



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

September 29, 2005

Mr. Larry Johnson
NM Energy, Minerals, and Natural Resources Department
New Mexico Oil Conservation Division
1625 French Drive
Hobbs, N.M. 88240

RE: Plains All American Pipeline, Arrowhead Grayburg 8" Gathering (Ref. #2003-00176)
UL-P. (SE ¼ of the SE ¼) Section 2, Township 22 S, Range 36 E¹⁵¹
Latitude N 32° 24' 55.77" and Longitude W 103° 13' 51.26"
Lea County, New Mexico

Dear Mr. Johnson:

On June 9, 2004, Environmental Plus, Inc. (EPI), on behalf of Plains All American Pipeline, submitted a *Site Characterization and Proposal for Risk-Based Closure Report* to the New Mexico Oil Conservation Division (NMOCD) documenting the delineation activities and proposal for remediation of the above referenced site. On August 16, 2004, an *Addendum for Site Characterization and Proposal for Risk-Based Closure* was provided to the NMOCD to address requested information. Approval was granted by the NMOCD to proceed with risk-based closure on September 22, 2004. Excavation of the western end of the release site, clay barrier installation, backfilling, grading/contouring and the seeding of native range grass constitutes the final closure activity at this site, which this letter documents.

Site Background

The site is located in Lea County, New Mexico at latitude N 32° 24' 55.77" and longitude W 103° 13' 51.26" and elevation of approximately 3,512 feet above mean sea level. The release site is on land owned by the State of New Mexico. On June 30, 2003, approximately 20 barrels of crude oil was released, with no product recovered. EPI was retained to delineate and remediate the hydrocarbon impacted soil. Based on the previously submitted *Site Characterization and Proposal for Risk-Based Closure Report* and *Addendum for Site Characterization and Proposal for Risk-Based Closure Report*, the remedial goals (with the exception of the portion of the excavation that was risk-based) for this site are as follows:

<i>Parameter</i>	<i>Remedial Goals</i>
Benzene ^A	10 mg/Kg
BTEX ^A	50 mg/Kg
TPH	100 mg/Kg

^A—A 100 ppm field analysis may be substituted for laboratory analyses.

The site was excavated and hydrocarbon impacted soil transported to Lea Station Land Farm. Field and confirmatory laboratory analyses of soil samples indicated that NMOCD remedial goals (reference table above) had not been reached. Excavation activities resumed until field analyses indicated impacted soil had been removed. Confirmatory laboratory analyses indicated that remediation activities had achieved NMOCD remedial goals with the exception of the western end of the excavation and the excavation floor. As the

objective of the risk-based closure was to isolate hydrocarbon impacted soil remaining in the excavation floor and below, it was determined that further remedial excavation activities would concentrate on removing impacted soil at the western end of the excavation. For further background information, please refer to Plains All American Arrowhead Grayburg 8" Gathering, Ref. #2003-00176, "Site Characterization and Proposal for Risk-Based Closure," June 8, 2004 and "Addendum for Site Characterization and Proposal for Risk-Based Closure," August 12, 2004.

Field Work

On November 2-3, 2004, EPI personnel excavated approximately 186 cubic yards of soil impacted above NMOCD remedial thresholds from the western end of the release area. Impacted soil was transported to the Lea Station Land Farm for treatment. Five-point composite soil samples were collected from ten locations: northeast, northwest, southeast, and southwest sidewalls and six sample sites at five-feet below ground surface (bgs) on the north and south walls of the western end of the excavation (reference *Figure 6*). A portion of each sample was analyzed in the field utilizing an UltraRae photoionization detector (PID) equipped with a 9.8 electron volt (eV) lamp, the remainder of the sample was submitted to an independent laboratory for confirmatory analyses.

Analytical results indicated remedial goals for the risk-based closure had been achieved. Upon confirmation that the agreed upon NMOCD remedial goals had been achieved, isolation of the remaining source term (i.e. the excavation floor) began. A barrier of dense compacted red clay exhibiting a minimum permeability of 1×10^{-5} cm/sec was installed at eleven-foot bgs, extending four-feet beyond the contamination limits (reference *Figure 7*). The barrier was installed in six-inch lifts with a minimum thickness of one-foot, compacted and tested by an independent laboratory to verify that compaction has achieved a minimum of 95% its Proctor Density (reference *Attachment II*). After verification of compaction, the excavation was backfilled with native soils and contoured to allow natural drainage.

The soil was prepared and the seed drilled with a combination drill/roller packer. Approximately 0.5 acres was seeded with BLM #2 seed consisting of 56.88% pure live seed (PLS) Little Bluestem (*Schizacharium scoparium*) grass, drilled at a rate of 8 pounds PLS per acre. Final closure activity at this site was accomplished with the conclusion of seeding.

Analytical Data

Confirmatory five-point composite soil samples were collected on November 2 and 3, 2004 from the excavation. A portion of each sample was placed in a self sealing polyethylene bag and placed in a heated environment (i.e. truck cabin) to allow the volatilization of organic vapors. After the samples had been allowed to equilibrate to $\approx 70^{\circ}$ F, they were analyzed for the presence of organic vapors utilizing MiniRae photoionization detector (PID) equipped with a 9.8 electron volt (eV) lamp. The remainder of the sample was placed in a jar provided by an independent laboratory and set on ice for transport to the laboratory for quantification of benzene, toluene, ethylbenzene, xylenes (BTEX) via EPA Method 8260B and total petroleum hydrocarbons (TPH) via EPA Method 8015 Modified. Laboratory analyses indicated TPH and BTEX constituent concentrations in all samples were not detected at or above laboratory method detection limit (MDL). All reported TPH and BTEX constituent concentrations from the September 2 and 3, 2004 sampling event were below NMOCD remedial thresholds as outlined above (reference *Table 1*).

Conclusion

The information provided in this letter documents the final remedial and site closure activities at the Arrowhead Grayburg 8" Gathering release site, located in UL-P, SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 2, Range 36 East, Township 22 South, Lea County, New Mexico in accordance with the approved proposal for risk based

Mr. Larry Johnson
September 29, 2005

closure. Upon receipt of laboratory confirmation that hydrocarbon impacted soil had been successfully removed, a compacted clay liner was installed and laboratory verified for proper compaction. Final closure activity at the site consisted of backfilling the excavation, contouring to allow drainage and seeding native range grass. Based on past and current documentation, EPI, on behalf of Plains All American Pipeline, submit that remedial activities performed at this site have achieved all NMOCD remedial goals in accordance with the approved work plan and request a letter stating that no further action be required.

Should you have any questions or concerns, please feel free to contact Iain Olness or me at (505) 394-3481 or via e-mail at iolness@envplus.com.

Sincerely,

ENVIRONMENTAL PLUS, INC.



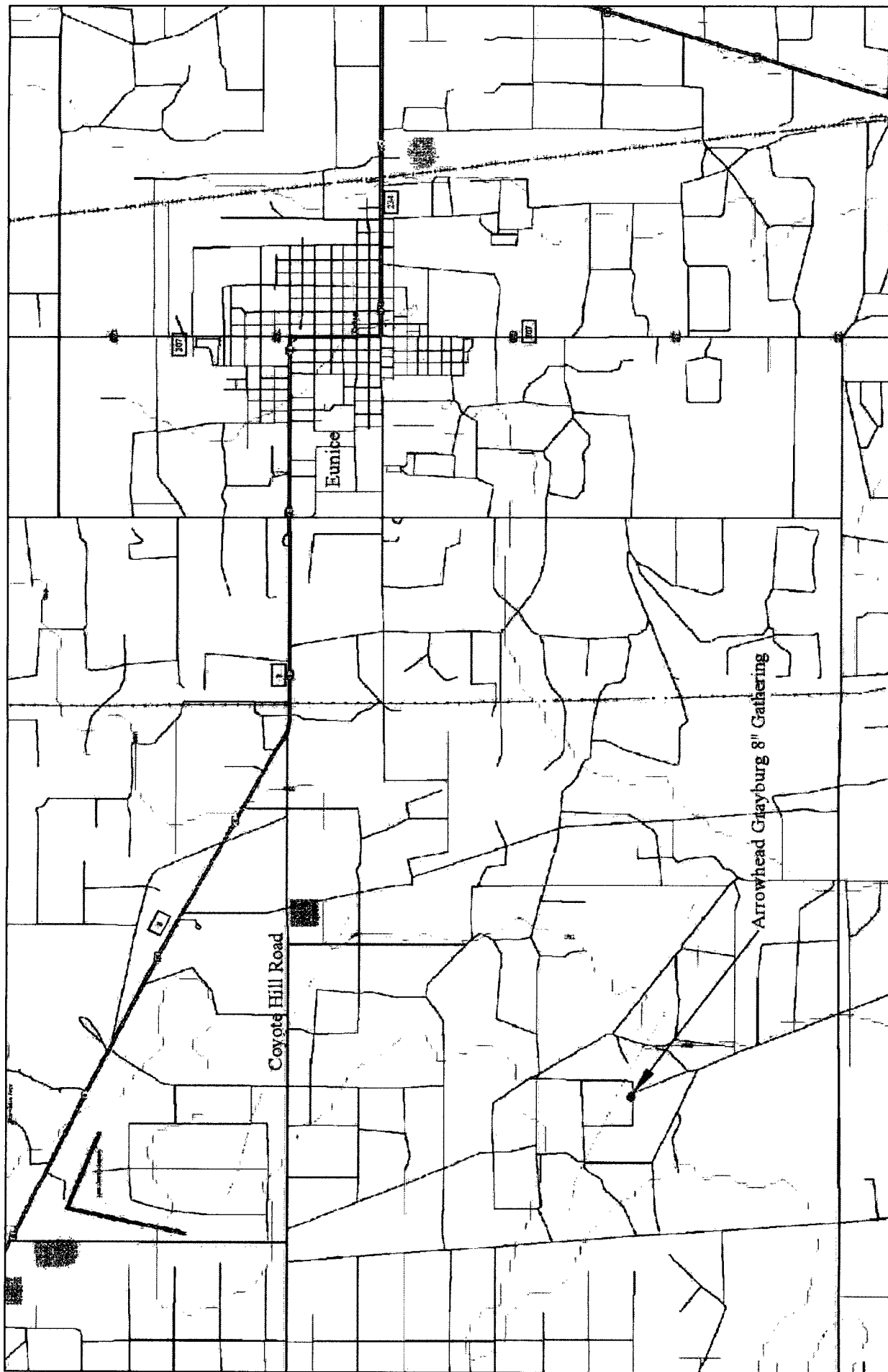
Iain Olness, P.G.
Hydrogeologist

cc: Ms. Camille Reynolds, Plains All American Pipeline, Lovington
Mr. Jeff Dann, Plains All American Pipeline, Houston
Mr. Cody Morrow, New Mexico State Land Office, Sante Fe
File

enclosures:

Figure 1- Area Map
Figure 2- Site Location Map
Figure 3- Site Map
Figure 4- February 18 thru March 2, 2004 Sampling Location Map
Figure 5- March 8, 2004 Sampling Location Map
Figure 6- November 2, 2004 Sampling Location Map
Figure 7- Clay Barrier Location Map
Table-1 Summary of Excavation Analytical Results
Attachment I- Soil Sample Laboratory Results and Chain-of-Custody Form
Attachment II- Clay Liner Compaction Results
Attachment III- Site Photographs
Attachment IV- Final C-141

FIGURES



<p>Figure 1 Area Map Plains All American Arrowhead Grayburg 8" Gathering</p>	<p>Lea County, New Mexico SE 1/4 of the SE 1/4, Sec. 2, T22S, R36E N 32° 24' 55.8" W 103° 13' 51.3" Elevation: 3,512 feet amsl</p>	<p>DWG By: Iain Olness May 2004</p>	<p>REVISED:</p>	<p>SHEET 1 of 1</p>
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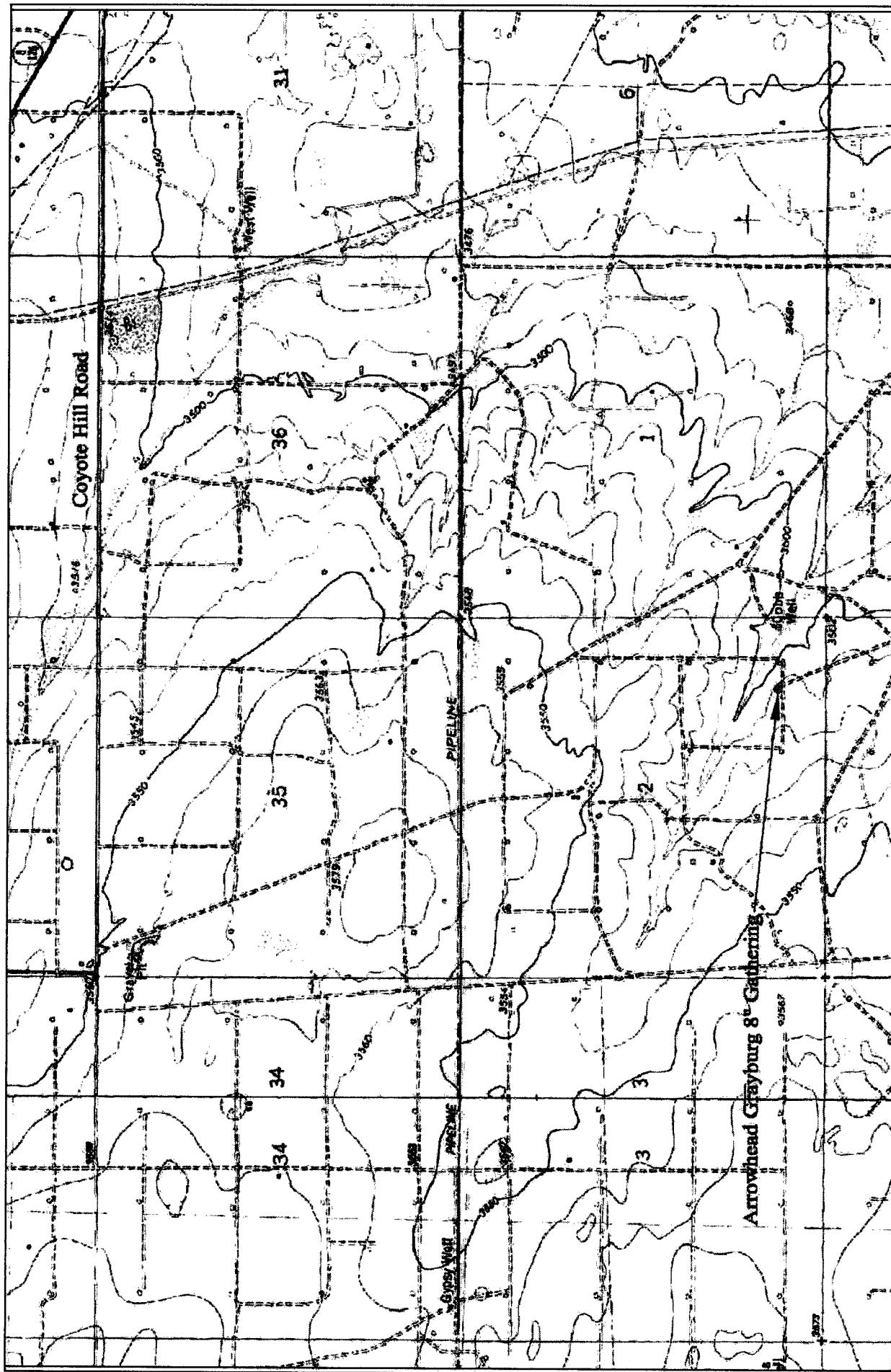


Figure 2
 Site Location Map
 Plains All American
 Arrowhead Grayburg 8" Gathering

Lea County, New Mexico
 SE 1/4 of the SE 1/4, Sec. 2, T22S, R36E
 N 32° 24' 55.8" W 103° 13' 51.3"
 Elevation: 3,512 feet amsl

DWG By: Iain Olness
 May 2004

REVISED:



SHEET
 1 of 1

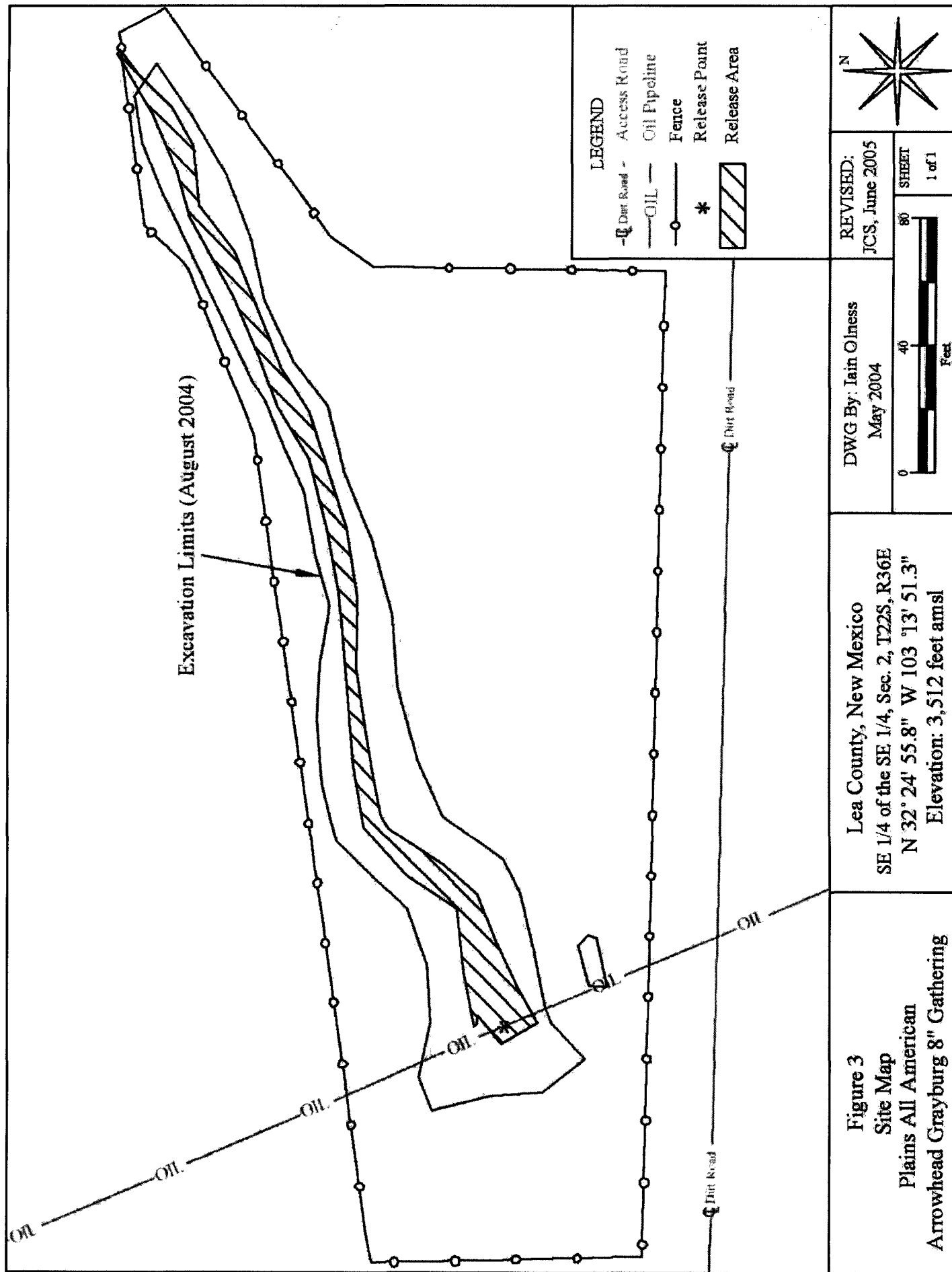


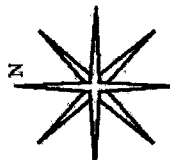
Figure 3
Site Map
Plains All American
Arrowhead Grayburg 8" Gathering

Lea County, New Mexico
SE 1/4 of the SE 1/4, Sec. 2, T22S, R36E
N 32° 24' 55.8" W 103° 13' 51.3"
Elevation: 3,512 feet amsl

DWG By: Iain Olness
May 2004

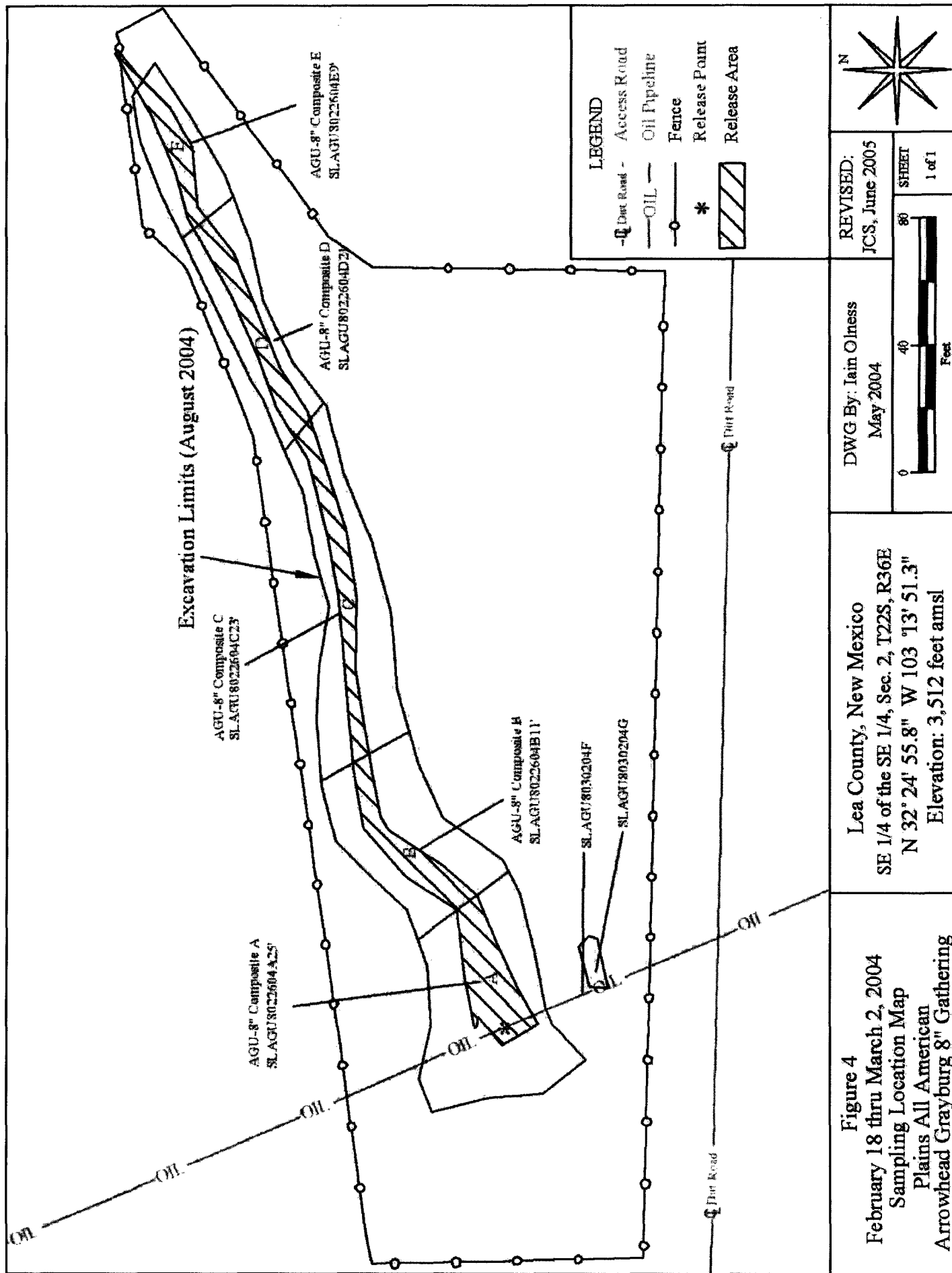
REVISED:
JCS, June 2005

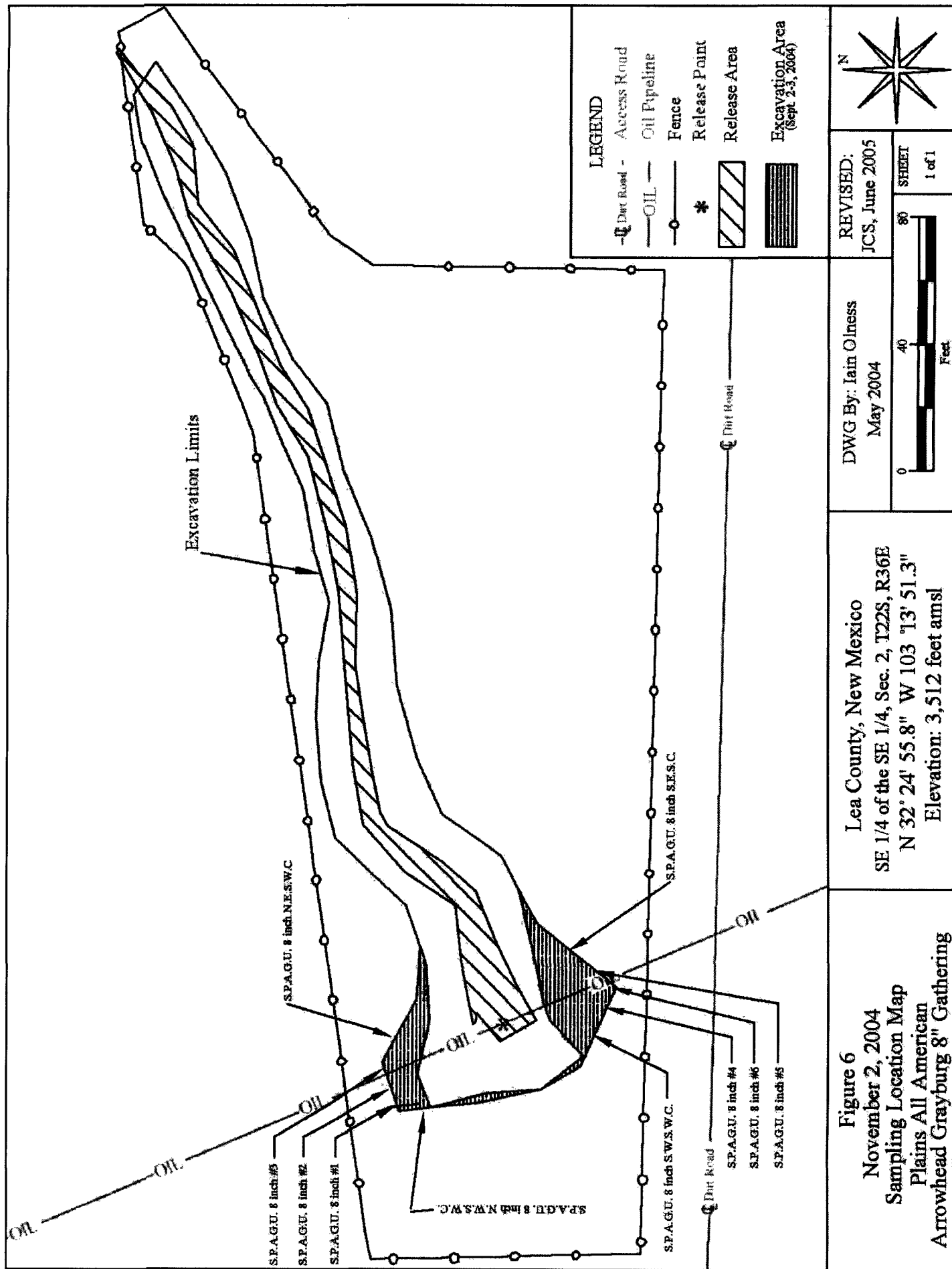
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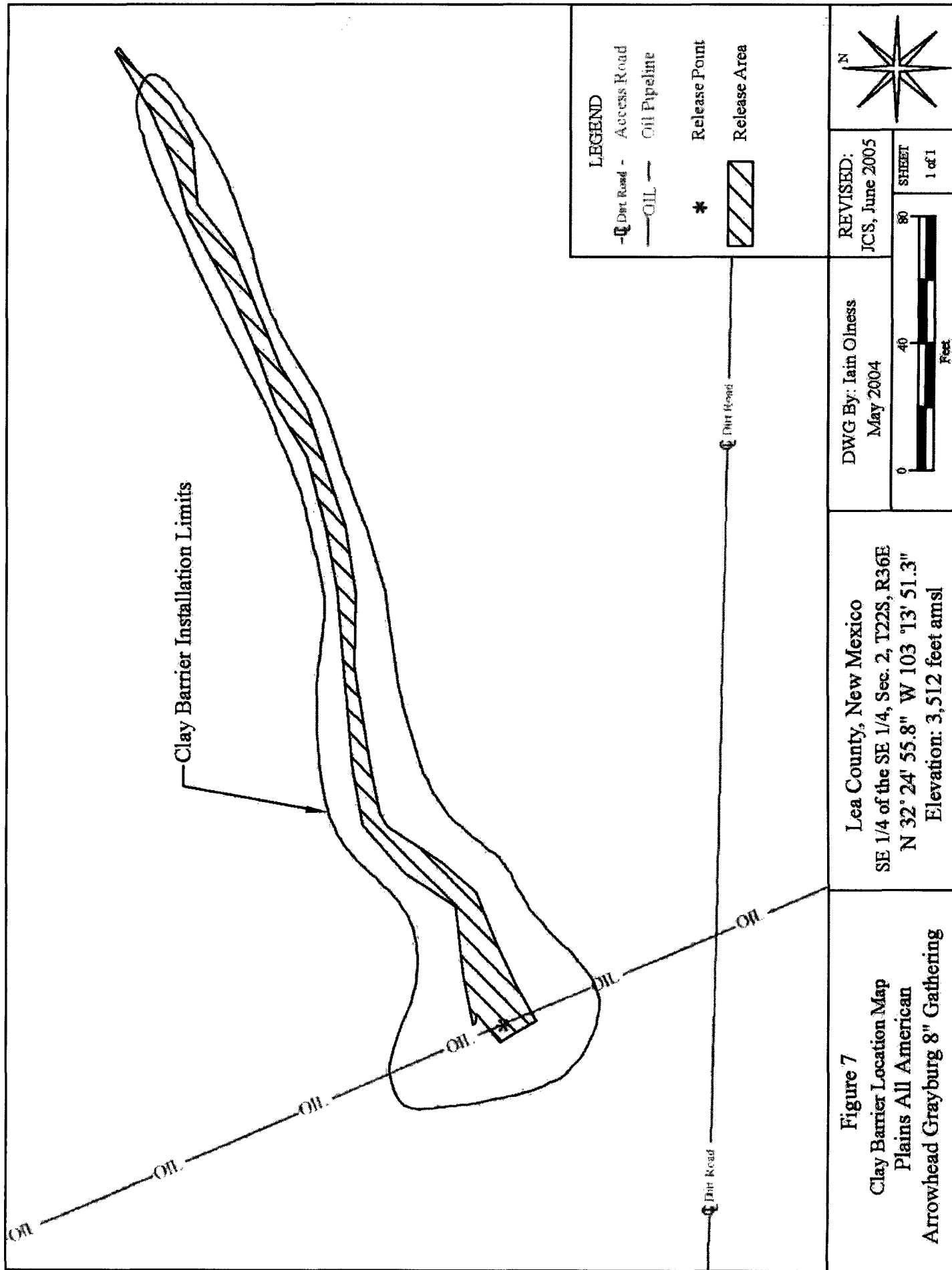


- LEGEND
- - - Dirt Road - Access Road
 - Oil Pipeline
 - Fence
 - * Release Point
 - ▨ Release Area

Excavation Limits (August 2004)







LEGEND

- - - Dirt Road - Access Road
- OIL — Oil Pipeline
- * Release Point
- ▨ Release Area

REVISED:
JCS, June 2005

SHEET
1 of 1

DWG By: Iain Olness
May 2004



Lea County, New Mexico
SE 1/4 of the SE 1/4, Sec. 2, T22S, R36E
N 32° 24' 55.8" W 103° 13' 51.3"
Elevation: 3,512 feet amsl

Figure 7
Clay Barrier Location Map
Plains All American
Arrowhead Grayburg 8" Gathering

TABLES

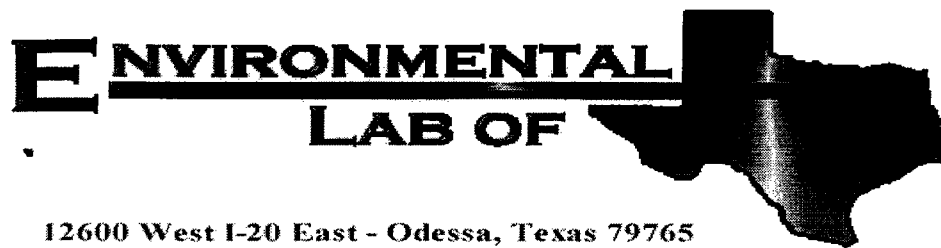
TABLE 2
Summary of Excavation Analytical Results

Arrowhead Grayburg 8" Gathering - Ref. #2003-00176

Sample Name	Date	Sample Type	Depth	Location	PID Analysis (ppm)	TPH (mg/Kg)	BTEX (µg/Kg)	Benzene (µg/Kg)	Chloride (mg/Kg)
AGU-8" Composite A	18-Feb-04	Composite	10	Section A	685	NS	NS	NS	NS
AGU-8" Composite B	18-Feb-04	Composite	5	Section B	967	NS	NS	NS	NS
AGU-8" Composite C	18-Feb-04	Composite	10	Section C	228	NS	NS	NS	NS
AGU-8" Composite D	18-Feb-04	Composite	7	Section D	1,144	NS	NS	NS	NS
AGU-8" Composite E	18-Feb-04	Composite	1.5	Section E	685	NS	NS	NS	NS
SLAGU8022604A25'	26-Feb-04	Composite	25	Section A	NS	242	180	<25	156
SLAGU8022604B11'	26-Feb-04	Composite	11	Section B	NS	679	<125	<25	NA
SLAGU8022604C23'	26-Feb-04	Composite	23	Section C	NS	18.9	<125	<25	NA
SLAGU8022604D21'	26-Feb-04	Composite	21	Section D	NS	161	69.9	<25	NA
SLAGU8022604E9'	26-Feb-04	Composite	9	Section E	NS	<10	<125	<25	NA
SLAGU8030204F	2-Mar-04	Grab	1	Valve	93.2	NS	NS	NS	NS
SLAGU8030204G	2-Mar-04	Grab	1	Sump	84.7	NS	NS	NS	NS
SLAGU8030804SECANSWC	8-Mar-04	Composite	3-8	Section A North Sidewall	4.4	902	56.2	<25	NA
SLAGU8030804SECASSWC	8-Mar-04	Composite	3-8	Section A South Sidewall	144	4,320	3,974	75.2	NA
SLAGU8030804SECAWSWC	8-Mar-04	Composite	3-8	Section A West Sidewall	2.9	14.8	<125	<25	NA
SLAGU8030804SECABHC	8-Mar-04	Composite	11	Section A Bottomhole	601	11,200	64,260	1,070	NA
SLAGU8030804SECBNSWC	8-Mar-04	Composite	3-6	Section B North Sidewall	7.9	33.7	<125	<25	NA
SLAGU8030804SECBSSWC	8-Mar-04	Composite	3-6	Section B South Sidewall	6.1	7.27	<125	<25	NA
SLAGU8030804SECBBHC	8-Mar-04	Composite	8	Section B Bottomhole	40.4	654	223	<25	NA
SLAGU8030804SECBBHC	8-Mar-04	Composite	6	Section C Bottomhole	108	2,050	2,642	<25	NA
NMOCD Remedial Thresholds					100	50,000	10,000	250	

ppm = parts per million, which is equivalent to milligrams per kilogram
mg/Kg = milligrams per kilogram, which is equivalent to parts per million
µg/Kg = micrograms per kilogram, which is equivalent to 0.001 milligrams per kilogram
NS = Not Sampled
NA = Not Analyzed
Results in **Bold** are above the remedial action levels as set by the NMOCD.

ATTACHMENT I-
Soil Sample Laboratory Results and Chain-of-Custody
Form



Analytical Report

Prepared for:

Frank Hernandez
Link Energy Pipeline
P.O. Box 1660
Midland, TX 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Location: None Given

Lab Order Number: 4B27003

Report Date: 03/01/04

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SLAGU8022604A25'	4B27003-01	Soil	02/26/04 09:35	02/27/04 10:50
SLAGU8022604B11'	4B27003-02	Soil	02/26/04 09:45	02/27/04 10:50
SLAGU8022604C23'	4B27003-03	Soil	02/26/04 13:05	02/27/04 10:50
SLAGU8022604D21'	4B27003-04	Soil	02/26/04 14:12	02/27/04 10:50
SLAGU8022604E9'	4B27003-05	Soil	02/26/04 14:35	02/27/04 10:50

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

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Project Number: 2003-00176
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Fax: (432) 682-9719

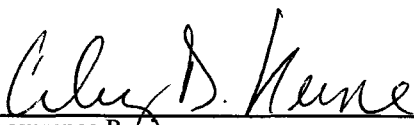
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03/01/04 16:16

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8022604A25' (4B27003-01)									
Benzene	ND	0.0250	mg/kg dry	25	EC40119	02/27/04	02/27/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0330	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.124	0.0250	"	"	"	"	"	"	
Xylene (o)	J [0.0229]	0.0250	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		88.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	25.0	10.0	mg/kg dry	1	EB42707	02/27/04	02/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	217	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	242	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		105 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		106 %	70-130		"	"	"	"	
SLAGU8022604B11' (4B27003-02)									
Benzene	ND	0.0250	mg/kg dry	25	EC40119	02/27/04	02/27/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		85.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.7 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB42707	02/27/04	02/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	J [6.79]	10.0	"	"	"	"	"	"	J
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		97.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		98.8 %	70-130		"	"	"	"	
SLAGU8022604C23' (4B27003-03)									
Benzene	ND	0.0250	mg/kg dry	25	EC40119	02/27/04	02/27/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		87.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB42707	02/27/04	02/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	18.9	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	18.9	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		105 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.


Quality Assurance Review

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

Organics by GC
Environmental Lab of Texas

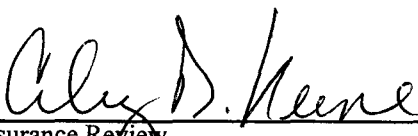
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8022604D21' (4B27003-04)									
Benzene	ND	0.0250	mg/kg dry	25	EC40119	02/27/04	02/27/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	J [0.0171]	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	0.0528	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	15.9	10.0	mg/kg dry	1	EB42707	02/27/04	02/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	145	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	161	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		98.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		99.6 %	70-130		"	"	"	"	

SLAGU8022604E9' (4B27003-05)

Benzene	ND	0.0250	mg/kg dry	25	EC40119	02/27/04	02/27/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		83.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB42707	02/27/04	02/27/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		85.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		86.4 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Quality Assurance Review

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

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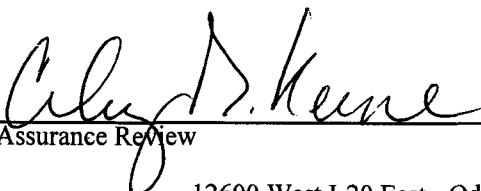
Reported:
03/01/04 16:16

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8022604A25' (4B27003-01)									
Chloride	156	20.0	mg/kg Wet	2	EB42708	02/27/04	02/27/04	SW 846 9253	
% Solids	96.0		%	1	EC40108	03/01/04	03/01/04	% calculation	
SLAGU8022604B11' (4B27003-02)									
% Solids	96.0		%	1	EC40108	03/01/04	03/01/04	% calculation	
SLAGU8022604C23' (4B27003-03)									
% Solids	96.0		%	1	EC40108	03/01/04	03/01/04	% calculation	
SLAGU8022604D21' (4B27003-04)									
% Solids	96.0		%	1	EC40108	03/01/04	03/01/04	% calculation	
SLAGU8022604E9' (4B27003-05)									
% Solids	95.0		%	1	EC40108	03/01/04	03/01/04	% calculation	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.


Quality Assurance Review

Page 4 of 9

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB42707 - Solvent Extraction (GC)

Blank (EB42707-BLK1)

Prepared & Analyzed: 02/27/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	40.0		mg/kg	50.0		80.0	70-130			
Surrogate: 1-Chlorooctadecane	42.1		"	50.0		84.2	70-130			

LCS (EB42707-BS1)

Prepared & Analyzed: 02/27/04

Gasoline Range Organics C6-C12	421	10.0	mg/kg wet	500		84.2	75-125			
Diesel Range Organics >C12-C35	493	10.0	"	500		98.6	75-125			
Total Hydrocarbon C6-C35	914	10.0	"	1000		91.4	75-125			
Surrogate: 1-Chlorooctane	45.7		mg/kg	50.0		91.4	70-130			
Surrogate: 1-Chlorooctadecane	41.6		"	50.0		83.2	70-130			

Calibration Check (EB42707-CCV1)

Prepared & Analyzed: 02/27/04

Gasoline Range Organics C6-C12	468		mg/kg	500		93.6	80-120			
Diesel Range Organics >C12-C35	512		"	500		102	80-120			
Total Hydrocarbon C6-C35	980		"	1000		98.0	80-120			
Surrogate: 1-Chlorooctane	56.9		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	53.4		"	50.0		107	70-130			

Matrix Spike (EB42707-MS1)

Source: 4B25003-17

Prepared & Analyzed: 02/27/04

Gasoline Range Organics C6-C12	543	10.0	mg/kg dry	549	ND	98.9	75-125			
Diesel Range Organics >C12-C35	620	10.0	"	549	80.9	98.2	75-125			
Total Hydrocarbon C6-C35	1160	10.0	"	1100	80.9	98.1	75-125			
Surrogate: 1-Chlorooctane	59.0		mg/kg	50.0		118	70-130			
Surrogate: 1-Chlorooctadecane	55.8		"	50.0		112	70-130			

Matrix Spike Dup (EB42707-MSD1)

Source: 4B25003-17

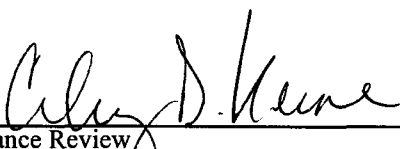
Prepared & Analyzed: 02/27/04

Gasoline Range Organics C6-C12	515	10.0	mg/kg dry	549	ND	93.8	75-125	5.29	20	
Diesel Range Organics >C12-C35	601	10.0	"	549	80.9	94.7	75-125	3.11	20	
Total Hydrocarbon C6-C35	1120	10.0	"	1100	80.9	94.5	75-125	3.51	20	
Surrogate: 1-Chlorooctane	61.4		mg/kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	54.5		"	50.0		109	70-130			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review



Page 5 of 9

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC40119 - EPA 5030C (GC)

Blank (EC40119-BLK1)

Prepared & Analyzed: 02/27/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	91.6		ug/kg	100		91.6	80-120			
Surrogate: 4-Bromofluorobenzene	94.3		"	100		94.3	80-120			

LCS (EC40119-BS1)

Prepared & Analyzed: 02/27/04

Benzene	91.7		ug/kg	100		91.7	80-120			
Toluene	90.1		"	100		90.1	80-120			
Ethylbenzene	90.7		"	100		90.7	80-120			
Xylene (p/m)	178		"	200		89.0	80-120			
Xylene (o)	87.7		"	100		87.7	80-120			
Surrogate: a,a,a-Trifluorotoluene	95.0		"	100		95.0	80-120			
Surrogate: 4-Bromofluorobenzene	93.2		"	100		93.2	80-120			

Calibration Check (EC40119-CCV1)

Prepared & Analyzed: 02/27/04

Benzene	93.9		ug/kg	100		93.9	80-120			
Toluene	90.6		"	100		90.6	80-120			
Ethylbenzene	88.8		"	100		88.8	80-120			
Xylene (p/m)	174		"	200		87.0	80-120			
Xylene (o)	89.8		"	100		89.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	93.7		"	100		93.7	80-120			
Surrogate: 4-Bromofluorobenzene	93.9		"	100		93.9	80-120			

Matrix Spike (EC40119-MS1)

Source: 4B27003-05

Prepared & Analyzed: 02/27/04

Benzene	96.1		ug/kg	100	ND	96.1	80-120			
Toluene	93.5		"	100	ND	93.5	80-120			
Ethylbenzene	93.1		"	100	ND	93.1	80-120			
Xylene (p/m)	183		"	200	ND	91.5	80-120			
Xylene (o)	93.5		"	100	ND	93.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	96.0		"	100		96.0	80-120			
Surrogate: 4-Bromofluorobenzene	103		"	100		103	80-120			

Environmental Lab of Texas

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Quality Assurance Review

Cathy D. Keene

Page 6 of 9

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EC40119 - EPA 5030C (GC)

Matrix Spike Dup (EC40119-MSD1)

Source: 4B27003-05

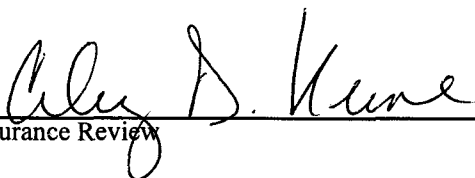
Prepared & Analyzed: 02/27/04

Benzene	92.9		ug/kg	100	ND	92.9	80-120	3.39	20	
Toluene	90.2		"	100	ND	90.2	80-120	3.59	20	
Ethylbenzene	90.3		"	100	ND	90.3	80-120	3.05	20	
Xylene (p/m)	178		"	200	ND	89.0	80-120	2.77	20	
Xylene (o)	91.9		"	100	ND	91.9	80-120	1.73	20	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	82.2		"	100		82.2	80-120			
Surrogate: <i>4-Bromofluorobenzene</i>	99.6		"	100		99.6	80-120			

Environmental Lab of Texas

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Quality Assurance Review



Page 7 of 9

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EB42708 - General Preparation (WetChem)

Blank (EB42708-BLK1)

Prepared & Analyzed: 02/27/04

Chloride ND 20.0 mg/kg Wet

Calibration Check (EB42708-CCV1)

Prepared & Analyzed: 02/27/04

Chloride 5100 mg/kg Wet 5000 102 80-120

Matrix Spike (EB42708-MS1)

Source: 4B27003-01

Prepared & Analyzed: 02/27/04

Chloride 610 20.0 mg/kg Wet 500 156 90.8 80-120

Matrix Spike Dup (EB42708-MSD1)

Source: 4B27003-01

Prepared & Analyzed: 02/27/04

Chloride 610 20.0 mg/kg Wet 500 156 90.8 80-120 0.00 20

Batch EC40108 - % Solids

Blank (EC40108-BLK1)

Prepared & Analyzed: 03/01/04

% Solids 100 %

Duplicate (EC40108-DUP1)

Source: 4B25003-12

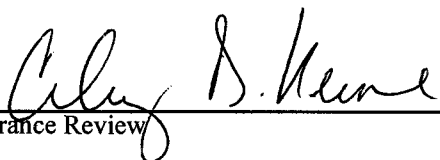
Prepared & Analyzed: 03/01/04

% Solids 87.0 % 87.0 0.00 20

Environmental Lab of Texas

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Quality Assurance Review



Page 8 of 9

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: AGU 8 inch #4
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/01/04 16:16

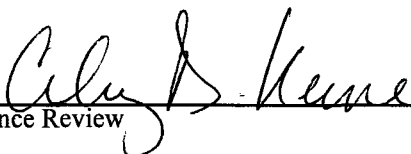
Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Environmental Lab of Texas

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Quality Assurance Review



12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Page 9 of 9

12600 West I-20 East
Odessa Texas 79763

Project Name: AGU 8" #4

Project #: 2003-00176

Project Loc:

PO#:

James Knudsen 5

[illegible]

Special Instructions

FAX RESULTS TO PAT McCASLAND ASAP

Relinquished:

Charles D.

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

Received by:

Received by:	<i>Moto</i>
Received by:	<i>James McMurtry</i>

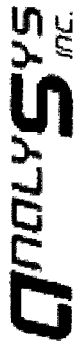
Date	Time
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Date	Time
2-27-04	10:50

Sample Containers	Ir	Y	N
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Temperature Upon Request:

Laboratory Comments:

150



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

Client: Environmental Plus, Inc.

Attn: Pat McCasland

Address: 2100 Ave. O

Eunice

NM 88231

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

Report#/Lab ID#: 153566 **Report Date:** 03/11/04

Project ID: AGU8 2003-00176

Sample Name: SLAGU8030204F

Sample Matrix: soil

Date Received: 03/04/2004 **Time:** 09:50

Date Sampled: 03/02/2004 **Time:** 10:30

REPORT OF ANALYSIS

Parameter	Result	Units	RQL ⁵	Blank	Date	Method ⁶	Data Qual ⁷	Prec. ²	Recov. ³	CCV ⁴	LCS ⁴
TPH by GC (as diesel)	20200	mg/Kg	250	<250	03/09/04	8015 mod.	---	5.6	79.1	108.2	75.8
TPH by GC (as diesel-ext)	---	---	---	---	03/08/04	3570m	---	---	---	---	---
TPH by GC (as gasoline)	1660	mg/Kg	50	<50	03/09/04	8015 mod.	---	7.5	72.8	91	63.8
Volatile organics-8260b/BTEX	---	---	---	---	03/10/04	8260b(5030/5035)	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	03/10/04	8260b	---	0.9	100.3	108.6	102.2
Ethylbenzene	2670	µg/Kg	1000	<1000	03/09/04	8260b	---	8.8	95.1	105.8	97.6
m,p-Xylenes	11200	µg/Kg	2000	<2000	03/09/04	8260b	---	9	97.7	104.9	100.3
o-Xylene	3270	µg/Kg	1000	<1000	03/09/04	8260b	---	7.2	95.8	105.6	99.3
Toluene	315	µg/Kg	20	<20	03/10/04	8260b	---	2.2	102.1	108.8	107.5

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, 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 Elton

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



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

Client: Environmental Plus, Inc.
Attn: Pat McCasland

Project ID: AGU8 2003-00176
Sample Name: SLAGU8030204F

Report#/Lab ID#: 153566
Sample Matrix: soil

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	337	36-140	X
p-Terphenyl	8015 mod.	none/diluted	diluted @ 50X	D
1,2-Dichloroethane-d4	8260b	97.7	56-120	---
Toluene-d8	8260b	81.1	71-116	---

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

Exceptions Report:

Report #/Lab ID#: 153566 **Matrix:** soil
Client: Environmental Plus, Inc. **Attn:** Pat McCasland
Project ID: AGU8 2003-00176
Sample Name: SLAGU8030204F

Sample Temperature/Condition <=6°C

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

Sample Bottles & Preservation

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

J flag Discussion

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

Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
1-Chlorooctane	X	Surrogate recovery outside advisory/acceptance limits. Typically verified by reanalysis or reextraction & reanalysis. In some well known matrices
1-Chlorooctane	X	(sample sources with known interferences) and for some conditions, reextraction and/or reanalysis may be at analysts discretion.
p-Terphenyl	D	Sample diluted to assure quantitation within calibration range or due to Matrix interferences or other matrix effects (eg. high non-target organic
p-Terphenyl	D	levels). Surrogate recoveries not accurately quantifiable.

Notes:



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

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

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

Report#/Lab ID#: 153567 **Report Date:** 03/11/04
Project ID: AGU8 2003-00176
Sample Name: SLAGU8030204G
Sample Matrix: soil
Date Received: 03/04/2004 **Time:** 09:50
Date Sampled: 03/02/2004 **Time:** 10:40

REPORT OF ANALYSIS

Parameter	Result	Units	RQL ⁵	Blank	Date	Method ⁶	Data Qual ⁷	Prec. ²	Recov. ³	CCV ⁴	LCS ⁴
TPH by GC (as diesel)	667	mg/Kg	25	<25	03/09/04	8015 mod.	---	5.6	79.1	108.2	75.8
TPH by GC (as diesel-ext)	---	---	---	---	03/08/04	3570m	---	---	---	---	---
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	03/09/04	8015 mod.	---	7.5	72.8	91	63.8
Volatile organics-8260b/BTEX	---	---	---	---	03/09/04	8260b(5030/5035)	---	---	---	---	---
Benzene	<20	µg/Kg	20	<20	03/09/04	8260b	---	0.9	100.3	108.6	102.2
Ethylbenzene	<20	µg/Kg	20	<20	03/09/04	8260b	---	8.8	95.1	105.8	97.6
m,p-Xylenes	<40	µg/Kg	40	<40	03/09/04	8260b	---	9	97.7	104.9	100.3
o-Xylene	<20	µg/Kg	20	<20	03/09/04	8260b	---	7.2	95.8	105.6	99.3
Toluene	<20	µg/Kg	20	<20	03/09/04	8260b	---	2.2	102.1	108.8	107.5

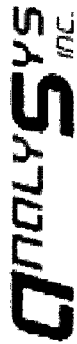
QUALITY ASSURANCE DATA¹

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, 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 Elton

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



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

Client: Environmental Plus, Inc.
Attn: Pat McCasland

Project ID: AGU8 2003-00176
Sample Name: SLAGU8030204G

Report#/Lab ID#: 153567
Sample Matrix: soil

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	46	36-140	---
p-Terphenyl	8015 mod.	413	40-121	X
1,2-Dichloroethane-d4	8260b	103	56-120	---
Toluene-d8	8260b	105	71-116	---

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

Exceptions Report:

Report #/Lab ID#: 153567 **Matrix:** soil
Client: Environmental Plus, Inc. **Attn:** Pat McCasland
Project ID: AGU8 2003-00176
Sample Name: SLAGU8030204G

Sample Temperature/Condition <=6°C

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

Sample Bottles & Preservation

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

J flag Discussion

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

Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
p-Terphenyl	X	Surrogate recovery outside advisory/acceptance limits. Typically verified by reanalysis or reextraction & reanalysis. In some well known matrices
p-Terphenyl	X	(sample sources with known interferences) and for some conditions, reextraction and/or reanalysis may be at analysts discretion.

Notes:

בולש"י INC.

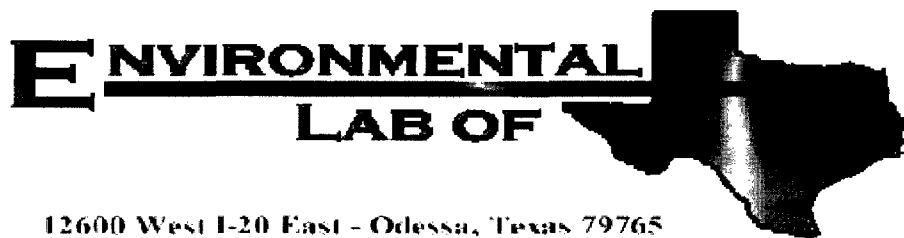
Phone 505-631-3095 Fax 505-396-2754

Project Name/PO#: AG08
2003-00176
Sampler: Morris Burkett

Please attach explanatory information as required

1582

[T]endering of above described samples to AnalySys, Inc. for analytical testing of agreement by buyer/supplier to AnalySys, Inc.'s standard terms.



Analytical Report

Prepared for:

Frank Hernandez
Link Energy Pipeline
P.O. Box 1660
Midland, TX 79702

Project: Arrowhead Greyberg Unit 8

Project Number: 2003-00176

Location: None Given

Lab Order Number: 4C09002

Report Date: 03/15/04

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SLAGU8030804SECANSWC	4C09002-01	Soil	03/08/04 09:05	03/09/04 12:20
SLAGU8030804SECASSWC	4C09002-02	Soil	03/08/04 09:15	03/09/04 12:20
SLAGU8030804SECAWSWC	4C09002-03	Soil	03/08/04 09:25	03/09/04 12:20
SLAGU8030804SECABHC	4C09002-04	Soil	03/08/04 09:40	03/09/04 12:20
SLAGU8030804SECBNSWC	4C09002-05	Soil	03/08/04 09:55	03/09/04 12:20
SLAGU8030804SECBSSWC	4C09002-06	Soil	03/08/04 10:10	03/09/04 12:20
SLAGU8030804SECBBHC	4C09002-07	Soil	03/08/04 10:25	03/09/04 12:20
SLAGU8030804SECCBBHC	4C09002-08	Soil	03/08/04 10:45	03/09/04 12:20

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8030804SECANSWC (4C09002-01)									
Benzene	ND	0.0250	mg/kg dry	25	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.0562	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		95.7 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	36.6	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	865	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	902	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		100 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		99.2 %	70-130		"	"	"	"	
SLAGU8030804SECASSWC (4C09002-02)									
Benzene	0.0752	0.0500	mg/kg dry	50	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	0.277	0.0500	"	"	"	"	"	"	
Ethylbenzene	0.713	0.0500	"	"	"	"	"	"	
Xylene (p/m)	2.40	0.0500	"	"	"	"	"	"	
Xylene (o)	0.509	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		129 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		104 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	402	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	3920	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	4320	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		119 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		109 %	70-130		"	"	"	"	
SLAGU8030804SECAWSWC (4C09002-03)									
Benzene	ND	0.0250	mg/kg dry	25	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.7 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	14.8	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	14.8	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		101 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		102 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Quality Assurance Review

Page 2 of 11

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8030804SECABHC (4C09002-04)									
Benzene	1.07	0.100	mg/kg dry	100	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	5.31	0.100	"	"	"	"	"	"	
Ethylbenzene	11.6	0.100	"	"	"	"	"	"	
Xylene (p/m)	36.8	0.100	"	"	"	"	"	"	
Xylene (o)	9.48	0.100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		278 %	80-120		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		113 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	2400	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	8750	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	11200	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		167 %	70-130		"	"	"	"	S-04
<i>Surrogate: 1-Chlorooctadecane</i>		116 %	70-130		"	"	"	"	
SLAGU8030804SECBNSWC (4C09002-05)									
Benzene	ND	0.0250	mg/kg dry	25	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.2 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	33.7	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	33.7	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		88.0 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		87.0 %	70-130		"	"	"	"	
SLAGU8030804SECBSSWC (4C09002-06)									
Benzene	ND	0.0250	mg/kg dry	25	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.0 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	J [7.27]	10.0	"	"	"	"	"	"	J
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		94.0 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		92.6 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Quality Assurance Review

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Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8030804SECCBBHC (4C09002-07)									
Benzene	ND	0.0250	mg/kg dry	25	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0347	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.142	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0460	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		93.4 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	52.0	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	602	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	654	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		90.8 %	70-130		"	"	"	"	
SLAGU8030804SECCBBHC (4C09002-08)									
Benzene	ND	0.0250	mg/kg dry	25	EC41506	03/12/04	03/12/04	EPA 8021B	
Toluene	0.167	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.369	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.57	0.0250	"	"	"	"	"	"	
Xylene (o)	0.536	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	300	10.0	mg/kg dry	1	EC40903	03/09/04	03/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	1750	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	2050	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		114 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Quality Assurance Review

Page 4 of 11

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SLAGU8030804SECANSWC (4C09002-01)									
% Solids	92.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECASSWC (4C09002-02)									
% Solids	94.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECAWSWC (4C09002-03)									
% Solids	94.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECABHC (4C09002-04)									
% Solids	88.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECBNSWC (4C09002-05)									
% Solids	91.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECBSSWC (4C09002-06)									
% Solids	91.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECBBHC (4C09002-07)									
% Solids	91.0		%	1	EC41004	03/09/04	03/10/04	% calculation	
SLAGU8030804SECCBBHC (4C09002-08)									
% Solids	90.0		%	1	EC41004	03/09/04	03/10/04	% calculation	

Environmental Lab of Texas

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Quality Assurance Review

Page 5 of 11

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC40903 - Solvent Extraction (GC)

Blank (EC40903-BLK1)

Prepared & Analyzed: 03/09/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	38.9		mg/kg	50.0		77.8	70-130			
Surrogate: 1-Chlorooctadecane	38.4		"	50.0		76.8	70-130			

Blank (EC40903-BLK2)

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	40.4		mg/kg	50.0		80.8	70-130			
Surrogate: 1-Chlorooctadecane	42.8		"	50.0		85.6	70-130			

LCS (EC40903-BS1)

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	396		mg/kg	500		79.2	75-125			
Diesel Range Organics >C12-C35	504		"	500		101	75-125			
Total Hydrocarbon C6-C35	900		"	1000		90.0	75-125			
Surrogate: 1-Chlorooctane	53.8		"	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	44.2		"	50.0		88.4	70-130			

LCS (EC40903-BS2)

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	408	10.0	mg/kg wet	500		81.6	75-125			
Diesel Range Organics >C12-C35	473	10.0	"	500		94.6	75-125			
Total Hydrocarbon C6-C35	881	10.0	"	1000		88.1	75-125			
Surrogate: 1-Chlorooctane	54.7		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	44.6		"	50.0		89.2	70-130			

Calibration Check (EC40903-CCV1)

Prepared & Analyzed: 03/09/04

Gasoline Range Organics C6-C12	443		mg/kg	500		88.6	80-120			
Diesel Range Organics >C12-C35	519		"	500		104	80-120			
Total Hydrocarbon C6-C35	962		"	1000		96.2	80-120			
Surrogate: 1-Chlorooctane	59.8		"	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	48.1		"	50.0		96.2	70-130			

Environmental Lab of Texas

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Quality Assurance Review

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Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC40903 - Solvent Extraction (GC)

Calibration Check (EC40903-CCV2)

Prepared & Analyzed: 03/09/04

Gasoline Range Organics C6-C12	437		mg/kg	500		87.4	80-120			
Diesel Range Organics >C12-C35	527		"	500		105	80-120			
Total Hydrocarbon C6-C35	964		"	1000		96.4	80-120			
Surrogate: 1-Chlorooctane	59.2		"	50.0		118	70-130			
Surrogate: 1-Chlorooctadecane	48.4		"	50.0		96.8	70-130			

Matrix Spike (EC40903-MS1)

Source: 4C09001-03

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	496		mg/kg	500	ND	99.2	75-125			
Diesel Range Organics >C12-C35	518		"	500	ND	104	75-125			
Total Hydrocarbon C6-C35	1010		"	1000	ND	101	75-125			
Surrogate: 1-Chlorooctane	55.2		"	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	49.9		"	50.0		99.8	70-130			

Matrix Spike (EC40903-MS2)

Source: 4C09008-01

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	527	10.0	mg/kg dry	538	ND	98.0	75-125			
Diesel Range Organics >C12-C35	774	10.0	"	538	203	106	75-125			
Total Hydrocarbon C6-C35	1300	10.0	"	1080	203	102	75-125			
Surrogate: 1-Chlorooctane	57.6		mg/kg	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	50.2		"	50.0		100	70-130			

Matrix Spike Dup (EC40903-MSD1)

Source: 4C09001-03

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	476		mg/kg	500	ND	95.2	75-125	4.12	20	
Diesel Range Organics >C12-C35	537		"	500	ND	107	75-125	3.60	20	
Total Hydrocarbon C6-C35	1010		"	1000	ND	101	75-125	0.00	20	
Surrogate: 1-Chlorooctane	55.2		"	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	49.9		"	50.0		99.8	70-130			

Matrix Spike Dup (EC40903-MSD2)

Source: 4C09008-01

Prepared: 03/09/04 Analyzed: 03/10/04

Gasoline Range Organics C6-C12	522	10.0	mg/kg dry	538	ND	97.0	75-125	0.953	20	
Diesel Range Organics >C12-C35	777	10.0	"	538	203	107	75-125	0.387	20	
Total Hydrocarbon C6-C35	1300	10.0	"	1080	203	102	75-125	0.00	20	
Surrogate: 1-Chlorooctane	57.0		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	50.2		"	50.0		100	70-130			

Environmental Lab of Texas

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Quality Assurance Review

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Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC41506 - EPA 5030C (GC)

Blank (EC41506-BLK1)

Prepared & Analyzed: 03/12/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	99.2		ug/kg	100		99.2	80-120			
Surrogate: 4-Bromofluorobenzene	101		"	100		101	80-120			

LCS (EC41506-BS1)

Prepared & Analyzed: 03/12/04

Benzene	101		ug/kg	100		101	80-120			
Toluene	98.3		"	100		98.3	80-120			
Ethylbenzene	97.9		"	100		97.9	80-120			
Xylene (p/m)	197		"	200		98.5	80-120			
Xylene (o)	98.5		"	100		98.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	108		"	100		108	80-120			
Surrogate: 4-Bromofluorobenzene	101		"	100		101	80-120			

Calibration Check (EC41506-CCV1)

Prepared: 03/12/04 Analyzed: 03/15/04

Benzene	95.3		ug/kg	100		95.3	80-120			
Toluene	93.3		"	100		93.3	80-120			
Ethylbenzene	93.1		"	100		93.1	80-120			
Xylene (p/m)	185		"	200		92.5	80-120			
Xylene (o)	95.8		"	100		95.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	97.5		"	100		97.5	80-120			
Surrogate: 4-Bromofluorobenzene	98.2		"	100		98.2	80-120			

Matrix Spike (EC41506-MS1)

Source: 4C11003-03

Prepared: 03/12/04 Analyzed: 03/15/04

Benzene	104		ug/kg	100	ND	104	80-120			
Toluene	101		"	100	ND	101	80-120			
Ethylbenzene	101		"	100	ND	101	80-120			
Xylene (p/m)	201		"	200	ND	100	80-120			
Xylene (o)	102		"	100	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	104		"	100		104	80-120			
Surrogate: 4-Bromofluorobenzene	99.5		"	100		99.5	80-120			

Environmental Lab of Texas

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Quality Assurance Review

Page 8 of 11

Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC41506 - EPA 5030C (GC)

Matrix Spike Dup (EC41506-MSD1)

Source: 4C11003-03

Prepared: 03/12/04 Analyzed: 03/15/04

Benzene	99.3		ug/kg	100	ND	99.3	80-120	4.62	20	
Toluene	94.6		"	100	ND	94.6	80-120	6.54	20	
Ethylbenzene	95.7		"	100	ND	95.7	80-120	5.39	20	
Xylene (p/m)	192		"	200	ND	96.0	80-120	4.08	20	
Xylene (o)	96.4		"	100	ND	96.4	80-120	5.65	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	93.2		"	100		93.2	80-120			
Surrogate: <i>4</i> -Bromofluorobenzene	93.9		"	100		93.9	80-120			

Environmental Lab of Texas

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Quality Assurance Review

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Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC41004 - % Solids

Blank (EC41004-BLK1)

Prepared: 03/09/04 Analyzed: 03/10/04

% Solids 100 %

Duplicate (EC41004-DUP1)

Source: 4C08007-03

Prepared: 03/09/04 Analyzed: 03/10/04

% Solids 90.0 % 90.0 0.00 20

Environmental Lab of Texas

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Quality Assurance Review

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Link Energy Pipeline
P.O. Box 1660
Midland TX, 79702

Project: Arrowhead Greyberg Unit 8
Project Number: 2003-00176
Project Manager: Frank Hernandez

Fax: (432) 682-9719

Reported:
03/15/04 16:48

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

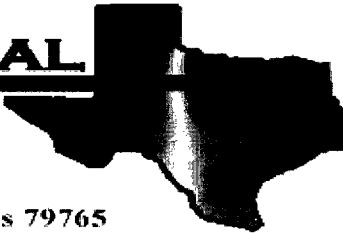
Environmental Lab of Texas

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Quality Assurance Review

Page 11 of 11

E NVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Jimmy Bryant

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: AGU 8 inch

Project Number: 2003-00176

Location: None Given

Lab Order Number: 4K03005

Report Date: 11/05/04

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S.P.A.G.U. 8 inch #1	4K03005-01	Soil	11/02/04 10:55	11/03/04 15:17
S.P.A.G.U. 8 inch #2	4K03005-02	Soil	11/02/04 10:58	11/03/04 15:17
S.P.A.G.U. 8 inch #3	4K03005-03	Soil	11/02/04 11:01	11/03/04 15:17
S.P.A.G.U. 8 inch N.E.S.W.C.	4K03005-04	Soil	11/02/04 14:35	11/03/04 15:17
S.P.A.G.U. 8 inch N.W.S.W.C.	4K03005-05	Soil	11/02/04 14:38	11/03/04 15:17
S.P.A.G.U. 8 inch S.E.S.W.C.	4K03005-06	Soil	11/03/04 08:10	11/03/04 15:17
S.P.A.G.U. 8 inch S.W.S.W.C.	4K03005-07	Soil	11/03/04 08:13	11/03/04 15:17
S.P.A.G.U. 8 inch S.6	4K03005-08	Soil	11/03/04 08:17	11/03/04 15:17
S.P.A.G.U. 8 inch S.5	4K03005-09	Soil	11/03/04 08:20	11/03/04 15:17
S.P.A.G.U. 8 inch S.4	4K03005-10	Soil	11/03/04 08:24	11/03/04 15:17

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S.P.A.G.U. 8 inch #1 (4K03005-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.6 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		109 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		110 %	70-130		"	"	"	"	
S.P.A.G.U. 8 inch #2 (4K03005-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87.5 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		118 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		128 %	70-130		"	"	"	"	
S.P.A.G.U. 8 inch #3 (4K03005-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		90.5 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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S.P.A.G.U. 8 inch #3 (4K03005-03) Soil

Surrogate: 1-Chlorooctane		101 %	70-130		EK40310	11/03/04	11/03/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		103 %	70-130		"	"	"	"	

S.P.A.G.U. 8 inch N.E.S.W.C. (4K03005-04) Soil

Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		83.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		123 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		130 %	70-130		"	"	"	"	

S.P.A.G.U. 8 inch N.W.S.W.C. (4K03005-05) Soil

Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		115 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		128 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S.P.A.G.U. 8 inch S.E.S.W.C. (4K03005-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.2 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		86.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		95.0 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		102 %	70-130		"	"	"	"	
S.P.A.G.U. 8 inch S.W.S.W.C. (4K03005-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.2 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		88.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		86.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		95.0 %	70-130		"	"	"	"	
S.P.A.G.U. 8 inch S.6 (4K03005-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		92.3 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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S.P.A.G.U. 8 inch S.6 (4K03005-08) Soil

Surrogate: 1-Chlorooctane		88.2 %	70-130		EK40310	11/03/04	11/03/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		88.4 %	70-130		"	"	"	"	

S.P.A.G.U. 8 inch S.5 (4K03005-09) Soil

Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		91.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		99.2 %	70-130		"	"	"	"	

S.P.A.G.U. 8 inch S.4 (4K03005-10) Soil

Benzene	ND	0.0250	mg/kg dry	25	EK40506	11/03/04	11/04/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.1 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40310	11/03/04	11/03/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		89.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		99.8 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S.P.A.G.U. 8 inch #1 (4K03005-01) Soil									
% Moisture	17.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch #2 (4K03005-02) Soil									
% Moisture	12.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch #3 (4K03005-03) Soil									
% Moisture	15.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch N.E.S.W.C. (4K03005-04) Soil									
% Moisture	11.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch N.W.S.W.C. (4K03005-05) Soil									
% Moisture	14.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch S.E.S.W.C. (4K03005-06) Soil									
% Moisture	12.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch S.W.S.W.C. (4K03005-07) Soil									
% Moisture	12.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch S.6 (4K03005-08) Soil									
% Moisture	14.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch S.5 (4K03005-09) Soil									
% Moisture	12.0		%	1	EK40406	11/03/04	11/04/04	% calculation	
S.P.A.G.U. 8 inch S.4 (4K03005-10) Soil									
% Moisture	9.0		%	1	EK40406	11/03/04	11/04/04	% calculation	

Environmental Lab of Texas

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Page 6 of 11

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EK40310 - Solvent Extraction (GC)

Blank (EK40310-BLK1)

Prepared & Analyzed: 11/03/04

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	37.1		mg/kg	50.0		74.2	70-130			
Surrogate: 1-Chlorooctadecane	36.1		"	50.0		72.2	70-130			

LCS (EK40310-BS1)

Prepared & Analyzed: 11/03/04

Gasoline Range Organics C6-C12	429	10.0	mg/kg wet	500		85.8	75-125			
Diesel Range Organics >C12-C35	497	10.0	"	500		99.4	75-125			
Total Hydrocarbon C6-C35	926	10.0	"	1000		92.6	75-125			
Surrogate: 1-Chlorooctane	47.6		mg/kg	50.0		95.2	70-130			
Surrogate: 1-Chlorooctadecane	36.8		"	50.0		73.6	70-130			

Calibration Check (EK40310-CCV1)

Prepared & Analyzed: 11/03/04

Gasoline Range Organics C6-C12	430		mg/kg	500		86.0	80-120			
Diesel Range Organics >C12-C35	521		"	500		104	80-120			
Total Hydrocarbon C6-C35	950		"	1000		95.0	80-120			
Surrogate: 1-Chlorooctane	43.7		"	50.0		87.4	70-130			
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130			

Matrix Spike (EK40310-MS1)

Source: 4K03005-01

Prepared & Analyzed: 11/03/04

Gasoline Range Organics C6-C12	576	10.0	mg/kg dry	602	ND	95.7	75-125			
Diesel Range Organics >C12-C35	638	10.0	"	602	ND	106	75-125			
Total Hydrocarbon C6-C35	1210	10.0	"	1200	ND	101	75-125			
Surrogate: 1-Chlorooctane	57.0		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	54.0		"	50.0		108	70-130			

Matrix Spike Dup (EK40310-MSD1)

Source: 4K03005-01

Prepared & Analyzed: 11/03/04

Gasoline Range Organics C6-C12	580	10.0	mg/kg dry	602	ND	96.3	75-125	0.692	20	
Diesel Range Organics >C12-C35	674	10.0	"	602	ND	112	75-125	5.49	20	
Total Hydrocarbon C6-C35	1250	10.0	"	1200	ND	104	75-125	3.25	20	
Surrogate: 1-Chlorooctane	61.3		mg/kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	59.0		"	50.0		118	70-130			

Environmental Lab of Texas

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Page 7 of 11

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EK40506 - EPA 5030C (GC)

Blank (EK40506-BLK1)

Prepared & Analyzed: 11/03/04

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	91.6		ug/kg	100		91.6	80-120			
Surrogate: 4-Bromofluorobenzene	92.2		"	100		92.2	80-120			

LCS (EK40506-BS1)

Prepared & Analyzed: 11/03/04

Benzene	91.4		ug/kg	100		91.4	80-120			
Toluene	95.2		"	100		95.2	80-120			
Ethylbenzene	95.8		"	100		95.8	80-120			
Xylene (p/m)	212		"	200		106	80-120			
Xylene (o)	99.0		"	100		99.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	113		"	100		113	80-120			

Calibration Check (EK40506-CCV1)

Prepared: 11/03/04 Analyzed: 11/04/04

Benzene	92.4		ug/kg	100		92.4	80-120			
Toluene	94.8		"	100		94.8	80-120			
Ethylbenzene	90.8		"	100		90.8	80-120			
Xylene (p/m)	198		"	200		99.0	80-120			
Xylene (o)	96.0		"	100		96.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	107		"	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	111		"	100		111	80-120			

Matrix Spike (EK40506-MS1)

Source: 4K03005-10

Prepared: 11/03/04 Analyzed: 11/04/04

Benzene	93.9		ug/kg	100	ND	93.9	80-120			
Toluene	97.7		"	100	ND	97.7	80-120			
Ethylbenzene	96.5		"	100	ND	96.5	80-120			
Xylene (p/m)	213		"	200	ND	106	80-120			
Xylene (o)	101		"	100	ND	101	80-120			
Surrogate: a,a,a-Trifluorotoluene	91.3		"	100		91.3	80-120			
Surrogate: 4-Bromofluorobenzene	117		"	100		117	80-120			

Environmental Lab of Texas

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Page 8 of 11

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EK40506 - EPA 5030C (GC)

Matrix Spike Dup (EK40506-MSD1)		Source: 4K03005-10		Prepared: 11/03/04		Analyzed: 11/04/04				
Benzene	92.7		ug/kg	100	ND	92.7	80-120	1.29	20	
Toluene	95.9		"	100	ND	95.9	80-120	1.86	20	
Ethylbenzene	93.2		"	100	ND	93.2	80-120	3.48	20	
Xylene (p/m)	204		"	200	ND	102	80-120	3.85	20	
Xylene (o)	95.9		"	100	ND	95.9	80-120	5.18	20	
Surrogate: a,a,a-Trifluorotoluene	106		"	100		106	80-120			
Surrogate: 4-Bromofluorobenzene	114		"	100		114	80-120			

Environmental Lab of Texas

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Page 9 of 11

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EK40406 - General Preparation (Prep)

Blank (EK40406-BLK1)

Prepared: 11/03/04 Analyzed: 11/04/04

% Moisture 0.0 %

Duplicate (EK40406-DUP1)

Source: 4K03003-01

Prepared & Analyzed: 11/04/04

% Moisture 8.0 % 8.0 0.00 20

Environmental Lab of Texas

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Page 10 of 11

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: AGU 8 inch
Project Number: 2003-00176
Project Manager: Jimmy Bryant

Fax: (432) 687-4914

Reported:
11/05/04 17:47

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:

Raland K. Tuttle

Date:

11/5/2004

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 11 of 11

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

Project Name: AGU 8"

Project #: 2003-00176

Project Loc:

PO#:

Telephone No: _____

Telephone No: _____

Printer Signature: Martin Bennett

[illegible]

Special Instructions

FAX RESULTS TO PAT McCASLAND ASAP

Relinquished: *Mamas Benkert*

Time	Received by:
1:30	<i>[Signature]</i>

Date	11.3.04
Time	11.30

Sample Containers	IN	Y	N
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100			

Temperature Upon Request

Laboratory Comments: 3.5'C

Relinquished: David L. Baker

Received by: Hume

Date	Time
11-3-84	1517

402 glass or ice

ATTACHMENT II-
Clay Liner Compaction Results



LABORATORY TEST REPORT
PETTIGREW & ASSOCIATES, P.A.

1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827



DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To: Environmental Plus
Attn: Roger Boone
P.O. Box 1558
Eunice, NM 88231

Material: Red Clay

Test Method: ASTM: D 2922

Project: AGU 8 Arrowhead & Grey Burg Unit

Date of Test: November 10, 2004

Depth: 1' Below Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-1	Pit - 105' E. & 6' N. of the SW Corner	100.0	12.6	
SG-2	Pit - 50' E. & 15' N. of the SW Corner	96.2	15.8	
SG-3	Pit - 25' W. & 15' S. of the NE Corner	97.0	13.1	

Control Density: 111.4
ASTM: D 698

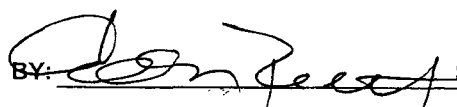
Optimum Moisture: 16.8%

Required Compaction: 95%

Lab No.: 04 12253-12256

Copies To: Enviromental Plus

PETTIGREW & ASSOCIATES

BY:  S.E.T.



LABORATORY TEST REPORT
PETTIGREW & ASSOCIATES, P.A.

1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827



DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To: Environmental Plus
Attn: Roger Boone
P.O. Box 1558
Eunice, NM 88231

Material: Red Clay

Test Method: ASTM: D 2922

Project: AGU 8 Arrowhead & Grey Burg Unit

Date of Test: November 12, 2004

Depth: Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-4	Pit - 15' E. & 20' S. of the NW Corner	95.6	13.5	
SG-5	Pit - 200' E. & 10' S. of the NW Corner	98.0	14.5	
SG-6	Pit - 75' W. & 5' N. of the SE Corner	96.4	14.8	

Control Density: 111.4
ASTM: D 698

Optimum Moisture: 16.8%

Required Compaction: 95%

Lab No.: 04 12264-12267

Copies To: Enviromental Plus

PETTIGREW & ASSOCIATES

BY  S.E.T.

FOR: ENVIRO. PLUS



DATE: 11/10/04

PROJECT: _____

LAB NO. _____

1110 N. GRIMES
HOBBS NM 88240
(505) 393-9827

DENSITY DETERMINATION

TYPE OF MATERIAL: RED CLAY Control Density: 111.4 @ 16.8

Proctor Type: D698

Test # 36-1 LOCATION: PIT. 105' E & 6' N. OF THE SW COR

Elevation: 1' UFSG

DC Contact CPM	MC Moisture CPM	Air Gap CPM	WD Bulk Density PCF	M Moisture PCF	DD Dry Density PCF	% Moisture	% Density
<u>621.1</u>	<u>131.3</u>		<u>125.5</u>	<u>14.1</u>	<u>111.4</u>		

Avg. Dry Density: _____ % M 12.6 % Comp. 100.0
% Moisture (avg.) _____ % Lab Dens (avg.) _____

Test # 36-2 LOCATION: PIT 50' E & 15' N. OF THE SW COR.

Elevation: 1' UFSG

DC Contact CPM	MC Moisture CPM	Air Gap CPM	WD Bulk Density PCF	M Moisture PCF	DD Dry Density PCF	% Moisture	% Density
<u>2340</u>	<u>154.6</u>		<u>124.1</u>	<u>16.7</u>	<u>107.2</u>		

Avg. Dry Density: _____ % M 15.8 % Comp. 96.2
% Moisture (avg.) _____ % Lab Dens (avg.) _____

Test # 36-3 LOCATION: PIT 25' W. & 15' S. OF THE NE COR.

Elevation: 1' UFSG

DC Contact CPM	MC Moisture CPM	Air Gap CPM	WD Bulk Density PCF	M Moisture PCF	DD Dry Density PCF	% Moisture	% Density
<u>1392</u>	<u>132.3</u>		<u>122.2</u>	<u>14.2</u>	<u>108.1</u>		

Avg. Dry Density: _____ % M 13.1 % Comp. 97.0
% Moisture (avg.) _____ % Lab Dens (avg.) _____

Test # _____ LOCATION: _____

Elevation: _____

DC Contact CPM	MC Moisture CPM	Air Gap CPM	WD Bulk Density PCF	M Moisture PCF	DD Dry Density PCF	% Moisture	% Density

Avg. Dry Density: _____ % M _____ % Comp. _____
% Moisture (avg.) _____ % Lab Dens (avg.) _____

Required: 95% Tech Time _____

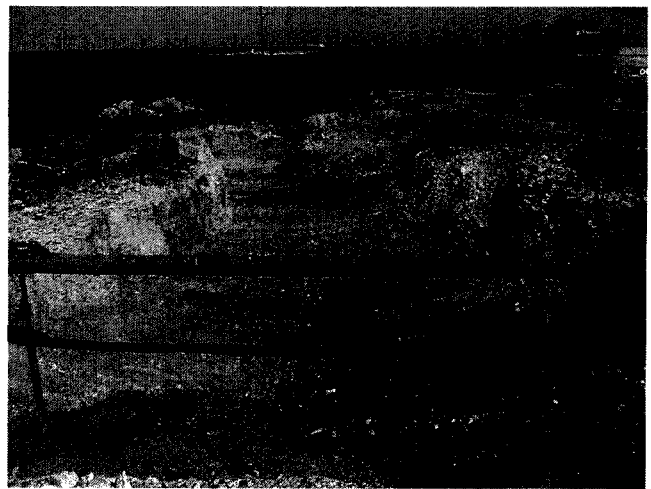
Copies: _____ If testing by time _____

Tested By: [Signature]

ATTACHMENT III-
Site Photographs



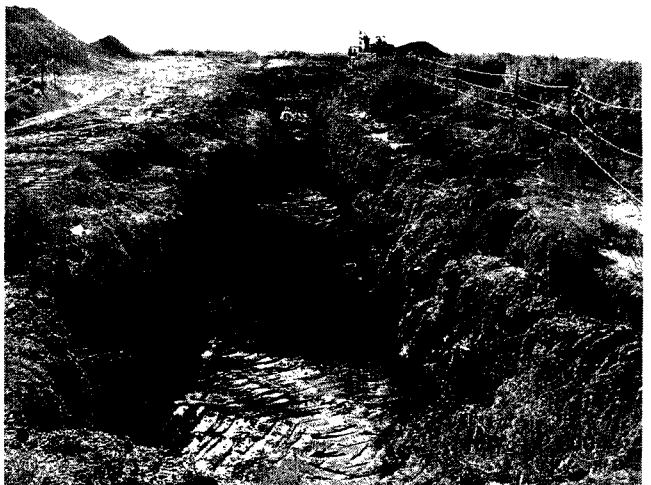
Photograph #1- November 2, 2004 excavation activities, looking northerly.



Photograph #2- November 3, 2004 excavation activities, looking easterly.



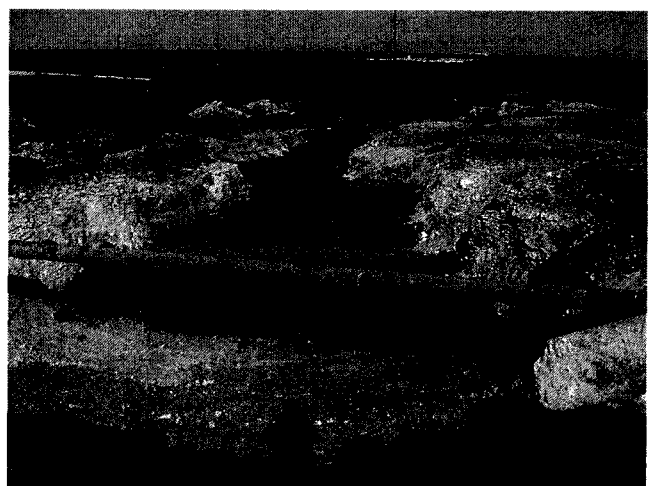
Photograph #3- Completion of excavation activities, looking southerly.



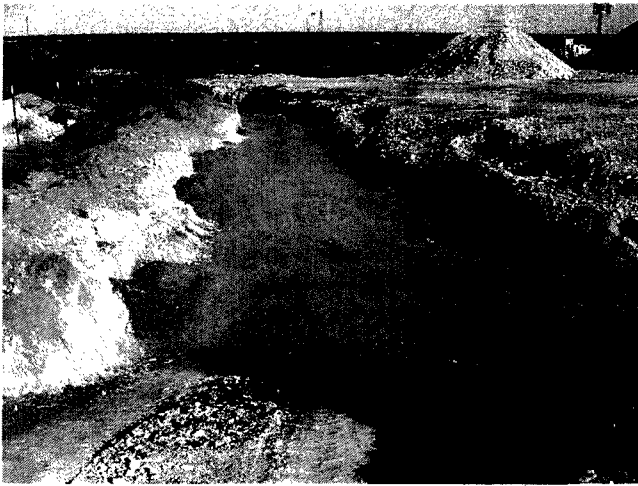
Photograph #4- Installation of clay liner in eastern portion of excavation, looking westerly.



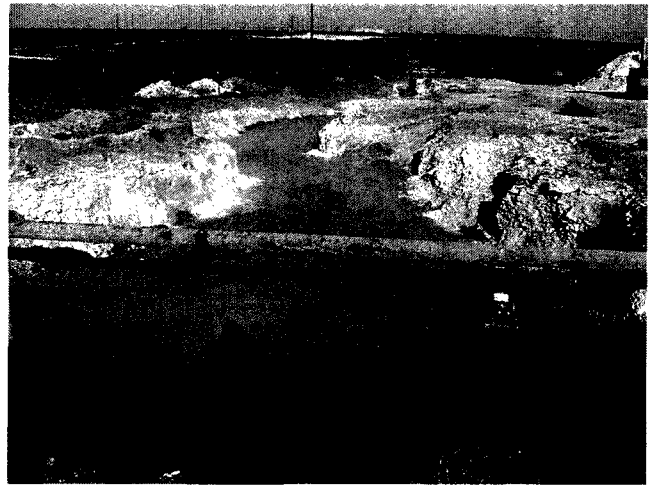
Photograph #5- Initial compaction of clay liner in eastern portion of excavation, looking westerly.



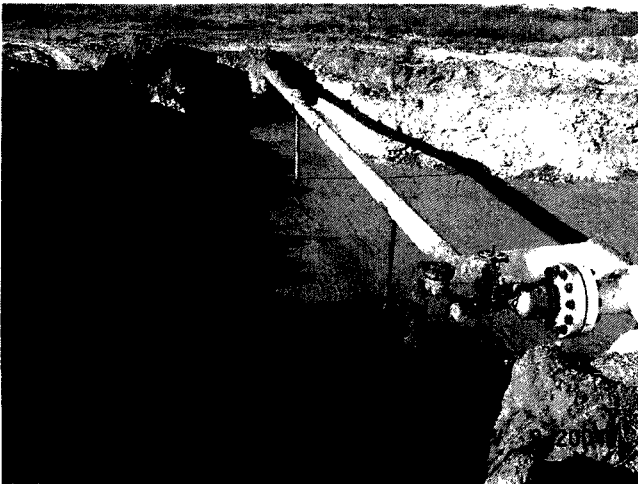
Photograph #6- Installation of clay liner in western portion of excavation, looking easterly.



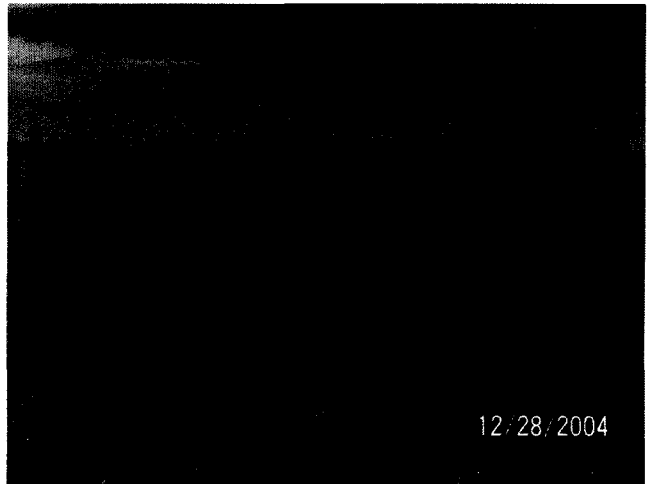
Photograph #7- Clay liner in eastern portion of excavation after compaction looking easterly.



Photograph #8- Clay liner in western portion of excavation after compaction, looking easterly.



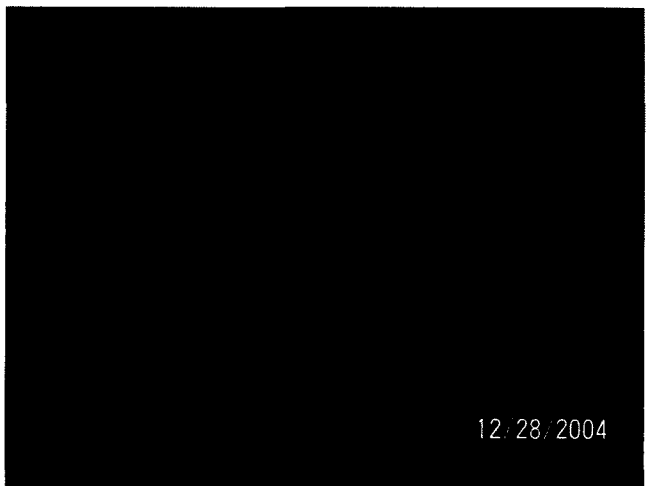
Photograph #9- Clay liner in western portion of excavation after compaction, looking northerly.



Photograph #10- Site after backfilling, looking westerly.



Photograph #11- Site after backfilling, looking northerly.



Photograph #12- Site after backfilling, looking easterly.

ATTACHMENT IV-
Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Plains All American Pipeline	Contact Camille Reynolds
Address 3112 W. Hwy 82, Lovington, New Mexico 88260	Telephone No. 505-396-3341
Facility Name Arrowhead Grayberg 8" Gathering	Facility Type 8" Steel Pipeline

Surface Owner State of New Mexico	Mineral Owner	Lease No.
--------------------------------------	---------------	-----------

LOCATION OF RELEASE

Unit Letter 2	Section 2	Township T22S	Range R36E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea Lat. 32 24' 55.774"N Lon. 103 13' 51.267"W
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NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 barrels	Volume Recovered 0 barrels
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence EOTT Energy LLC	Date and Hour of Discovery 6-30-03 @ 12:00 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Sylvia Dickie	
By Whom? Pat McCasland, EPI	Date and Hour 6-30-03 @ 2:00 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	
If a Watercourse was Impacted, Describe Fully.* NA		
Describe Cause of Problem and Remedial Action Taken.* The leak was caused by internal/external corrosion. A line repair clamp was installed.		
Describe Area Affected and Cleanup Action Taken.* Soil above NMOCD remedial thresholds was transported to Lea Station Land Farm for treatment. A clay liner was installed in the excavation floor to isolate remaining hydrocarbon residuals. Excavation was backfilled with clean native soil and contoured to allow natural drainage. Remedial Goals: TPH 8015m = 5000 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: <i>Camille Reynolds</i>	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
Date: 9/30/05 Phone: 505-396-3341	Conditions of Approval:	Attached <input type="checkbox"/>

* Attach Additional Sheets If Necessary

RP#12