromofluorobenzene	99%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-04  
 Sample ID: SEL691102BH7-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003161-02		9/17/02 0:46	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	94%	80	120
Bromofluorobenzene	100%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-05  
 Sample ID: SEL691102BH7-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003161-02		9/17/02	1	25		
		1:07				

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	100%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-06  
 Sample ID: SEL691102BH7-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003161-02		9/17/02 1:29	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	97%	80	120
Bromofluorobenzene	100%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-07  
 Sample ID: SEL691102BH8-5'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/14/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003161-02		9/17/02 1:52	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	96%	80	120
Bromofluorobenzene	102%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-08  
 Sample ID: SE1.691102BH8-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/14/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003161-02		9/17/02 2:14	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	98%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-09  
 Sample ID: SEL691102BH8-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/14/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003161-02		9/17/02 11:48	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylenc	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	100%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-10  
 Sample ID: SEL691102BH9-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8015M</u>
		9/14/02	1	10	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	10600	100
DRO, >C12-C35	12400	100
TOTAL, C6-C35	23000	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8021B</u>
0003161-02		9/17/02 2:58	1	200	CK	

Parameter	Result mg/kg	RL
Benzene	23.9	0.200
Ethylbenzene	73.8	0.200
Toluene	111	0.200
p/m-Xylene	146	0.200
o-Xylene	70.9	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	968%	80	120
Bromofluorobenzene	149%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-11  
 Sample ID: SEL691102BH9-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/14/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	1,220	10.0
DRO, >C12-C35	1,500	10.0
TOTAL, C6-C35	2,720	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003161-02		9/17/02 3:20	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	2.36	0.200
Ethylbenzene	17.7	0.200
Toluene	17.7	0.200
p/m-Xylene	30.2	0.200
o-Xylene	12.8	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	160%	80	120
Bromofluorobenzene	124%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-12  
 Sample ID: SEL691102BH9-20'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8015M</u>
		9/14/02	1	1	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8021B</u>
0003161-02		9/17/02 9:20	1	25	CK	

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	0.031	0.025
Toluene	<0.025	0.025
p/m-Xylene	0.096	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	104%	80	120
Bromofluorobenzene	108%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204502  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204502-13  
 Sample ID: SEL691102BH9-25'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/14/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003161-02		9/17/02 9:42	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylenc	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	99%	80	120

Approval: Raland K Tuttle 9-19-02  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

**Order#:** G0204502

**Project:** Linman 6"

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL691102BH6-5'	0204502-01	SOIL	09/11/2002	09/12/2002
SEL691102BH6-10'	0204502-02	SOIL	09/11/2002	09/12/2002
SEL691102BH6-15'	0204502-03	SOIL	09/11/2002	09/12/2002
SEL691102BH7-5'	0204502-04	SOIL	09/11/2002	09/12/2002
SEL691102BH7-10'	0204502-05	SOIL	09/11/2002	09/12/2002
SEL691102BH7-15'	0204502-06	SOIL	09/11/2002	09/12/2002
SEL691102BH8-5'	0204502-07	SOIL	09/11/2002	09/12/2002
SEL691102BH8-10'	0204502-08	SOIL	09/11/2002	09/12/2002
SEL691102BH8-15'	0204502-09	SOIL	09/11/2002	09/12/2002
SEL691102BH9-10'	0204502-10	SOIL	09/11/2002	09/12/2002
SEL691102BH9-15'	0204502-11	SOIL	09/11/2002	09/12/2002
SEL691102BH9-20'	0204502-12	SOIL	09/11/2002	09/12/2002
SEL691102BH9-25'	0204502-13	SOIL	09/11/2002	09/12/2002

**Surrogate recoveries are outside control limits due to interference from coeluting compounds for sample ID #0204502-10 & 0204502-11.**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: *Salan K. Furbush* Date: 9-19-02  
 Environmental Lab of Texas I, Ltd.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8015M**

Order#: G0204502

<i><b>BLANK</b></i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	TOTAL, C6-C35-mg/kg	0003147-02			<10.0		
	TOTAL, C6-C35-mg/kg	0003156-02			<10.0		
<i><b>MS</b></i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	TOTAL, C6-C35-mg/kg	0204500-04	0	952	1100	115.5%	
	TOTAL, C6-C35-mg/kg	0204502-08	0	952	1080	113.4%	
<i><b>MSD</b></i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	TOTAL, C6-C35-mg/kg	0204500-04	0	952	1080	113.4%	1.8%
	TOTAL, C6-C35-mg/kg	0204502-08	0	952	1140	119.7%	5.4%
<i><b>SRM</b></i>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	TOTAL, C6-C35-mg/kg	0003147-05		1000	1040	104.0%	
	TOTAL, C6-C35-mg/kg	0003156-05		1000	1190	119.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

Order#: G0204502

<b>BLANK</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0003161-02			<0.025		
Ethylbenzene-mg/kg		0003161-02			<0.025		
Toluene-mg/kg		0003161-02			<0.025		
p/m-Xylene-mg/kg		0003161-02			<0.025		
o-Xylene-mg/kg		0003161-02			<0.025		
<b>MS</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0204502-13	0	0.1	0.103	103.0%	
Ethylbenzene-mg/kg		0204502-13	0	0.1	0.106	106.0%	
Toluene-mg/kg		0204502-13	0	0.1	0.107	107.0%	
p/m-Xylene-mg/kg		0204502-13	0	0.2	0.220	110.0%	
o-Xylene-mg/kg		0204502-13	0	0.1	0.104	104.0%	
<b>MSD</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0204502-13	0	0.1	0.094	94.0%	9.1%
Ethylbenzene-mg/kg		0204502-13	0	0.1	0.097	97.0%	8.9%
Toluene-mg/kg		0204502-13	0	0.1	0.098	98.0%	8.8%
p/m-Xylene-mg/kg		0204502-13	0	0.2	0.202	101.0%	8.5%
o-Xylene-mg/kg		0204502-13	0	0.1	0.096	96.0%	8.0%
<b>SRM</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
Benzene-mg/kg		0003161-05		0.1	0.086	86.0%	
Ethylbenzene-mg/kg		0003161-05		0.1	0.085	85.0%	
Toluene-mg/kg		0003161-05		0.1	0.085	85.0%	
p/m-Xylene-mg/kg		0003161-05		0.2	0.174	87.0%	
o-Xylene-mg/kg		0003161-05		0.1	0.085	85.0%	





COPY

## ANALYTICAL REPORT

**Prepared for:**

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project:** Linman Line 6"  
**PO#:** 2002-10235  
**Order#:** G0204544  
**Report Date:** 09/24/2002

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0204544-01	SEL691202BH10 5'	SOIL	9/12/02 7:30	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204544-02	SEL691202BH10 10'	SOIL	9/12/02 7:50	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204544-03	SEL691202BH10 15'	SOIL	9/12/02 8:15	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204544-04	SFL691202BH10 20'	SOIL	9/12/02 8:35	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204544-05	SEL691202BH10 25'	SOIL	9/12/02 9:05	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204544-06	SEL691202BH10 30'	SOIL	9/12/02 9:40	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204544-07	SEL691202BH10 35'	SOIL	9/12/02 14:00	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
	8015M 8021B/5030 BTEX					
0204544-08	SEL691202BH10 40'	SOIL	9/12/02 15:00	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Lianan Line 6"  
 Location: None Given

Lab ID: 0204544-01  
 Sample ID: SEL691202BH10 5'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	7560	50.0
DRO, >C12-C35	7030	50.0
TOTAL, C6-C35	14590	50.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 2:40	1	100	CK	8021B

Parameter	Result mg/kg	RL
Benzene	43.9	0.100
Ethylbenzene	99.0	0.100
Toluene	160	0.100
p/m-Xylene	141	0.100
o-Xylene	63.8	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1890%	80	120
Bromofluorobenzene	150%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

Lab ID: 0204544-02  
 Sample ID: SEL691202BH10 10'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	22000	50.0
DRO, >C12-C35	25100	50.0
TOTAL, C6-C35	47100	50.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 3:02	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	101	0.200
Ethylbenzene	197	0.200
Toluene	325	0.200
p/m-Xylenc	280	0.200
o-Xylene	127	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	2000%	80	120
Bromofluorobenzene	148%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

Lab ID: 0204544-03  
 Sample ID: SEL691202BH10 15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	16700	100
DRO, >C12-C35	18100	100
TOTAL, C6-C35	34800	100

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 3:24	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	101	0.200
Ethylbenzene	173	0.200
Toluene	308	0.200
p/m-Xylene	260	0.200
o-Xylene	117	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1890%	80	120
Bromofluorobenzene	152%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Luman Line 6"  
 Location: None Given

Lab ID: 0204544-04  
 Sample ID: SEL691202BH10 20'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/18/02	1	10		

Parameter	Result mg/kg	RL
GRO, C6-C12	15300	100
DRO, >C12-C35	15800	100
TOTAL, C6-C35	31100	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003198-02		9/21/02 3:46	1	200		

Parameter	Result mg/kg	RL
Benzene	76.1	0.200
Ethylbenzene	146	0.200
Toluene	252	0.200
p/m-Xylene	225	0.200
o-Xylene	102	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1700%	80	120
Bromofluorobenzene	147%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

Lab ID: 0204544-05  
 Sample ID: SEL691202BH10 25'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/18/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	12000	100
DRO, >C12-C35	11400	100
TOTAL, C6-C35	23400	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003198-02		9/21/02 4:08	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	66.2	0.200
Ethylbenzene	132	0.200
Toluene	234	0.200
p/m-Xylene	197	0.200
o-Xylene	87.3	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1700%	80	120
Bromofluorobenzene	266%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

Lab ID: 0204544-06  
 Sample ID: SEL691202BH10 30'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/18/02	1	5		

Parameter	Result mg/kg	RL
GRO, C6-C12	13800	50.0
DRO, >C12-C35	14400	50.0
TOTAL, C6-C35	28200	50.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003198-02		9/21/02 4:31	1	200		

Parameter	Result mg/kg	RL
Benzene	80.5	0.200
Ethylbenzenc	164	0.200
Toluene	271	0.200
p/m-Xylene	235	0.200
o-Xylene	105	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1680%	80	120
Bromofluorobenzene	160%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

Lab ID: 0204544-07  
 Sample ID: SEI.691202BH10 35'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	10600	50.0
DRO, >C12-C35	12300	50.0
TOTAL, C6-C35	22900	50.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 4:53	1	100	CK	8021B

Parameter	Result mg/kg	RL
Benzene	35.6	0.100
Ethylbenzene	98.1	0.100
Toluene	143	0.100
p/m-Xylenc	141	0.100
o-Xylene	67.1	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1980%	80	120
Bromofluorobenzene	171%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204544  
 Project: 2002-10235  
 Project Name: Linman Line 6"  
 Location: None Given

Lab ID: 0204544-08  
 Sample ID: SEL691202BH10 40'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	16400	100
DRO, >C12-C35	16400	100
TOTAL, C6-C35	32800	100

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 5:15	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	90.9	0.200
Ethylbenzene	168	0.200
Toluene	285	0.200
p/m-Xylene	245	0.200
o-Xylene	112	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1900%	80	120
Bromofluorobenzene	161%	80	120

Approval:  9/25/02  
 Raland K. Tuttle, Lab Director, QA Officer  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8015M**

Order#: G0204544

<i><b>BLANK</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-02			<10.0		
<i><b>CONTROL</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-03		952	1120	117.6%	
<i><b>CONTROL DUP</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-04		952	1120	117.6%	0.0%
<i><b>SRM</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-05		1000	1120	112.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

Order#: G0204544

<b>BLANK</b>		<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
SOIL							
Benzene-mg/kg		0003198-02			<0.025		
Ethylbenzene-mg/kg		0003198-02			<0.025		
Toluene-mg/kg		0003198-02			<0.025		
p/m-Xylene-mg/kg		0003198-02			<0.025		
o-Xylene-mg/kg		0003198-02			<0.025		
<b>MS</b>		<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
SOIL							
Benzene-mg/kg		0204546-03	0	0.1	0.102	102.%	
Ethylbenzene-mg/kg		0204546-03	0	0.1	0.108	108.%	
Toluene-mg/kg		0204546-03	0	0.1	0.108	108.%	
p/m-Xylene-mg/kg		0204546-03	0	0.2	0.226	113.%	
o-Xylene-mg/kg		0204546-03	0	0.1	0.106	106.%	
<b>MSD</b>		<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
SOIL							
Benzene-mg/kg		0204546-03	0	0.1	0.100	100.%	2.%
Ethylbenzene-mg/kg		0204546-03	0	0.1	0.109	109.%	0.9%
Toluene-mg/kg		0204546-03	0	0.1	0.104	104.%	3.8%
p/m-Xylene-mg/kg		0204546-03	0	0.2	0.225	112.5%	0.4%
o-Xylene-mg/kg		0204546-03	0	0.1	0.105	105.%	0.9%
<b>SRM</b>		<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
SOIL							
Benzene-mg/kg		0003198-05		0.1	0.101	101.%	
Ethylbenzene-mg/kg		0003198-05		0.1	0.105	105.%	
Toluene-mg/kg		0003198-05		0.1	0.107	107.%	
p/m-Xylene-mg/kg		0003198-05		0.2	0.218	109.%	
o-Xylene-mg/kg		0003198-05		0.1	0.104	104.%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

**Order#:** G0204544

**Project:** Linman Line 6"

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL691202BH10 5'	0204544-01	SOIL	09/12/2002	09/18/2002
SEL691202BH10 10	0204544-02	SOIL	09/12/2002	09/18/2002
SEL691202BH10 15	0204544-03	SOIL	09/12/2002	09/18/2002
SEL691202BH10 20	0204544-04	SOIL	09/12/2002	09/18/2002
SEL691202BH10 25	0204544-05	SOIL	09/12/2002	09/18/2002
SEL691202BH10 30	0204544-06	SOIL	09/12/2002	09/18/2002
SEL691202BH10 35	0204544-07	SOIL	09/12/2002	09/18/2002
SEL691202BH10 40	0204544-08	SOIL	09/12/2002	09/18/2002

**Surrogate recoveries are outside control limits due to interference from coeluting compounds**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: *Aly D. Kune* Date: 9/25/02  
 Environmental Lab of Texas I, Ltd.



COPY

## ANALYTICAL REPORT

**Prepared for:**

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project:** Linman 6"  
**PO#:** 2002-10235  
**Order#:** G0204545  
**Report Date:** 09/24/2002

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204545  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>	<u>Date / Time</u>	<u>Container</u>	<u>Preservative</u>
			<u>Collected</u>	<u>Received</u>		
0204545-01	SEL691302BH10-45'	SOIL	9/13/02 8:15	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					
0204545-02	SEL691302BH10-50'	SOIL	9/13/02 9:40	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					
0204545-03	SEL691302BH10-55'	SOIL	9/13/02 11:40	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204545  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204545-01  
 Sample ID: SEL691302BH10-45'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8015M</u>
		9/18/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	3480	50.0
DRO, >C12-C35	3970	50.0
TOTAL, C6-C35	7450	50.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8021B</u>
0003198-02		9/23/02 21:56	1	100	CK	8021B

Parameter	Result mg/kg	RL
Benzene	25.7	0.100
Ethylbenzene	66.4	0.100
Toluene	109	0.100
p/m-Xylene	100	0.100
o-Xylene	44.7	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1310%	80	120
Bromofluorobenzene	134%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204545  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204545-02  
 Sample ID: SEL691302BH10-50'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	15.3	10.0
DRO, >C12-C35	21.9	10.0
TOTAL, C6-C35	37.2	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/23/02 21:34	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	974%	80	120
Bromofluorobenzene	128%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204545  
 Project: 2002-10235  
 Project Name: Linman 6"  
 Location: None Given

Lab ID: 0204545-03  
 Sample ID: SEL691302BH10-55'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/18/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 16:45	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	104%	80	120
Bromofluorobenzene	102%	80	120

Approval: *Celey D. Keene* 9/25/02  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8015M**

Order#: G0204545

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-02			<10.0		
<b>CONTROL</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-03		952	1120	117.6%	
<b>CONTROL DUP</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-04		952	1120	117.6%	0%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-05		1000	1120	112.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### 8021B/5030 BTEX

Order#: G0204545

<b>BLANK</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0003198-02			<0.025		
	Ethylbenzene-mg/kg	0003198-02			<0.025		
	Toluene-mg/kg	0003198-02			<0.025		
	p/m-Xylene-mg/kg	0003198-02			<0.025		
	o-Xylene-mg/kg	0003198-02			<0.025		
<b>MS</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0204546-03	0	0.1	0.102	102.0%	
	Ethylbenzene-mg/kg	0204546-03	0	0.1	0.108	108.0%	
	Toluene-mg/kg	0204546-03	0	0.1	0.108	108.0%	
	p/m-Xylene-mg/kg	0204546-03	0	0.2	0.226	113.0%	
	o-Xylene-mg/kg	0204546-03	0	0.1	0.106	106.0%	
<b>MSD</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0204546-03	0	0.1	0.100	100.0%	2.0%
	Ethylbenzene-mg/kg	0204546-03	0	0.1	0.109	109.0%	0.9%
	Toluene-mg/kg	0204546-03	0	0.1	0.104	104.0%	3.8%
	p/m-Xylene-mg/kg	0204546-03	0	0.2	0.225	112.5%	0.4%
	o-Xylene-mg/kg	0204546-03	0	0.1	0.105	105.0%	0.9%
<b>SRM</b>		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
SOIL							
	Benzene-mg/kg	0003198-05		0.1	0.101	101.0%	
	Ethylbenzene-mg/kg	0003198-05		0.1	0.105	105.0%	
	Toluene-mg/kg	0003198-05		0.1	0.107	107.0%	
	p/m-Xylene-mg/kg	0003198-05		0.2	0.218	109.0%	
	o-Xylene-mg/kg	0003198-05		0.1	0.104	104.0%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

**Order#:** G0204545

**Project:** Linman 6"

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL691302BH10-45'	0204545-01	SOIL	09/13/2002	09/18/2002
SEL691302BH10-50'	0204545-02	SOIL	09/13/2002	09/18/2002
SEL691302BH10-55'	0204545-03	SOIL	09/13/2002	09/18/2002

**Surrogate recoveries are outside control limits due to interference from coeluting compounds**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By:

*Cathy D. Kune*  
 Environmental Lab of Texas I, Ltd.

Date:

*9/25/02*



COPY

# ANALYTICAL REPORT

Prepared for:

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project:** Linman 6" Line  
**PO#:** 2002-10235  
**Order#:** G0204546  
**Report Date:** 09/30/2002

Certificates

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706  
915-684-3456

Order#: G0204546  
Project: 2002-10235  
Project Name: Linman 6" Line  
Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0204546-01	SEL691602BH11-5'	SOIL	9/16/02 8:00	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204546-02	SEL691602BH11-10'	SOIL	9/16/02 8:15	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204546-03	SEL691602BH11-15'	SOIL	9/16/02 8:35	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204546-04	SEL691602BH12-5'	SOIL	9/16/02 9:00	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204546-05	SEL691602BH12-10'	SOIL	9/16/02 9:15	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204546-06	SEL691602BH12-15'	SOIL	9/16/02 9:25	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204546-07	SEL691602BH12-20'	SOIL	9/16/02 9:40	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time	Date / Time	Container	Preservative
			Collected	Received		
0204546-01	SEL691602BH11-5'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			8:00	15:20		
			Rejected: No	Temp: 1.5 C		
0204546-02	SEL691602BH11-10'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			8:15	15:20		
			Rejected: No	Temp: 1.5 C		
0204546-03	SEL691602BH11-15'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			8:35	15:20		
			Rejected: No	Temp: 1.5 C		
0204546-04	SEL691602BH12-5'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			9:00	15:20		
			Rejected: No	Temp: 1.5 C		
0204546-05	SEL691602BH12-10'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			9:15	15:20		
			Rejected: No	Temp: 1.5 C		
0204546-06	SEL691602BH12-15'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			9:25	15:20		
			Rejected: No	Temp: 1.5 C		
0204546-07	SEL691602BH12-20'  8015M 8021B/5030 BTEX	SOIL	9/16/02	9/18/02	4 oz glass	Ice
			9:40	15:20		
			Rejected: No	Temp: 1.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0204546-14	WEL691602BH10MW	WATER	9/16/02 15:15	9/18/02 15:20	40 ml glass	Ice, HCl
<u>Lab Testing:</u>		Rejected: No	Temp: 1.5 C			
8021B/5030 BTEX						

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-01  
 Sample ID: SEL691602BH11-5'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 17:07	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	104%	80	120
Bromofluorobenzene	103%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-02  
 Sample ID: SF1.691602BH11-10'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 17:29	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	92%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-03  
 Sample ID: SEL691602BH11-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003198-02		9/21/02 17:51	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	98%	80	120
Bromofluorobenzene	97%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-04  
 Sample ID: SEL691602BH12-5'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	2740	50.0
DRO, >C12-C35	2840	50.0
TOTAL, C6-C35	5580	50.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/23/02 22:18	1	100	CK	8021B

Parameter	Result mg/kg	RL
Benzene	17.1	0.100
Ethylbenzene	46.5	0.100
Toluene	73.5	0.100
p/m-Xylene	74.6	0.100
o-Xylene	33.7	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1110%	80	120
Bromofluorobenzene	130%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-05  
 Sample ID: SEL691602BH12-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor		
		9/19/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	4500	50.0
DRO, >C12-C35	5930	50.0
TOTAL, C6-C35	10430	50.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor		
0003199-02		9/23/02 22:40	1	100	CK	8021B

Parameter	Result mg/kg	RL
Benzene	11.8	0.100
Ethylbenzene	45.7	0.100
Toluene	60.3	0.100
p/m-Xylenc	72.0	0.100
o-Xylene	33.0	0.100

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	947%	80	120
Bromofluorobenzene	136%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-06  
 Sample ID: SEL691602BH12-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/23/02 13:00	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	0.030	0.025
Toluene	0.028	0.025
p/m-Xylene	0.063	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	89%	80	120
Bromofluorobenzene	100%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-07  
 Sample ID: SEL691602BH12-20'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/19/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003199-02		9/23/02 13:22	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	0.038	0.025
Toluene	0.045	0.025
p/m-Xylene	0.099	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	96%	80	120
Bromofluorobenzene	101%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-08  
 Sample ID: SEL691602BH13-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/19/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003199-02		9/23/02 13:44	1	25		

Parameter	Result mg/kg	RL
Benzene	0.026	0.025
Ethylbenzene	0.188	0.025
Toluene	0.164	0.025
p/m-Xylene	0.500	0.025
o-Xylene	0.142	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	95%	80	120
Bromofluorobenzene	109%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-09  
 Sample ID: SEL691602BH13-10'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/21/02 21:33	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	111%	80	120
Bromofluorobenzene	111%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-10  
 Sample ID: SEL691602BIII3-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/21/02 21:55	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	106%	80	120
Bromofluorobenzene	104%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-11  
 Sample ID: SEL691602BH14-5'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/19/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003199-02		9/21/02 22:17	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	106%	80	120
Bromofluorobenzene	106%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-12  
 Sample ID: SEL691602BH14-10'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/19/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003199-02		9/21/02 22:39	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	101%	80	120
Bromofluorobenzene	103%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-13  
 Sample ID: SEL691602BH14-15'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/19/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003199-02		9/21/02 23:02	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	101%	80	120
Bromofluorobenzene	100%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204546  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204546-14  
 Sample ID: WEL691602BH10MW

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor		
0003245-02		9/27/02 17:21	1	10	CK	8021B

Parameter	Result mg/L	RL
Benzene	0.482	0.010
Ethylbenzene	0.246	0.010
Toluene	1.08	0.010
p/m-Xylene	0.362	0.010
o-Xylene	0.155	0.010

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	98%	80	120
Bromofluorobenzene	92%	80	120

Approval: Raland K Tuttle 9-30-02  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8015M**

**Order#: G0204546**

<i><b>BLANK</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003201-02			<10.0		
<i><b>MS</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0204546-02	0	952	1180	123.9%	
<i><b>MSD</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0204546-02	0	952	1190	125.0%	0.8%
<i><b>SRM</b></i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003201-05		1000	1220	122.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

Order#: G0204546

<b>BLANK</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0003198-02			<0.025		
Benzene-mg/kg	0003199-02			<0.025		
Benzene-mg/L	0003245-02			<0.001		
Ethylbenzene-mg/kg	0003198-02			<0.025		
Ethylbenzene-mg/kg	0003199-02			<0.025		
Ethylbenzene-mg/L	0003245-02			<0.001		
Toluene-mg/kg	0003198-02			<0.025		
Toluene-mg/kg	0003199-02			<0.025		
Toluene-mg/L	0003245-02			<0.001		
p/m-Xylene-mg/kg	0003198-02			<0.025		
p/m-Xylene-mg/kg	0003199-02			<0.025		
p/m-Xylene-mg/L	0003245-02			<0.001		
o-Xylene-mg/kg	0003198-02			<0.025		
o-Xylene-mg/kg	0003199-02			<0.025		
o-Xylene-mg/L	0003245-02			<0.001		
<b>MS</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0204546-03	0	0.1	0.102	102.%	
Benzene-mg/kg	0204546-13	0	0.1	0.110	110.%	
Benzene-mg/L	0204610-04	0	0.1	0.096	96.%	
Ethylbenzene-mg/kg	0204546-03	0	0.1	0.108	108.%	
Ethylbenzene-mg/kg	0204546-13	0	0.1	0.115	115.%	
Ethylbenzene-mg/L	0204610-04	0	0.1	0.098	98.%	
Toluene-mg/kg	0204546-03	0	0.1	0.108	108.%	
Toluene-mg/kg	0204546-13	0	0.1	0.114	114.%	
Toluene-mg/L	0204610-04	0	0.1	0.100	100.%	
p/m-Xylene-mg/kg	0204546-03	0	0.2	0.226	113.%	
p/m-Xylene-mg/kg	0204546-13	0	0.2	0.230	115.%	
p/m-Xylene-mg/L	0204610-04	0	0.2	0.208	104.%	
o-Xylene-mg/kg	0204546-03	0	0.1	0.106	106.%	
o-Xylene-mg/kg	0204546-13	0	0.1	0.113	113.%	
o-Xylene-mg/L	0204610-04	0	0.1	0.098	98.%	
<b>MSD</b>						
SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0204546-03	0	0.1	0.100	100.%	2.%
Benzene-mg/kg	0204546-13	0	0.1	0.108	108.%	1.8%
Benzene-mg/L	0204610-04	0	0.1	0.102	102.%	6.1%
Ethylbenzene-mg/kg	0204546-03	0	0.1	0.109	109.%	0.9%
Ethylbenzene-mg/kg	0204546-13	0	0.1	0.113	113.%	1.8%
Ethylbenzene-mg/L	0204610-04	0	0.1	0.104	104.%	5.9%

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

Order#: G0204546

<b>MSD</b>		<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
<b>SOIL</b>							
Toluene-mg/kg		0204546-03	0	0.1	0.104	104.0%	3.8%
Toluene-mg/kg		0204546-13	0	0.1	0.112	112.0%	1.8%
Toluene-mg/L		0204610-04	0	0.1	0.105	105.0%	4.9%
p/m-Xylene-mg/kg		0204546-03	0	0.2	0.225	112.5%	0.4%
p/m-Xylene-mg/kg		0204546-13	0	0.2	0.228	114.0%	0.9%
p/m-Xylene-mg/L		0204610-04	0	0.2	0.221	110.5%	6.1%
o-Xylene-mg/kg		0204546-03	0	0.1	0.105	105.0%	0.9%
o-Xylene-mg/kg		0204546-13	0	0.1	0.111	111.0%	1.8%
o-Xylene-mg/L		0204610-04	0	0.1	0.105	105.0%	6.9%
<b>SRM</b>		<b>LAB-ID #</b>	<b>Sample Concentr.</b>	<b>Spike Concentr.</b>	<b>QC Test Result</b>	<b>Pct (%) Recovery</b>	<b>RPD</b>
<b>SOIL</b>							
Benzene-mg/kg		0003198-05		0.1	0.101	101.0%	
Benzene-mg/kg		0003199-05		0.1	0.104	104.0%	
Benzene-mg/L		0003245-05		0.1	0.095	95.0%	
Ethylbenzene-mg/kg		0003198-05		0.1	0.105	105.0%	
Ethylbenzene-mg/kg		0003199-05		0.1	0.109	109.0%	
Ethylbenzene-mg/L		0003245-05		0.1	0.097	97.0%	
Toluene-mg/kg		0003198-05		0.1	0.107	107.0%	
Toluene-mg/kg		0003199-05		0.1	0.108	108.0%	
Toluene-mg/L		0003245-05		0.1	0.098	98.0%	
p/m-Xylene-mg/kg		0003198-05		0.2	0.218	109.0%	
p/m-Xylene-mg/kg		0003199-05		0.2	0.230	115.0%	
p/m-Xylene-mg/L		0003245-05		0.2	0.207	103.5%	
o-Xylene-mg/kg		0003198-05		0.1	0.104	104.0%	
o-Xylene-mg/kg		0003199-05		0.1	0.108	108.0%	
o-Xylene-mg/L		0003245-05		0.1	0.098	98.0%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706

**Order#:** G0204546**Project:** Linman 6" Line

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL691602BH11-5'	0204546-01	SOIL	09/16/2002	09/18/2002
SEL691602BH11-10'	0204546-02	SOIL	09/16/2002	09/18/2002
SEL691602BH11-15'	0204546-03	SOIL	09/16/2002	09/18/2002
SEL691602BH12-5'	0204546-04	SOIL	09/16/2002	09/18/2002
SEL691602BH12-10'	0204546-05	SOIL	09/16/2002	09/18/2002
SEL691602BH12-15'	0204546-06	SOIL	09/16/2002	09/18/2002
SEL691602BH12-20'	0204546-07	SOIL	09/16/2002	09/18/2002
SEL691602BH13-5'	0204546-08	SOIL	09/16/2002	09/18/2002
SEL691602BH13-10'	0204546-09	SOIL	09/16/2002	09/18/2002
SEL691602BH13-15'	0204546-10	SOIL	09/16/2002	09/18/2002
SEL691602BH14-5'	0204546-11	SOIL	09/16/2002	09/18/2002
SEL691602BH14-10'	0204546-12	SOIL	09/16/2002	09/18/2002
SEL691602BH14-15'	0204546-13	SOIL	09/16/2002	09/18/2002
WEL691602BH10M	0204546-14	WATER	09/16/2002	09/18/2002

**Surrogate recoveries are outside control limits due to interference from coeluting compounds**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By:

*Roland K. J. [Signature]*  
Environmental Lab of Texas I, Ltd.

Date:

9-30-02



COPY

# ANALYTICAL REPORT

**Prepared for:**

**FRANK HERNANDEZ  
ENRON TRANSPORTATION SYSTEMS  
5805 E. HWY. 80  
MIDLAND, TX 79706**

**Project:** Linman 6" Line  
**PO#:** 2002-10235  
**Order#:** G0204548  
**Report Date:** 09/24/2002

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0204548-01	SEL691702BH15-5'	SOIL	9/17/02 8:15	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204548-02	SEL691702BH15-10'	SOIL	9/17/02 8:30	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204548-03	SEL691702BH15-15'	SOIL	9/17/02 8:50	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204548-04	SEL691702BH15-20'	SOIL	9/17/02 9:05	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204548-05	SEL691702BH16-5'	SOIL	9/17/02 11:15	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204548-06	SEL691702BH16-10'	SOIL	9/17/02 11:35	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
0204548-07	SEL691702BH16-15'	SOIL	9/17/02 11:50	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706  
 915-684-3456

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
	8015M 8021B/5030 BTEX					
<b>0204548-08</b>	SEL691702BH16-20'	SOIL	9/17/02 12:40	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
<b>0204548-09</b>	SEL691702BH16-25'	SOIL	9/17/02 13:20	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
<b>0204548-10</b>	SEL691702BH16-30'	SOIL	9/17/02 14:00	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		
<b>0204548-11</b>	SEL691702BH16-35'	SOIL	9/17/02 14:45	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M 8021B/5030 BTEX	Rejected: No		Temp: 1.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-01  
 Sample ID: SEL691702BH15-5'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	8060	100
DRO, >C12-C35	7970	100
TOTAL, C6-C35	16030	100

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/23/02 23:02	1	500	CK	8021B

Parameter	Result mg/kg	RL
Benzene	39.8	0.500
Ethylbenzene	248	0.500
Toluene	296	0.500
p/m-Xylene	517	0.500
o-Xylene	263	0.500

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	864%	80	120
Bromofluorobenzene	160%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-02  
 Sample ID: SEL691702BH15-10'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/19/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	19600	100
DRO, >C12-C35	18300	100
TOTAL, C6-C35	37900	100

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/23/02 23:24	1	1000	CK	8021B

Parameter	Result mg/kg	RL
Benzene	97.1	1.00
Ethylbenzene	474	1.00
Toluene	572	1.00
p/m-Xylene	926	1.00
o-Xylene	481	1.00

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1070%	80	120
Bromofluorobenzene	167%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-03  
 Sample ID: SEL691702BH15-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/20/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	21.0	10.0
TOTAL, C6-C35	21.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/22/02 13:37	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	109%	80	120
Bromofluorobenzene	107%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-04  
 Sample ID: SEL691702BH15-20'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/20/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/22/02 13:59	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	104%	80	120
Bromofluorobenzene	104%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-05  
 Sample ID: SEL691702BH16-5'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/20/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	3950	50.0
DRO, >C12-C35	4000	50.0
TOTAL, C6-C35	7950	50.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003199-02		9/23/02 23:46	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	5.37	0.200
Ethylbenzene	35.9	0.200
Toluene	43.2	0.200
p/m-Xylene	73.1	0.200
o-Xylene	31.0	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	514%	80	120
Bromofluorobenzene	135%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-06  
 Sample ID: SEL691702BH16-10'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/20/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	7630	100
DRO, >C12-C35	7860	100
TOTAL, C6-C35	15490	100

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003200-02		9/24/02 14:49	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	28.2	0.200
Ethylbenzene	98.0	0.200
Toluene	140	0.200
p/m-Xylene	154	0.200
o-Xylene	67.8	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	966%	80	120
Bromofluorobenzene	135%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-07  
 Sample ID: SEI.691702BH16-15'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/20/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	11400	100
DRO, >C12-C35	12100	100
TOTAL, C6-C35	23500	100

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003200-02		9/24/02 15:11	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	27.9	0.200
Ethylbenzenc	120	0.200
Toluene	187	0.200
p/m-Xylene	185	0.200
o-Xylene	78.5	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1100%	80	120
Bromofluorobenzene	126%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-08  
 Sample ID: SEL691702BH16-20'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/20/02	1	10	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	8880	100
DRO, >C12-C35	9780	100
TOTAL, C6-C35	18660	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003200-02		9/24/02 15:33	1	200	CK	

Parameter	Result mg/kg	RL
Benzene	36.1	0.200
Ethylbenzene	107	0.200
Toluene	161	0.200
p/m-Xylenc	178	0.200
o-Xylene	83.0	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1220%	80	120
Bromofluorobenzene	159%	80	120

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-09  
 Sample ID: SEL691702BII16-25'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/20/02	1	10	CK	

Parameter	Result mg/kg	RL
GRO, C6-C12	7520	100
DRO, >C12-C35	8950	100
TOTAL, C6-C35	16470	100

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003200-02		9/24/02	1	200	CK	
		1:14				

Parameter	Result mg/kg	RL
Benzene	<0.200	0.200
Ethylbenzene	5.37	0.200
Toluene	2.72	0.200
p/m-Xylene	7.71	0.200
o-Xylene	3.31	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	102%	80	120
Bromofluorobenzene	102%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-10  
 Sample ID: SEL691702BH16-30'

### 8015M

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
		9/20/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u> <u>Blank</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Sample</u> <u>Amount</u>	<u>Dilution</u> <u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0003200-02		9/23/02 14:50	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	0.090	0.025
Toluene	0.063	0.025
p/m-Xylene	0.216	0.025
o-Xylene	0.044	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	95%	80	120
Bromofluorobenzene	105%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

FRANK HERNANDEZ  
 ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

Order#: G0204548  
 Project: 2002-10235  
 Project Name: Linman 6" Line  
 Location: None Given

Lab ID: 0204548-11  
 Sample ID: SEL691702BH16-35'

### 8015M

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8015M
		9/20/02	1	1		

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

### 8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor	CK	8021B
0003200-02		9/23/02 15:12	1	25		

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	0.100	0.025
Toluene	0.100	0.025
p/m-Xylene	0.288	0.025
o-Xylene	0.064	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	97%	80	120
Bromofluorobenzene	106%	80	120

Approval: Celey D. Keene 9/25/02  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biczugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8015M**

Order#: G0204548

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
		0003201-02			<10.0		
		0003202-02			<10.0		
<b>MS</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
		0204546-02	0	952	1180	123.9%	
		0204548-11	0	952	1210	127.1%	
<b>MSD</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
		0204546-02	0	952	1190	125.0%	0.8%
		0204548-11	0	952	1230	129.2%	1.6%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
		0003201-05		1000	1220	122.0%	
		0003202-05		1000	1190	119.0%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

**8021B/5030 BTEX**

Order#: G0204548

<b>BLANK</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003199-02			<0.025		
Benzene-mg/kg		0003200-02			<0.025		
Ethylbenzene-mg/kg		0003199-02			<0.025		
Ethylbenzene-mg/kg		0003200-02			<0.025		
Toluene-mg/kg		0003199-02			<0.025		
Toluene-mg/kg		0003200-02			<0.025		
p/m-Xylene-mg/kg		0003199-02			<0.025		
p/m-Xylene-mg/kg		0003200-02			<0.025		
o-Xylene-mg/kg		0003199-02			<0.025		
o-Xylene-mg/kg		0003200-02			<0.025		
<b>MS</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204546-13	0	0.1	0.110	110.%	
Benzene-mg/kg		0204556-09	0	0.1	0.099	99.%	
Ethylbenzene-mg/kg		0204546-13	0	0.1	0.115	115.%	
Ethylbenzene-mg/kg		0204556-09	0	0.1	0.104	104.%	
Toluene-mg/kg		0204546-13	0	0.1	0.114	114.%	
Toluene-mg/kg		0204556-09	0	0.1	0.103	103.%	
p/m-Xylene-mg/kg		0204546-13	0	0.2	0.230	115.%	
p/m-Xylene-mg/kg		0204556-09	0	0.2	0.220	110.%	
o-Xylene-mg/kg		0204546-13	0	0.1	0.113	113.%	
o-Xylene-mg/kg		0204556-09	0	0.1	0.102	102.%	
<b>MSD</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204546-13	0	0.1	0.108	108.%	1.8%
Benzene-mg/kg		0204556-09	0	0.1	0.101	101.%	2.%
Ethylbenzene-mg/kg		0204546-13	0	0.1	0.113	113.%	1.8%
Ethylbenzene-mg/kg		0204556-09	0	0.1	0.105	105.%	1.%
Toluene-mg/kg		0204546-13	0	0.1	0.112	112.%	1.8%
Toluene-mg/kg		0204556-09	0	0.1	0.104	104.%	1.%
p/m-Xylene-mg/kg		0204546-13	0	0.2	0.228	114.%	0.9%
p/m-Xylene-mg/kg		0204556-09	0	0.2	0.221	110.5%	0.5%
o-Xylene-mg/kg		0204546-13	0	0.1	0.111	111.%	1.8%
o-Xylene-mg/kg		0204556-09	0	0.1	0.104	104.%	1.9%
<b>SRM</b>							
	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003199-05		0.1	0.104	104.%	
Benzene-mg/kg		0003200-05		0.1	0.111	111.%	
Ethylbenzene-mg/kg		0003199-05		0.1	0.109	109.%	
Ethylbenzene-mg/kg		0003200-05		0.1	0.115	115.%	
Toluene-mg/kg		0003199-05		0.1	0.108	108.%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

<i>SRM</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Toluene-mg/kg		0003200-05		0.1	0.114	114.0%	
p/m-Xylene-mg/kg		0003199-05		0.2	0.230	115.0%	
p/m-Xylene-mg/kg		0003200-05		0.2	0.229	114.5%	
o-Xyleno-mg/kg		0003199-05		0.1	0.108	108.0%	
o-Xylene-mg/kg		0003200-05		0.1	0.114	114.0%	

# CASE NARRATIVE

## ENVIRONMENTAL LAB OF TEXAS

**Prepared for:**

ENRON TRANSPORTATION SYSTEMS  
 5805 E. HWY. 80  
 MIDLAND, TX 79706

**Order#:** G0204548

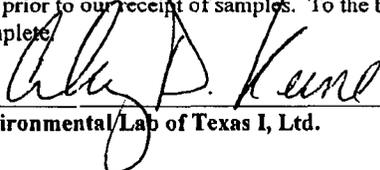
**Project:** Linman 6" Line

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SEL691702BH15-5'	0204548-01	SOIL	09/17/2002	09/18/2002
SEL691702BH15-10'	0204548-02	SOIL	09/17/2002	09/18/2002
SEL691702BH15-15'	0204548-03	SOIL	09/17/2002	09/18/2002
SEL691702BH15-20'	0204548-04	SOIL	09/17/2002	09/18/2002
SEL691702BH16-5'	0204548-05	SOIL	09/17/2002	09/18/2002
SEL691702BH16-10'	0204548-06	SOIL	09/17/2002	09/18/2002
SEL691702BH16-15'	0204548-07	SOIL	09/17/2002	09/18/2002
SEL691702BH16-20'	0204548-08	SOIL	09/17/2002	09/18/2002
SEL691702BH16-25'	0204548-09	SOIL	09/17/2002	09/18/2002
SEL691702BH16-30'	0204548-10	SOIL	09/17/2002	09/18/2002
SEL691702BH16-35'	0204548-11	SOIL	09/17/2002	09/18/2002

**Surrogate recoveries are outside control limits due to interference from coeluting compounds**

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By:  Date: 9/25/02  
 Environmental Lab of Texas I, Ltd.



**Attachment V: Site Information and Metrics Form and Initial NMOCD Form C-141**

Plains Pipeline, L.P. Site Information and Metrics

Incident Date:  
9-4-02 @ 1:20 PM

NMOCD Notified:  
9-4-02 @ 3:30 PM

SITE: <b>Hugh Gathering 090402</b>		Assigned Site Reference #: <b>2002-10235</b>			
Company: Plains Pipeline, L.P.		NATIONAL RESPONSE CENTER - 800.424.8802			
Street Address: PO Box 1660		Notified Date/Time:			
Mailing Address: 5805 East Highway 80		Notified by: Camille Reynolds			
City, State, Zip: Midland, Texas 79702		Person Notified:			
Representative: Camille Reynolds		NRC Report# :			
Representative Telephone: 505.393.5611					
Telephone:					
Fluid volume released (bbls): 50 bbls		Recovered (bbls): 0 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: Hugh Gathering 090402					
Source of contamination: 6" Steel Pipeline					
Land Owner, i.e., BLM, ST, Fee, Other: Bryant					
LSP Dimensions 10' X 10'		East side - 10' x 10'			
LSP Area: 100 ft <sup>2</sup>		East side - 100 ft <sup>2</sup>			
Location of Reference Point (RP)					
Location distance and direction from RP					
Latitude: 32°29'11.007"N		32°29'11.080"N			
Longitude: 103°07'33.864"W		103°07'29.637"W			
Elevation above mean sea level: 3,425'amsl					
Feet from South Section Line					
Feet from West Section Line					
Location- Unit or ¼¼: SE¼ of the SE¼ UL-P		East side - SW¼ of the SW¼ UL-M			
Location- Section: 11		East side - Section 12			
Location- Township: T21S					
Location- Range: R37E					
Surface water body within 1000' radius of site: none					
Surface water body within 1000' radius of site:					
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					
Public water supply wells within 1000' radius of site:					
Depth from land surface to groundwater (DG) 60'bgs					
Depth of contamination (DC) - 60'bgs					
Depth to groundwater (DG - DC = DtGW) - zero feet					
<b>1. Groundwater</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		If >1000' from water source, or; >200' from private domestic water source: 0 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	
Site Rank (1+2+3) = 10					
Total Site Ranking Score and Acceptable Concentrations					
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					

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action - Informational**

**OPERATOR**

Initial Report  Final Report

Name of Company: <b>Plains Pipeline, L.P.</b>		Contact: <b>Camille Reynolds</b>
Address <b>PO Box 1660 5805 East Highway 80 Midland, Texas 79702</b>		Telephone No. <b>505.393.5611</b>
Facility Name <b>Hugh Gathering 090402 #2002-10235</b>		Facility Type <b>6" Steel Pipeline</b>
Surface Owner: <b>Bryant</b>	Mineral Owner	Lease No.

**LOCATION OF RELEASE**

Unit Letter <b>P</b>	Section <b>11</b>	Township <b>T21S</b>	Range <b>R37E</b>	Feet from the	North/South Line	Feet from the	East/West Line	County: <b>Lea</b>
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Latitude: 32°29'11.007"N Longitude: 103°07'33.864"W

**NATURE OF RELEASE**

Type of Release <b>Crude Oil</b>	Volume of Release <b>50 bbls barrels</b>	Volume Recovered <b>0 bbls barrels</b>
Source of Release <b>6" Steel Pipeline</b>	Date and Hour of Occurrence <b>9-4-02 @ 1:20 PM</b>	Date and Hour of Discovery <b>9-4-02 @ 1:30 PM</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Larry Johnson</b>	
By Whom? <b>Camille Reynolds</b>	Date and Hour <b>9-4-02 @ 3:30 PM</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>NA</b>	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

**6" Steel Pipeline The leak was due to internal/external corrosion. Near surface impacted soil was disposed of in an NMOCD approved landfarm.**

Describe Area Affected and Cleanup Action Taken.\*

**100 sqft 10' X 10': Site delineated. Remedial Goals: TPH 8015m = 1000 & 100 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 groundwater, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Camille Reynolds</b>	Approved by District Supervisor:	
E-mail Address: <b>CJReynolds@PAALP.com</b>	Approval Date:	Expiration Date:
Title: <b>District Environmental Supervisor</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>9/6/2002</b> Phone: <b>505.393.5611</b>		

Attach Additional Sheets If Necessary