

AP - 41

# STAGE 1 & 2 WORKPLANS

DATE:

MARCH, 2005

# **ABATEMENT PLAN**



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

April 1, 2005

Ms. Camille Reynolds  
Plains All American Pipeline  
P.O. Box 3319  
Midland, TX 79702

Re: Stage 1 and Stage 2 Abatement Plan  
For the Hugh Gathering 090402  
Dated March 2005  
Ref. #2002-10235  
NMOCD Ref. 1R-078

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the report shown above submitted to NMOCD, on behalf of Plains All American Pipeline (Plains), by Environmental Plus, Inc. The abatement plan pertains to a Plains pipeline leak located in Unit Letter M of Section 12, and Unit Letter P of Section 11, Township 21 South, Range 37 East, Lea County New Mexico.

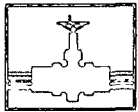
After review, the NMOCD finds that it cannot accept this plan, as it does not adequately address remediation of the vadose zone that was contaminated by the spill. Please address this concern and re-submit the abatement plan by May 1, 2005.

If you have any questions, contact me at (505) 476-3492 or [emartin@state.nm.us](mailto:emartin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin  
Environmental Bureau

Cc: Larry Johnson, NMOCD, Hobbs  
Pat McCasland, EPI  
Jeff Dann, Plains



PLAINS  
PIPELINE

March 14, 2005

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

Re: Plains All American Pipeline Stage 1 and 2  
Abatement Plan  
Hugh Gathering Site  
Sections 11 and 12, T21S, R37E  
Lea County, New Mexico

Dear Mr. Martin:

Please find attached for your approval the Stage 1 and 2 Abatement Plan, dated March 2005, for the Hugh Gathering site located in Sections 11 and 12 of Township 21 South, and Range 37 East of Lea County, New Mexico. The Stage 1 and 2 Abatement Plan details site activities conducted to date and future activities for remediation and closure of the site.

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

Sincerely,

Camille Reynolds  
Remediation Coordinator  
Plains All American Pipeline

Cc: Larry Johnson, NMOCD, Hobbs Office  
Mr. James Bryant, 8204 Indigo Ct., Albuquerque, NM

Enclosure



# STAGE 1 AND STAGE 2 ABATEMENT PLAN

FOR THE

*IR-078*

HUGH GATHERING 090402  
Ref. # 2002-10235

Unit Letter-M (SW¼ of the SW¼) of Section 12  
Latitude: 32°29'11.080"N/Longitude: 103°07'29.637"W  
and

Unit Letter-P (SE¼ of the SE¼) of Section 11  
Latitude: 32°29'11.007"N/Longitude: 103°07'33.864"W,

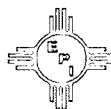
Township 21 South and Range 37 East

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

MARCH 2005

PREPARED BY

Environmental Plus, Inc.  
2100 Avenue O  
P.O. Box 1558  
Eunice, New Mexico 88231  
Tele 505•394•3481 FAX 505•394•2601



## Distribution List

Name	Title	Company or Agency	Mailing Address	e-mail
Ed Martin	Environmental Manager	NMOCD	P.O. Box 6429, 1220 S. St. Francis Drive, Santa Fe, NM 87505	EMartin@state.nm.us
Larry Johnson	Environmental Engineer	NMOCD	1625 French Dr., Hobbs, NM 88231	LWJohnson@state.nm.us
James Bryant	Landowner (west side)		--	--
Bill & Paige McNeill	Landowners (east side)		--	--
Camille Reynolds	Environmental Supervisor	Plains	P.O. Box 3119, Midland, TX 79702	CJReynolds@paalp.com
Jeff Dann	Environmental Director	Plains	333 Clay Street Suite #1600, Houston, TX 77002	JPDann@paalp.com
file		EPI	P.O. Box 1558, Eunice, NM 88231	Enviplus1@aol.com

NMOCD - New Mexico Oil Conservation Division  
 Plains - Plains All American Pipeline  
 EPI - Environmental Plus, Inc.

## STANDARD OF CARE

### Stage 1 and Stage 2 Abatement Plan

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.

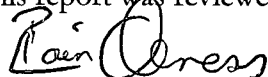
This report was prepared by:



Patrick W. McCasland

March 15, 2005  
Date

This report was reviewed by:



Iain Olness, PG

15 March 2005  
Date

# Table of Contents

Distribution List .....	i
Standard of Care .....	ii
Table of Contents .....	iii
1.0 Introduction .....	1
2.0 "Responsible Person" .....	1
3.0 Stage 1 Abatement Plan .....	1
3.1 Background .....	1
3.2 Initial Spill Mitigation .....	2
3.3 Stage 1 Abatement Plan Objectives as per New Mexico Oil Conservation Division	
Regulation 19.E(3) .....	2
3.3.1 Project Organization and Responsibility .....	3
3.3.2 Project Safety .....	3
3.3.3 Site Description .....	3
3.3.3.1 Historical Use .....	3
3.3.3.2 Legal Descriptions .....	3
3.3.3.2.1 Release on the east side of NMSR 18 .....	4
3.3.3.2.2 Release on the west side of NMSR 18 .....	4
3.3.3.3 Photographic documentation .....	4
3.3.3.4 Ecological Description .....	4
3.3.4 Environmental Media Characterization .....	4
3.3.4.1 Area Ground Water Levels .....	4
3.3.4.2 Water Well Inventory .....	5
3.3.4.3 Water Wells Actually or Potentially Affected by the Pollution .....	5
3.3.4.4 Aquifer Recharge .....	6
3.3.4.5 Depth to Ground Water Calculation .....	6
3.3.4.6 Ground Water Gradient .....	6
3.3.4.7 Wellhead Protection Area .....	6
3.3.4.8 Distance to Nearest Surface Water Body .....	6
3.3.4.9 Seasonal Stream Flow Characteristics .....	6
3.3.5 Delineation of Nature, Extent, and Magnitude of Contamination	
(19NMAC15.A.19.E(3)(b)(i), (ii)) .....	6
3.3.5.1 Release on the east side of NMSR 18 .....	6
3.3.5.1.1 Highly Contaminated/Saturated Soils .....	6
3.3.5.1.2 Unsaturated Contaminated Soils .....	6
3.3.5.1.3 Ground Water Contamination .....	6
3.3.5.1.4 Other Relevant Media Contamination .....	7
3.3.5.1.5 Background (Up-gradient) Sample Results .....	7
3.3.5.2 Release on the west side of NMSR 18 .....	7
3.3.5.2.1 Highly Contaminated/Saturated Soils .....	7
3.3.5.2.2 Unsaturated Contaminated Soils .....	7
3.3.5.2.3 Ground Water Contamination .....	7
3.3.5.2.4 Other Relevant Media Contamination .....	7
3.3.5.2.5 Background (Up-gradient) Sample Results .....	7
3.3.6 Identification of Remedial Action Levels .....	8
3.3.6.1 Site Ranking - Soil from the surface to 8'bgs .....	8
3.3.6.2 Site Ranking - Soil from 8'bgs to 58'bgs .....	8

3.3.6.3 Risk-Based Closure .....	8
3.3.7 Proposed Borehole Sampling Locations .....	8
3.3.8 Monitoring Program (19NMAC15.A.19.E(3)(c)).....	8
3.3.9 Schedule for Stage 1 Abatement Plan Implementation .....	9
4.0 Stage 2 Abatement Plan .....	9
4.1 Soil Investigation and Proposed Remediation Strategy .....	9
4.1.1 Subsurface Soil Investigation – West side of NMSR 18.....	9
4.1.2 Subsurface Soil Investigation – East side of NMSR 18.....	11
4.1.3 Remediation Strategy.....	13
4.1.3.1 East Release Excavation Preparation.....	13
4.1.3.2 West Release Excavation Preparation.....	13
4.1.3.3 Engineered Barrier Installation .....	13
4.1.3.4 Backfilling, Contouring, and Reseeding.....	14
4.2 Product Recovery and Ground Water Remediation.....	14
4.2.1 Product Recovery .....	14
4.2.2 Ground Water Remediation.....	14
4.3 Site Surface Restoration .....	14
4.4 Abatement and Monitoring Schedule .....	14
4.5 Public Notification.....	14
Attachment I: Well Report, Maps and Figures .....	16
Attachment II: Site Photographs .....	23
Attachment III: Quality Assurance Plan.....	25
Attachment IV: Site Soil Delineation Information .....	30
Attachment V: Site Information and Metrics Form and Initial NMOCD Form C-141 .....	33

## 1.0 INTRODUCTION

Environmental Plus, Inc. (EPI), on behalf of Plains All American Pipeline (Plains), submits this Stage 1 and Stage 2 Abatement Plan to the New Mexico Oil Conservation Division for the investigation and remediation of the Plains All American Pipeline Hugh Gathering 090402 (Ref.#2002-10235). 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 All American Pipeline  
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 ground water 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 ground water, 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 All American Pipeline 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., Unit Letter-M (UL-M) (SW<sup>1</sup>/<sub>4</sub> of the SW<sup>1</sup>/<sub>4</sub>) of Section 12, Township 21 South (T21S) and Range 37 East (R37E) on property owned by William McNeill and UL-P (SE<sup>1</sup>/<sub>4</sub> of the SE<sup>1</sup>/<sub>4</sub>) of Section 11, T21S, R37E on property owned by James A. Bryant. The pipeline section has been replaced approximately 168 cubic yards (yd<sup>3</sup>) of impacted soil, excavated during replacement of the pipeline, has been 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 extend 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 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. Groundwater delineation efforts have installed 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 Section 4.1 of the Stage 2 Abatement Plan.

### 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 impact, i.e., horizontal and vertical extents, of the vadose zone and ground water 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 ground water underlying the site. The focus and scope were 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 ground water 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 ground water/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 All American Pipeline 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 12 and Section 11 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 Rat, 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 ground water 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 Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- 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 Ground Water 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-feet bgs and 100-feetbgs (reference the NMOSE Well Report in Attachment I). 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	No Data	No Data	No Data	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	No Data	No Data	No Data	No Data
Discharg	0.00	0.00	0.00	0.00	0.00
Spc	0	0	0	0	0
Spc-date	No Data	No Data	No Data	No Data	No Data
Qwyear	1965	1966	No Data	1965	1970
Temp	0.0	0.0	0.0	0.0	0.0
Tempdate	No Data	No Data	No Data	No Data	No Data
Obs-well	No Data	No Data	No Data	No Data	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), because of the relatively shallow occurrence of ground water in the area, suggests the upper most, unconfined aquifer is recharged from the surface.

#### **3.3.4.5 Depth to Ground Water Calculation**

The NMOCD requires the site be ranked to determine which soil TPH threshold will apply and defines depth to ground water as, "the vertical distance from the lowermost contaminants to the seasonal high water elevation of the ground water." The uppermost occurrence of ground water 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 ground water is 0.0-feet.

#### **3.3.4.6 Ground Water 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 extend 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 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 is impacted above the NMOCD guideline thresholds for the CoCs but is unsaturated.

##### **3.3.5.1.3 Ground Water Contamination**

The ground water 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). *about 100' in ?*

##### 3.3.5.2.2 Unsaturated Contaminated Soils

The "in-situ" soil 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 Ground Water Contamination

The ground water 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 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 is the only other well not impacted with PSH that is being monitored 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 approximately 30-feet north of the leak origin, 1.40-feet in monitor well MW3 approximately 75-feet south of the leak origin, 3.22-feet in monitor well MW9 approximately 50-feet southwest of the leak origin, and 1.34-feet in monitor well MW10 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) ground water Maximum Contaminant Levels for the CoCs will apply to site ground water.

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

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

Depth to Groundwater /  $>50' = 10$   
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-feet bgs to 58-feet 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 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 disposition information. Data is summarized into an annual report

documenting progress and status and submitted to the Santa Fe and Hobbs offices of the NMOCED 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

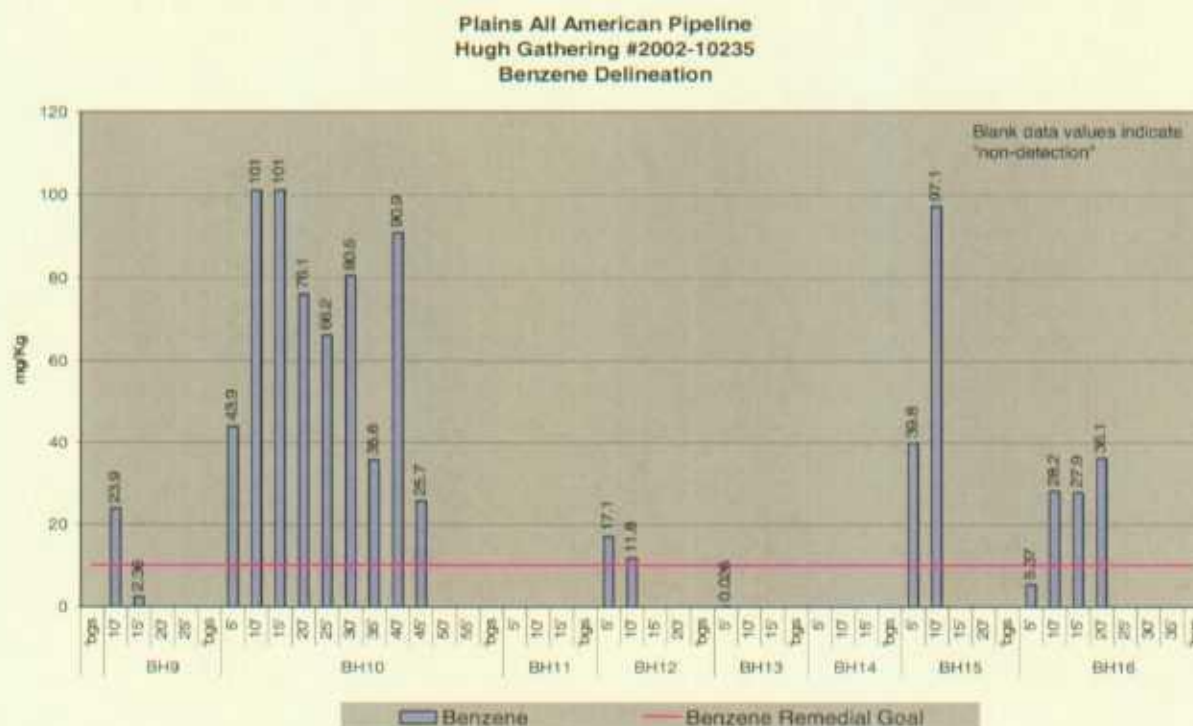
The objective of the Stage 2 Abatement Plan is to abate soil and ground water contamination to acceptable levels as delineated and identified during the Stage 1 Abatement Plan. The information collected to date provides information sufficient to select an abatement strategy and develop a plan for the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

### 4.1 SOIL INVESTIGATION AND PROPOSED REMEDIATION STRATEGY

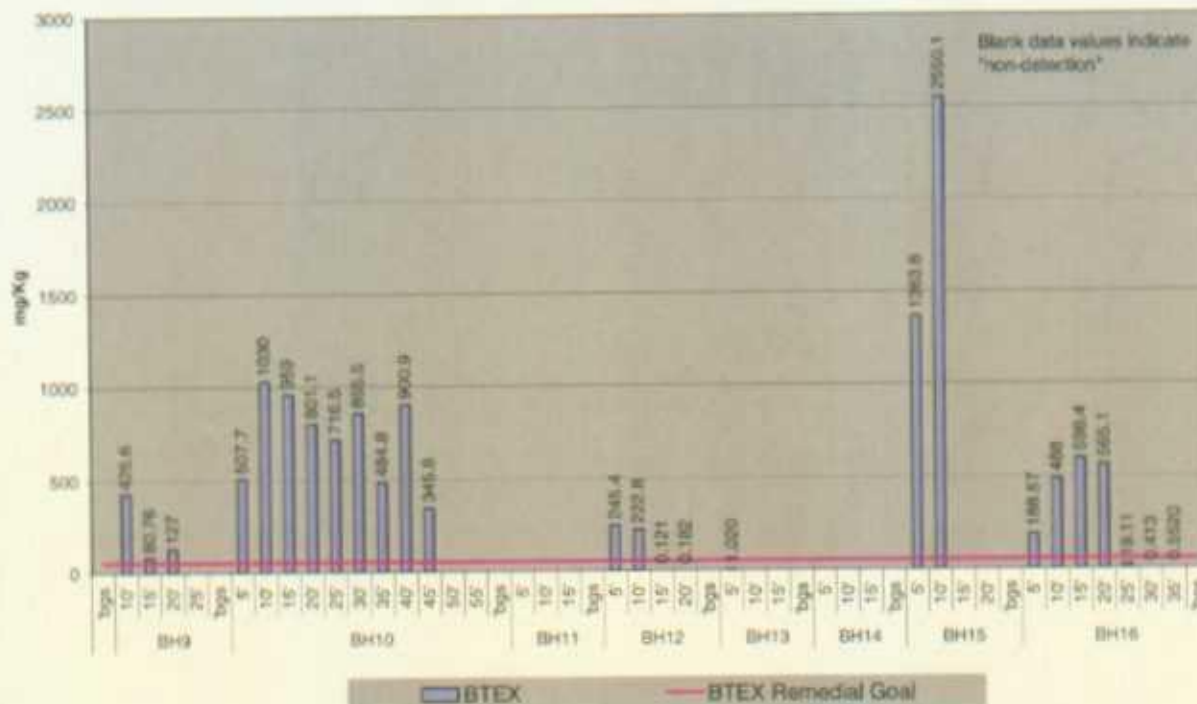
Based on information collected during the preliminary soil delineation phase of the project, Plains proposes to isolate the remaining crude oil source term by installing an engineered 2-foot thick clay barrier to prevent the vertical transport mechanism and eliminate the groundwater exposure pathway of the petroleum hydrocarbon source term.

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

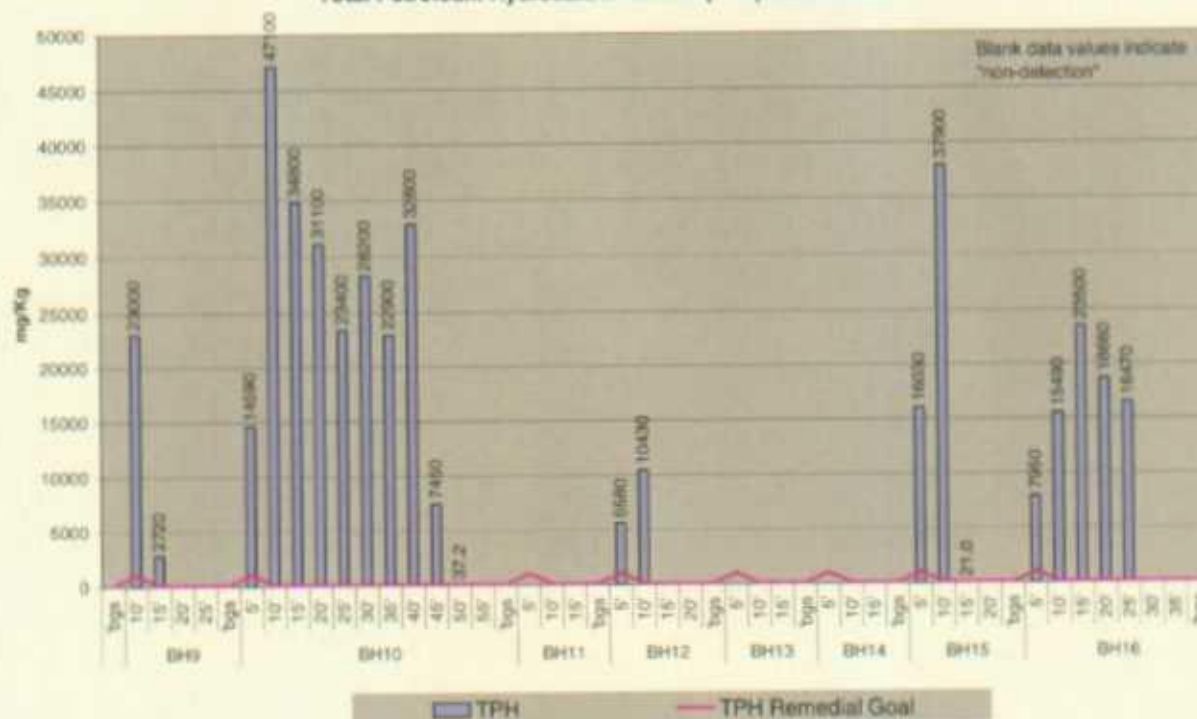
The preliminary investigation conducted in September 2002 advanced and sampled 8 boreholes, one of which was converted into a groundwater monitor well, i.e. BH10 was completed as monitor well MW2. The site borehole map is included in Attachment I. The analytical results are presented and summarized in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



Plains All American Pipeline  
Hugh Gathering #2002-10235  
BTEX Delineation

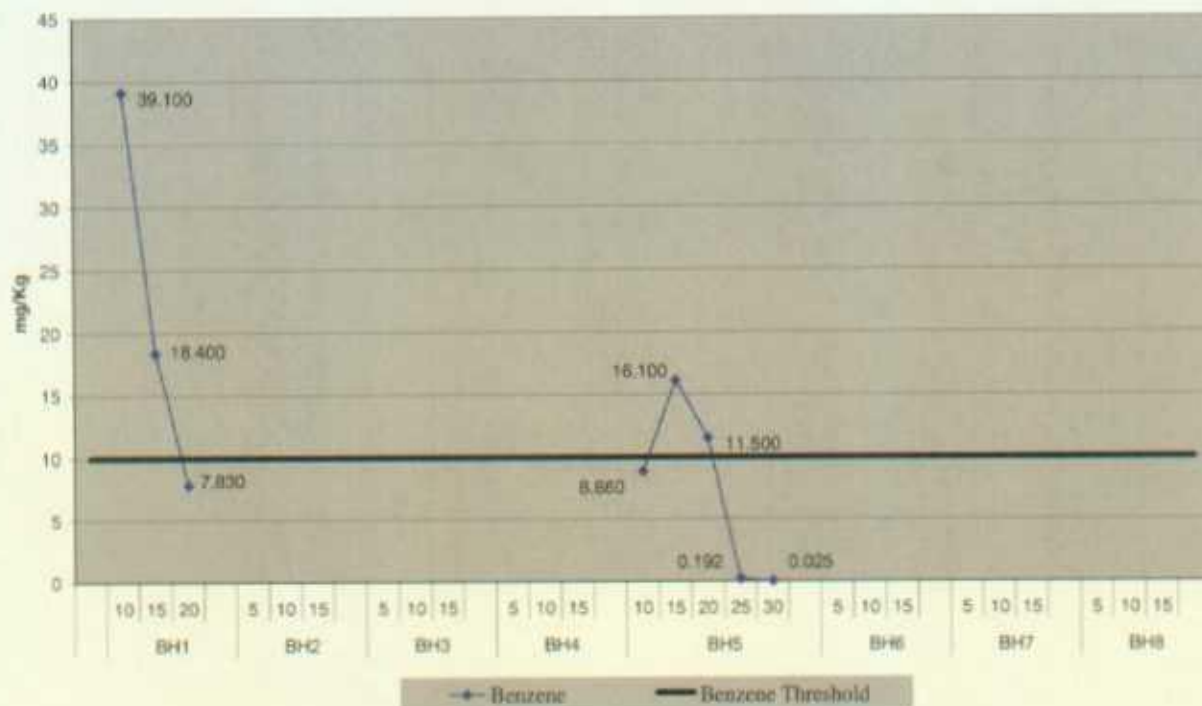


Plains All American Pipeline  
Hugh Gathering #2002-10235  
Total Petroleum Hydrocarbon 8015M (TPH) Delineation

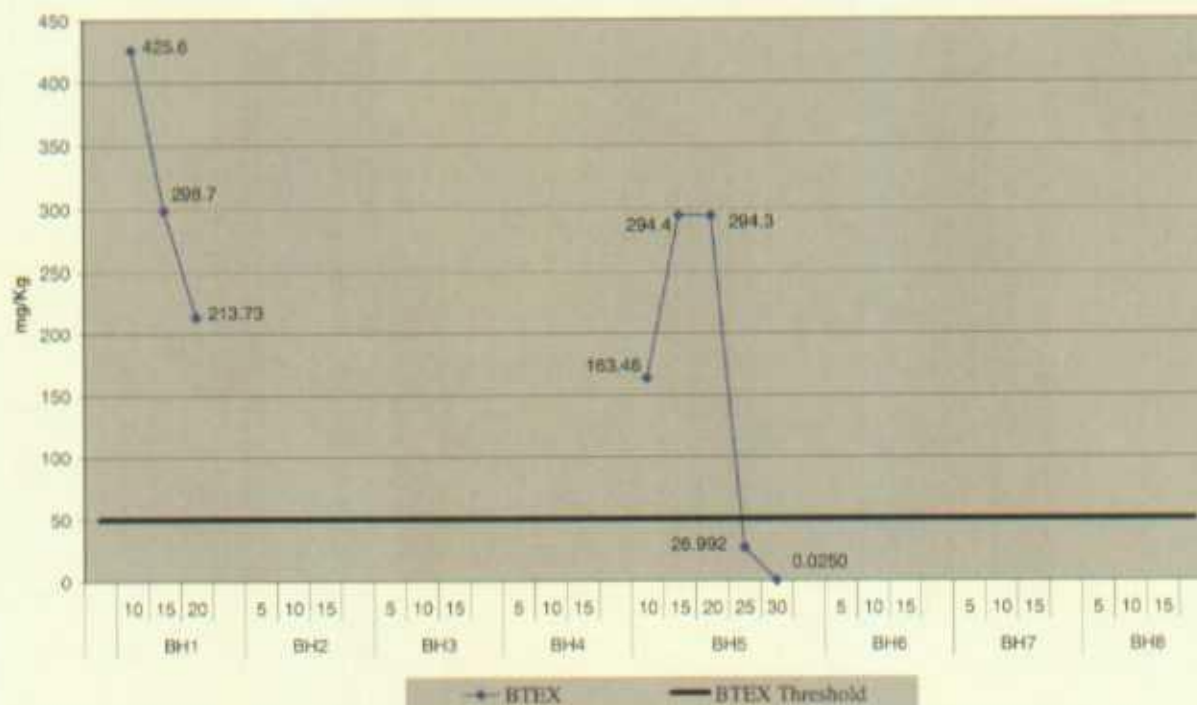




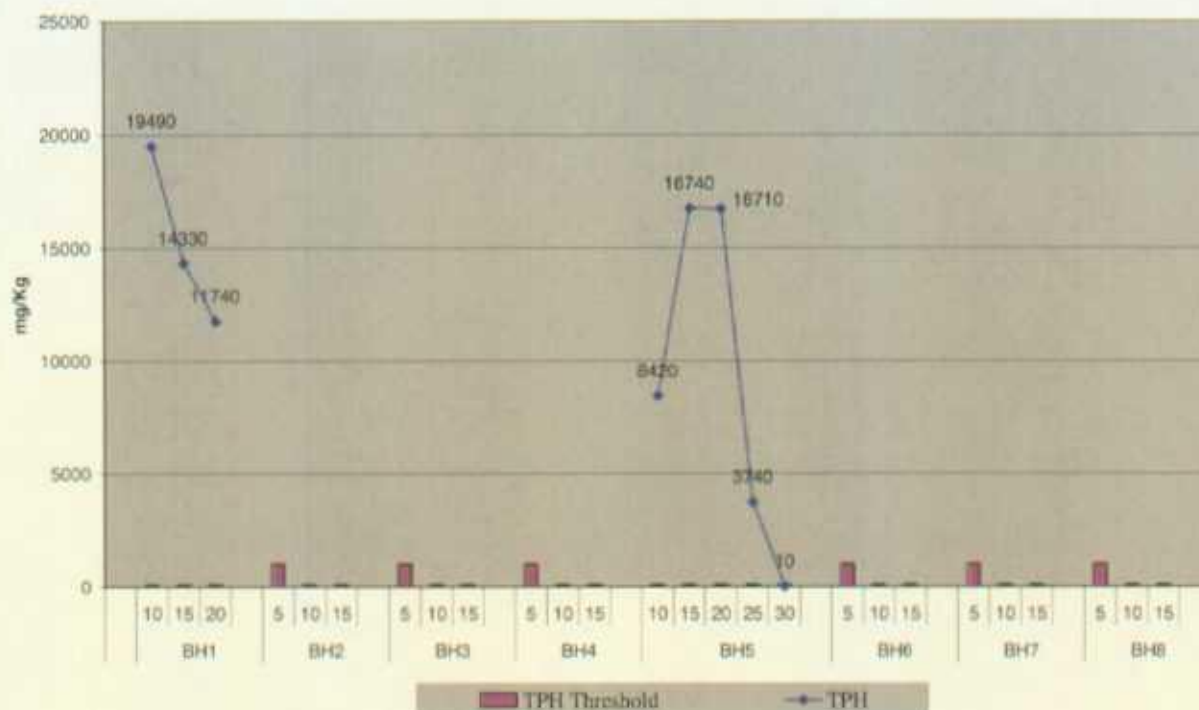
Plains All American Pipeline  
Hugh Gathering #2002-10235 Eastside  
Benzene Delineation



Plains All American Pipeline  
Hugh Gathering #2002-10235 Eastside  
BTEX Delineation



Plains All American Pipeline  
Hugh Gathering #2002-10235 Eastside  
Total Petroleum Hydrocarbon 8015M Delineation



### 4.1.3 Remediation Strategy

Plains proposes dispose of impacted soils down to 10-foot bgs in the Plains Lea Station Landfarm and permanently isolate the remaining impacted soils above the NMOCD guidelines below 10'bgs with a 5-foot oversized compacted and engineer tested 2-foot thick clay barrier, relying on risk assessment conclusions to demonstrate adequate isolation.

#### 4.1.3.1 East Release Excavation Preparation

Soil impacted above the NMOCD remedial action levels down to 10'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 300 yd<sup>3</sup>, i.e., 25'x25'x10' = 232 yd<sup>3</sup> x 1.2 expansion factor = 278 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.

#### 4.1.3.2 West Release Excavation Preparation

Soil impacted above the NMOCD remedial action levels down to 10'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 750 yd<sup>3</sup>, i.e., 40'x40'x10' = 593 yd<sup>3</sup> x 1.2 expansion factor = 712 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.

#### 4.1.3.3 Engineered Barrier Installation

The 2-foot clay barriers will be installed in 1-foot thick compacted lifts and tested by an engineering firm to verify adequate compaction. 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.

#### **4.1.3.4 Backfilling, Contouring, and Reseeding**

After the barriers are installed, it is proposed to backfill the excavations with the clean soil and contour to the natural grade. The east side release will be reseeded with a seed blend acceptable to the landowner.

### **4.2 PRODUCT RECOVERY AND GROUND WATER REMEDIATION**

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

#### **4.2.1 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.

#### **4.2.2 Ground Water 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.

### **4.3 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 agreeable with the landowner.

### **4.4 ABATEMENT AND MONITORING SCHEDULE**

Sampling of the monitor wells will continue to be quarterly and 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 ground water will cease after receipt of 4 consecutive quarters of monitoring well data below regulatory limits. At that time the monitor wells will be abandoned.

### **4.5 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

---

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

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

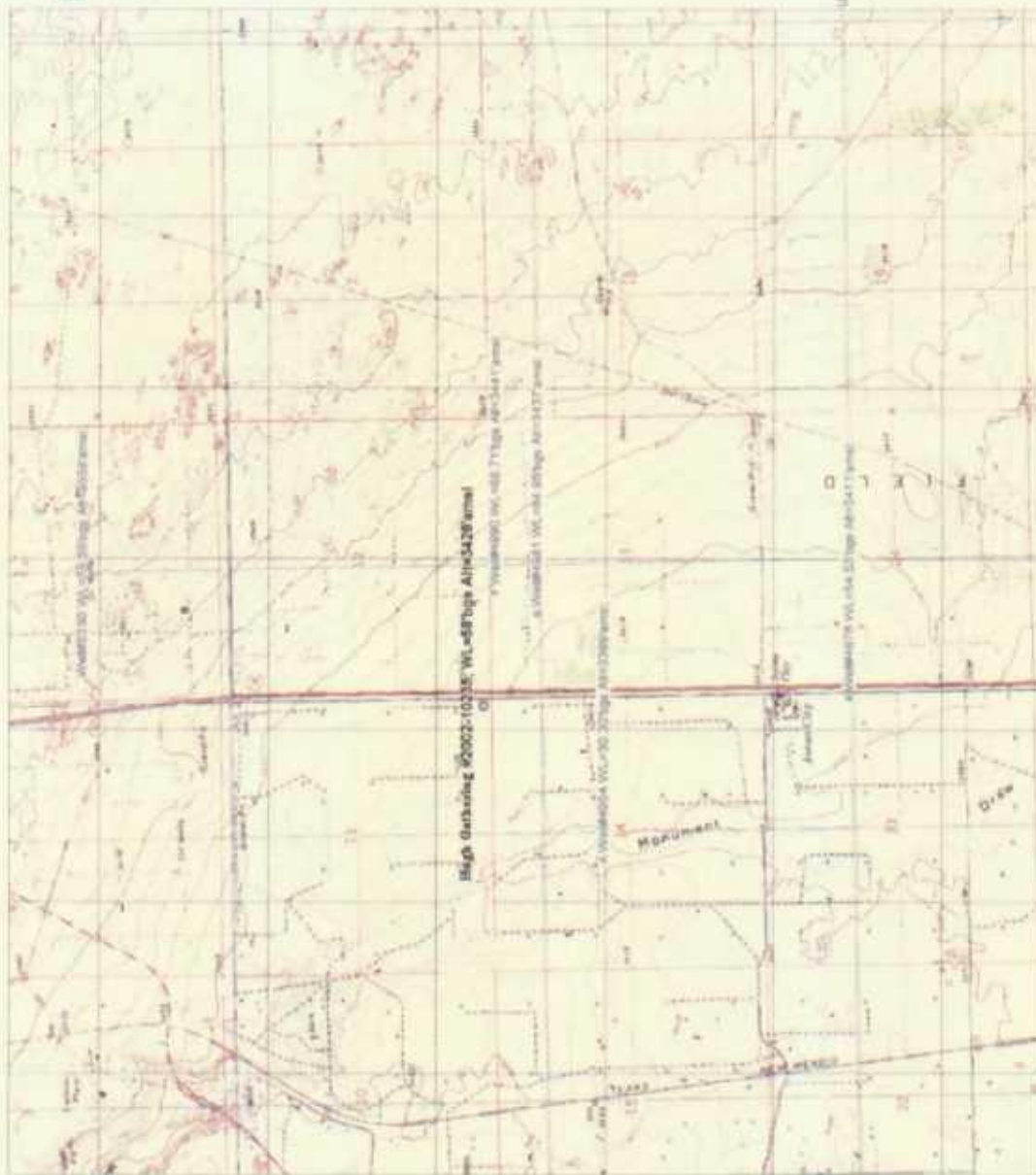
---

#### 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 SECII  
AND  
UL-M SEC12  
T2IS R37E  
LEA CO. NM**



N

SCALE 1:40,000



FEET

UNIVERSAL TRANSVERSE MERCATOR  
13 NORTH  
NAD 1983 SP'ON (New Mexico)

MULTIPLE FILES  
9/13/2002



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

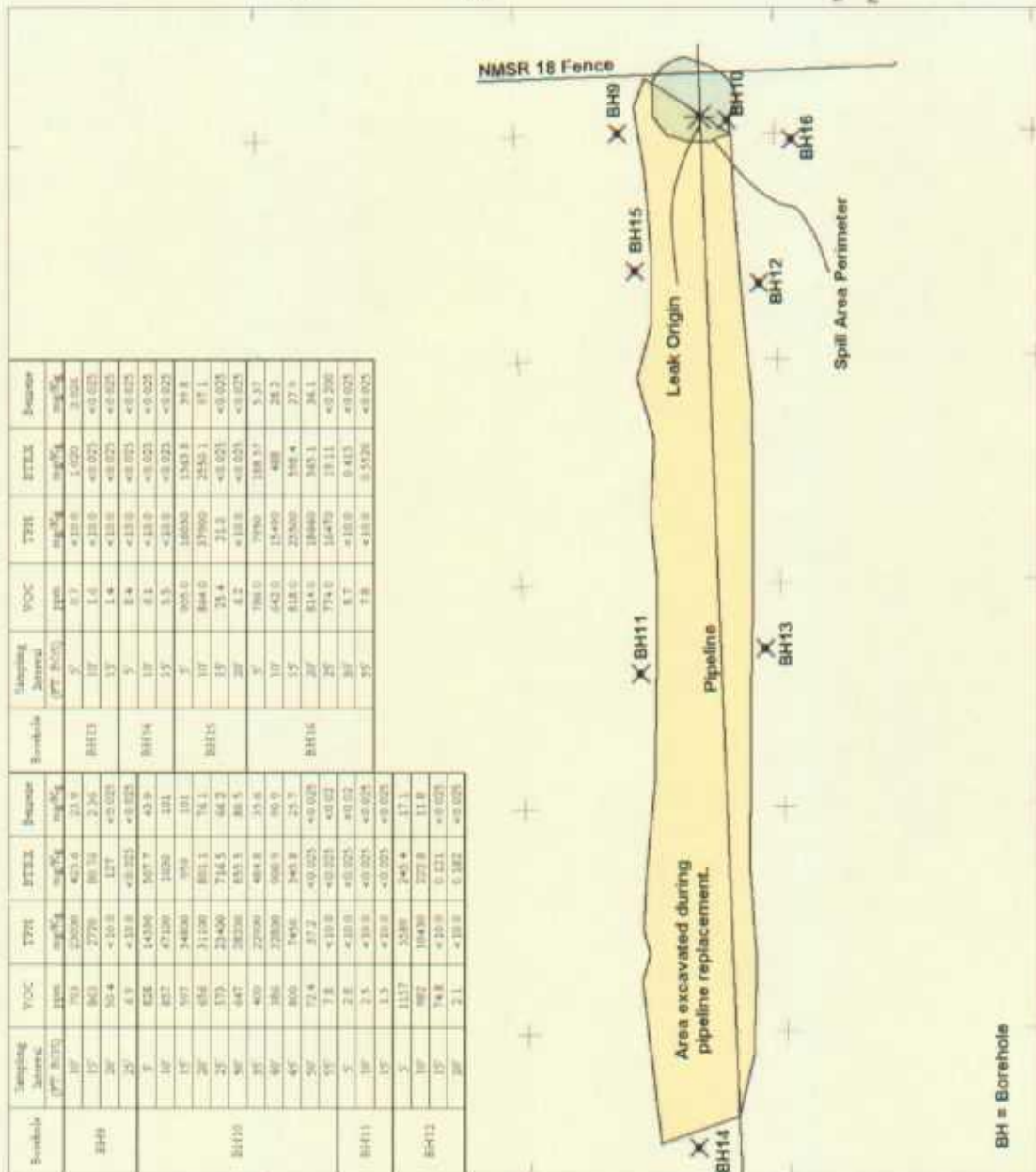


Scale 1:200

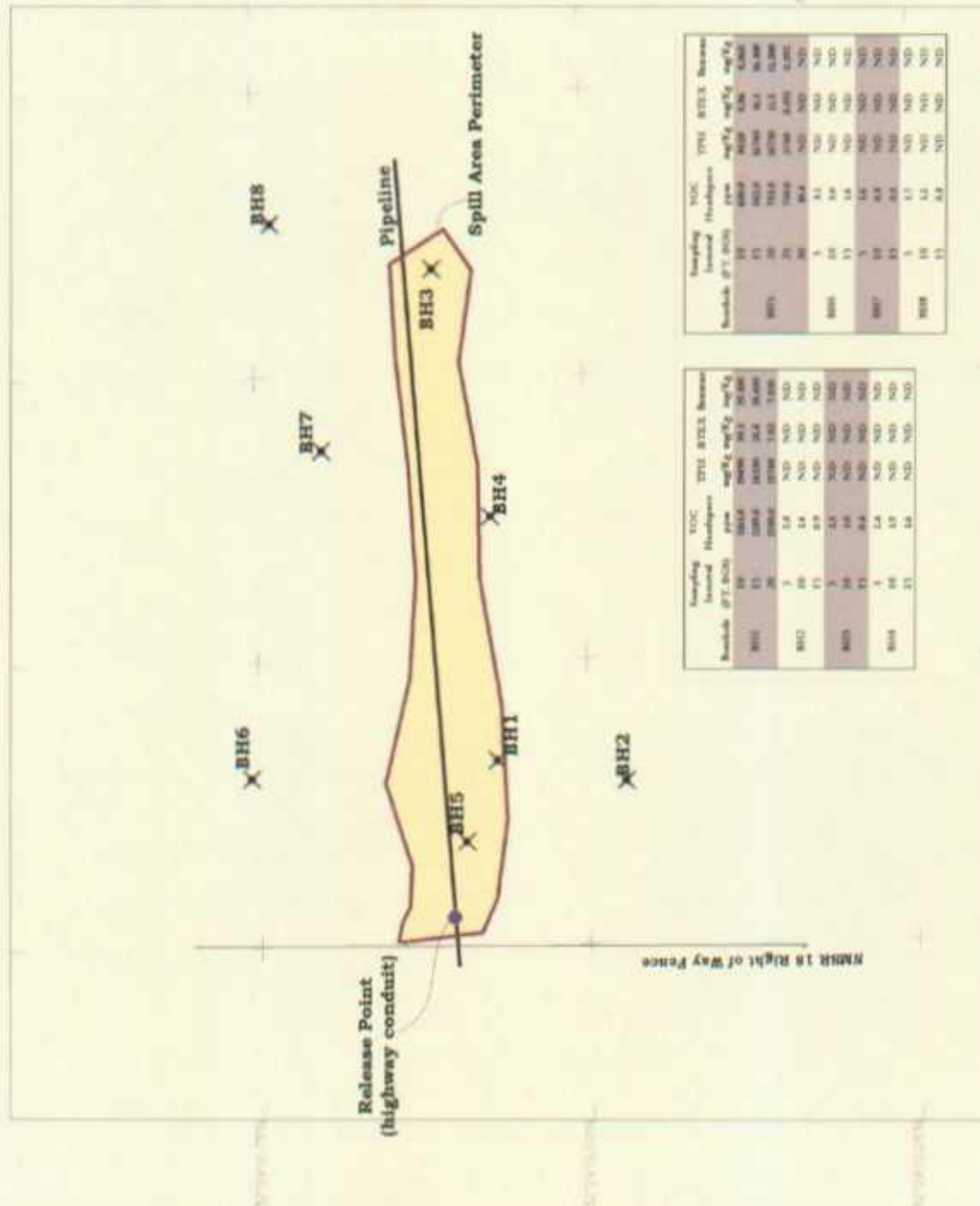


Universal Transverse Mercator  
13 North  
NAD 1983 HF-2B (New Mexico)

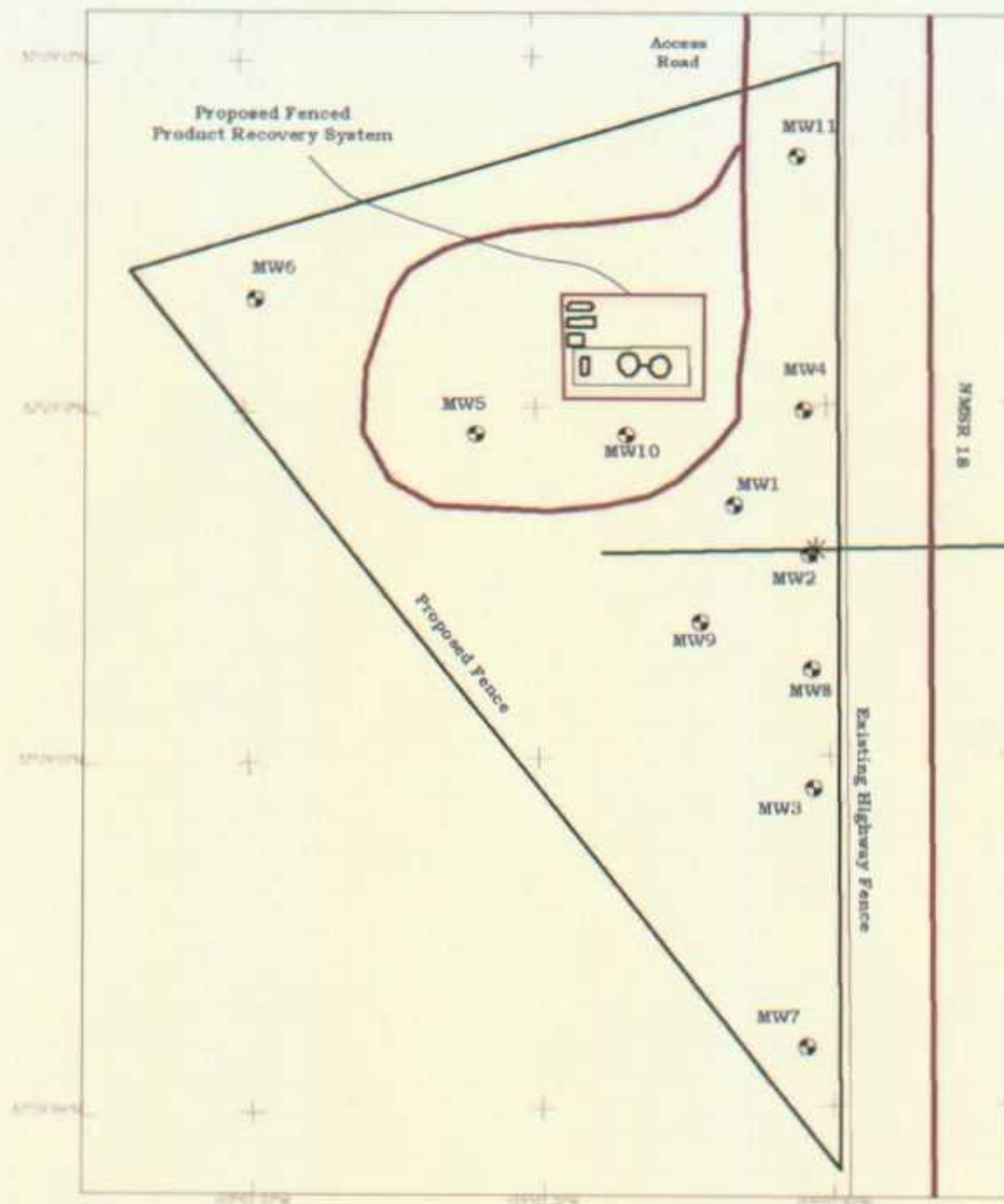
Hugh Gathering West Borehole  
3/10/2005



Borehole	Sampling Interval (FT)	VOC	TTH	ETEX	Source	Borehole	Sampling Interval (FT)	VOC	TTH	ETEX	Source
BH11	5'	8.3	13.8	0.025	0.025	BH14	5'	8.3	13.8	0.025	0.025
BH12	5'	8.3	13.8	0.025	0.025	BH15	5'	8.3	13.8	0.025	0.025
BH13	5'	8.3	13.8	0.025	0.025	BH16	5'	8.3	13.8	0.025	0.025
BH14	5'	8.3	13.8	0.025	0.025						
BH15	5'	8.3	13.8	0.025	0.025						
BH16	5'	8.3	13.8	0.025	0.025						







PLAINS ALL AMERICAN HUGH GATHERING #2002-10235  
 UL-P SECTION II T21S R37E LEA COUNTY NEW MEXICO  
 PROPOSED FENCED AREA = 33,277 SQFT ACCESS ROAD = 400 FT

UNIVERSAL TRANSVERSE MERCATOR  
 15 North  
 NAD 1927 (WESTERN US)

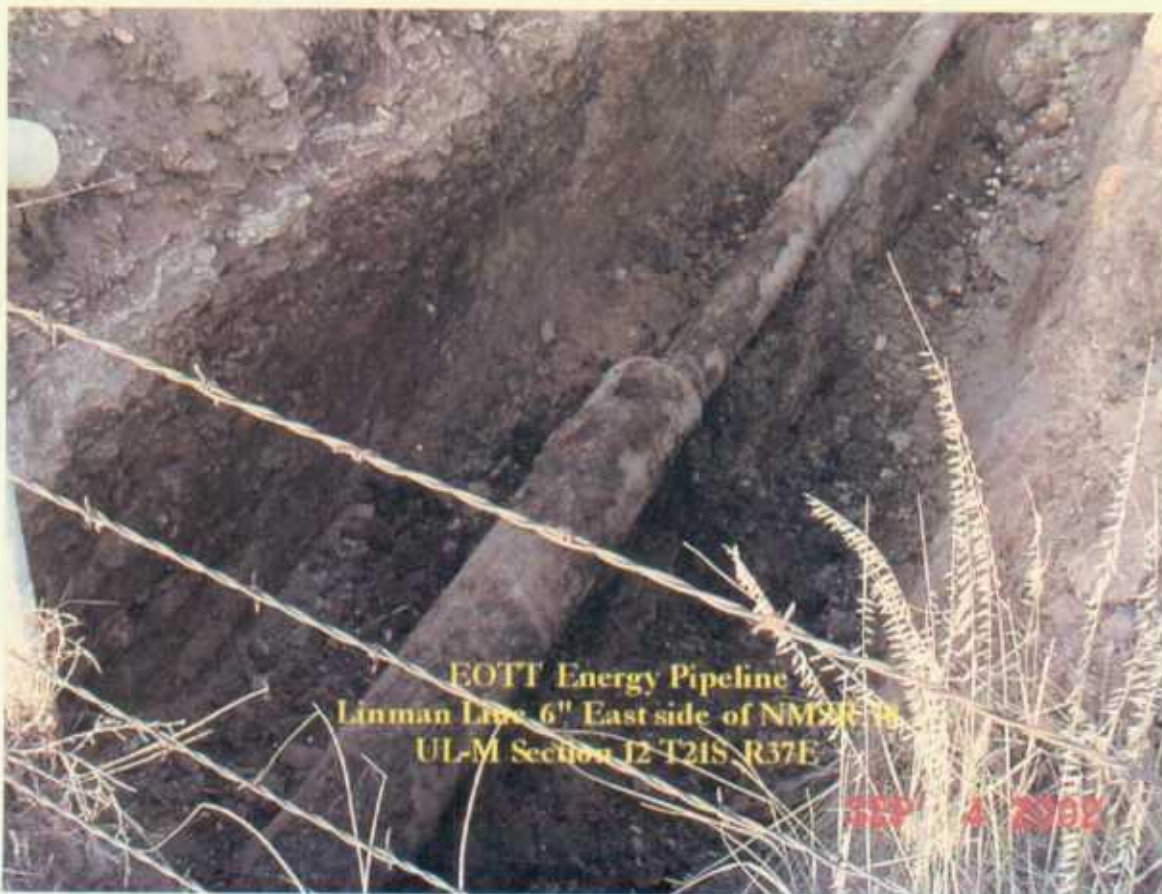
SCALE 1:600

HUGH GATHERING SURFACE USE

2/21/2005



## **Attachment II: Site Photographs**



### **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 ground water. 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 ground water 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 Ground Water Sampling

Ground water 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 Ground Water Level Measurements

Ground water levels will be taken with an accurate water level meter at each borehole where ground water 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 ground water 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 Westside 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>9</sup> mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg
BH9	Probe	10'	SEL691102BH9	9/11/02	Brown Oily Sand	793	10600	12400	23000	425.6	23.9	111	73.8
	Probe	15'	SEL691102BH9	9/11/02	Lt. Brown Oily Sand	863	1220	1500	2720	80.76	2.36	17.7	17.7
	Probe	20'	SEL691102BH9	9/11/02	Lt. Brown Oily Sand	50.4	<10.0	<10.0	<10.0	127	<0.025	<0.025	0.031
	Probe	25'	SEL691102BH9	9/11/02	Lt. Brown Oily Sand	6.9	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025
BH10	Probe	5'	SEL691202BH10	9/12/02	Brown Oily Sand	828	7560	7030	14590	507.7	43.9	160	99
	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
BH11	Probe	55'	SEL691202BH11	9/13/02	Red Clay	7.8	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025
	Probe	5'	SEL691602BH11	9/16/02	Lt. Brown Sand	2.8	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025
	Probe	10'	SEL691602BH11	9/16/02	Lt. Brown Sand	2.5	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025
	Probe	15'	SEL691602BH11	9/16/02	Lt. Brown Sand	1.3	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025
BH12	Probe	5'	SEL691602BH12	9/16/02	Brown Oily Sand & Rk	1157	2740	2840	5580	245.4	17.1	73.5	46.5
	Probe	10'	SEL691602BH12	9/16/02	Brown Oily Sand	982	4500	5930	10430	222.8	11.8	60.3	45.7
	Probe	15'	SEL691602BH12	9/16/02	Lt. Brown Sand	74.8	<10.0	<10.0	<10.0	0.121	<0.025	0.028	0.03
	Probe	20'	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
	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
BH14	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
BH16	Probe	15'	SEL691702BH16	9/17/02	Lt. Brown Sand	818.0	11400	12100	23500	598.4	27.9	187	120
	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
				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									
				100 ppm Isobutylene calibration gas = 101 ppm									

<sup>1</sup>bgs - below ground surface

<sup>2</sup>VOC-Volatile Organic Contaminants/Constituents

<sup>3</sup>GRO-Gasoline Range Organics C<sub>6</sub>-C<sub>12</sub>

<sup>4</sup>DRO-Diesel Range Organics C<sub>12</sub>-C<sub>35</sub>

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

na - not analyzed

<sup>9</sup>BTEX - Mass sum of benzene, toluene, ethylbenzene, and xylenes

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

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

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

Page 1 of 9

# 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

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

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

### 8021B/5030 BTEX

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

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

Page 2 of 9

# 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

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

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

### 8021B/5030 BTEX

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

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	605%	80	120
Bromofluorobenzene	129%	80	120

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

Page 3 of 9

# 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>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		9/15/02 0:29	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	104%	80	120
Bromofluorobenzene	104%	80	120

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

Page 4 of 9

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/13/02	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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 0:51	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	100%	80	120
Bromofluorobenzene	105%	80	120

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

Page 5 of 9

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/13/02	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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 1:13	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	100%	80	120
Bromofluorobenzene	106%	80	120

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

Page 6 of 9

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/13/02	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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 1:35	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	91%	80	120
Bromofluorobenzene	97%	80	120

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

Page 7 of 9

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/13/02	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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 1:57	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	97%	80	120
Bromofluorobenzene	104%	80	120

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

Page 8 of 9

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

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

Order#: C0204500  
Project: 2002-10235  
Project Name: Linman 6"  
Location: None Given

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

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/13/02	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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 2:19	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	107%	80	120
Bromofluorobenzene	112%	80	120

Approval:

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.

Date

**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	104.4%	

**ENVIRONMENTAL LAB OF TEXAS****QUALITY CONTROL REPORT****8021B/5030 BTEX****Order#: G0204500**

<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	0.094	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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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.%	0.0%
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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. Joubert Date: 9-19-02  
Environmental Lab of Texas I, Ltd.

Environmental Lab of Texas, Inc.

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

~~Don Alexander~~ Frank Hernandez

Project Name:

Livston 6"

Company Name

~~Environmental Plus for Scott~~

Project #:

2002-10235

Company Address:

2400 Ave. C

City/State/Zip:

~~no. 20.000 8883~~

२०३.

Telephone No.:

5.394.0481

Sampler Signature:

Bradley Bk

[illegible]

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

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 2:41	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	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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003173-02		9/15/02 3:03	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	100%	80	120
Bromofluorobenzene	108%	80	120

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

Page 2 of 8

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003173-02		9/15/02 3:25	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	92%	80	120
Bromofluorobenzene	99%	80	120

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

Page 3 of 8

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

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

Order#: C0204501  
Project: 2002-10235  
Project Name: Liman 6"  
Location: None Given

Lab ID: 0204501-04  
Sample ID: SEL691002BIT5-10'

### 8015M

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

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

### 8021B/5030 BTEX

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

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

Page 4 of 8

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

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

Page 5 of 8

# 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

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

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

### 8021B/5030 BTEX

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

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

Page 6 of 8

# 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>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	1,340	10.0
DRO, >C12-C35	2,400	10.0
TOTAL, C6-C35	3,740	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		9/15/02 4:54	1	25	CK	8021B

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

Page 7 of 8

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

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

Approval:

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.

Date

*Raland K. Tuttle* 9-18-02

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

Page 8 of 8

**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.%	
Ethylbenzene-mg/kg		0204501-08	0	0.1	0.093	93.%	
Toluene-mg/kg		0204501-08	0	0.1	0.096	96.%	
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.%	
<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.%	1.1%
Ethylbenzene-mg/kg		0204501-08	0	0.1	0.096	96.%	3.2%
Toluene-mg/kg		0204501-08	0	0.1	0.096	96.%	0.%
p/m-Xylene-mg/kg		0204501-08	0	0.2	0.198	99.%	2.6%
o-Xylene-mg/kg		0204501-08	0	0.1	0.095	95.%	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.%	
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#:** 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:

*Ralph K. Judd*  
Environmental Lab of Texas I, Ltd.

Date:

9-18-02



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

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003161-02		9/16/02 23:39	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	97%	80	120

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

Page 1 of 13

# 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>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</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>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>		
0003161-02		9/17/02 0:01	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	101%	80	120
Bromofluorobenzene	105%	80	120

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

Page 2 of 13

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 3 of 13

# 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

Page 4 of 13

# 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 1:07	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	100%	80	120

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

Page 5 of 13

# 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>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 1:29	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	97%	80	120
Bromofluorobenzene	100%	80	120

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

Page 6 of 13

# 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> Blank	<u>Date</u> Prepared	<u>Date</u> Analyzed	<u>Sample</u> Amount	<u>Dilution</u> Factor	<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> Blank	<u>Date</u> Prepared	<u>Date</u> Analyzed	<u>Sample</u> Amount	<u>Dilution</u> Factor	<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

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

Page 7 of 13

# 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: SEL691102BH8-10'

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003161-02		9/17/02 2:14	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	98%	80	120

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

Page 8 of 13

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

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

Page 9 of 13

# 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

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

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

### 8021B/5030 BTEX

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

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

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

Page 10 of 13

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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-Xylenc	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

Page 11 of 13

# 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

Method	Date	Date	Sample	Dilution	Analyst	Method
Blank	Prepared	Analyzed	Amount	Factor		
		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

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

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

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

Page 12 of 13

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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-Xylenc	<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  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

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

Page 1 of 1

# 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: \_\_\_\_\_

*Salman K. J. J.*  
Environmental Lab of Texas I, Ltd.

Date: \_\_\_\_\_

*9-19-02*

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0204502

<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		
TOTAL, C6-C35-mg/kg		0003156-02			<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%	
TOTAL, C6-C35-mg/kg		0204502-08	0	952	1080	113.4%	
<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%
TOTAL, C6-C35-mg/kg		0204502-08	0	952	1140	119.7%	5.4%
<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%	
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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%	

Environmental Lab of Texas, Inc.

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Pat McEasterd Frank Hernandez

Project Name: Liman 6

Company Name Environmental Plus Inc East

Project #: 2002-10235

Company Address: 250 Ave. A

Project Loc:

City/State/Zip: Eviee N.M 88231

PO #:

Telephone No: 505-394-3481

Fax No: 505-394-7601

Sampler Signature: Bradley Blum

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative										Matrix			Other Specialty	T4.2.1	T4.2.2	T4.2.3	T4.2.4	T4.2.5	T4.2.6	T4.2.7	T4.2.8	T4.2.9	T4.2.10	T4.2.11	T4.2.12	T4.2.13	T4.2.14	T4.2.15	T4.2.16	T4.2.17	T4.2.18	T4.2.19	T4.2.20	T4.2.21	T4.2.22	T4.2.23	T4.2.24	T4.2.25	T4.2.26	T4.2.27	T4.2.28	T4.2.29	T4.2.30	T4.2.31	T4.2.32	T4.2.33	T4.2.34	T4.2.35	T4.2.36	T4.2.37	T4.2.38	T4.2.39	T4.2.40	T4.2.41	T4.2.42	T4.2.43	T4.2.44	T4.2.45	T4.2.46	T4.2.47	T4.2.48	T4.2.49	T4.2.50	T4.2.51	T4.2.52	T4.2.53	T4.2.54	T4.2.55	T4.2.56	T4.2.57	T4.2.58	T4.2.59	T4.2.60	T4.2.61	T4.2.62	T4.2.63	T4.2.64	T4.2.65	T4.2.66	T4.2.67	T4.2.68	T4.2.69	T4.2.70	T4.2.71	T4.2.72	T4.2.73	T4.2.74	T4.2.75	T4.2.76	T4.2.77	T4.2.78	T4.2.79	T4.2.80	T4.2.81	T4.2.82	T4.2.83	T4.2.84	T4.2.85	T4.2.86	T4.2.87	T4.2.88	T4.2.89	T4.2.90	T4.2.91	T4.2.92	T4.2.93	T4.2.94	T4.2.95	T4.2.96	T4.2.97	T4.2.98	T4.2.99	T4.2.100	T4.2.101	T4.2.102	T4.2.103	T4.2.104	T4.2.105	T4.2.106	T4.2.107	T4.2.108	T4.2.109	T4.2.110	T4.2.111	T4.2.112	T4.2.113	T4.2.114	T4.2.115	T4.2.116	T4.2.117	T4.2.118	T4.2.119	T4.2.120	T4.2.121	T4.2.122	T4.2.123	T4.2.124	T4.2.125	T4.2.126	T4.2.127	T4.2.128	T4.2.129	T4.2.130	T4.2.131	T4.2.132	T4.2.133	T4.2.134	T4.2.135	T4.2.136	T4.2.137	T4.2.138	T4.2.139	T4.2.140	T4.2.141	T4.2.142	T4.2.143	T4.2.144	T4.2.145	T4.2.146	T4.2.147	T4.2.148	T4.2.149	T4.2.150	T4.2.151	T4.2.152	T4.2.153	T4.2.154	T4.2.155	T4.2.156	T4.2.157	T4.2.158	T4.2.159	T4.2.160	T4.2.161	T4.2.162	T4.2.163	T4.2.164	T4.2.165	T4.2.166	T4.2.167	T4.2.168	T4.2.169	T4.2.170	T4.2.171	T4.2.172	T4.2.173	T4.2.174	T4.2.175	T4.2.176	T4.2.177	T4.2.178	T4.2.179	T4.2.180	T4.2.181	T4.2.182	T4.2.183	T4.2.184	T4.2.185	T4.2.186	T4.2.187	T4.2.188	T4.2.189	T4.2.190	T4.2.191	T4.2.192	T4.2.193	T4.2.194	T4.2.195	T4.2.196	T4.2.197	T4.2.198	T4.2.199	T4.2.200	T4.2.201	T4.2.202	T4.2.203	T4.2.204	T4.2.205	T4.2.206	T4.2.207	T4.2.208	T4.2.209	T4.2.210	T4.2.211	T4.2.212	T4.2.213	T4.2.214	T4.2.215	T4.2.216	T4.2.217	T4.2.218	T4.2.219	T4.2.220	T4.2.221	T4.2.222	T4.2.223	T4.2.224	T4.2.225	T4.2.226	T4.2.227	T4.2.228	T4.2.229	T4.2.230	T4.2.231	T4.2.232	T4.2.233	T4.2.234	T4.2.235	T4.2.236	T4.2.237	T4.2.238	T4.2.239	T4.2.240	T4.2.241
----------------------	------------	--------------	--------------	-------------------	--------------	--	--	--	--	--	--	--	--	--	--------	--	--	-----------------	--------	--------	--------	--------	--------	--------	--------	--------	--------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------



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</u> <u>Collected</u>	<u>Date / Time</u> <u>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>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					
0204544-02	SEL691202BH10 10'	SOIL	9/12/02 7:50	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					
0204544-03	SEL691202BH10 15'	SOIL	9/12/02 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					
0204544-04	SEL691202BH10 20'	SOIL	9/12/02 8:35	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					
0204544-05	SEL691202BH10 25'	SOIL	9/12/02 9:05	9/18/02 15:20	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 1.5 C		
	8015M					
	8021B/5030 BTEX					
0204544-06	SEL691202BH10 30'	SOIL	9/12/02 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					
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</u> <u>Collected</u>	<u>Date / Time</u> <u>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>	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#: G0204544  
Project: 2002-10235  
Project Name: Linman Line 6"  
Location: None Given

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

### 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>		
		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>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>		
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

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 2 of 8

# 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: Human Line 6"  
Location: None Given

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

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 3 of 8

# 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: 0204544-04  
Sample ID: SEL691202BH10 20'

### 8015M

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

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

### 8021B/5030 BTEX

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

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

Page 4 of 8

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 5 of 8

# 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>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	13800	50.0
DRO, >C12-C35	14400	50.0
TOTAL, C6-C35	28200	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 4:31	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	80.5	0.200
Ethylbenzene	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

Page 6 of 8

# 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: SEL691202BH10 35'

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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-Xylene	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

Page 7 of 8

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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: 

Raland K. Tuttle, Lab Director, QA Officer  
Caley D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date 9/25/02

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

Page 8 of 8

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0204544

<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%	0.0%
<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#: G0204544

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	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.%
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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:

  
Environmental Lab of Texas I, Ltd.

Date:

9/25/02

12600 West I-20 East  
Odessa Texas 79763

Phone: 915-563-1800  
Fax: 915-563-1713

**Sampler Signature:**

### Special Instructions

FAX RESULTS TO PAT MCCASLAND ASAP

**Relinquished:**

2

Received by:

Received by: Pat S  
Received by: Jeanne Mcmurray

Date	Time
------	------

Date	Time
------	------

Sample Containers Int	N
-----------------------	---

Temperature Upon Request  
Laboratory Comments:

100

Date	Time
------	------

Date	Time
------	------

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>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 2 of 3

# 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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
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  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biczugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date

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

Page 3 of 3

**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%	0.0%
<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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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>	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.%
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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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#:** 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: \_\_\_\_\_

\_\_\_\_\_  
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</u> <u>Collected</u>	<u>Date / Time</u> <u>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 Collected	Date / Time Received	Container	Preservative
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.

<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	1cc, 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 1 of 14

# 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: SEL691602BH11-10'

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 2 of 14

# 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>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
0003198-02		9/21/02 17:51	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	98%	80	120
Bromofluorobenzene	97%	80	120

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

Page 3 of 14

# 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

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

Page 4 of 14

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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-Xylene	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

Page 5 of 14

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 6 of 14

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

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

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

Page 7 of 14

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

# 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: Luman 6" Line  
Location: None Given

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

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

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

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

Page 8 of 14

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 9 of 14

# 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

Method	Date	Date	Sample	Dilution	Analyst	Method
Blank	Prepared	Analyzed	Amount	Factor		
		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

Method	Date	Date	Sample	Dilution	Analyst	Method
Blank	Prepared	Analyzed	Amount	Factor		
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

Page 10 of 14

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003199-02		9/21/02 22:17	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	106%	80	120

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

Page 11 of 14

# 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>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8015M</u>
		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>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>CK</u>	<u>8021B</u>
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

Page 12 of 14

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

# 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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003199-02		9/21/02 23:02	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	101%	80	120
Bromofluorobenzene	100%	80	120

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

Page 13 of 14

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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**

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003201-02			<10.0		
<b>MS</b>	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%	
<b>MSD</b>	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%
<b>SRM</b>	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>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	Toluene-mg/kg	0204546-03	0	0.1	0.104	104.%	3.8%
	Toluene-mg/kg	0204546-13	0	0.1	0.112	112.%	1.8%
	Toluene-mg/L	0204610-04	0	0.1	0.105	105.%	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.%	0.9%
	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.%	0.9%
	o-Xylene-mg/kg	0204546-13	0	0.1	0.111	111.%	1.8%
	o-Xylene-mg/L	0204610-04	0	0.1	0.105	105.%	6.9%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	Benzene-mg/kg	0003198-05		0.1	0.101	101.%	
	Benzene-mg/kg	0003199-05		0.1	0.104	104.%	
	Benzene-mg/L	0003245-05		0.1	0.095	95.%	
	Ethylbenzene-mg/kg	0003198-05		0.1	0.105	105.%	
	Ethylbenzene-mg/kg	0003199-05		0.1	0.109	109.%	
	Ethylbenzene-mg/L	0003245-05		0.1	0.097	97.%	
	Toluene-mg/kg	0003198-05		0.1	0.107	107.%	
	Toluene-mg/kg	0003199-05		0.1	0.108	108.%	
	Toluene-mg/L	0003245-05		0.1	0.098	98.%	
	p/m-Xylene-mg/kg	0003198-05		0.2	0.218	109.%	
	p/m-Xylene-mg/kg	0003199-05		0.2	0.230	115.%	
	p/m-Xylene-mg/L	0003245-05		0.2	0.207	103.5%	
	o-Xylene-mg/kg	0003198-05		0.1	0.104	104.%	
	o-Xylene-mg/kg	0003199-05		0.1	0.108	108.%	
	o-Xylene-mg/L	0003245-05		0.1	0.098	98.%	

# 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:

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

Date:

9-30-02

Phone: 615-563-1800  
Fax: 615-563-1713

Project Name: Environ 6: L.A.

Project #: 2002-10235

Project Loc:

PO#:

*[Handwritten signature]*

[illegible][illegible]

Sample Containers Initialed

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Laboratory Comments.

100

115 C

7-1802 1520

— 78 —

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.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
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</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
	8015M 8021B/5030 BTEX					
0204548-08	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		
0204548-09	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		
0204548-10	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		
0204548-11	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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

Page 1 of 11

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

# 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>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>
		9/19/02	1	10		

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>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>
0003199-02		9/23/02 23:24	1	1000		

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

Page 2 of 11

# 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

Page 3 of 11

# 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

Page 4 of 11

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
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

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

Page 5 of 11

# 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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		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

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
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

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

Page 6 of 11

# 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: SEL691702BH16-15'

### 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>
		9/20/02	1	10		

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>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>
0003200-02		9/24/02 15:11	1	200		

Parameter	Result mg/kg	RL
Benzene	27.9	0.200
Ethylbenzene	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

Page 7 of 11

# 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: Luman 6" Line  
Location: None Given

Lab ID: 0204548-08  
Sample ID: SEL691702BH16-20'

### 8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/20/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	8880	100
DRO, >C12-C35	9780	100
TOTAL, C6-C35	18660	100

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003200-02		9/24/02 15:33	1	200	CK	8021B

Parameter	Result mg/kg	RL
Benzene	36.1	0.200
Ethylbenzene	107	0.200
Toluene	161	0.200
p/m-Xylene	178	0.200
o-Xylene	83.0	0.200

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	1220%	80	120
Bromofluorobenzene	159%	80	120

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

Page 8 of 11

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/20/02	1	10	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	7520	100
DRO, >C12-C35	8950	100
TOTAL, C6-C35	16470	100

### 8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003200-02		9/24/02 1:14	1	200	CK	8021B

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

Page 9 of 11

# 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

Page 10 of 11

# 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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		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

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003200-02		9/23/02 15:12	1	25	CK	8021B

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: *Coley D. Keene* 9/25/02

Raland K. Tuttle, Lab Director, QA Officer  
Coley D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biczugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date

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

Page 11 of 11

# 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
TOTAL, C6-C35-mg/kg		0003201-02			<10.0		
TOTAL, C6-C35-mg/kg		0003202-02			<10.0		
<b>MS</b>	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%	
TOTAL, C6-C35-mg/kg		0204548-11	0	952	1210	127.1%	
<b>MSD</b>	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%
TOTAL, C6-C35-mg/kg		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
TOTAL, C6-C35-mg/kg		0003201-05		1000	1220	122.0%	
TOTAL, C6-C35-mg/kg		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	110.0%	
Benzene-mg/kg		0204556-09	0	0.1	0.099	99.0%	
Ethylbenzene-mg/kg		0204546-13	0	0.1	0.115	115.0%	
Ethylbenzene-mg/kg		0204556-09	0	0.1	0.104	104.0%	
Toluene-mg/kg		0204546-13	0	0.1	0.114	114.0%	
Toluene-mg/kg		0204556-09	0	0.1	0.103	103.0%	
p/m-Xylene-mg/kg		0204546-13	0	0.2	0.230	115.0%	
p/m-Xylene-mg/kg		0204556-09	0	0.2	0.220	110.0%	
o-Xylene-mg/kg		0204546-13	0	0.1	0.113	113.0%	
o-Xylene-mg/kg		0204556-09	0	0.1	0.102	102.0%	
<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	108.0%	1.8%
Benzene-mg/kg		0204556-09	0	0.1	0.101	101.0%	2.0%
Ethylbenzene-mg/kg		0204546-13	0	0.1	0.113	113.0%	1.8%
Ethylbenzene-mg/kg		0204556-09	0	0.1	0.105	105.0%	1.0%
Toluene-mg/kg		0204546-13	0	0.1	0.112	112.0%	1.8%
Toluene-mg/kg		0204556-09	0	0.1	0.104	104.0%	1.0%
p/m-Xylene-mg/kg		0204546-13	0	0.2	0.228	114.0%	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	111.0%	1.8%
o-Xylene-mg/kg		0204556-09	0	0.1	0.104	104.0%	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	104.0%	
Benzene-mg/kg		0003200-05		0.1	0.111	111.0%	
Ethylbenzene-mg/kg		0003199-05		0.1	0.109	109.0%	
Ethylbenzene-mg/kg		0003200-05		0.1	0.115	115.0%	
Toluene-mg/kg		0003199-05		0.1	0.108	108.0%	

# 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.%	
p/m-Xylene-mg/kg		0003199-05		0.2	0.230	115.%	
p/m-Xylene-mg/kg		0003200-05		0.2	0.229	114.5%	
o-Xylene-mg/kg		0003199-05		0.1	0.108	108.%	
o-Xylene-mg/kg		0003200-05		0.1	0.114	114.%	

# 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:

  
Environmental Lab of Texas I, Ltd.

Date:

9/25/02

12600 West I-20 East  
Odessa Texas 79763

Bradley E. E.

PO#:

7002-10235

Project Loc:

PO#:

### Analyze For

[illegible]

Special Instructions

FAX RESULTS TO PAT MCCASLAND AGAR

Relinquished: Bradley Blum  
Relinquished: Matt G

Received by: [Signature]  
Received by: [Signature]

Jane Murray

Date	Time
9-18-02	1520

Temperature Upon Request:  
Laboratory Comments:

20511

**Attachment V: Site Information and Metrics Form and Initial NMOCD Form C-141**

**Plains All American Pipeline Site  
 Information and Metrics**

 Incident Date:  
 9-4-02 @ 1:20 PM

 NMOCD Notified:  
 9-4-02 @ 3:30 PM

<b>SITE: Hugh Gathering 090402</b>		<b>Assigned Site Reference #: 2002-10235</b>	
Company: Plains All American Pipeline		<b>NATIONAL RESPONSE CENTER - 800.424.8802</b>	
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 ¼: 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 ground water (DG) 60'bgs			
Depth of contamination (DC) - 60'bgs			
Depth to ground water (DG - DC = DtGW) - zero feet			
<b>1. Ground Water</b>		<b>2. Wellhead Protection Area</b>	
If Depth to GW <50 feet: 20 points		If <1000' from water source, or; <200' from private domestic water source: 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	
If Depth to GW >100 feet: 0 points			
Ground water Score = 10		Wellhead Protection Area Score = 0	
Site Rank (1+2+3) = 10		Surface Water Score = 0	
<b>Total Site Ranking Score and Acceptable Concentrations</b>			
Parameter	>19	10-19	0-9
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm
<sup>1</sup> 100 ppm field VOC headspace measurement may be substituted for lab analysis			

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 All American Pipeline</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>
-------------------------	----------------------	-------------------------	----------------------	---------------	------------------	---------------	----------------	--------------------

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 ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	<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

---

**CORRESPONDENCE**

**MISC.**

**Martin, Ed**

---

**From:** James1Luke@aol.com  
**Sent:** Friday, March 18, 2005 3:31 PM  
**To:** EMARTIN@state.nm.us  
**Subject:** Re: Hugh Gathering

1R-0078

Thank you. We received our copy yesterday afternoon and are in the process of reviewing. Hopefully, the plan is technically correct since our backgrounds are not in this field. We appreciate your communications with us.  
L & J Bryant

---

This email has been scanned by the MessageLabs Email Security System.  
For more information please visit <http://www.messagelabs.com/email>

---

3/18/2005

**Martin, Ed**

---

**To:** james1luke@aol.com  
**Cc:** Anderson, Roger; Fesmire, Mark  
**Subject:** Plains All American Hugh Gathering Site

The Oil Conservation Division has not yet received an abatement plan for this site. I have talked to Plains about this, and they have promised to have the abatement plan in to this office by the end of next week (March 18, 2005). When I receive it, I will send you a copy.

Attached are the groundwater standards that we use for these types of sites.



Cleanup  
Standards1.doc

Soil cleanup standards depend upon the location and its proximity to groundwater. Generally speaking here are the standards we use:



Cleanup  
Standards.doc

I will keep you updated as to the progress of the submission of the abatement plan and work on the plan as it progresses.

***Ed Martin***

New Mexico Oil Conservation Division  
Environmental Bureau  
1220 S. St. Francis  
Santa Fe, NM 87505  
Phone: 505-476-3492  
Fax: 505-476-3462

**Martin, Ed**

---

**From:** Anderson, Roger  
**Sent:** Friday, March 04, 2005 2:08 PM  
**To:** Martin, Ed  
**Subject:** FW: Abatement plan: Plains All American Hugh Gathering #2002-10235

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

**From:** Fesmire, Mark  
**Sent:** Friday, March 04, 2005 12:44 PM  
**To:** Anderson, Roger  
**Subject:** FW: Abatement plan: Plains All American Hugh Gathering #2002-10235

Roger,

More of the last message.

Mark

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

**From:** James1Luke@aol.com [mailto:James1Luke@aol.com]  
**Sent:** Tuesday, March 01, 2005 7:32 AM  
**To:** MFesmire@state.nm.us  
**Subject:** Fwd: Abatement plan: Plains All American Hugh Gathering #2002-10235

Mr. Fesmire:

UL-P SE1/4 of the SE1/4 of Section 11 T21S R37E, Lea County, New Mexico

In our original email we neglected to ask about the standards for clean up of oil spills within New Mexico. What are the standards? How much of the contaminated soil must be removed, how deep, down to the water table where the contamination has reached? Please inform us of any requirements the State of New Mexico places upon the companies responsible.

Please reply by return email or telephone 505-797-7788.

Thank you.  
Lucille Bryant  
James A. Bryant

---

This email has been scanned by the MessageLabs Email Security System.  
For more information please visit <http://www.messagelabs.com/email>

---

3/8/2005

**Martin, Ed**

---

**From:** Anderson, Roger  
**Sent:** Friday, March 04, 2005 2:08 PM  
**To:** Martin, Ed  
**Subject:** FW: Abatement plan: Plains All American Hugh Gathering #2002-10235

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

**From:** Fesmire, Mark  
**Sent:** Friday, March 04, 2005 12:42 PM  
**To:** 'James1Luke@aol.com'  
**Cc:** Anderson, Roger  
**Subject:** RE: Abatement plan: Plains All American Hugh Gathering #2002-10235

Mr. and Mrs Bryant:

I have forwarded your request to Mr. Roger Anderson, Environmental Bureau Chief for the Oil Conservation Division. He should be able to answer your questions and get back to you in the near future. If you need to reach him by telephone, his number is 505-476-3490. If you need to reach me, my number is 505-476-3460.

Mark Fesmire  
OCD Director

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

**From:** James1Luke@aol.com [mailto:James1Luke@aol.com]  
**Sent:** Monday, February 28, 2005 7:31 PM  
**To:** MFesmire@state.nm.us  
**Subject:** Abatement plan: Plains All American Hugh Gathering #2002-10235

Dear Mr. Fesmire:

As owners of UL-P SE1/4 of the SE1/4 of Section 11 T21S R37E, Lea County, New Mexico, we are requesting information regarding the filing of an Abatement Plan regarding the cleaning of contaminated soil at this site which resulted from an oil pipeline leak. Has the Plan been filed? If it has been, how do we obtain a copy? If not, do you know why it has not been filed?

We became aware inadvertently of this oil pipeline leak. On February 1, 2005, we initiated a telephone call to Environmental Plus, Inc. resulting in a telephone call from a Plains All American representative. We were advised that the Abatement Plan would take about two weeks to complete.

Please advise us of the situation and of any information that should be forthcoming to us as property owners.

You may reach us by return email or telephone us at 505-797-7788 in Albuquerque.

Thank you.  
James A. Bryant  
Lucille Bryant

---

This email has been scanned by the MessageLabs Email Security System.  
For more information please visit <http://www.messagelabs.com/email>

3/8/2005



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

October 14, 2004

Mr. Jeffrey P. Dann  
Plains All American L.P.  
P.O. Box 4648  
Houston, TX 77210-4648

18-78

Dear Mr. Dann:

The New Mexico Oil Conservation Division (NMOCD) has received your letter, dated September 20, 2004, identifying the need for additional groundwater monitor and/or recovery wells at various sites. This request is hereby approved.

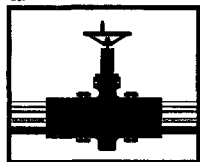
This approval does not relieve Plains Marketing, L.P. of any future liability at these sites should it prove that Plains' operations have caused harm to public health or the environment. Nor does it relieve Plains of its obligation to comply with the rules and regulations of any other governmental agency.

If you have any questions, contact me at (505) 476-3492 or [emartin@state.nm.us](mailto:emartin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin  
Environmental Bureau

Cc: Larry Johnson, NMOCD, Hobbs  
Camille Reynolds, Plains, Midland



# PLAINS

## MARKETING, L.P.

September 20, 2004

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

Re: Plains Marketing, L.P. (formerly Link Energy) Remediation Sites  
Various Locations in Lea County

Dear Mr. Martin:

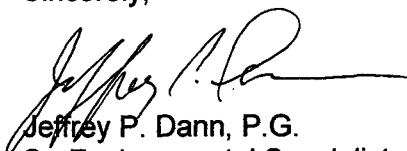
Based on the results of our ongoing groundwater monitoring and sampling program at several of our remediation and groundwater monitoring sites in Lea County, we have identified the need for additional groundwater monitor and/or recovery wells at the flowing sites.

Site Name	Plains EMS No.	Site Location	Number of Wells
Jct 34 to Lea	2002-10286	Section 21, T20S, R37E	3
Livingston Line-Bob McCasland	2001-11043	Section 3, T21S, R37E	2
Hugh Gathering	2002-10235	Section 11, T21S, R37E	1
C. S. Caylor	2002-10250	Section 6, T17S, R37E	5
Lovington Deep 6-Inch	2002-1-312	Section 6, T21S, R36E	6
Kimbrough Sweet	2000-10757	Section 3, T18S, R37E	2
8" Moore to Jal #1	2002-10270	Section 16, T17S, R37E	3
8" Moore to Jal #2	2002-10273	Section 16, T17S, R37E	3
Darr Angell #1	Darr Angell #1	Section 11, T15S, R37E	1
Darr Angell #4	2001-10876	Section 2/11, T15S, R37E	2
Red Byrd #1	Red Byrd #1	Section 1, T19S, R36E	5
HDO 90-23	HDO 90-23	Section 6, T20S, R37E	2
Monument 6" Pipeline	2001-11056	Section 5, T20S, R37E	3
Texaco Skelly F	2002-11229	Section 21, T20S, R37E	1
SPS-11	SPS-11	Section 18, T18S, R36E	2
Monument #11	TNM Mon #11	Section 30, T19S, R37E	2
Monument #2	TNM Mon #2	Section 6, T20S, R37E	1
Monument #17	TNM Mon #17	Section 29, T19S, R37E	1
Monument #18	TNM Mon #18	Section 7, T20S, R37E	2
98-05A	TNM 98-05A	Section 26, T21S, R37E	1
LF-59	LF-59	Section 32, T19S, R37E	2

The proposed well locations are illustrated on the attached site maps. Plains requests your approval of the proposed monitor well locations at the above-referenced sites. We anticipate commencement of drilling activities the week of October 4, 2004.

Should you have any questions or comments concerning this information, please contact me at (713) 646-4657.

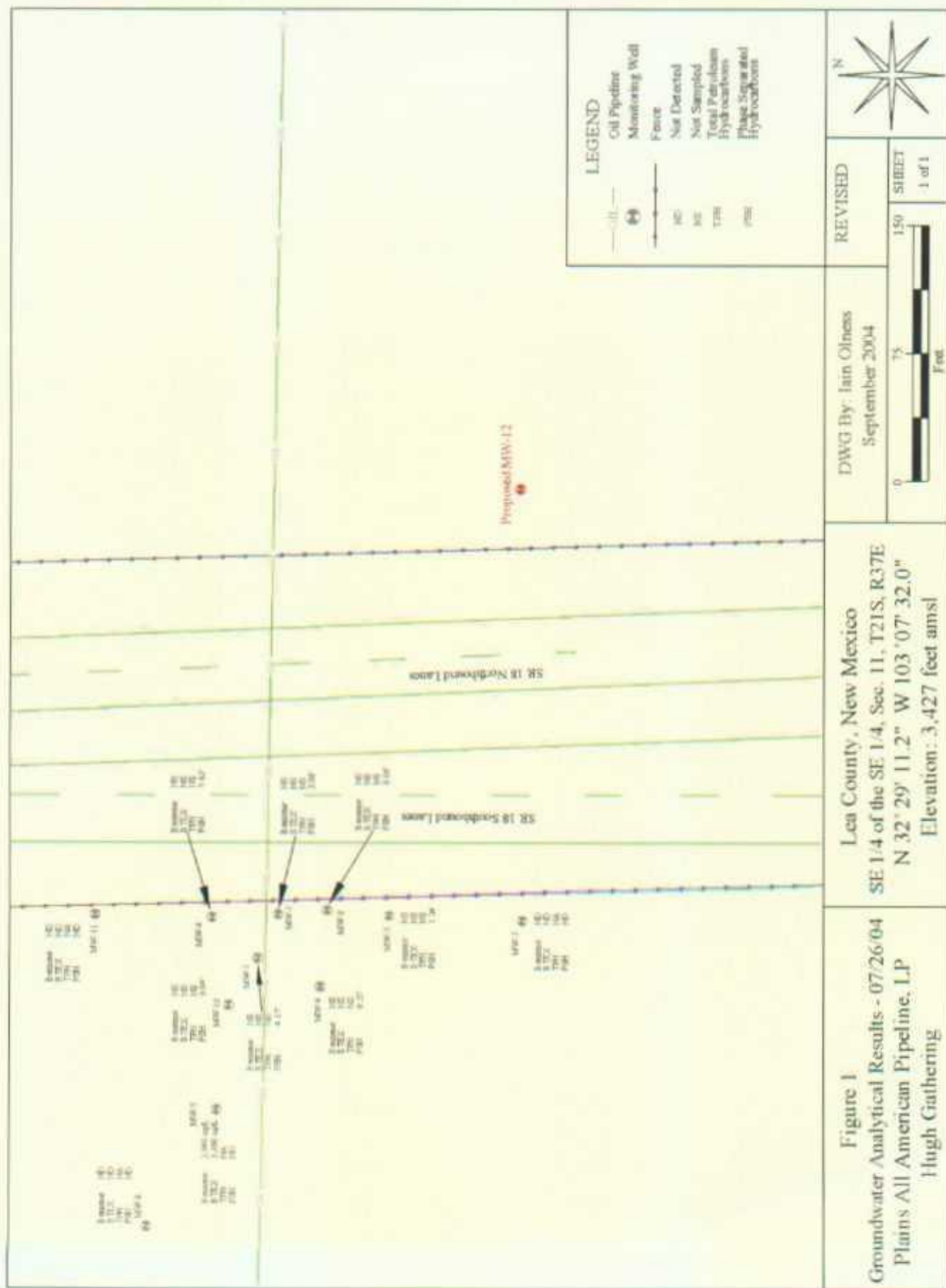
Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey P. Dann", with a long horizontal flourish extending to the right.

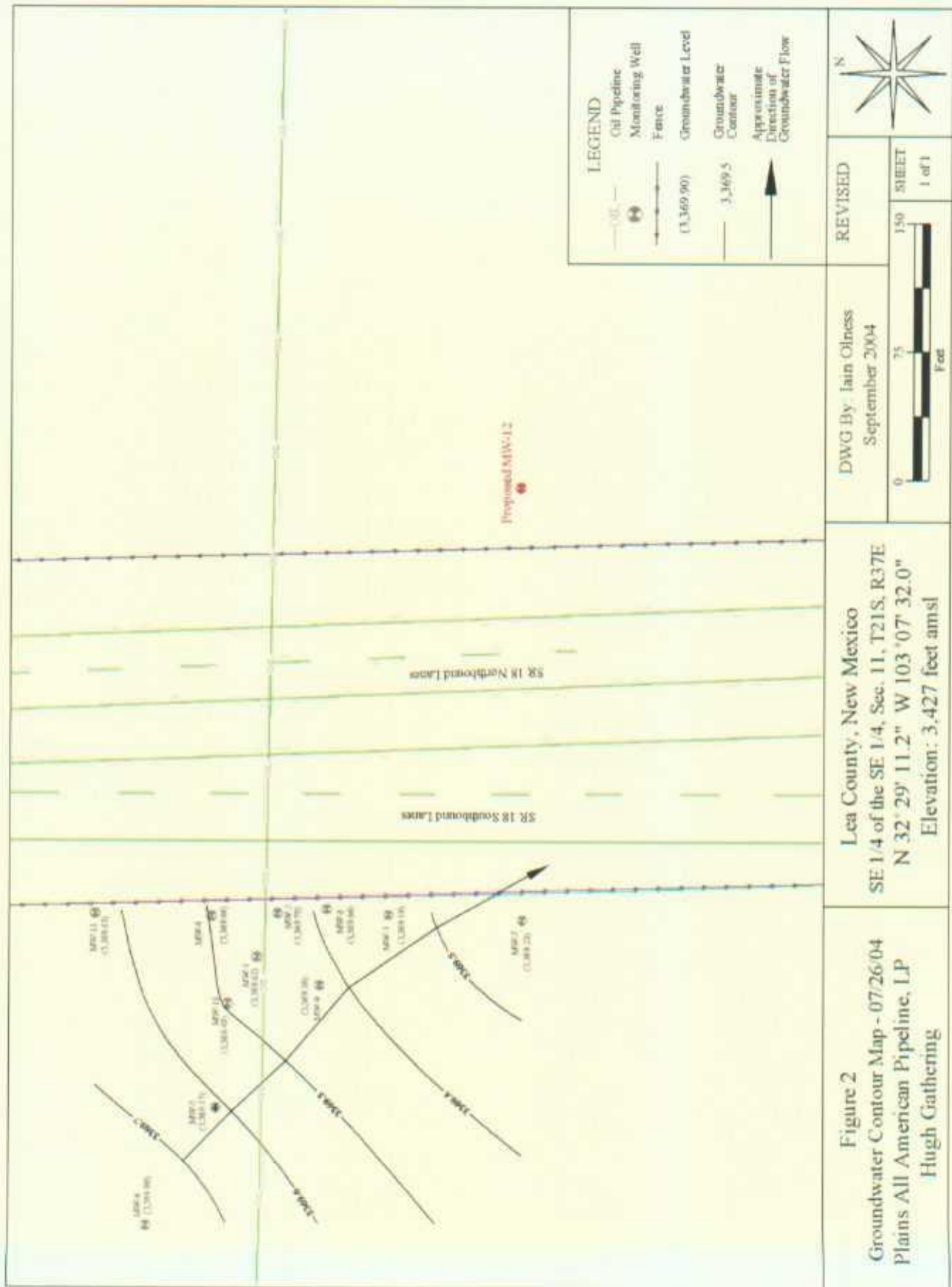
Jeffrey P. Dann, P.G.  
Sr. Environmental Specialist  
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM  
Camille Reynolds, Plains  
Todd Choban, Nova  
Pat McCasland, EPI

File: c:\jeff-files\OCD-DrillingSchOct2004



Mr. Ed Martin  
20 September 2004





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

April 5, 2004

Mr. Ed Martin  
NM Energy, Minerals, and Natural Resources Department  
New Mexico Oil Conservation Division – Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Subject: Preliminary 2003 Ground water monitoring summary

Re: Link Energy Hugh Gathering #2002-10235  
UL-P Section 11 T21S R37E  
Lea County New Mexico

1R-78

Dear Mr. Martin,

Environmental Plus, Inc. (EPI), on behalf of Mr. Frank Hernandez, Link Energy, submits for your consideration this *Preliminary 2003 Ground Water Monitoring Report* for the Link Energy Hugh Gathering #2002-10235. The information included in this submittal provides water levels, an analytical results summary, and an annotated map of the site.

If there are any questions or comments please call Mr. Ben Miller or myself at EPI's offices, or at 505-390-2088 or 505-390-9804 respectively. Mr. Hernandez may be contacted through Link's Midland office at 915-638-3799 or 505-631-3095.

All official correspondence should be addressed to:

Mr. Frank Hernandez  
Link Energy  
P.O. Box 1660  
5805 East Highway 80  
Midland, Texas 79703

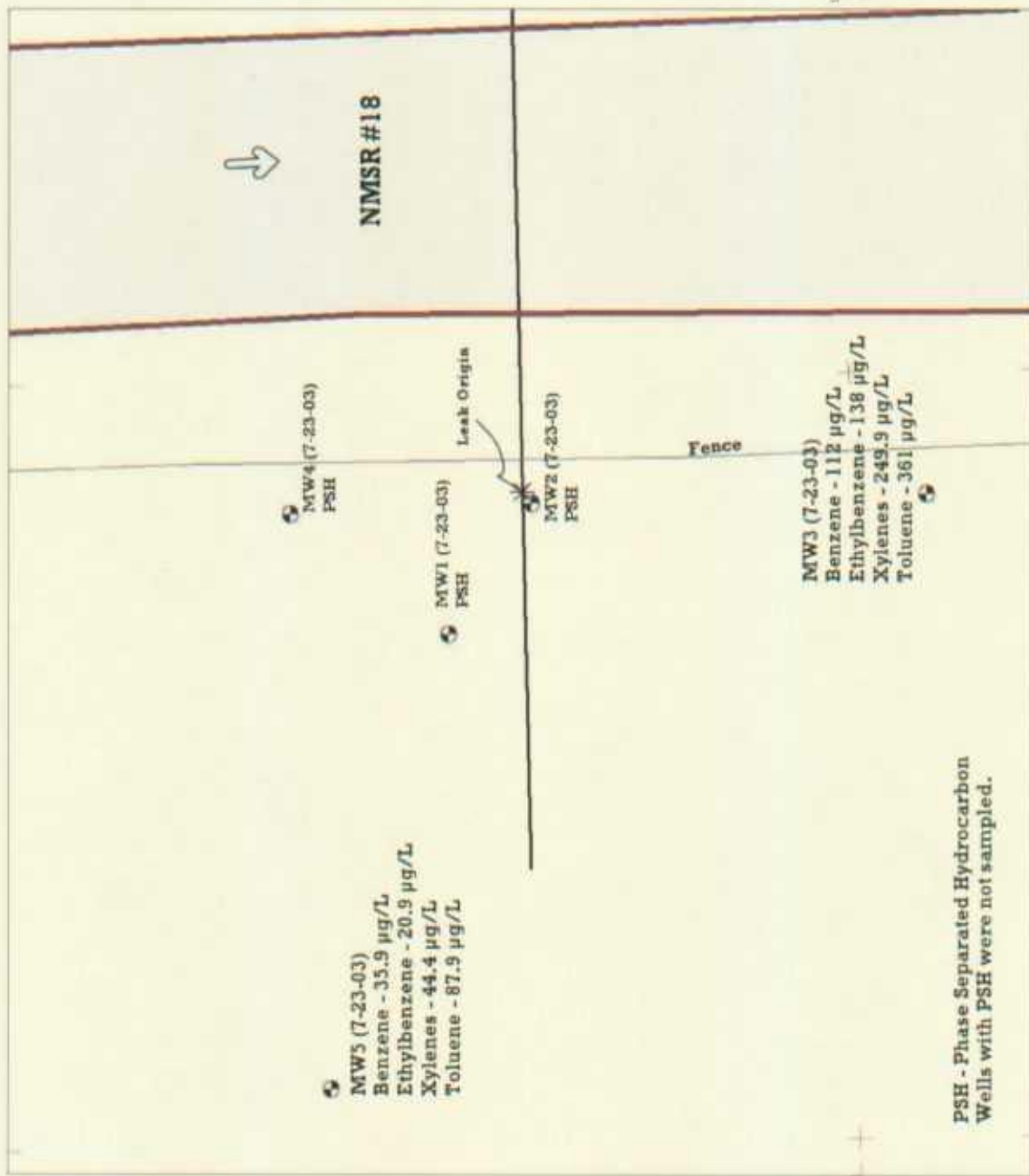
Sincerely,

Pat McCasland  
EPI Technical Manager

cc: Larry W. Johnson, NMOCD – Hobbs District Office  
Frank Hernandez, Link Energy  
Jeff Dann, Link Energy (Houston)  
Sherry Miller, EPI President  
Ben Miller, EPI Vice President and General Manager

ENVIRONMENTAL PLUS, INC.

LINK ENERGY  
HUGH  
GATHERING  
#2002-10235  
UL-P SEC II  
T2IS R37E



N

SCALE 1:350



FEET

UNIVERSAL TRANSVERSE MERCATOR  
15 NORTH  
UAD 1083 1010M (New Mexico)

LITHMAN MW MAP SSE  
4/8/2004



Link Energy  
Hugh Gathering #2002-10235  
Water Level and Analytical Information

Well #	Date	PSH Level	Water Level	Product Thickness	Benzene	Ethylbenzene	m,p-Xylenes	o-Xylene	Toluene	TPH	
		'btoc	'btoc	feet	µg/L	µg/L	µg/L	µg/L	µg/L	GRO mg/L	DRO mg/L
MW1	12/13/2002	59.33	67.10	7.77							
	2/27/2003	59.42	66.63	7.21							
	3/24/2003	59.51	66.15	6.64							
	6/4/2003	59.70	65.48	5.78							
	6/10/2003	60.16	60.62	0.46							
	8/14/2003	60.53	61.86	1.33							
	11/4/2003	60.17	64.64	4.47							
MW2	6/10/2003	60.57	61.27	0.70							
	11/4/2003	60.71	64.28	3.57							
MW3	6/10/2003	ND	66.67								
	7/23/2003	ND	60.85	oil sheen	112	138	158	91.9	361	2.29	3.95
	8/14/2003	ND	60.86								
MW4	6/10/2003	61.03	61.26	0.23							
	7/23/2003	60.65	63.80	3.15							
	8/14/2003	49.82	50.24	0.42							
MW5	7/23/2003	ND	61.17		35.9	20.9	24.1	20.3	87.9	<0.5	1.97
	8/14/2003	ND	59.75								
WQCC Standard					10	750	Total Xylene 620.0		750		

'btoc - feet below top of casing

µg/L - micrograms per Liter

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

PSH - Phase Separated Hydrocarbon

WQCC - New Mexico Water Quality Control Commission



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

June 24, 2004

Mr. Jimmy Bryant  
Link Energy  
P.O. Box 1660  
Midland, TX 79703

Dear Mr. Bryant:

The New Mexico Oil Conservation Division acknowledges receipt of:

"2003 Annual Monitoring Report" for the Link Energy Hugh Gathering #2002-10235; NMOCD  
ref. 1R0078

The report referenced above is hereby approved. Status of the site and the recommendations included in Section 7.0 on page 2 of the report are acceptable. The Stage I and Stage II Abatement Plan referred to in this section should be prepared and submitted to NMOCD as soon as possible.

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin  
Environmental Bureau

cc: Larry W. Johnson, NMOCD, Hobbs  
Jeff Dann, Link Energy, Houston  
Pat McCasland, EPI



ENVIRONMENTAL PLUS, INC.

Micro-Blaze

Micro-Blaze Out™

STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

May 10, 2004

Mr. Ed Martin

NM Energy, Minerals, and Natural Resources Department

New Mexico Oil Conservation Division – Environmental Bureau

1220 South St. Francis Drive

Santa Fe, NM 87505

RECEIVED

MAY 13 2004

OIL CONSERVATION  
DIVISION

Subject: Proposed Link Energy monitor well installations in Lea County, New Mexico

Re: C.S. Cayler #2002-10250, UL-B Section 6 T17S R37E  
Hugh Gathering #2002-10235, UL-P Section 11 T21S R37E  
Hobbs Junction Mainline #2003-00017, UL-M Sections 26 and 35 T18S R37E  
Junction 34 to Lea #2002-10286, UL-L Section 21 T20S R37E  
Kimbrough Sweet #2002-10757, UL-E Section 3 T18S R37E  
Livingston Line Bob McCasland #2001-11043, UL-K Section 3 T21S R37E

Dear Mr. Martin,

Environmental Plus, Inc. (EPI), on behalf of Mr. Jimmy Bryant, Link Energy, submits for your consensus, the attached maps illustrating the proposed monitor well installation locations at the above referenced sites. Installation of these wells will provide further delineation information regarding the extents of phase separated and dissolved phase hydrocarbon, as well as, additional soil delineation information. It is anticipated that the work will begin the week of May 17, 2004.

If there are any questions or comments please call Mr. Ben Miller or myself at office, or at 505-390-2088 or 505-390-7864, respectively. Mr. Bryant may be contacted at 432-684-3479.

All official correspondence should be addressed to:

Mr. Jimmy Bryant  
Link Energy  
P.O. Box 1660  
5805 East Highway 80  
Midland, Texas 79703

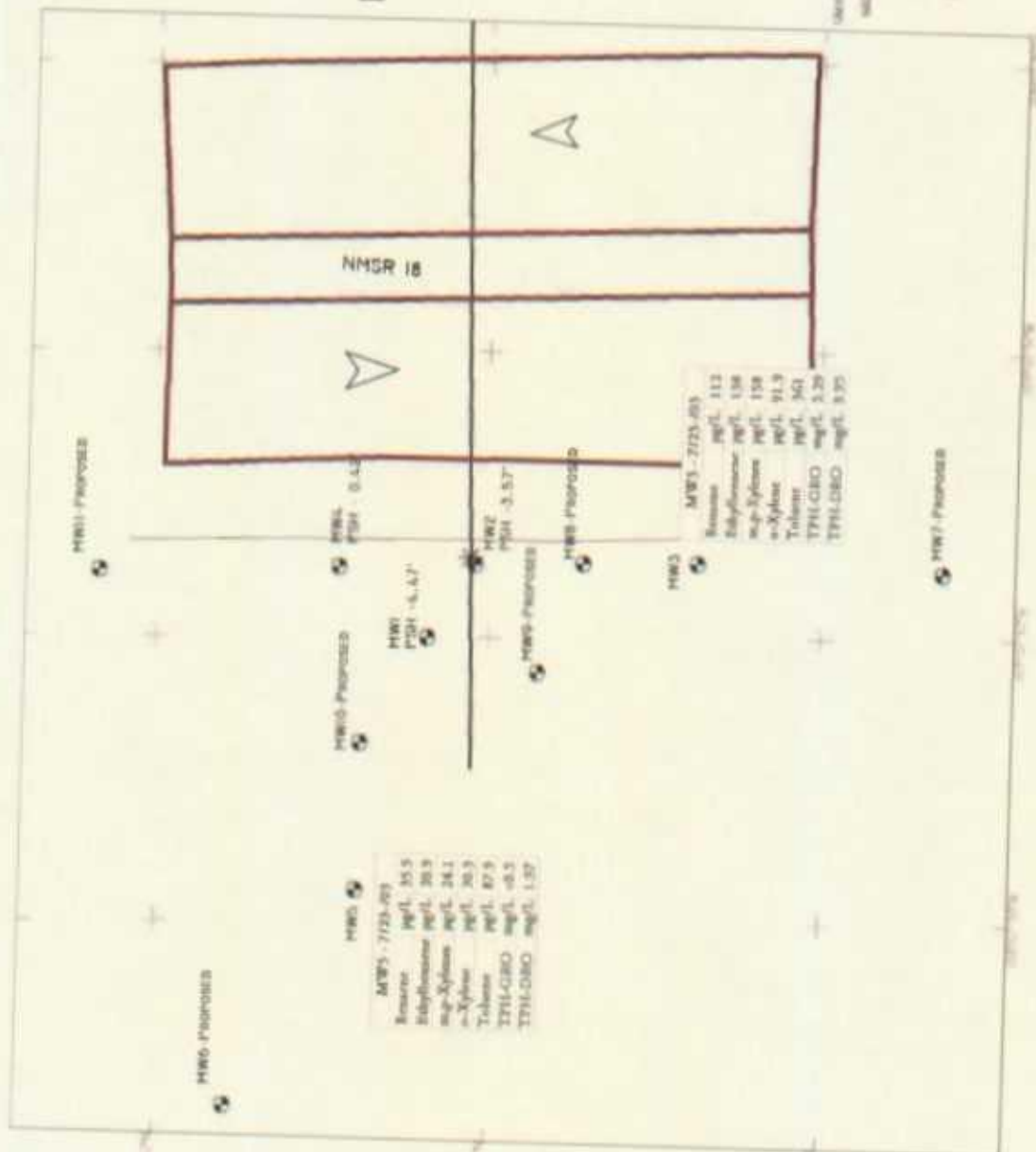
Sincerely,

Pat McCasland  
EPI Technical Manager

cc: Larry W. Johnson, NMOCD – Hobbs District Office  
Jimmy Bryant, Link Energy (Midland)  
Jeff Dann, Link Energy (Houston)  
Sherry Miller, EPI President  
Ben Miller, EPI Vice President and General Manager

ENVIRONMENTAL PLUS, INC.

LINK ENERGY  
HUGH  
GATHERING  
#2002-10235  
UL-P SEC II  
T21S R37E  
EXISTING AND  
PROPOSED  
MONITOR WELLS

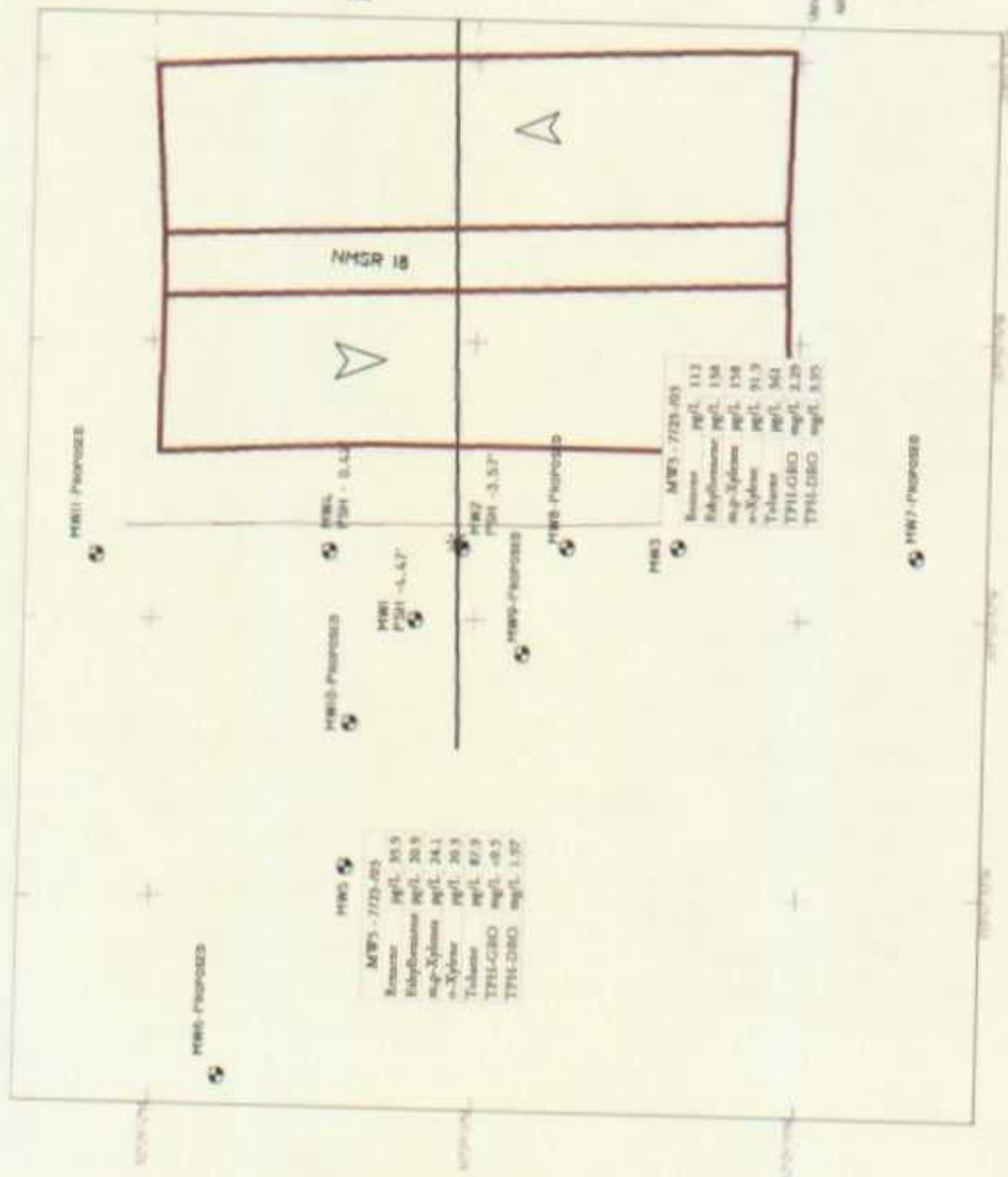


UNIVERSITY, THUNDERBOLT RESERVE  
MAD 4831 (PDS) (NEW PLANT)

HUGH GATHERING MWs AND PROPOSED 3-D-06-08  
5/16/2004



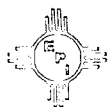
LINK ENERGY  
HUGH  
GATHERING  
#2002-10235  
UL-P SEC II  
T21S R37E  
EXISTING AND  
PROPOSED  
MONITOR WELLS



Location, Transmitted Radiation  
is shown  
and used upon this plan

HUGH GATHERING MWs AND PROPOSED S-B-04, 35F  
5/16/2004





ENVIRONMENTAL PLUS, INC. *Micro-Blaze* *Micro-Blaze Out™*

STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

April 30, 2004

Mr. Ed Martin  
NM Energy, Minerals, and Natural Resources Department  
New Mexico Oil Conservation Division – Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Subject: 2003 Annual Monitoring Report

Re: Link Energy Hugh Gathering #2002-10235  
UL-P Section 11 T21S R37E  
Lea County New Mexico

Dear Mr. Martin,

Environmental Plus, Inc. (EPI), on behalf of Mr. Frank Hernandez, Link Energy, submits the enclosed *2003 Annual Monitoring Report* for the Link Energy Hugh Gathering #2002-10235. The information included in this submittal provides water levels, analytical results, and PSH thicknesses, levels, and recovery volumes.

If there are any questions or comments please call Mr. Ben Miller or myself at EPI's offices, or at 505-390-2088 or 505-390-9804 respectively. Mr. Hernandez may be contacted through Link's Midland office at 915-638-3799 or 505-631-3095.

All official correspondence should be addressed to:

Mr. Frank Hernandez  
Link Energy  
P.O. Box 1660  
5805 East Highway 80  
Midland, Texas 79703

Sincerely,

Pat McCasland  
EPI Technical Manager

cc: Larry W. Johnson, NMOCDC – Hobbs District Office  
Frank Hernandez, Link Energy  
Jeff Dann, Link Energy (Houston)  
Sherry Miller, EPI President  
Ben Miller, EPI Vice President and General Manager

ENVIRONMENTAL PLUS, INC.



## 2003 ANNUAL MONITORING REPORT

Hugh Gathering 090402  
Ref. # 2002-10235

UL-P, SE¼ of the SE¼ of Section 11, R37E, T21S  
Latitude 32°29'11.007"N and Longitude 103°07'33.864"W  
Elevation ~3,425'amsl

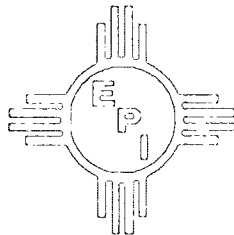
3 miles northeast of Eunice, Lea, New Mexico

Date

April 2004

Prepared by

Environmental Plus, Inc.  
2100 West Avenue O  
P.O. Box 1558  
Eunice, New Mexico 88231  
Tele 505•394•3481 FAX 505•394•2601



## Table of Contents

Table of Contents .....	i
1.0 Background.....	1
2.0 Field Activities .....	1
3.0 Groundwater Gradient and PSH Thickness .....	1
4.0 PSH Recovery.....	1
5.0 Groundwater Sampling.....	1
6.0 Analytical Results .....	2
7.0 Status and Recommendations .....	2
FIGURES.....	3
Figure 1 - Hugh Gathering 090402 Area Map .....	4
Figure 2 - Hugh Gathering 090402 Monitor Well Location Map.....	5
Figure 3 - Hugh Gathering 090402 Site Map .....	6
Figure 4 - Hugh Gathering 090402 Groundwater Gradient Map.....	7
Figure 5 - Hugh Gathering 090402 MW1 Water and PSH Levels and PSH Thickness.....	8
Figure 6 - Hugh Gathering 090402 MW2 Water and PSH Levels and PSH Thickness.....	9
Figure 7 - Hugh Gathering 090402 MW3 Water Levels.....	10
Figure 8 - Hugh Gathering 090402 MW4 Water and PSH Levels and PSH Thickness.....	11
Figure 9 - Hugh Gathering 090402 MW5 Water Levels.....	12
TABLE .....	13
Table 1 - Hugh Gathering 090402 Water and PSH Levels, PSH Thicknesses, Analytical Results Summary and PSH Recovery Log.....	14
APPENDIX .....	15
Appendix A - Hugh Gathering 090402 Analytical Results and Forms .....	16

## 1.0 BACKGROUND

This site is located in UL-P, the SE¼ of the SE¼ of Section 11, Range-37E, Township- 21S at Latitude 32°29'11.007"N and Longitude 103°07'33.864"W approximately 3 miles northeast of Eunice, Lea County, New Mexico on property owned by Jimmy Bryant. Area and site maps are included as Figures 1-3. The estimated 50 barrel crude oil leak was attributed to internal/external corrosion and occurred on September 4, 2002 in the 6" steel pipeline with no oil recovered. The line was subsequently replaced and tested. Near surface impacted soil was disposed of in an NMOCD approved landfarm and the site delineated. Approximately 100 sqft (10' X 10') of surface area was affected. There are no surface water bodies or domestic or agricultural water wells within 1,000 horizontal feet of the site. During site soil delineation in September 2002, crude oil, (i.e., phase separated hydrocarbons (PSH)) were found to have impacted the ground water measured at approximately 60 feet below ground surface ('bgs).

## 2.0 FIELD ACTIVITIES

A single 2" PVC cased monitor well (MW1), was installed during soil delineation activities in September 2002 to evaluate PSH thickness and to initiate PSH recovery. In June 2003, monitor wells MW2, MW3, and MW4 were installed and in July 2003 MW5 was installed. In June 2003, weekly manual recovery of PSH began at monitor wells MW1, MW2, and MW4. In August 2003 Link Energy began deploying a gasoline powered PSH recovery system on a daily basis. Site surveillance is conducted daily to monitor water and PSH levels, deploy the trailer mounted product recovery system, and manage produced fluids.

## 3.0 GROUNDWATER GRADIENT AND PSH THICKNESS

The area groundwater gradient, as illustrated in Figure 4, is to the southeast and was determined using measurements from the site monitoring wells. Stabilized PSH thickness declined from 7.77 feet in January 2002 to 4.47 feet in October 2003. Water and PSH levels along with PSH thickness are illustrated in Figures 5-9.

## 4.0 PSH RECOVERY

Product recovery activities began in September of 2002, initially by manual bailing followed in August of 2003 with the daily deployment of a gasoline powered PSH recovery system. The recovery system is shutdown for at least 48 hours prior to collecting water and PSH levels to ensure stabilized measurements. As of December 31, 2003, approximately 400 gallons of crude oil have been recovered and reintroduced into the Link Energy pipeline system.

## 5.0 GROUNDWATER SAMPLING

Monitor wells MW1, MW2, and MW4 were not sampled due to the presence of PSH. Monitor wells MW3 and MW5 were sampled in July 2003. The data is summarized in Table 2 and the analytical reports are included in Appendix A.

## 6.0 ANALYTICAL RESULTS

Groundwater samples collected from monitor wells MW3 and MW5 both exceeded the New Mexico Water Quality Control Commission (WQCC) 10 mg/L standard for benzene (112 mg/L and 35.9 mg/L, respectively) and, although detected, toluene, ethyl benzene, and total xylene did not exceed the WQCC standards (Ethylbenzene-750 mg/L, total xylene-620 mg/L, and toluene-750 mg/L).

## 7.0 STATUS AND RECOMMENDATIONS

Currently, Environmental Plus, Inc. on behalf of Link Energy is preparing a Stage I and Stage II Abatement Plan in accordance with 19.15.1.19 NMAC (Rule 19) that will propose further delineation of the groundwater to bound the areal extents of the PSH and the dissolved phase hydrocarbons, as well as, provide for additional recovery and monitor wells. A conservative risk assessment will be provided to address the impacted soil remaining in the subsurface. The Abatement Plan will propose the following;

- At least 3 additional wells to bound the areal extents of dissolved phase hydrocarbon plume,
- Additional interior recovery wells,
- Include, at least annually, Polyaromatic Hydrocarbon (PAH) and general chemistry in the analytical suite,
- A soil remediation plan that will propose a conservative risk assessment to address the impacted soil remaining in the subsurface.

## FIGURES

LINK ENERGY  
HUGH GATHERING  
#2002-10235  
UL-P SECII  
AND  
UL-M SEC12  
T2IS R37E  
LEA CO. NM

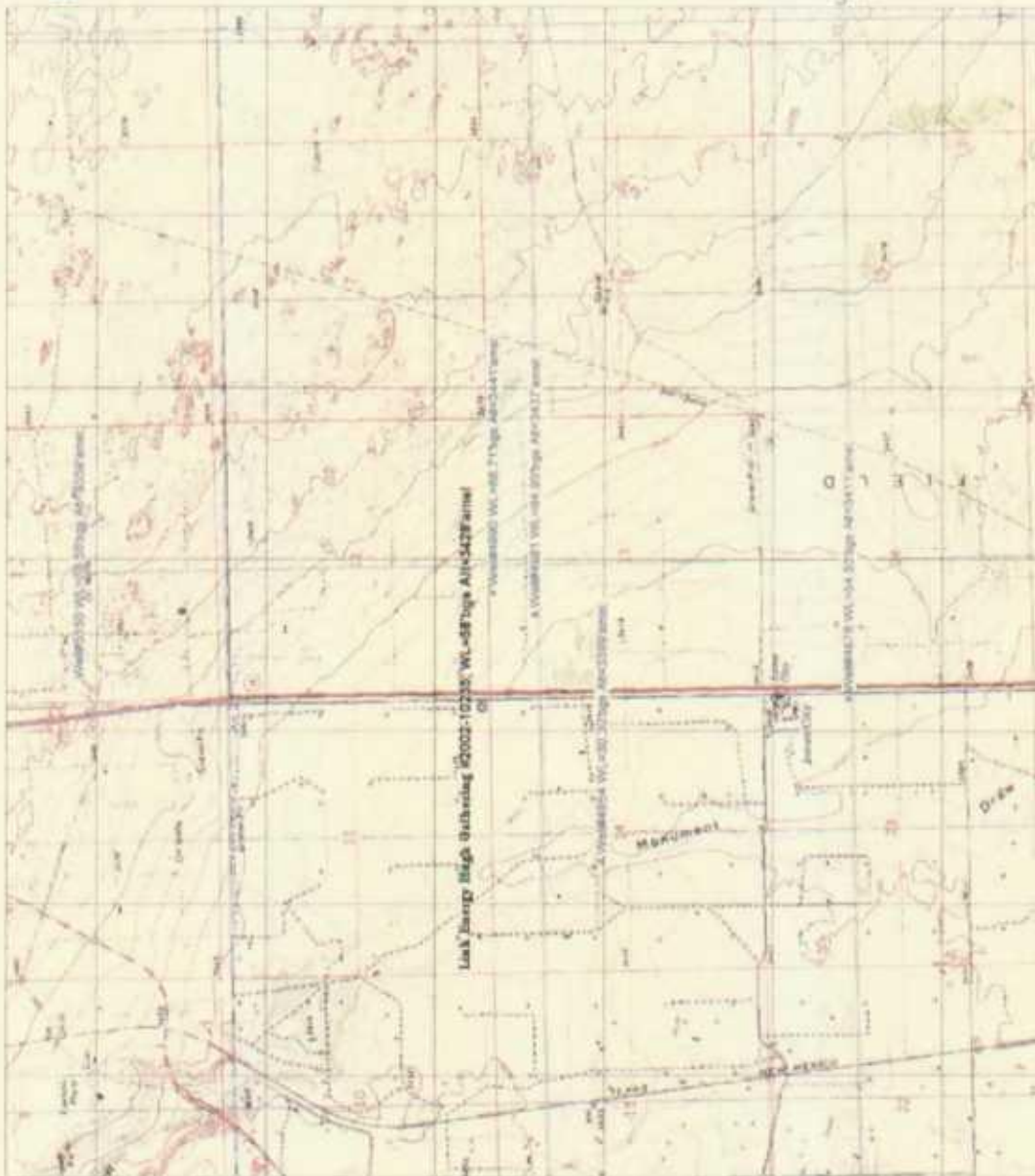


Figure 1 - Hugh Gathering 090402 Area Map

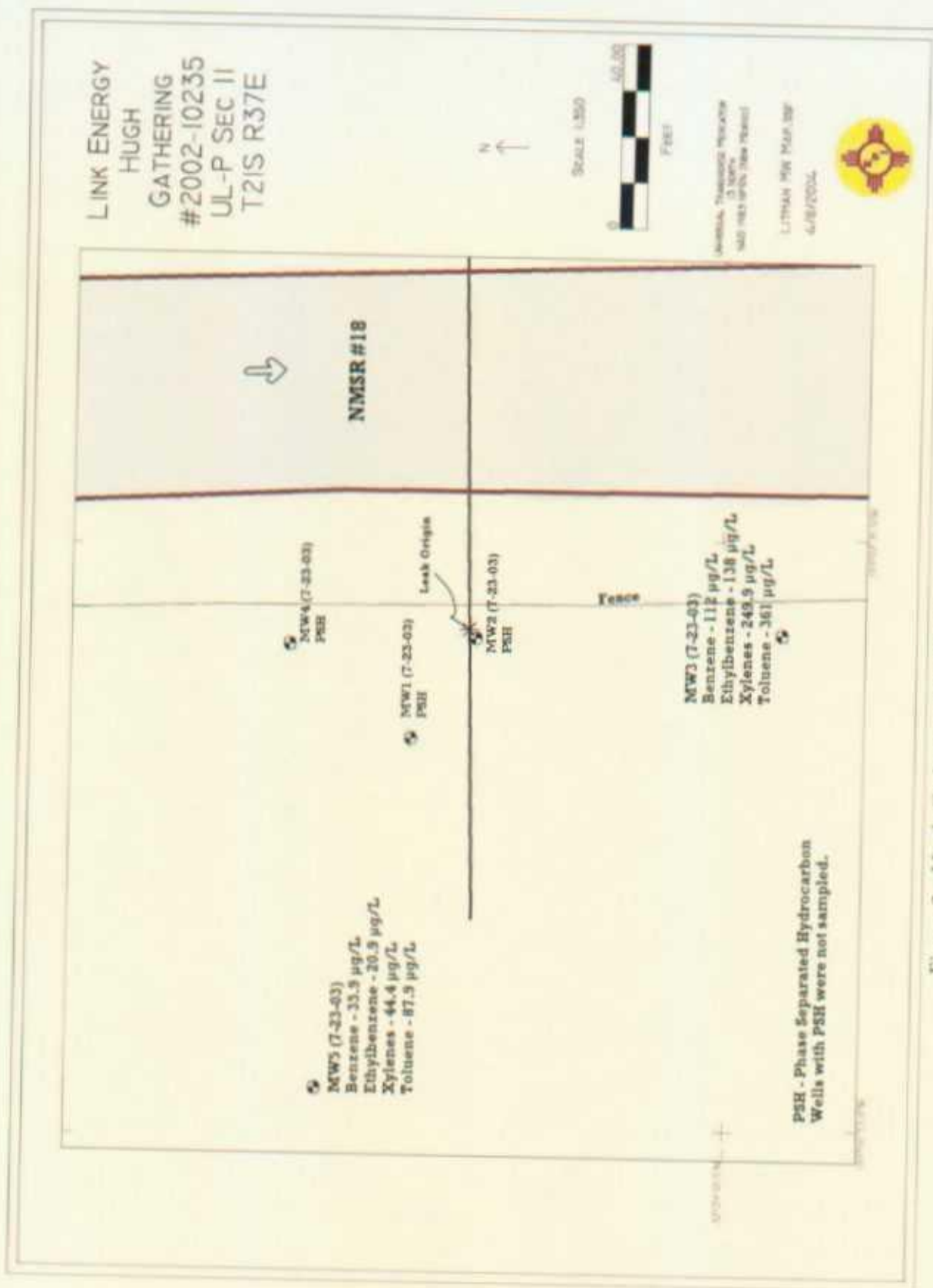
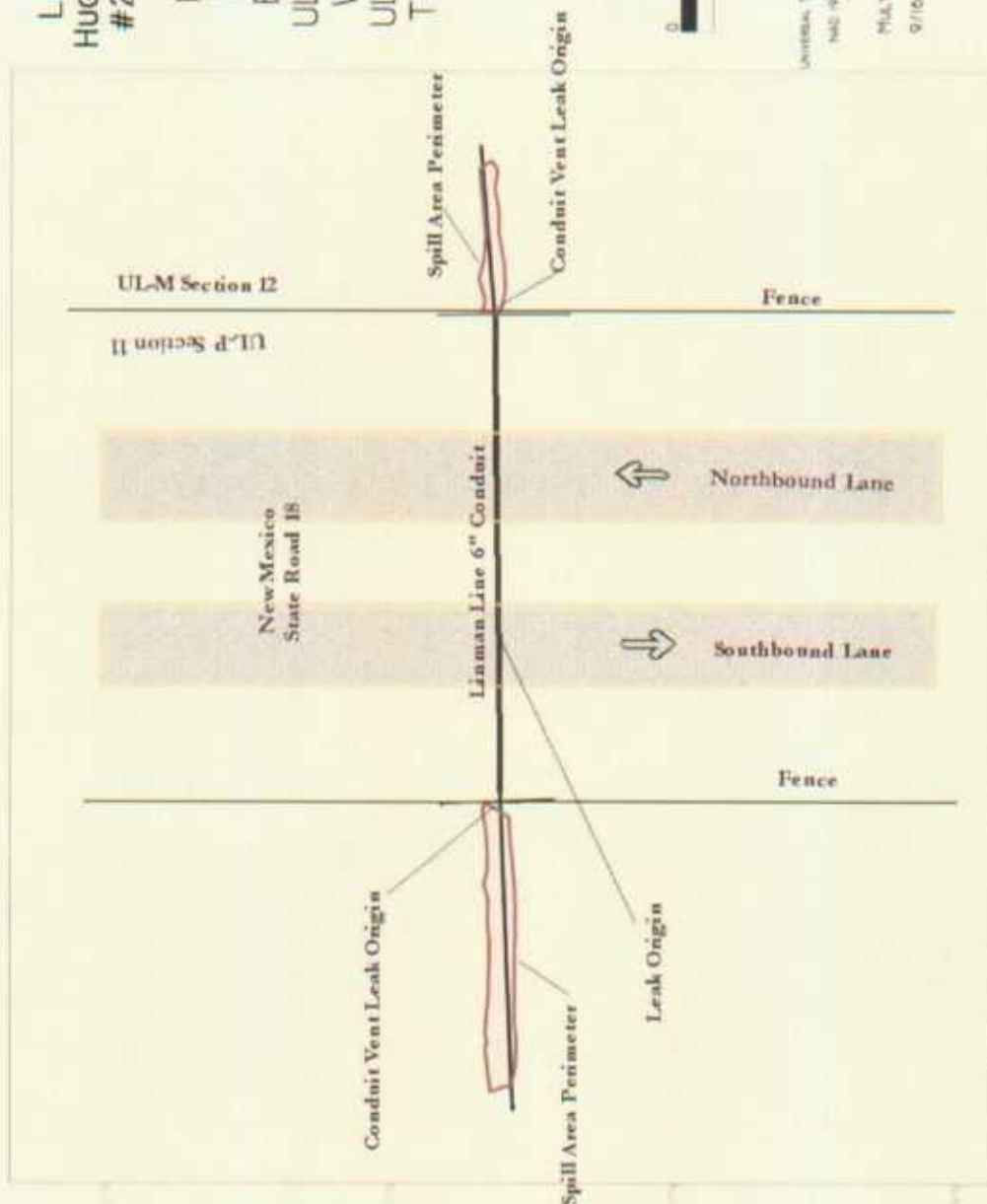


Figure 2 - Hugh Gathering 090402 Monitor Well Location Map

LINK ENERGY  
HUGH GATHERING  
#2002-10235

NMSR 18  
CONDUIT  
EASTSIDE  
UL-M SEC12  
WESTSIDE  
UL-P SEC II  
T2IS R37E



SCALE 1:700  
0 40.00  
FEET

UNIVERSAL TRANSVERSE MERCATOR  
12 NORTH  
NAD 1983 (WESTERN US)

MULTIPLE FILES  
9/16/2002



Figure 3 - Hugh Gathering 090402 Site Map

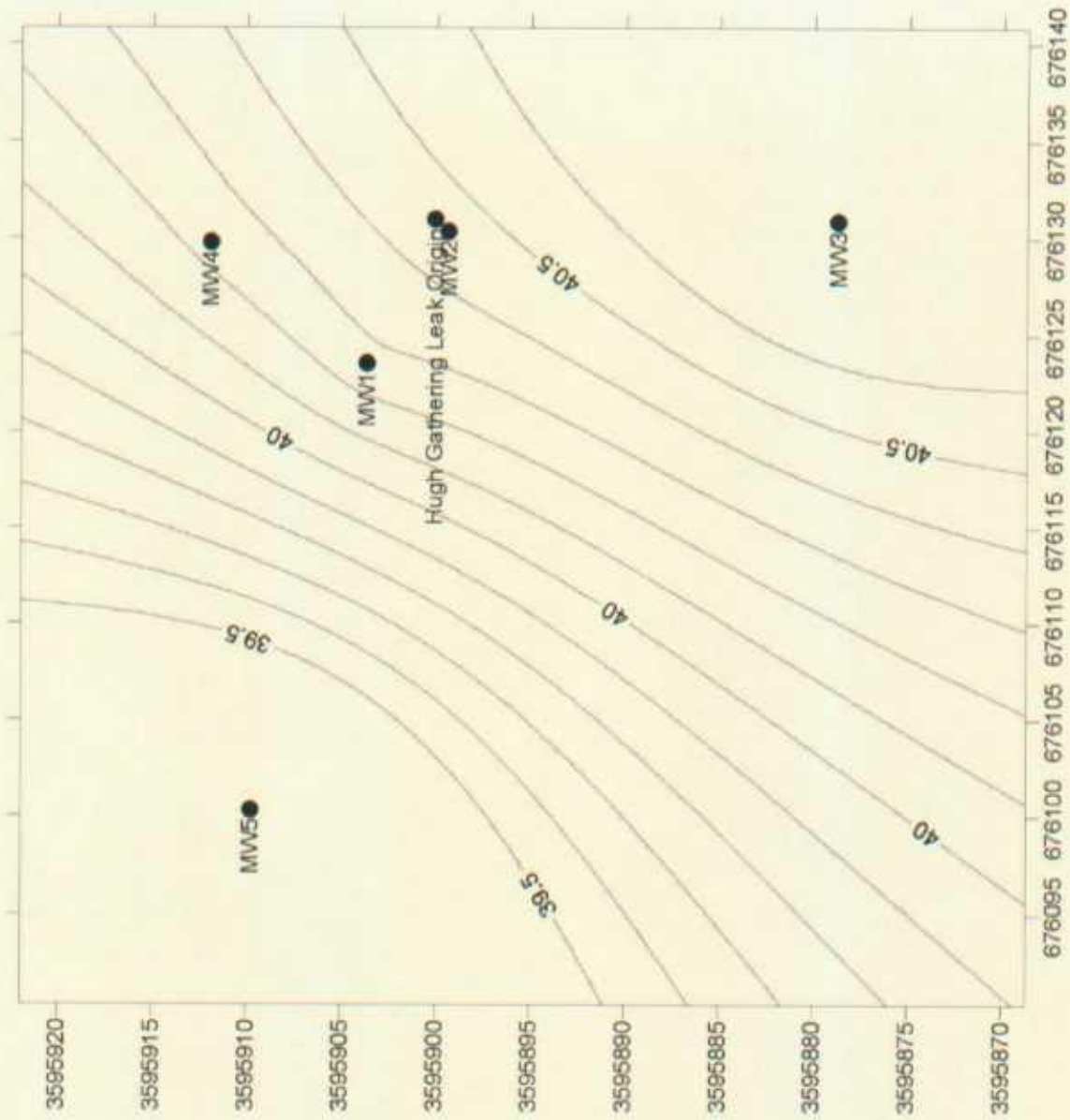


Figure 4 - Hugh Gathering 090402 Groundwater Gradient Map

Link Energy  
Hugh Gathering #2002-10235  
MW1 Water and PSH Levels and PSH Thickness

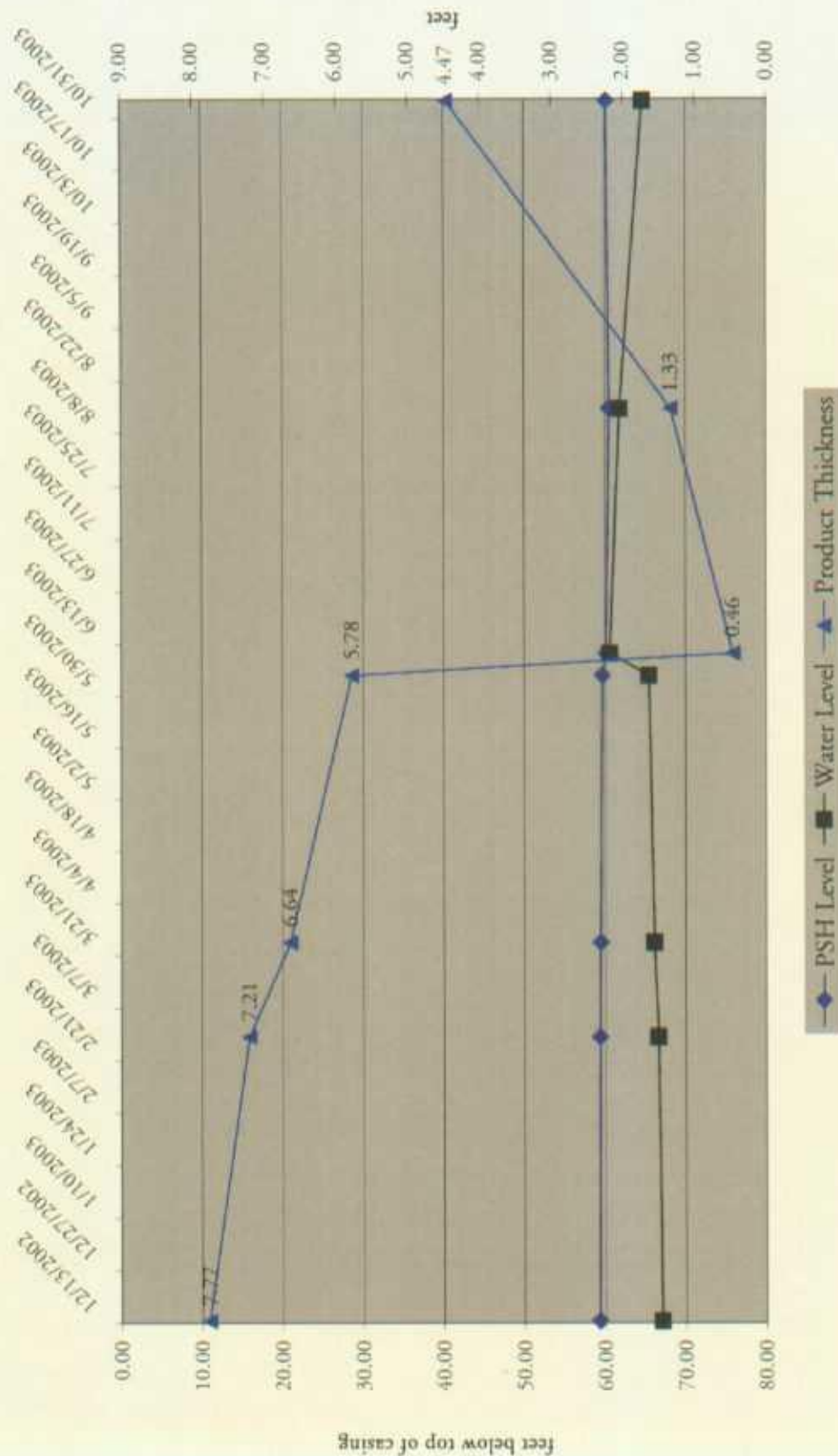


Figure 5 - Hugh Gathering 090402 MW1 Water and PSH Levels and PSH Thickness

Link Energy  
Hugh Gathering #2002-10235  
MW2 Water and PSH Levels and PSH Thickness

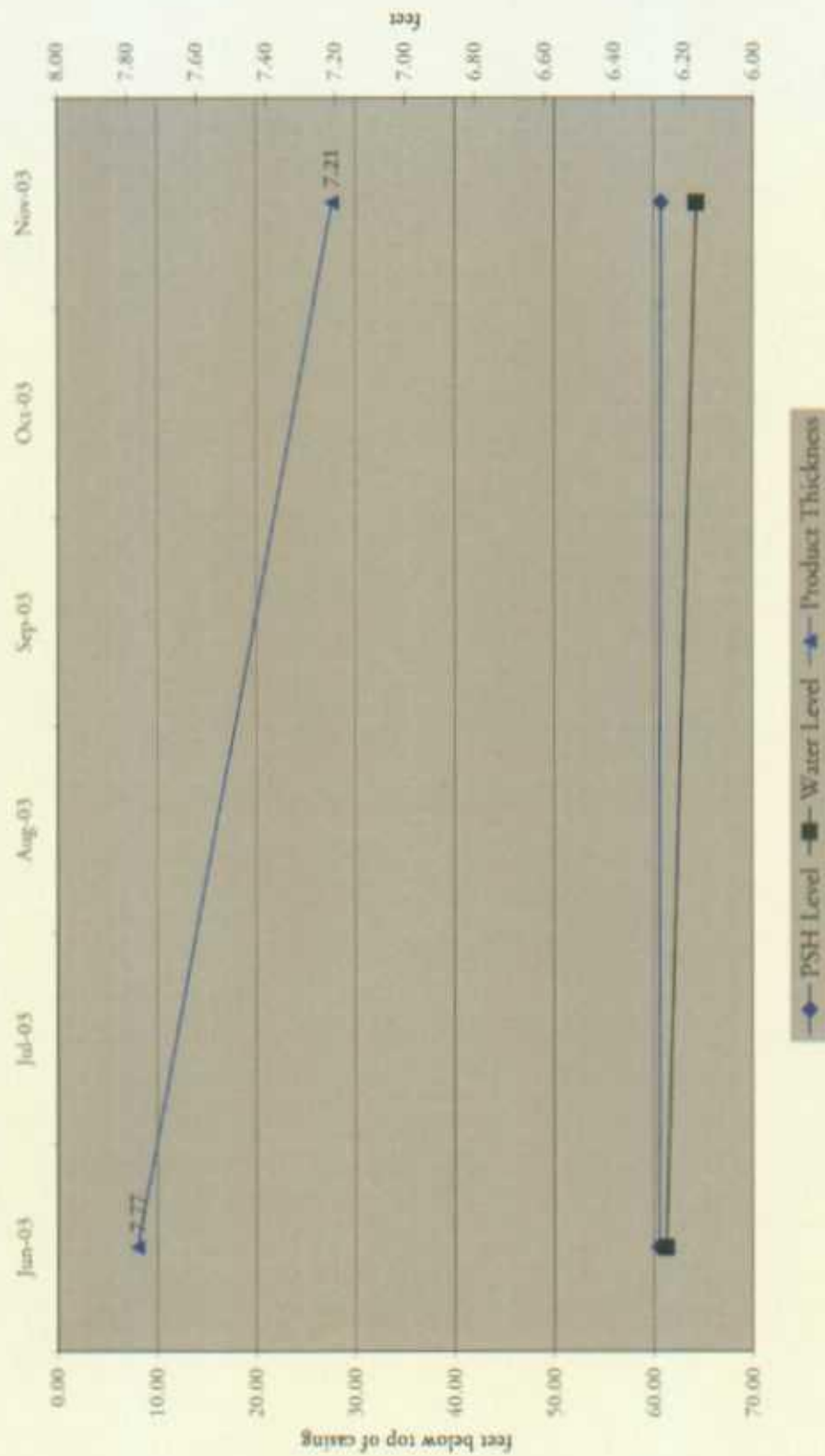


Figure 6 - Hugh Gathering 090402 MW2 Water and PSH Levels and PSH Thickness

Link Energy  
Hugh Gathering #2002-10235  
MW3 Water Levels

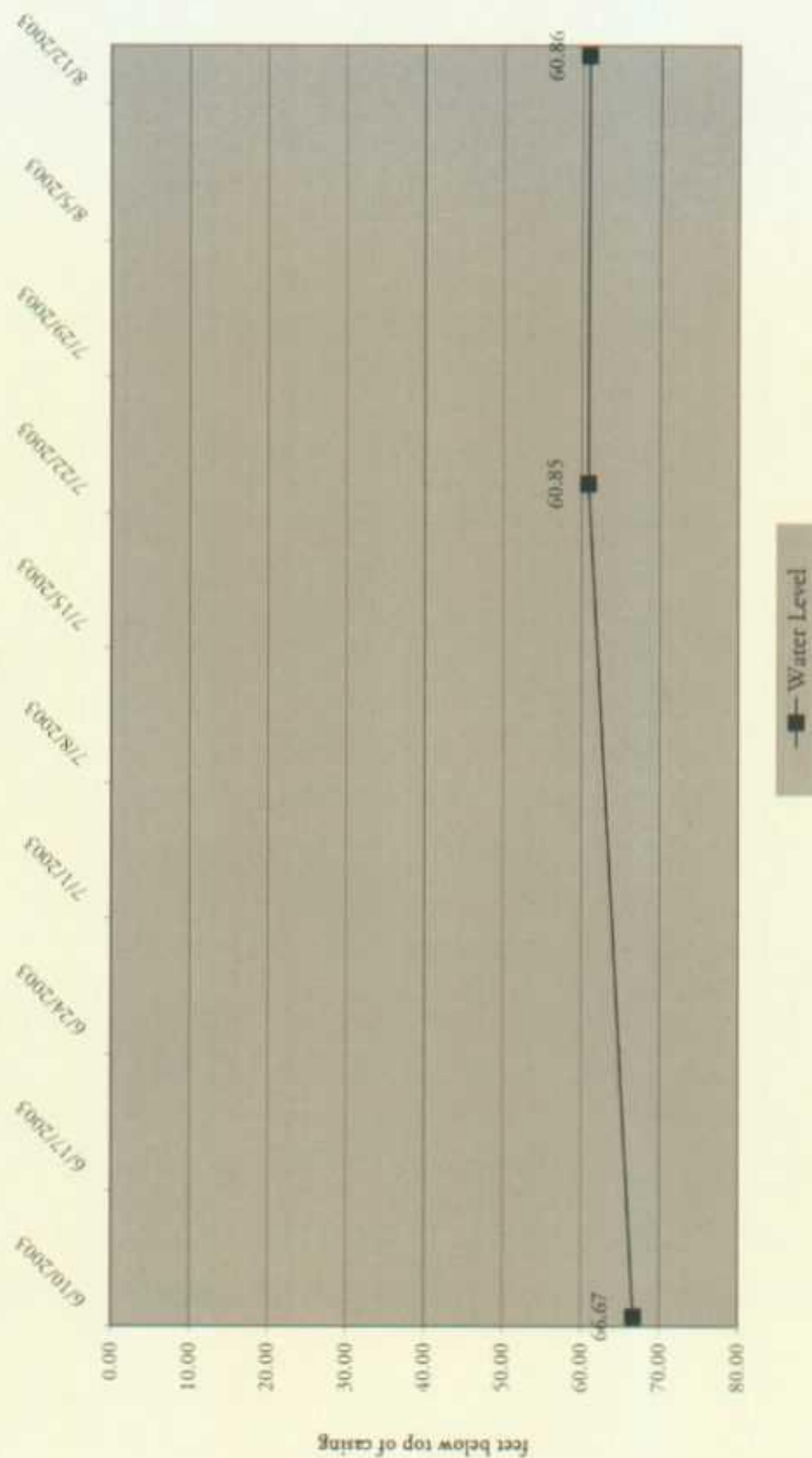


Figure 7 - Hugh Gathering 090402 MW3 Water Levels

Link Energy  
Hugh Gathering #2002-10235  
MW/4 Water and PSH Levels and PSH Thickness

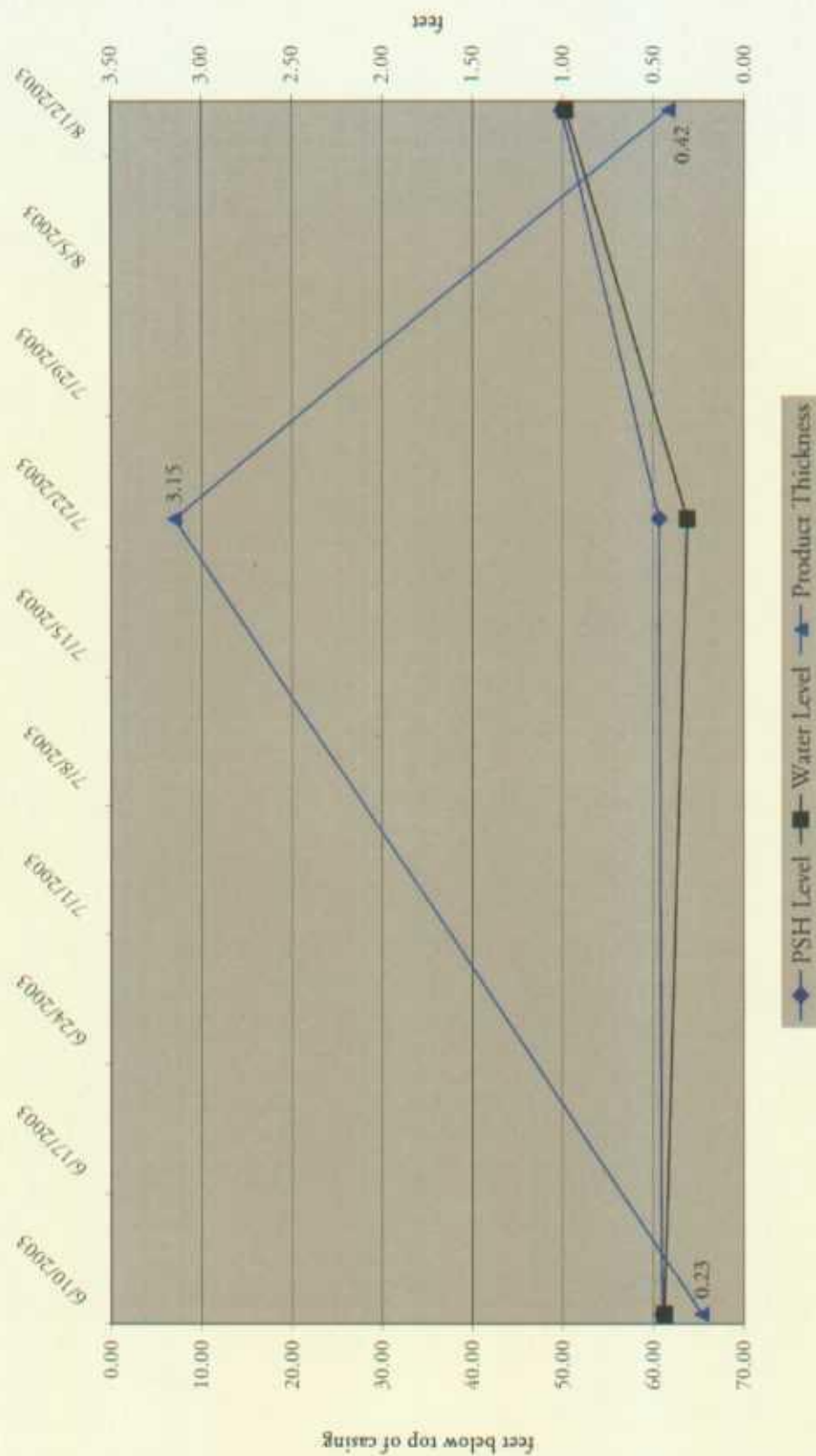
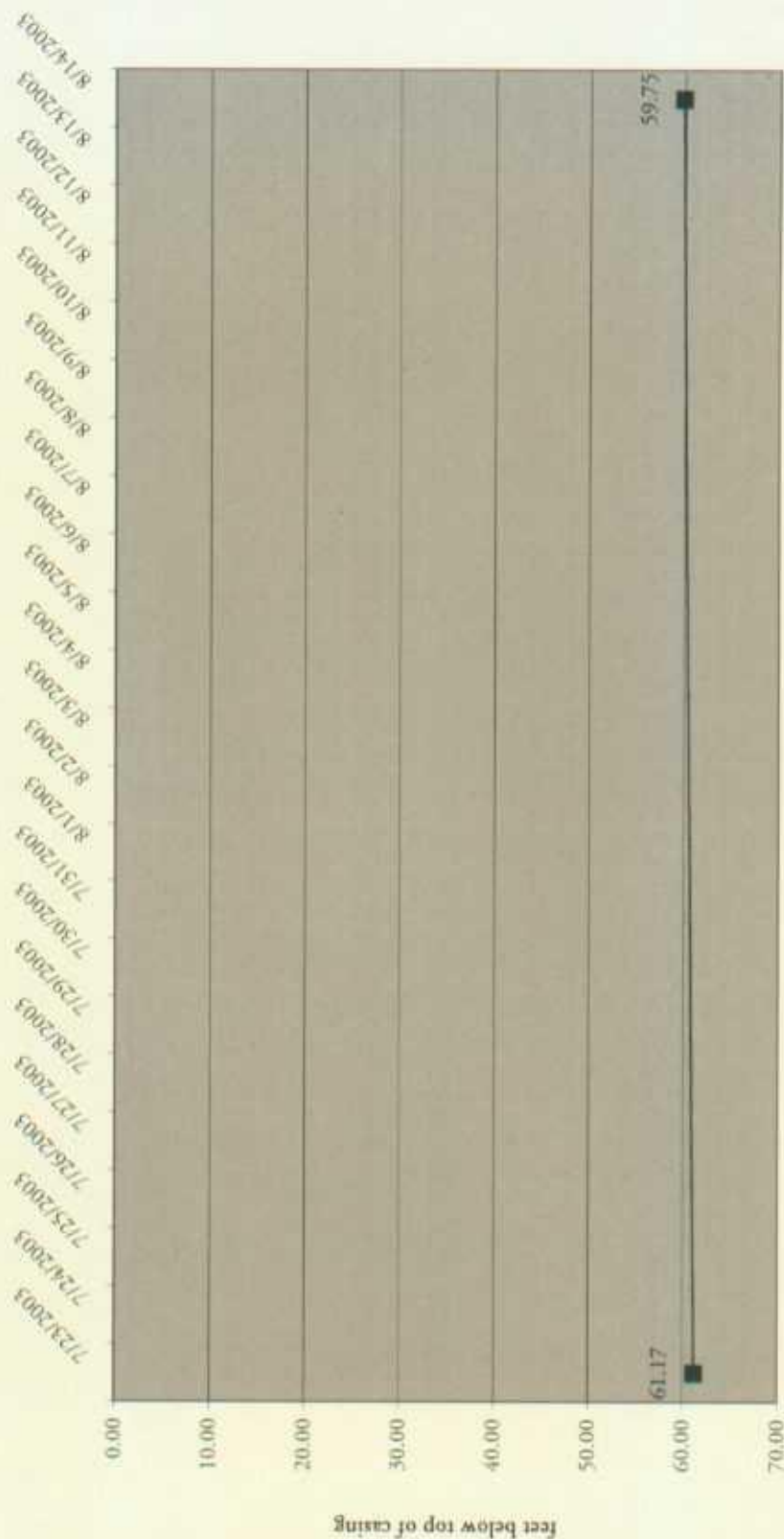


Figure 8 - Hugh Gathering 090402 MW/4 Water and PSH Levels and PSH Thickness

Link Energy  
Hugh Gathering #2002-10235  
MW5 Water Levels



■ Water Level

Figure 9 - Hugh Gathering 090402 MW5 Water Levels

TABLE

Link Energy  
Hugh Gathering #2002-10235

Water and PSH Level, PSH Thickness, Analytical Information, and PSH Recovery Summary

Well #	Date	PSH Level	Water Level	Product Thickness	Benzene	Ethylbenzene	m,p-Xylenes	o-Xylene	Toluene	TPH		PSH Recovered (volumes are from MW's 1, 2, & 3)
										GRO	DRO	
MW1	12/13/2002	59.33	67.10	7.77	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	gallons
	2/27/2003	59.42	66.63	7.21								110
	3/24/2003	59.51	66.15	6.64								15
	6/4/2003	59.70	65.48	5.78								20
	6/10/2003	60.16	60.62	0.46								65
MW2	8/14/2003	60.53	61.86	1.33								80
	11/4/2003	60.17	64.64	4.47								110
	6/10/2003	60.57	61.27	0.70								
MW3	11/4/2003	60.71	64.28	3.57								
	6/10/2003	ND	66.67									
	7/23/2003	ND	60.85	oil sheen	112	138	158	91.9	361	2.29	3.95	
MW4	8/14/2003	ND	60.86									
	6/10/2003	61.03	61.26	0.23								
	7/23/2003	60.65	63.80	3.15								
MW5	8/14/2003	49.82	50.24	0.42								
	7/23/2003	ND	61.17		35.9	20.9	24.1	20.3	87.9	<0.5	1.97	
	8/14/2003	ND	59.75									
										WQCC Standard		400
										TOTAL		400

'btoc - feet below top of casing

µg/L - micrograms per Liter

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

PSH - Phase Separated Hydrocarbon

WQCC - New Mexico Water Quality Control Commission

Table 1 - Hugh Gathering 090402 Water and PSH Levels, PSH Thicknesses, Analytical Results Summary and PSH Recovery Log

## APPENDIX

APPENDIX A - HUGH GATHERING 090402 ANALYTICAL RESULTS AND  
FORMS

QUALYS<sup>PC</sup>

Client: Environmental Plus, Inc.  
 Attn: Pat McCasland  
 Address: 2100 Ave. O  
 Emile

NM 88231

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

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

Report# Lab ID#: 145464 Report Date: 08/06/03  
 Project ID: 2000-10437  
 Sample Name: WEHG7233WMTW (MW5)  
 Sample Matrix: water  
 Date Received: 07/23/2003 Time: 10:50  
 Date Sampled: 07/23/2003 Time: 09:15

## REPORT OF ANALYSIS

QUALITY ASSURANCE DATA<sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Proc. <sup>3</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	1.97	mg/L	0.5	<0.5	08/04/03	8015 mod.	—	8.9	72.2	75.2	76
TPH by GC (as diesel-ext)	—	—	—	—	08/04/03	3540	—	—	—	—	—
TPH by GC (as gasoline)	<0.5	mg/L	0.5	<0.5	08/04/03	8015 mod.	—	2.4	99.5	99.8	96.3
Volatile organics-8266/81EX	—	—	—	—	07/31/03	8260b	—	—	—	—	—
Benzene	35.9	µg/L	1	<1	07/31/03	8260b	—	1	87.9	96.7	93.6
Ethylbenzene	30.9	µg/L	1	<1	07/31/03	8260b	—	5.5	107.1	107.6	109
m,p-Xylenes	24.1	µg/L	1	<1	07/31/03	8260b	—	3.5	107.4	106.3	109.8
o-Xylene	20.3	µg/L	1	<1	07/31/03	8260b	—	3.5	109.4	106.8	110.1
Toluene	27.9	µg/L	1	<1	07/31/03	8260b	—	0.9	90.3	100.3	97.3

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

Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (RP) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limit (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. LCS from (4) only reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are: 1 = analyte potentially present between the PQL and the MDL, B = Analyte detected in actualized method blank(s). 81 = MS only MSD recovery exceed advisory limits. S2 = Peak detected in spikes (PDS) recovery exceeds advisory limit. S3 = MS and/or MSD and PDS recoveries exceed advisory limits. P = Precision higher than advisory limit. M = Matrix interference.



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

Client: Environmental Plus, Inc. Attn: Pat McCord	Project ID: 2000-10437 Sample Name: VEHG72303WJW/ (MW5)	Report#/Lab ID#: 145464 Sample Matrix: water
--	--	---

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	68.4	50-150	--
p-Terphenyl	8015 mod.	64.2	50-150	--
1,2-Dichlorooctane-44	8260b	84	80-120	--
Toluene-43	8260b	103	88-110	--

Data Qualifier: D= Surrogate diluted and X= Surrogate outside laboratory recovery limits

ANALYSIS

3912 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Plus, Inc.  
Attn: Pat McCasland  
Address: 2140 Ave. O  
Eunice

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

NM 88238

Report#/Lab ID#: 145465 Report Date: 08/06/03  
Project ID: 2000-10437  
Sample Name: WEEH72303SMW2 (MW3)  
Sample Matrix: water  
Date Received: 07/29/03 Time: 10:50  
Date Sampled: 07/29/03 Time: 10:50

# REPORT OF ANALYSIS

## QUALITY ASSURANCE DATA 1

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>8</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
TPH by GC (as diesel)	3.95	mg/L	0.5	<0.5	08/05/03	8015 mod.	—	8.9	72.2	75.2	76
TPH by GC (as diesel-extr)	—	—	—	—	08/04/03	3540	—	—	—	—	—
TPH by GC (as gasoline)	2.20	mg/L	0.5	<0.5	08/05/03	8015 mod.	—	2.4	99.5	99.8	96.3
Volatiles organics-8260b/8TEX	—	—	—	—	07/31/03	8260b	—	—	—	—	—
Benzene	112	µg/L	10	<10	07/31/03	8260b	—	1	87.9	96.7	93.6
Ethylbenzene	136	µg/L	10	<10	07/31/03	8260b	—	5.5	107.1	107.6	109
m,p-Xylenes	150	µg/L	10	<10	07/31/03	8260b	—	3.5	107.4	106.3	109.8
o-Xylene	91.9	µg/L	10	<10	07/31/03	8260b	—	3.5	109.4	106.8	110.1
Toluene	261	µg/L	10	<10	07/31/03	8260b	—	0.9	90.3	100.3	97.3

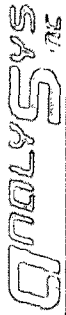
This analytical report is not to be used for legal purposes. The analytical results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with Analytix, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2000, Analytix, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of Analytix, Inc.

Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limit (RQL), typically as or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. LCS from (1) values reflect residual quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are 1 = analyte potentially present between the PQL and the RQL. 8 = Analyte detected in accelerated method blank(s). 91 = MS (and/or MSD recovery checked) recovery limits. 92 = Pass against applicable (PDS) recovery criteria recovery limit. 93 = MS (and/or MSD and PDS recovery checked) recovery limit. P = Precision higher than recovery limit. M = Matrix interference.



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

Client: Environmental Plus, Inc.	Project ID: 2000-10437	Report#/Lab ID#: 145465
Att: Pat McClelland	Sample Name: WEHG72303SMW2 (MW3)	Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Date Qualifiers
1-Chlorooctane	8005 mod.	70.5	50-150	---
p-Terphenyl	8005 mod.	76.5	50-150	---
1,2-Dichloroethane-44	8260b	101	80-120	---
Toluene-43	8260b	106	88-110	---

Data Qualifier: D= Surrogate diluted and N= Surrogate outside laboratory recovery limits

**Bill to (if different):**

Company Name Fott Energy  
Address 5805 Hwy 80

City Midland State Tx Zip 79701  
ATTN: Frank Hemawale

Phone 915.638-3799 Fax \_\_\_\_\_

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

Project Name/PO#: 2000-10437 Sampler

Bill to (if different):  
Company Name Fort Energy  
Address 5895 Hwy 80

City Midland State Tx Zip 79701  
ATTN: Frank Hemawale

Phone 915.638-3799 Fax \_\_\_\_\_

### Analyses Requested (1)

**Please attach explanatory information as required**

[illegible]

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

$T = 3.8^{\circ}\text{C}$

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Bradly J. [Signature]	Environmental Prot	7-23-07		E. L. [Signature]	ASE	7-25-07	10:50

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