1R - 124

GENERAL CORRESPONDENCE

YEAR(S):

2005 - 1997

September 16, 2005

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

Re: Notification of Plains Marketing, L.P. Plugging and Abandonment of Monitor Wells
TNM-Monument 18
NW ¼, NW ¼, Section 7, T-20-S, R-37-E
Lea County, NM

Dear Mr. Martin,

NOVA Safety and Environmental (NOVA), on behalf of Plains Marketing, L.P. (Plains) respectfully submits the following notification of plugging and abandonment of monitor wells at the Plains TNM-Monument 18 leak site (the site), located in the SW ¼, NE ¼, Section 29, T-20-S, R-37-E in Lea County, NM.

On September 13, 2005, one (1) monitor well was plugged and abandoned at the site. Please reference your letter to Ms. Camille Reynolds of Plains Marketing L.P. dated June 22, 2005 regarding authorization to plug and abandon this well.

The monitor well was plugged and abandoned by Environmental Plus, Inc (EPI) of Eunice, New Mexico, a licensed water well driller in the State of New Mexico. The monitor wells were plugged utilizing guidelines set forth by the office of the New Mexico State Engineer. EPI removed and disposed of the monitor well cover, vault, and the remains of the concrete pad.

Monitor well MW-2 was filled with approximately three (3) bags of bentonite pellets to a depth of approximately one (1) foot below ground surface (bgs) and properly hydrated with water. Topsoil was placed above the former monitor well to complete the procedure.

The former monitor well location is as follows:

- MW-13, 32 degrees, 35.517" N, 103 degrees, 17.932" W

Plains has completed the approved plugging and abandonment of the above referenced monitor well as directed by the New Mexico Oil Conservation Division (NMOCD). Plains will continue to gauge and sample the remaining monitor wells at the site.

In the future, Plains may make additional requests to the NMOCD for plugging and abandonment of monitor well(s) at this site, as warranted.

Sincerely,

Curt D. Stanley
Project Manager
NOVA Safety and Environmental

cc:
Paul Sheeley / Larry Johnson, NMOCD, Hobbs, NM

Cody Morrow, New Mexico State Land Office, Santa Fe, NM

Myra Meyers, New Mexico State Land Office, Hobbs, NM

Camille Reynolds, Plains Marketing, L.P., Lovington, NM
cjreynolds@paalp.com
Jeff Dann, Plains Marketing, L.P., Houston, TX
jpdann@paalp.com
NOVA Safety and Environmental, Midland, TX
cstanley@novatraining.cc

Attachments:
Attachment #1 – Form C-141 – Release Notification and Corrective Action

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

x Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact:	Camille Reynolds
Address:	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	505-441-0965
Facility Name	Monument # 18	Facility Type:	Pipeline

Surface Owner:	Mineral Owner	Lease No.
Jim B Cooper		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	7	20S	37E					Lea

Latitude 32 degrees 35' 30.0" **Longitude** 103 degrees 17' 55.9"

NATURE OF RELEASE

Type of Release:	Volume of Release:	Volume Recovered
Source of Release:	Date and Hour of Occurrence Unknown	Date and Hour of Discovery
Was Immediate Notice Given? Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*
NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release, initial response information is unavailable.

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:	OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:	Attached ☐
Date: 3/21/2005 Phone: (505)441-0965		

* Attach Additional Sheets If Necessary

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

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

June 22, 2005

Ms. Camille Reynolds
Plains Pipeline
3112 West Highway 82
Lovington, NM 88260

Re: 2004 Annual Monitoring Report
Monument 18 Release Site
NW/4 NW/4 of Section 7, Township 20 South, Range 37 East
Lea County, New Mexico
Plains EMS Number: TNM Monument 18-Known
NMOCD Reference 1R-0124

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the above report submitted on behalf of Plains Marketing, L.P. (Plains) by Nova Safety and Environmental and dated April 2005. This report is accepted with the following understandings and conditions:

1. Quarterly sampling and annual reporting will continue throughout 2005.
2. Passive product recovery will continue on a weekly basis throughout 2005.
3. Plains may plug and abandon monitor well MW-2 using a slurry of 3% - 5% bentonite.

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

If you have any questions, contact me at (505) 476-3492 or ed.martin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Ed Martin

Edwin E. Martin
Environmental Bureau

Cc: NMOCD, Hobbs

PLAINS
ALL AMERICAN

March 29, 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 – Annual Monitoring Reports
21 Sites in Lea County, New Mexico

Dear Mr. Martin:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

LF-59	Section 32, Township 19 South, Range 37 East, Lea County
TNM 97-04	Section 11, Township 16 South, Range 35 East, Lea County
HDO 90-23	Section 06, Township 20 South, Range 37 East, Lea County
Darr Angell 2	Section 11,14, Township 15 South, Range 37 East, Lea County
SPS 11	Section 18, Township 18 South, Range 36 East, Lea County
TNM 97-17	Section 21, Township 20 South, Range 37 East, Lea County
TNM 97-18	Section 28, Township 20 South, Range 37 East, Lea County
TNM 98-05A	Section 26, Township 21 South, Range 37 East, Lea County
Red Byrd # 1	Section 01, Township 20 South, Range 36 East, Lea County
Bob Durham	Section 31, 32, Township 19 South, Range 37 East, Lea County
Monument Site 11	Section 30, Township 19 South, Range 37 East, Lea County
Darr Angell 1	Section 11, Township 15 South, Range 37 East, Lea County
TNM 98-05B	Section 26, Township 21 South, Range 37 East, Lea County
Monument Site 2	Section 6, 7, Township 20 South, Range 37 East, Lea County
Monument Site 10	Section 32, Township 19 South, Range 37 East, Lea County
Monument Site 17	Section 29, Township 19 South, Range 37 East, Lea County
Monument Site 18	Section 07, Township 20 South, Range 37 East, Lea County
Monument Barber 10" PL	Section 32, Township 19 South, Range 37 East, Lea County
Darr Angell 4	Section 11, 02, Township 15 South, Range 37 East, Lea County
Monument to Lea 6"	Section 05, Township 20 South, Range 37 East, Lea County
Texaco Skelly "F"	Section 21, Township 20 South, Range 37 East, Lea County

3112 West Highway 82 • Lovington, NM 88260 • (505) 396-3341

PLAINS
ALL AMERICAN

Nova prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Nova in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above 21 facilities.

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

for CR

Camille Reynolds
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

PLAINS PIPELINE

September 23, 2005

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

Re: Plains Pipeline – Plugging and Abandonment of Monitor Wells
8 Sites in Lea County, New Mexico

Dear Mr. Martin:

Please find attached for your review the Plugging and Abandonment of Monitor Wells Reports for the following Plains sites:

Bob Durham	Section 32, Township 19 South, Range 37 East, Lea County
Darr Angell #2	Sections 11 and 14, Township 15 South, Range 37 East,LeaCounty
HDO 90-23	Section 6, Township 20 South, Range 37 East, Lea County
TNM Monument 17	Section 29, Township 19 South, Range 37 East, Lea County
1R-124 TNM Monument 18	Section 7, Township 20 South, Range 37 East, Lea County
TNM 97-04	Section 11, Township 16 South, Range 35 East, Lea County
TNM 97-18	Section 28, Township 20 South, Range 37 East, Lea County
SPS-11	Section 18, Township 18 South, Range 36 East, Lea County

If you have any questions or require further information, please contact me at (505) 441-0965.

Sincerely,

Dan Byrt for C.J.R.

Camille Reynolds
Remediation Coordinator
Plains Pipeline

Enclosures

XENCO Laboratories

CERTIFICATE OF ANALYSIS SUMMARY 1-71050

K.E.I. Consultants, Inc.

Project Name: Monument

Project ID: 610057 Site #18
Project Manager: Ann Baker
Project Location: Site #18

Date Received in Lab: May 6, 1997 10:00 by RT
Date Report Faxed: May 22, 1997
XENCO contact: Carlos Castro/Edward Yonemoto

Analysis Requested	*Lab ID:*	171050-001	171050-002				
	Field ID:	MW-2	MW-3				
	Depth:						
Metals (ICP) Analyzed by EPA 6010		Date Analyzed - Analytical Results ppm (mg/L - mg/Kg)					
		May 13, 1997	May 13, 1997				
Aluminum		2.67	48.6				
Arsenic		< 0.05	< 0.05				
Barium		0.30	3.33				
Beryllium		< 0.005	< 0.005				
Cadmium		< 0.01	< 0.01				
Calcium		1000	3600				
Chromium		< 0.05	< 0.05				
Cobalt		< 0.10	< 0.10				
Iron		0.88	26.7				
Lead		< 0.05	< 0.05				
Magnesium		627	1070				
Manganese		< 0.20	0.91				
Molybdenum		< 0.20	< 0.20				
Potassium		36.3	63.4				
Silver		< 0.02	< 0.02				
Sodium		2150	2390				
Tin		0.25	10.2				
Vanadium		< 0.05	0.35				
Zinc		< 0.25	< 0.25				
Nickel		< 0.10	< 0.10				
Copper		< 0.25	< 0.25				
Boron		0.57	0.70				
Silicon		26.0	8.24				
Strontium		16.0	16.0				

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

CERTIFICATE OF ANALYSIS SUMMARY 1-71050

K.E.I. Consultants, Inc.

Project Name: Monument

Project ID: 610057 Site #18
Project Manager: Ann Baker
Project Location: Site #18

Date Received in Lab: May 6, 1997 10:00 by RT
Date Report Faxed: May 22, 1997
XENCO contact: Carlos Castro/Edward Yonemoto

Analysis Requested	*Lab ID:*	171050-001	171050-002				
	Field ID:	MW-2	MW-3				
	Depth:						
Mercury, Tot Analyzed by EPA 7470		Date Analyzed - Analytical Results					ppm (mg/L - mg/Kg)
		May 12, 1997	May 12, 1997				
Mercury		< 0.0010	< 0.0010				
BTEX Analyzed by EPA 8020		Date Analyzed - Analytical Results					ppm (mg/L - mg/Kg)
		May 9, 1997	May 9, 1997				
Benzene		0.010	0.006				
Toluene		< 0.001	< 0.001				
Ethylbenzene		0.060	< 0.001				
m,p-Xylenes		0.022	< 0.002				
o-Xylene		< 0.001	< 0.001				
Total BTEX		0.092	0.006				
PAH Analyzed by EPA 8100		Date Analyzed - Analytical Results					ppm (mg/L - mg/Kg)
		May 15, 1997					
Acenaphthene		< 0.002					
Acenaphthylene		< 0.002					
Anthracene		< 0.002					
Benzo(a)anthracene		< 0.002					
Benzo(a)pyrene		< 0.002					
Benzo(b)fluoranthene		< 0.002					
Benzo(g,h,i)perylene		< 0.002					
Benzo(k)fluoranthene		< 0.002					
Chrysene		< 0.002					
Dibenzo(a,e)pyrene		< 0.002					
Dibenzo(a,h)anthracene		< 0.002					
Dibenz(a,j)acridine		< 0.002					
Fluoranthene		< 0.002					
Fluorene		< 0.002					

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

CERTIFICATE OF ANALYSIS SUMMARY 1-71050

K.E.I. Consultants, Inc.

Project Name: Monument

Project ID: 610057 Site #18
Project Manager: Ann Baker
Project Location: Site #18

Date Received in Lab: May 6, 1997 10:00 by RT
Date Report Faxed: May 22, 1997
XENCO contact: Carlos Castro/Edward Yonemoto

Analysis Requested	*Lab ID:* / *Field ID:* / *Depth:*	171050-001 MW-2	171050-002 MW-3				
Indeno(1,2,3-cd)pyrene		< 0.002					
3-Methylcholanthrene		< 0.002					
Naphthalene		< 0.002					
Phenanthrene		< 0.002					
Pyrene		< 0.002					
Dibenz(a,h)acridine		< 0.002					
Benzo(j)fluoranthene		< 0.002					
7H-Dibenzo(c,g)carbazole		< 0.002					
Dibenzo(a,h)pyrene		< 0.002					
Dibenzo(a,i)pyrene		< 0.002					
Bicarbonate Analyzed by SM 4500CO2D		Date Analyzed - Analytical Results ppm (mg/L - mg/Kg)					
		May 10, 1997	May 10, 1997				
Bicarbonate		271	279				
Carbonate Analyzed by SM4500CO2D		Date Analyzed - Analytical Results ppm (mg/L - mg/Kg)					
		May 10, 1997	May 10, 1997				
Carbonate		< 1.0	< 1.0				
TDS Analyzed by EPA 160.1		Date Analyzed - Analytical Results ppm (mg/L - mg/Kg)					
		May 9, 1997	May 9, 1997				
Total Dissolved Solids		16300	17200				
Anions Analyzed by EPA 300.0		Date Analyzed - Analytical Results ppm (mg/L - mg/Kg)					
		May 8, 1997	May 8, 1997				
Sulfate		368	356				
Chloride		757	7680				
TIC Mod. Analyzed by Mod. 415.1		Date Analyzed - Analytical Results ppm (mg/L - mg/Kg)					
		May 14, 1997	May 14, 1997				

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

CERTIFICATE OF ANALYSIS SUMMARY 1-71050

K.E.I. Consultants, Inc.

Project Name: Monument

Project ID: 610057 Site #18
Project Manager: Ann Baker
Project Location: Site #18

Date Received in Lab: May 6, 1997 10:00 by RT
Date Report Faxed: May 22, 1997
XENCO contact: Carlos Castro/Edward Yonemoto

Analysis Requested	*Lab ID:*	171050-001	171050-002				
	Field ID:	MW-2	MW-3				
	Depth:						
Total Inorganic Carbon		46.7	44.8				

Edward T. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A18C05

EPA 6010 Metals by ICP

Date Validated: May 15, 1997 09:00
Date Analyzed: May 13, 1997 11:30
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: SA
Matrix: Liquid

	BLANK SPIKE ANALYSIS						
Parameter	[A] Blank Result mg/L	[B] Blank Spike Result mg/L	[C] Blank Spike Amount mg/L	[D] Method Detection Limit mg/L	[E] QC LIMITS Blank Spike Recovery %	[F] LIMITS Recovery Range %	[G] Qualifier
Aluminum	< 0.01	0.72	1.00	0.01	72.0	70-125	
Arsenic	< 0.050	0.869	1.000	0.050	86.9	70-125	
Barium	< 0.002	0.429	0.500	0.002	85.8	70-125	
Beryllium	< 0.0050	0.1808	0.2000	0.0050	90.4	70-125	
Boron	< 0.03	1.20	1.56	0.03	76.9	70-125	
Cadmium	< 0.010	0.162	0.200	0.010	81.0	70-125	
Calcium	< 0.01	1.82	2.00	0.01	91.0	70-125	
[illegible]mium	< 0.013	0.433	0.500	0.013	86.6	70-125	
Cobalt	< 0.003	0.423	0.500	0.003	84.6	70-125	
Copper	< 0.008	0.443	0.500	0.008	88.6	70-125	
Iron	< 0.006	0.814	1.000	0.006	81.4	70-125	
Lead	< 0.03	0.85	1.00	0.03	85.0	70-125	
Magnesium	< 0.01	1.79	2.00	0.01	89.5	70-125	
Nickel	< 0.03	0.46	0.50	0.03	92.0	70-125	
Potassium	< 0.0250	2.1275	2.0000	0.0250	106.4	70-125	
Silver	< 0.010	0.334	0.400	0.010	83.5	70-125	
Sodium	< 0.0250	1.8363	2.0000	0.0250	91.8	70-125	
Strontium	< 0.025	1.171	1.560	0.025	75.1	70-125	
Vanadium	< 0.00	0.44	0.50	0.00	88.0	70-125	
Zinc	< 0.008	0.431	0.500	0.008	86.2	70-125	

Blank Spike Recovery [E] = 100*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A18C05

EPA 6010 Metals by ICP

Date Validated: May 15, 1997 09:00
Date Analyzed: May 13, 1997 19:46
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: SA
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 171051- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC LIMITS Relative Difference	[E] LIMITS Relative Difference	[F] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	
Aluminum	21.16	16.94	0.01	22.2	25.0	
Arsenic	< 0.050	< 0.050	0.050	N.C	25.0	
Barium	0.746	0.766	0.002	2.6	25.0	
Beryllium	< 0.0050	< 0.0050	0.0050	N.C	25.0	
Boron	0.148	0.139	0.025	6.3	25.0	
Cadmium	< 0.010	< 0.010	0.010	N.C	25.0	
Calcium	1170	1110	0.01	5.3	25.0	
Chromium	0.039	0.039	0.013	0.0	25.0	
Cobalt	0.011	0.013	0.003	16.7	25.0	
Copper	0.014	0.014	0.008	0.0	25.0	
Iron	13.43	13.26	0.01	1.3	25.0	
Lead	< 0.025	< 0.025	0.025	N.C	25.0	
Magnesium	39.95	37.77	0.01	5.6	25.0	
Manganese	0.291	0.300	0.006	3.0	25.0	
Molybdenum	< 0.025	< 0.025	0.025	N.C	25.0	
Nickel	< 0.025	0.157	0.025	N.C	25.0	
Potassium	7.841	7.730	0.025	1.4	25.0	
Silicon	24.49	16.18	0.03	40.9	25.0	A
Silver	< 0.010	< 0.010	0.010	N.C	25.0	

(A) Variability in duplicate measurement attributed to sample non-homogeneity.
Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A18C05

EPA 6010 Metals by ICP

Date Validated: May 15, 1997 09:00
Date Analyzed: May 13, 1997 19:46
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: SA
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 171051- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC Relative Difference	[E] LIMITS Relative Difference	[F] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	
Sodium	80.69	76.85	0.03	4.9	25.0	
Strontium	2.164	2.036	0.025	6.1	25.0	
Tin	5.533	5.160	0.025	7.0	25.0	
Vanadium	0.054	0.058	0.003	7.1	25.0	
Zinc	0.090	0.087	0.008	3.4	25.0	

(A) Variability in duplicate measurement attributed to sample non-homogeneity.
Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

Certificate Of Quality Control for Batch : 17A18C05

EPA 6010 Metals by ICP

Date Validated: May 15, 1997 09:00
Date Analyzed: May 13, 1997 11:30
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: SA
Matrix: Liquid

Q.C. Sample ID 171046- 001	MATRIX DUPLICATE ANALYSIS					MATRIX SPIKE ANALYSIS				
Parameter	[A] Sample Result mg/L	[B] Duplicate Result mg/L	[C] Method Detection Limit mg/L	[D] QC Relative Difference %	[E] LIMITS Relative Difference %	[F] Matrix Spike Result mg/L	[G] Matrix Spike Amount mg/L	[H] QC Matrix Spike Recovery %	[I] LIMITS Recovery Range %	[G] Qualifier
Aluminum	30.68	30.75	0.01	0.2	25.0	40.7	12.5	79.8	70-125	
Arsenic	< 0.050	< 0.050	0.050	N.C	25.0	0.89	1.00	88.7	70-125	
Barium	1.031	1.233	0.002	17.8	25.0	1.25	0.50	44.6	70-125	B
Beryllium	< 0.0050	< 0.0050	0.0050	N.C	25.0	0.179	0.200	89.3	70-125	
Boron	0.173	0.178	0.025	2.8	25.0	2.51	3.13	74.8	70-125	
Cadmium	< 0.010	< 0.010	0.010	N.C	25.0	0.16	0.20	79.5	70-125	
Calcium	114	134	0.01	16.1	25.0	133	12.5	152.0	70-125	A,B
Chromium	0.031	0.030	0.013	3.3	25.0	0.44	0.50	81.0	70-125	
Cobalt	0.037	0.032	0.003	14.5	25.0	0.39	0.50	69.8	70-125	B
Copper	0.026	0.030	0.008	14.3	25.0	0.46	0.50	86.8	70-125	
Iron	38.92	37.58	0.01	3.5	25.0	45.1	12.5	49.5	70-125	A,B
Lead	< 0.025	< 0.025	0.025	N.C	25.0	0.80	1.00	80.2	70-125	
Magnesium	21.29	23.91	0.01	11.6	25.0	31.9	12.5	85.0	70-125	

(A) High analyte concentration affects spike recovery.
(B) Post-digestion spike within acceptance limits.
Relative Difference [D] = 200*(B-A)/(B+A)
Matrix Spike Recovery [H] = 100*(F-A)/[G]
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XEN Laboratories

Certificate Of Quality Control for Batch : 17A18C05

EPA 6010 Metals by ICP

Date Validated: May 15, 1997 09:00
Date Analyzed: May 13, 1997 11:30
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: SA
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					MATRIX SPIKE ANALYSIS				
Q.C. Sample ID 171046- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC LIMITS Relative Difference	[E] LIMITS Relative Difference	[F] Matrix Spike Result	[G] Matrix Spike Amount	[H] QC LIMITS Matrix Spike Recovery	[I] LIMITS Recovery Range	[G] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	mg/L	mg/L	%	%	
Manganese	1.263	1.503	0.006	17.4	25.0	12.16	12.50	87.2	70-125	
Molybdenum	< 0.025	< 0.025	0.025	N.C	25.0	0.55	0.63	88.6	70-125	
Nickel	< 0.025	< 0.025	0.025	N.C	25.0	0.40	0.50	80.2	70-125	
Potassium	7.715	8.064	0.025	4.4	25.0	19.08	12.50	90.9	70-125	
Silver	< 0.010	< 0.010	0.010	N.C	25.0	0.33	0.40	81.3	70-125	
Sodium	56.80	67.17	0.03	16.7	25.0	72.3	12.5	123.7	70-125	
Strontium	0.921	1.095	0.025	17.3	25.0	3.05	3.13	68.1	70-125	B
Vanadium	0.128	0.142	0.003	10.4	25.0	0.51	0.50	77.2	70-125	
Zinc	0.180	0.201	0.008	11.0	25.0	0.57	0.50	78.6	70-125	

(A) High analyte concentration affects spike recovery.
(B) Post-digestion spike within acceptance limits.
Relative Difference [D] = 200*(B-A)/(B+A)
Matrix Spike Recovery [H] = 100*(F-A)/[G]
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XEN Laboratories

Certificate Of Quality Control for Batch : 17A05B25

SW846- 7470 Total Mercury

Date Validated: May 15, 1997 14:15
Date Analyzed: May 12, 1997 13:22
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: EZ
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					MATRIX SPIKE ANALYSIS				
Q.C. Sample ID 171051- 002	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC Relative Difference	[E] LIMITS Relative Difference	[F] Matrix Spike Result	[G] Matrix Spike Amount	[H] QC Matrix Spike Recovery	[I] LIMITS Recovery Range	[G] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	mg/L	mg/L	%	%	
Mercury	< 0.0010	< 0.0010	0.0010	N.C	25.0	0.0025	0.0025	100.0	70-125	

Relative Difference [D] = 200*(B-A)/(B+A)
Matrix Spike Recovery [H] = 100*(F-A)/[G]
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A05B25

SW846- 7470 Total Mercury

Date Validated: May 15, 1997 14:15
Date Analyzed: May 12, 1997 12:58
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: EZ
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					MATRIX SPIKE ANALYSIS				
Q.C. Sample ID 171047- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC LIMITS Relative Difference	[E] LIMITS Relative Difference	[F] Matrix Spike Result	[G] Matrix Spike Amount	[H] QC LIMITS Matrix Spike Recovery	[I] LIMITS Recovery Range	[G] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	mg/L	mg/L	%	%	
Mercury	< 0.0010	< 0.0010	0.0010	N.C	25.0	0.0026	0.0025	104.0	70-125	

Relative Difference [D] = 200*(B-A)/(B+A)
Matrix Spike Recovery [H] = 100*(F-A)/[G]
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A05B25

SW846- 7470 Total Mercury

Date Validated: May 15, 1997 14:15
Date Analyzed: May 12, 1997 12:55
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: EZ
Matrix: Liquid

	BLANK SPIKE ANALYSIS						
Parameter	[A] Blank Result mg/L	[B] Blank Spike Result mg/L	[C] Blank Spike Amount mg/L	[D] Method Detection Limit mg/L	[E] QC LIMITS Blank Spike Recovery %	[F] Recovery Range %	[G] Qualifier
Mercury	< 0.0010	0.0022	0.0025	0.0010	88.0	70-125	

Blank Spike Recovery [E] = 100*(B-A)/(C)
[illegible] Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A04B61

SW- 846 5030/8020 BTEX

Date Validated: May 12, 1997 14:50
Date Analyzed: May 9, 1997 10:17
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: IF
Matrix: Liquid

BLANK SPIKE ANALYSIS

Parameter	[A] Blank Result ppm	[B] Blank Spike Result ppm	[C] Blank Spike Amount ppm	[D] Method Detection Limit ppm	[E] QC LIMITS Blank Spike Recovery %	[F] LIMITS Recovery Range %	[G] Qualifier
Benzene	< 0.0010	0.1130	0.1000	0.0010	113.0	65-135	
Toluene	< 0.0010	0.1160	0.1000	0.0010	116.0	65-135	
Ethylbenzene	< 0.0010	0.1170	0.1000	0.0010	117.0	65-135	
m,p-Xylenes	< 0.0020	0.2410	0.2000	0.0020	120.5	65-135	
o-Xylene	< 0.0010	0.1150	0.1000	0.0010	115.0	65-135	

Blank Spike Recovery [E] = 100*(B-A)/(C)
[redacted] = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A04B61

SW- 846 5030/8020 BTEX

Date Validated: May 12, 1997 14:50
Date Analyzed: May 9, 1997 13:42
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: IF
Matrix: Liquid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY

Q.C. Sample ID 171048- 001 / Parameter	[A] Sample Result	[B] Matrix Spike Result	[C] Matrix Spike Duplicate Result	[D] Matrix Spike Amount	[E] Method Detection Limit	Matrix Limit Relative Difference	[F] QC Spike Relative Difference	[G] QC Matrix Spike Recovery	[H] QC M.S.D. Recovery	[I] Matrix Spike Recovery Range	[J] Qualifier
	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	
Benzene	< 0.0010	0.0868	0.0864	0.1000	0.0010	25.0	0.5	86.8	86.4	65-135	
Toluene	< 0.0010	0.1160	0.1120	0.1000	0.0010	25.0	3.5	116.0	112.0	65-135	
Ethylbenzene	< 0.0010	0.1180	0.1130	0.1000	0.0010	25.0	4.3	118.0	113.0	65-135	
m,p-Xylenes	< 0.0020	0.2420	0.2330	0.2000	0.0020	25.0	3.8	121.0	116.5	65-135	
o-Xylene	< 0.0010	0.1160	0.1120	0.1000	0.0010	25.0	3.5	116.0	112.0	65-135	

Spike Relative Difference [F] = 200*(B-C)/(B+C)
Matrix Spike Recovery [G] = 100*(B-A)/[D]
M.S.D. = Matrix Spike Duplicate
M.S.D. Recovery [H] = 100*(C-A)/[D]
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A34B35

SW-846 8100 PAHs by GC-MS

Date Validated: May 15, 1997 17:56
Date Analyzed: May 14, 1997 22:20
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: MM
Matrix: Liquid

BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY

Parameter	[A] Blank Result mg/L	[B] Blank Spike Result mg/L	[C] Blank Spike Duplicate Result mg/L	[D] Blank Spike Amount mg/L	[E] Method Detection Limit mg/L	Blank Limit Relative Difference %	[F] QC Spike Relative Difference %	[G] QC Blank Spike Recovery %	[H] QC B.S.D. Recovery %	[I] Blank Spike Recovery Range %	[J] Qualifier
Acenaphthene	< 0.0020	0.0658	0.0670	0.1000	0.0020	31.0	1.8	65.8	67.0	46-118	
4-Chloro-3-Methylphenol	< 0.0020	0.0398	0.0332	0.1000	0.0020	42.0	18.1	39.8	33.2	23-97	
2-Chlorophenol	< 0.0020	0.0630	0.0644	0.1000	0.0020	40.0	2.2	63.0	64.4	27-123	
1,4-Dichlorobenzene	< 0.0020	0.0702	0.0724	0.1000	0.0020	28.0	3.1	70.2	72.4	36-97	
2,4-Dinitrotoluene	< 0.0020	0.0628	0.0632	0.1000	0.0020	38.0	0.6	62.8	63.2	24-96	
N-Nitroso-di-n-propylamine	< 0.0040	0.0742	0.0738	0.1000	0.0040	38.0	0.5	74.2	73.8	41-116	
4-Nitrophenol	< 0.0040	0.0250	0.0248	0.1000	0.0040	50.5	0.8	25.0	24.8	10-80	
Pentachlorophenol	< 0.0010	0.0738	0.0706	0.1000	0.0010	50.0	4.4	73.8	70.6	9-103	
Phenol	< 0.0010	0.0222	0.0224	0.1000	0.0010	42.0	0.9	22.2	22.4	12-89	
Pyrene	< 0.0020	0.0852	0.0840	0.1000	0.0020	31.0	1.4	85.2	84.0	26-127	
1,2,4-Trichlorobenzene	< 0.0010	0.0736	0.0714	0.1000	0.0010	28.0	3.0	73.6	71.4	39-98	

Spike Relative Difference [F] = 200*(B-C)/(B+C)
Blank Spike Recovery [G] = 100*(B-A)/[D]
B.S.D. = Blank Spike Duplicate
B.S.D. Recovery [H] = 100*(C-A)/[D]
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A20A24

SM4500C02D Carbonate

Date Validated: May 14, 1997 15:30
Date Analyzed: May 10, 1997 09:20
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CG
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 171047- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC Relative Difference	[E] LIMITS Relative Difference	[F] Qualifier
Parameter	ppm	ppm	ppm	%	%	
Carbonate	< 1.00	< 1.00	1.00	N.C	25.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A20A22

SM 4500C02D Bicarbonate

Date Validated: May 14, 1997 15:30
Date Analyzed: May 10, 1997 09:20
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CG
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 171047- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC Relative Difference	[E] LIMITS Relative Difference	[F] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	
Bicarbonate	127	127	0.5	0.0	25.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A19A95

EPA 160.1 Total Dissolved Solids

Date Validated: May 9, 1997 13:45
Date Analyzed: May 9, 1997 09:40
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CG
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 171046- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC Relative Difference	[E] LIMITS Relative Difference	[F] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	
Total Dissolved Solids	528	504	4.0	4.3	25.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A10A40

EPA 300.0 Anions by Ion Chromatography

Date Validated: May 9, 1997 12:00
Date Analyzed: May 8, 1997 12:55
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: JS
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 171046- 001	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC Relative Difference	[E] LIMITS Relative Difference	[F] Qualifier
Parameter	mg/L	mg/L	mg/L	%	%	
Chloride	72.400	75.900	0.050	4.7	20.0	
Sulfate	59.60	62.30	0.10	4.4	20.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17Z99A23

MOD. 415.1 Total Inorganic Carbon

Date Validated: May 19, 1997 09:00
Date Analyzed: May 14, 1997 09:22
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: IF
Matrix: Liquid

	BLANK SPIKE ANALYSIS						
Parameter	[A] Blank Result ppm	[B] Blank Spike Result ppm	[C] Blank Spike Amount ppm	[D] Method Detection Limit ppm	[E] QC LIMITS Blank Spike Recovery %	[F] Recovery Range %	[G] Qualifier
Total Inorganic Carbon	< 1.0	20.6	20.0	1.0	103.0	70-120	

Blank Spike Recovery [E] = 100*(B-A)/(C)
N.C. Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17A10A40

EPA 300.0 Anions by Ion Chromatography

Date Validated: May 9, 1997 12:00
Date Analyzed: May 8, 1997 12:23
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: JS
Matrix: Liquid

	BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY										
Parameter	[A] Blank Result	[B] Blank Spike Result	[C] Blank Spike Duplicate Result	[D] Blank Spike Amount	[E] Method Detection Limit	Blank Limit Relative Difference	[F] QC Spike Relative Difference	[G] QC Blank Spike Recovery	[H] QC B.S.D. Recovery	[I] Blank Spike Recovery Range	[J] Qualifier
	mg/L	mg/L	mg/L	mg/L	mg/L	%	%	%	%	%	
Chloride	< 0.050	5.070	5.090	5.000	0.050	20.0	0.4	101.4	101.8	70-125	
Sulfate	< 0.10	4.97	5.06	5.00	0.10	20.0	1.8	99.4	101.2	70-125	

Spike Relative Difference [F] = 200*(B-C)/(B+C)
Blank Spike Recovery [G] = 100*(B-A)/[D]
B.S.D. = Blank Spike Duplicate
B.S.D. Recovery [H] = 100*(C-A)/[D]
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Edward H. Yonemoto, Ph.D.
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 17Z99A23

MOD. 415.1 Total Inorganic Carbon

Date Validated: May 19, 1997 09:00
Date Analyzed: May 14, 1997 11:41
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: IF
Matrix: Liquid

	MATRIX DUPLICATE ANALYSIS					MATRIX SPIKE ANALYSIS				
Q.C. Sample ID 171049- 002	[A] Sample Result	[B] Duplicate Result	[C] Method Detection Limit	[D] QC LIMITS Relative Difference	[E] Relative Difference	[F] Matrix Spike Result	[G] Matrix Spike Amount	[H] QC Matrix Spike Recovery	[I] LIMITS Recovery Range	[G] Qualifier
Parameter	ppm	ppm	ppm	%	%	ppm	ppm	%	%	
Total Inorganic Carbon	56.61	55.44	1.00	2.1	20.0	74.6	20.0	90.0	70-120	

Relative Difference [D] = 200*(B-A)/(B+A)
Matrix Spike Recovery [H] = 100*(F-A)/[G]
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward H. Yonemoto, Ph.D.
QA/QC Manager

ANALYTICAL CHAIN CUSTODY REPORT
CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

Project ID: 610057 Site #18
Project Manager: Ann Baker
Project Location: Site #18

Project Name: Monument

XENCO COC#: 1-71050
Date Received in Lab: May 6, 1997 10:00 by RT
XENCO contact : Carlos Castro/Edward Yonemoto

	Field ID	Lab. ID	Method Name	Method ID	Units	Turn Around	Date and Time: Sample Collected	Date and Time: Addition Requested	Date and Time: Extraction	Date and Time: Analysis
1	MW-2	171050-001	BTEX	SW-846	ppm	Standard	May 2, 1997 18:45		May 9, 1997 by IF	May 9, 1997 15:27 by IF
2			PAH	SW-846 8100	mg/L	Standard	May 2, 1997 18:45		May 9, 1997 by CY	May 15, 1997 06:51 by MM
3			TDS	EPA 160.1	mg/L	Standard	May 2, 1997 18:45		May 8, 1997 by CG	May 9, 1997 10:20 by CG
4			Anions	EPA 300.0	mg/L	Standard	May 2, 1997 18:45		May 8, 1997 by JS	May 8, 1997 15:06 by JS
5			Carbonate	SM4500CO2D	ppm	Standard	May 2, 1997 18:45		May 10, 1997 by CG	May 10, 1997 09:55 by CG
6			Bicarbonate	SM 4500CO2D	mg/L	Standard	May 2, 1997 18:45		May 10, 1997 by CG	May 10, 1997 09:55 by CG
7			Metals (ICP)	EPA 6010	mg/L	Standard	May 2, 1997 18:45		May 9, 1997 by EZ	May 13, 1997 19:33 by SA
8			Mercury, Tot	SW846-7470	mg/L	Standard	May 2, 1997 18:45		May 9, 1997 by EZ	May 12, 1997 13:18 by EZ
9			TIC Mod.	MOD. 415.1	ppm	Standard	May 2, 1997 18:45		May 14, 1997 by IF	May 14, 1997 12:38 by IF
10	MW-3	171050-002	BTEX	SW-846	ppm	Standard	May 2, 1997 18:05		May 9, 1997 by IF	May 9, 1997 15:46 by IF
11			TDS	EPA 160.1	mg/L	Standard	May 2, 1997 18:05		May 8, 1997 by CG	May 9, 1997 10:25 by CG
12			Anions	EPA 300.0	mg/L	Standard	May 2, 1997 18:05		May 8, 1997 by JS	May 8, 1997 15:30 by JS
13			Carbonate	SM4500CO2D	ppm	Standard	May 2, 1997 18:05		May 10, 1997 by CG	May 10, 1997 10:00 by CG
14			Bicarbonate	SM 4500CO2D	mg/L	Standard	May 2, 1997 18:05		May 10, 1997 by CG	May 10, 1997 10:00 by CG
15			Metals (ICP)	EPA 6010	mg/L	Standard	May 2, 1997 18:05		May 9, 1997 by EZ	May 13, 1997 19:40 by SA
16			Mercury, Tot	SW846-7470	mg/L	Standard	May 2, 1997 18:05		May 9, 1997 by EZ	May 12, 1997 13:19 by EZ
17			TIC Mod.	MOD. 415.1	ppm	Standard	May 2, 1997 18:05		May 14, 1997 by IF	May 14, 1997 13:41 by IF

XENCO Laboratories

11381 Meadowglen Suite L Houston, Texas 77082
(713) 589-0692 Fax (713) 589-0695

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page 1 of

Lab. Batch # 171050-N

Contractor: KET Consultants — Phone (800) 253-0507

Address: 4800 Wurzbach Drive Suite 100 San Antonio, Tx

Project Name: Monument — Project Director: Paul Hartnet

Project Location: site #18 — Project Manager: Ann Baker

Sampler Signature: — Project No.: 610057 site #18

No. coolers this shipment: — Contractor COC #

Carrier: UPS — Quote #:

Airbill No. — P.O. No.:

SAMPLE CHARACTERIZATION

Preservative: Ice, Other

Unl Dies Ker Unknown

Waste Oil

PIT No: Tank No:

Turn-around: ASAP, 24 hrs, 48 hrs, Standard

	Field ID	Date	Time	Depth	Soil	Water	Comp	Grab	Container Size	Container Type P, G	Ice	Other	Sample Description	No of Containers Total	BTEX (5030/8020-602)	TPH (418.1)	Heavy Metals	PAH (8100)	TDS (160.1)	CATIONS/ANIONS	Please Hold	Remarks	LAB ONLY ID #
1	MW-2	5-2-97	1845			/					/			7	/	/	/	/	/	/			1
2	MW-3	5-2-97	1805			/					/			6	/	/	/	/	/	/			2
3																							3
4																							4
5																							5
6																							6
7																							7
8																							8
9																							9
10																							10

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	DATE	TIME
	5-5-97	0600			
			Received For Laboratory by	5-6-97	1000

Remarks

Pink (Contractor), Yellow & White (Lab).

* Pre-scheduling is recommended

Precision Analytical Services

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. Cayler	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.

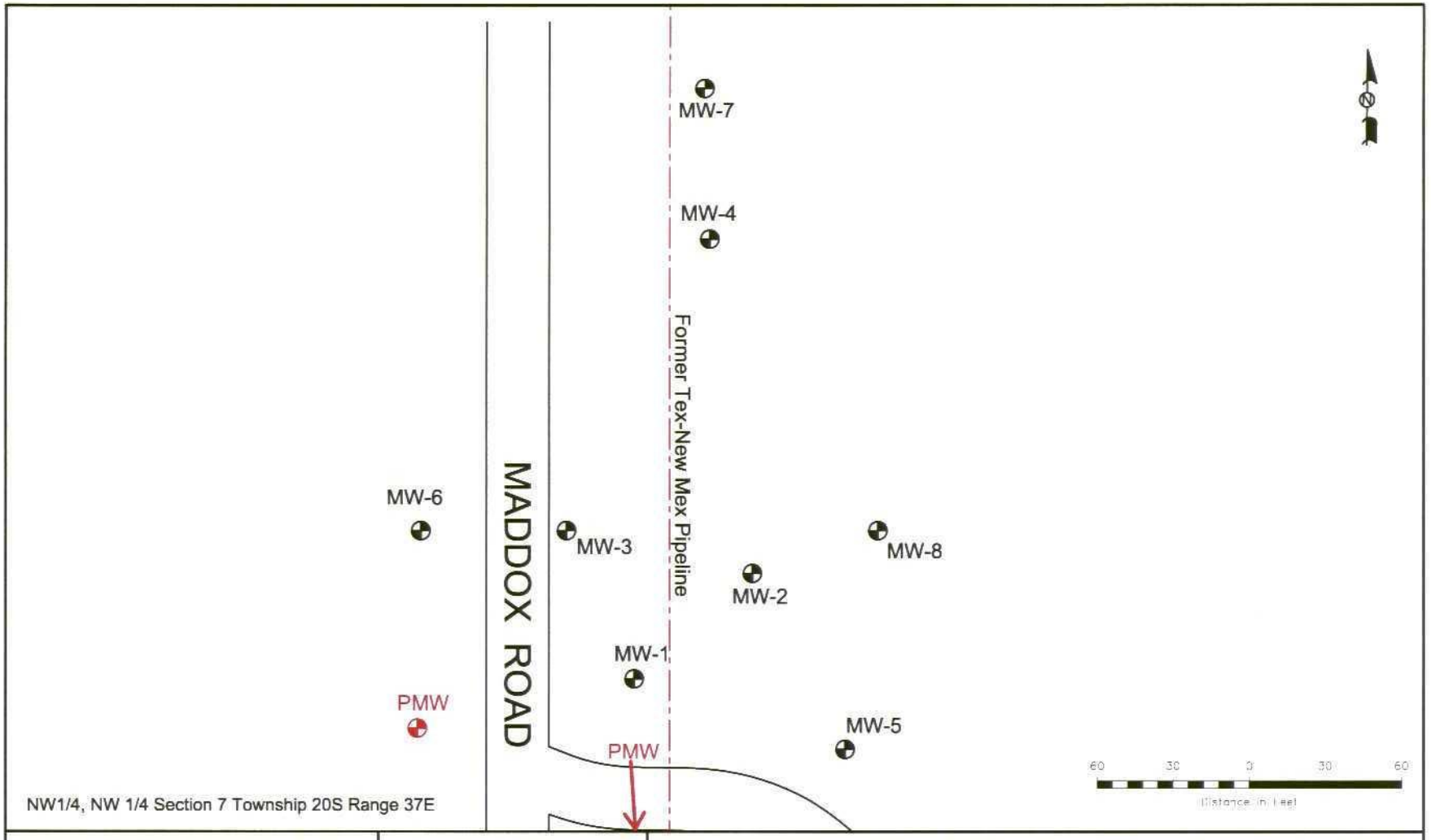
Should you have any questions or comments concerning this information, please contact me at (713) 646-4657.

Sincerely,

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



LEGEND:

- Monitor Well Locations
- PMW Proposed Monitor Well

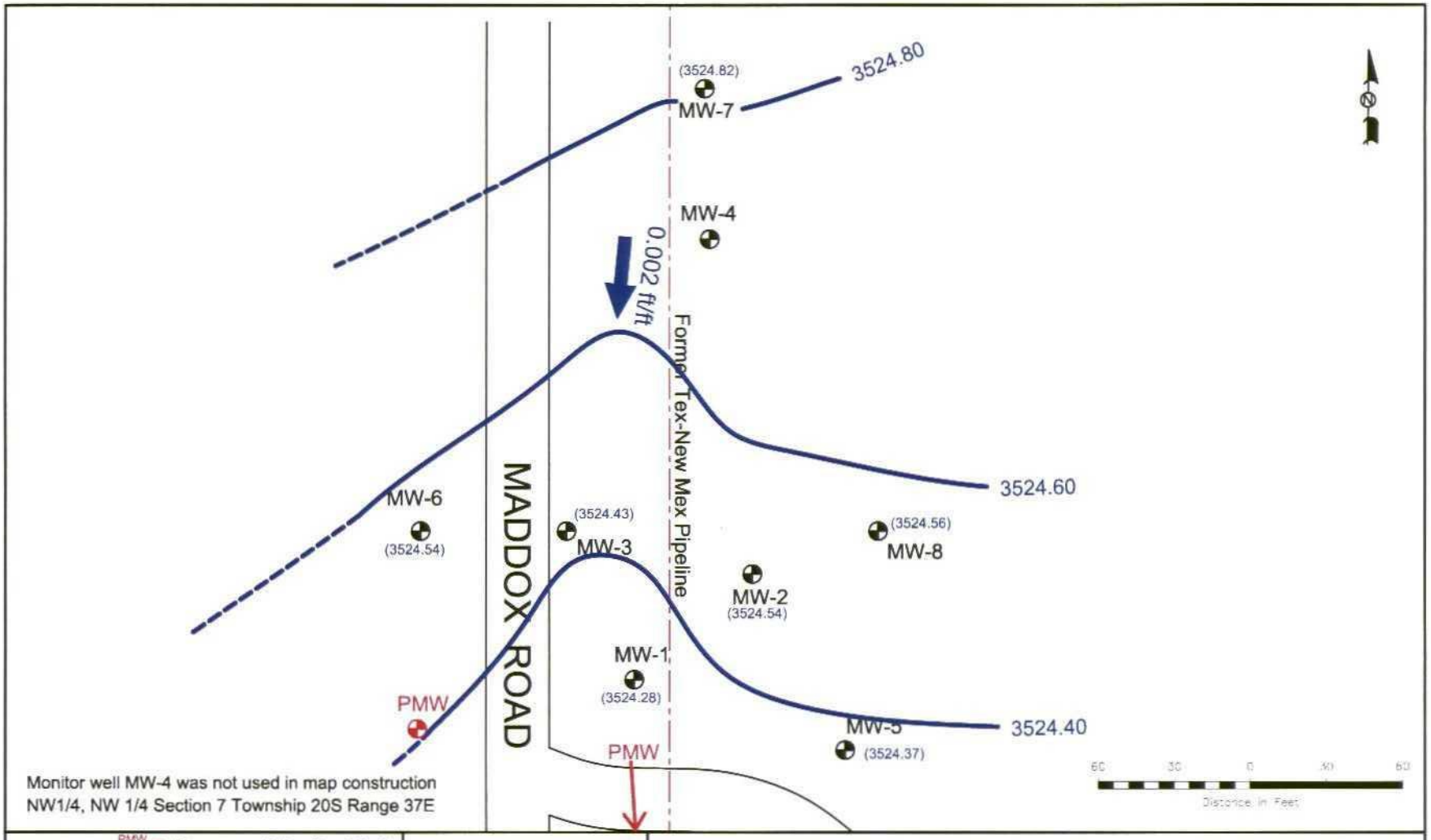
Figure 2
Site Map

Plains Pipeline, L.P.
Monument 18

Lea County, NM

NOVA Safety and Environmental

Sec 7 T20S R37E	32° 35' 30.0" N 103° 17' 55.9" W	
Scale: 1"=60'	Prepared By: CS	Checked By: TKC-
September 2, 2004		


(3524.82)
MW-7
3524.80
MW-4
0.002 ft/ft
Former Tex-New Mex Pipeline
MADDOX ROAD
MW-6
(3524.54)
(3524.43)
MW-3
(3524.56)
MW-8
MW-2
(3524.54)
3524.60
MW-1
(3524.28)
PMW
MW-5
(3524.37)
3524.40
PMW
Monitor well MW-4 was not used in map construction
NW1/4, NW 1/4 Section 7 Township 20S Range 37E
60 30 0 30 60
Distance in Feet
LEGEND:
PMW Proposed Monitor Well
Monitor Well Location
Groundwater Elevation Contour Line
(3525.78) Groundwater Elevation (in feet)
Groundwater Gradient Direction and Magnitude
Figure 2C
Inferred Groundwater Gradient Map 12/16/03
Plains Pipeline, L.P.
Monument 18
Lea County, NM
NOVA
safety and environmental
NOVA Safety and Environmental
Sec 7 T20S R37E
32° 35' 30.0" N 103° 17' 55.9" W
Scale: 1"=60'
Prepared By: CS
Checked By: TKC
March 19, 2004

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor

Joanna Prukop
Cabinet Secretary
Acting Director
Oil Conservation Division

April 28, 2004

Mr. Robert B. Eidson
Environmental Technology Group, Inc.
2540 West Marland
Hobbs, NM 88240

RE: Your "Annual Sampling and Quarterly Gauging of Groundwater Monitor Wells Meeting Regulatory Cleanup Standards" letter dated March 25, 2004

Sampling of the below-listed monitor wells may be done in the timeframes indicated:

Darr Angell #1: MW-4, 11, 15, 16, 19, and 20 may be sampled annually; MW-7 may be sampled semi-annually.
Darr Angell #2: MW-1, 5, 6, 7, 8, 9, and 10 may be sampled annually; MW-3, and 4 may be sampled semi-annually.
Darr Angell #4: MW-1, 2, 4, 5, 7, and 12 may be sampled annually; MW-9 may be sampled semi-annually.
HDO 90-23: MW-1, 7, and 8 may be sampled annually; MW-4, and 5 may be sampled semi-annually.
LF-37: MW-1, 2, 5, 6, 7, 8, and 9 may be sampled annually; MW-4 may be sampled semi-annually.
LF-59: MW-3, 5, and 6 may be sampled annually; MW-7 may be sampled semi-annually.
Monument 2: MW-6, and 7 may be sampled annually; MW-4 may be sampled semi-annually.
Monument 10: MW-4 may be sampled annually; MW-6, and 7 may be sampled semi-annually.
Monument 11: MW-1, 2, and 3 may be sampled annually.
Monument 17: MW-5, and 8 may be sampled annually. MW-4, and 6 may be sampled semi-annually.
Monument 18: MW-2, 6, 7, and 8 may be sampled annually. MW-5 may be sampled semi-annually.
TNM 97-04: MW-1, 7, 8, 10, and 12 may be sampled annually.
TNM 97-17: MW-1, 3, 11, 12, 13, 16, 17, 18, and 28 may be sampled annually. MW-22, 23, 24, 25, and 27 may be sampled semi-annually.
TNM 97-18: MW-1, 8, 9, 11, 12, 13, 14, 15, 16, 19, 20, and 21 may be sampled annually. MW-22, 26, 28, 29, and 30 may be sampled semi-annually.
TNM 97-23: MW-1, 2, 3, and 5 may be sampled annually.
TNM 98-05: MW-3, and 4 may be sampled annually.
TNM 98-05A: MW-5, and 8 may be sampled annually. MW-6, and 7 may be sampled semi-annually.
SPS-11: MW-2, 3, 13, 19, 20, 21, 22, 25, 27, 30, and 31 may be sampled annually. MW-10, and 18 may be sampled semi-annually.

Conditions:

1. Gauging of all monitor wells will continue on a quarterly basis.
2. A request for a change in sampling frequency for any other monitor wells must be made specifically for those wells. This approval of annual and semi-annual sampling for the above wells does not constitute a "blanket" approval for any other monitor well not shown above.

If you have any questions, do not hesitate to contact me.

NEW MEXICO OIL CONSERVATION DIVISION

Ed Martin
Environmental Bureau

DRAFT

March 25, 2004

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

RE: Annual sampling and quarterly gauging of groundwater monitor wells meeting regulatory cleanup standards.

Mr. Martin:

Environmental Technology Group, Inc. (ETGI) for Link Energy is requesting that the groundwater sampling schedule of the wells listed below be changed from a quarterly to an annual sampling schedule. Quarterly gauging will continue on all site monitor wells during the regularly scheduled monitoring events. Benzene and total BTEX concentrations have been below regulatory standards in all of the monitor wells listed below for at least eight consecutive monitoring periods:

HDO 90-23: MW-1, 4, 5, 7 and 8;
LF-37: MW-1, 2, 4, 5, 6, 7, 8 and 9;
LF-59: MW-3, 5, 6 and 7;
Monument 2: MW-4, 6 and 7;
Monument 10: MW-1, 4, 5, 6 and 7;
Monument 11: MW-1, 2 and 3;
Monument 17: MW-4, 5, 6 and 8;
Monument 18: MW-2, 5, 6, 7 and 8;
TNM 97-04: MW-1, 7, 8, 10 and 12;
TNM97-17: MW-1, 3, 11, 12, 13, 16, 17, 18, 22, 23, 24, 25, 27 and 28;
TNM 97-18: MW-1; + E-mail
TNM 97-23: MW-1, 2, 3 and 5;
TNM 98-05: MW-3 and 4;
TNM 98-05A: MW-5, 6, 7 and 8;
SPS-11: MW-2, 3, 13, 15, 18, 19, 20, 21, 22, 25, 27, 30 and 31. + E-mail (#10)

As additional monitor wells meet the eight consecutive monitoring events requirement with concentrations below regulatory standards we will formally request that they too be sampled on an annual basis.

Please contact me with any questions you have concerning ETGI's proposed groundwater sampling schedule at these sites.

Sincerely;

Robert B. Edison
Geologist / Senior Project Manager
ETGI, Hobbs, New Mexico

(505) 397-4882 office phone
(505) 631-2974 cell
(505) 397-4701 fax

From: Robert Eidson [reidson@etgi.cc]
Sent: Tuesday, April 27, 2004 10:53 AM
To: Ed Martin
Subject: Groundwater sampling frequency letter

Ed:
The letter is attached for your reference.

Tabulated analytical results are included in all of the Annual Groundwater Monitoring reports. The Figure 3's should also be helpful in determining sampling frequency changes. Of those sites which show only seven consecutive quarters of acceptable groundwater sampling results, I checked the first quarter results of this year to meet the requirement (8). All wells will continue to be gauged during each sampling event.

At the **Darr Angell 1 site (AP-07)** we would like to sample monitor wells MW-4, 7, 11, 15, 16, 19 and 20 annually.
At the **Darr Angell 2 site (AP-07)** we would like to sample monitor wells MW-1, 3, 4, 5, 6, 7, 8, 9 and 10 annually.
At the **Darr Angell 4 site (AP-07)** we would like to sample monitor wells MW-1, 2, 4, 5, 7, 9 and 12 annually.

Additionally, we would like to add the following monitor wells to the list shown on the attached letter:

At **TNM 97-18 (AP-13)** monitor wells MW-8, 9, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 26, 28, 29 and 30. and SPS-11.
At **SPS-11** monitor wells MW-10 and MW-19.

I will send the corresponding maps in groups to speed transmission and delivery.
Sincerely,
Robert B. Eidson
Geologist / Sr. Project Manager
ETGI
Hobbs, New Mexico
505-397-4882 office
505-397-4701 fax
505-631-2974 cell

EOTT ENERGY LLC

P.O. BOX 4666
HOUSTON, TEXAS 77210-4666

March 31, 2003

Mr. Randolph Bayliss, P.E.
Hydrologist
Oil Conservation Division
State of New Mexico
1220 South St. Francis Drive
Santa Fe NM 87505

Dear Mr. Bayliss;

EOTT Energy, LLC is an Operator of crude oil pipelines and terminal facilities located in the state of New Mexico. EOTT actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and workplans developed in consultation with the New Mexico Oil Conservation Division. Consistent with the rules and regulations of the New Mexico OCD, EOTT hereby submits its annual monitoring reports for the following titled sites:

Red Byrd No. 1	Section 1, Township 20 South, Range 36 East, Lea County NM
Red Byrd No. 2	Section 1, Township 20 South, Range 36 East, Lea County NM
TNM 98-SO1	Section 20, Township 19 South, Range 37 East, Lea County NM
TNM 97-23	Section 14, Township 22 South, Range 37 East, Lea County NM
Monument 18	Section 7, Township 20 South, Range 37 East, Lea County NM
TNM 98-05	Section 26, Township 21 South, Range 37 East, Lea County NM
Lea Station to Monument 6"	Section 5, Township 20 South, Range 37 East, Lea County NM

ETGI prepared these documents and has vouched for their accuracy and completeness, and on behalf of EOTT Energy, I have personally reviewed the documents and interviewed ETGI in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that EOTT Energy submits these Annual Compliance Monitoring Reports for the above 7 facilities.

I look forward to scheduling a meeting with you in the second or third week of March as you schedule allows, which will allow for an opportunity to review and discuss the results of the monitoring. If you have questions in the interim, please contact me at (713) 993-5047.

Sincerely,

Bill Von Drehle
Director Environmental
EOTT ENERGY LLC

Cc: Frank Hernandez

EOTT ENERGY Pipeline Limited Partnership

P.O. BOX 1660
5805 E. BUSINESS 20
MIDLAND, TEXAS 79702
(915) 682-3761

FEDERAL EXPRESS
AIR BILL # 8170 0342 3660

March 30, 2000

State of New Mexico
Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505
Attn: William Olson

RE: **ANNUAL GROUND WATER MONITORING REPORTS**

Dear Mr. Olson:

Attached please find the 2000 Annual Groundwater Monitoring Reports for the following sites:

Monument #18	Monument #10
Monument #17	TNM-97-16 (Becky Jo Doom site)
Monument #2	HDO-90-23
Monument #15	SPS-11
TNM-97-17	TNM-98-02
TNM-97-18	TNM-98-S01
TNM-98-05A	TNM-97-23
TNM-96-16	TNM-95-10 (Saunders)
TNM-97-14	TNM-97-04 (Townsend)

I hope all meets with OCD requirements for closure of the site but if you have any questions, please don't hesitate to call me at 915/684-3467.

Sincerely,

Lennah Frost
Sr. Environmental Engineer

cc: Environmental File

k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

March 19, 1999

Mr. William C. Olson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Texas-New Mexico Pipe Line Company
Pipe Line Release Site No. 18
Section 7, Township 20 South, Range 37 East
Lea County, New Mexico
Job No. 610057-6-18

Dear Mr. Olson:

This letter is in response to your letter dated February 1, 1999, regarding the referenced site. Your letter required a ground water remediation and monitoring plan be submitted to your office by April 1, 1999. This letter constitutes our formal request for extension of this deadline until May 7, 1999, for which you provided verbal approval on a recent phone conversation with Mike Hawthorne concerning the site.

If you have any questions please contact me at (210) 680-3767.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

cc: TNMPL, Tony Savoie
Equilon, Marc Oler
OCD Hobbs District Office

tnmpl\610057\site18\correspon\cwpext2.doc

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

February 1, 1999

CERTIFIED MAIL
RETURN RECEIPT NO: Z-274-520-611

Mr. Tony Savoie
Texas-New Mexico Pipe Line Company
P.O. Box 1030
Jal, New Mexico 88252

RE: GROUND WATER REMEDIATION
MONUMENT SITE #18

Dear Mr. Savoie:

The New Mexico Oil Conservation Division (OCD) has reviewed the following Texas-New Mexico Pipe Line Company (TNMPLC) documents which were submitted on behalf of TNMPLC by their consultant KEI:

- December 28, 1998 "GROUNDWATER MONITORING EVENT, TEXAS - NEW MEXICO PIPELINE COMPANY, MONUMENT SITE NO. 18, MONUMENT, NEW MEXICO, KEI JOB NO. 610057-6-18".

- October 29, 1998 "MONITORING WELLS MW 18-7 AND MW18-8, MONUMENT SITE NO. 18, UNIT D, SECTION 7, TOWNSHIP 20 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, JOB NO. 610057-2-18".

- October 29, 1998 "GROUNDWATER MONITORING EVENT, TEXAS - NEW MEXICO PIPELINE COMPANY, MONUMENT SITE NO. 18, MONUMENT, NEW MEXICO, KEI JOB NO. 610057-6-18".

These documents contain the results of TNMPLC's recent investigation of the extent of ground water contamination resulting from a crude oil pipeline spill at TNMPLC's Monument No. 18 Site.

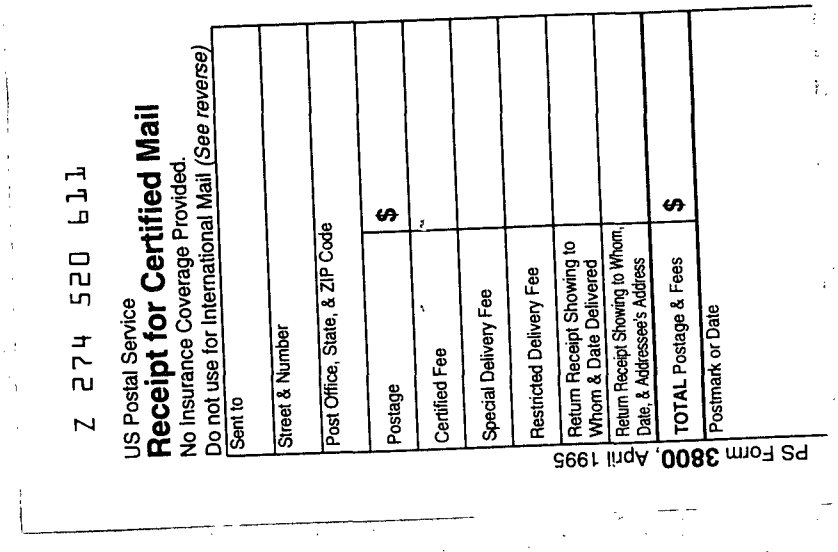
A review of the OCD's file on this site shows that on June 19, 1998 the OCD required that TNMPLC submit a work plan for remediation of contaminated ground water to the OCD by July 31, 1998. To date the OCD has no record of receiving this work plan. To correct this deficiency, the OCD requires that TNMPLC submit a ground water remediation and monitoring work plan to the OCD by April 1, 1999. The work plan will be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office
Theresa Nix, KEI



5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

October 29, 1998

Mr. Tony Savoie
TEXAS - NEW MEXICO PIPE LINE COMPANY
P.O. Box 1030
Jal, New Mexico 88252

Re: Monitoring Wells MW18-7 and MW18-8
Monument Site No. 18
Unit D, Section 7, Township 20 South, Range 37 East
Lea County, New Mexico
Job No. 610057-2-18

Dear Mr. Savoie:

Transmitted with this letter is the final Subsurface Investigation Report for the installation of monitoring wells MW18-7 and MW18-8 at Monument Site No. 18.

Please contact me at (210) 680-3767 with your comments or suggested changes.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Enclosure

cc: Marc Oler; Equilon
William Olson, OCD Santa Fe Office
OCD Hobbs Office

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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

June 19, 1998

CERTIFIED MAIL
RETURN RECEIPT NO: Z-235-437-300

Mr. Tony Savoie
Texas-New Mexico Pipe Line Company
P.O. Box 1030
Jal, New Mexico 88252

RE: GROUND WATER INVESTIGATION REPORT
MONUMENT SITE #18

Dear Mr. Savoie:

The New Mexico Oil Conservation Division (OCD) has reviewed the following Texas-New Mexico Pipe Line Company (TNMPLC) documents which were submitted on behalf of TNMPLC by their consultant KEI:

- March 26, 1998 "WELLS MW18-4, MW18-5, MW18-6, BORINGS B18-A, B18-B, B18-C, MONUMENT SITE NO. 18, LEA COUNTY, NEW MEXICO, JOB NO. 610057-2-18".

- March 26, 1998 "SUBSURFACE INVESTIGATION REPORT, MONITORING WELLS MW18-4, MW18-5, MW18-6, SOIL BORINGS B18-A, B18-B, B18-C, TEXAS - NEW MEXICO PIPELINE COMPANY MONUMENT SITE NO. 18, LEA COUNTY, NEW MEXICO".

These documents contain the results of TNMPLC's recent investigation of the extent of soil and ground water contamination resulting from a crude oil pipeline spill at TNMPLC's Monument No. 18 Site located in Unit F, Section 29, Township 19 South, Range 37 East, Lea County, New Mexico.

Several pieces of information required by the OCD on January 20, 1998 were not included in the above referenced documents. Please provide the OCD with the following information by July 31, 1998:

1. Please provide the OCD with a summary of all interim product recovery activities

2. A summary of all laboratory analytic results of water quality sampling including copies of the laboratory analyses and associated quality assurance/quality control data.

3. A water table elevation map using the water table elevation of the ground water in all site monitor wells.

4. A work plan for remediation of contaminated soil and ground water.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Wayne Price, OCD Aztec Office
Michael Hawthorne, KEI

Z 235 437 300

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Postmark or Date	

PS Form **3800**, April 1995

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

May 28, 1998

Mr. Tony Savoie
TEXAS - NEW MEXICO PIPE LINE COMPANY
P. O. Box 1030
Jal, New Mexico 88252

Re: Groundwater Monitoring Event
Texas - New Mexico Pipe Line Company
Monument Site No. 18
Monument, New Mexico
KEI Job No. 610057-6-18

Dear Mr. Savoie:

Transmitted with this letter is the ground water binder update packet for the second quarter of 1998 ground water monitoring event conducted at Monument Site No. 18, located near Monument, New Mexico. One copy has been submitted to OCD Hobbs and OCD Santa Fe.

The packet contains the following:

- Updated gauging tables
- Updated ground water laboratory results tables
- Updated figures
- A copy of the laboratory ground water results and chain-of-custody documentation
- A dated "tab" for the new event

Please remove and replace the former tables. Add the new dated tab and place the updated figures, laboratory reports, and chain-of-custody documentation behind this tab.

Please call me at (210) 680-3767 if you have any questions or comments.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Enclosure

cc: Marc Oler, TTTI
J. Michael Hawthorne, KEI
OCD Hobbs, Wayne Price
OCD Santa Fe, William Olson ✓

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5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

December 1, 1997

Mr. Tony Savoie
TEXAS - NEW MEXICO PIPE LINE COMPANY
P. O. Box 1030
Jal, New Mexico 88252

Re: Groundwater Monitoring Event
Texas - New Mexico Pipe Line Company
Monument Site No. 18
Monument, New Mexico
KEI Job No. 610057

Dear Mr. Savoie:

Transmitted with this letter is the ground water binder for all ground water monitoring events conducted at Monument Site No. 18, located near Monument, New Mexico.

After each ground water monitoring and sampling event, you will receive a packet containing the following:

- Updated gauging tables
- Updated ground water laboratory results tables
- Updated figures
- A copy of the laboratory ground water results and chain-of-custody documentation
- A dated "tab" for each new event

When you receive each packet, please remove and replace the former tables. Add the new dated tab and place the updated figures, laboratory reports, and chain-of-custody documentation behind this tab.

Please call me at (210) 680-3767 if you have any questions or comments.

Respectfully,

J. Michael Hawthorne, P.G., REM
Senior Geologist

Enclosure

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k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

March 26, 1998

Mr. William C. Olson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Wells MW18-4, MW18-5, MW18-6
Borings B18-A, B18-B, B18-C
Monument Site No. 18
Lea County, New Mexico
Job No. 610057-2-18

Dear Mr. Olson:

Transmitted with this letter is the report for the installation of 3 additional monitoring wells and soil borings at the referenced site. This report satisfies the requirements of the OCD letter dated January 20, 1998.

Due to soil sample laboratory results and the presence of phase-separate hydrocarbons (PSH) in the upgradient wells, MW18-3 and MW18-4, it appears a third party may be responsible for ground water impact at the site. KEI recommends TNMPL excavate the stained release area to a sufficient depth in order to determine if groundwater impact at the site is related to the TNMPL release or a third party. The excavation depth will be determined in the field based on field observations and laboratory results.

Please contact Theresa Nix or me at (210) 680-3767 if you have any questions.

Respectfully,

Pat Bullinger, P.E.

Enclosure

cc: Marc Oler; TTTI
Tony Savoie, TNMPL
Wayne Price, OCD Hobbs District Office

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5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

July 9, 1998

Mr. Wayne Price
STATE OF NEW MEXICO
Oil Conservation Division
P. O. Box 1980
Hobbs, New Mexico 88240

Re: Texas-New Mexico Pipe Line Company
Pipe Line Release Site No. 18
NW/4, Section 7, Township 20 South, Range 37 East
Lea County, New Mexico
Job No. 610057-2-18

Dear Mr. Price:

This letter provides written notification of drilling activities scheduled at the above referenced site during the week of July 13, 1998. Drilling at Site 18 is currently scheduled for Thursday, July 16, 1998. This schedule, however, is dependent upon completion of drilling activities at Site 17 on Wednesday of next week. Two delineation wells will be installed at the site (1 lateral and 1 upgradient).

If you have any questions or would like to be on-site during drilling, please contact me at (210) 680-3767.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

cc: TNMPL, Tony Savoie
OCD Santa Fe Office, Bill Olson

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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

January 20, 1998

CERTIFIED MAIL
RETURN RECEIPT NO: Z-235-437-220

Mr. Tony Savoie
Texas-New Mexico Pipe Line Company
P.O. Box 1030
Jal, New Mexico 88252

RE: GROUND WATER ABATEMENT
MONUMENT SITE #18

Dear Mr. Savoie:

The New Mexico Oil Conservation Division (OCD) has reviewed the following Texas-New Mexico Pipe Line Company (TNMPLC) documents which were submitted on behalf of TNMPLC by their consultant KEI:

- September 24, 1997 "TEXAS-NEW MEXICO PIPE LINE COMPANY, PIPE LINE RELEASE SITE NO. 18, LEA COUNTY, NEW MEXICO, JOB NO. 610057".
- September 9, 1997 "COMPREHENSIVE ASSESSMENT REPORT, TEXAS - NEW MEXICO PIPELINE COMPANY MONUMENT SITE NO. 18, LEA COUNTY, NEW MEXICO"

These documents contain the results of TNMPLC's investigation of the extent of soil and ground water contamination resulting from a crude oil pipeline spill at TNMPLC's Monument No. 17 Site located in Unit F, Section 29, Township 19 South, Range 37 East, Lea County, New Mexico. The documents also contain recommendations for further characterization of the extent of contamination and interim product recovery from the existing monitor wells.

The OCD approves of the recommendations contained in the above referenced documents with the following conditions:

1. TNMPLC will completely define the extent of contamination related to TNMPLC's activities.
2. All monitor wells will be constructed, developed and sampled according to OCD's August 16, 1996 site characterization plan approval.

3. TNMPLC will submit a report on the investigation and interim product recovery activities by April 1, 1998. The report will be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office. The report will contain:

   a. A description of all investigation and remediation activities which occurred including the procedures used during the investigation and conclusions and recommendations.

   b. A site map showing the locations of all soil borings and monitor wells in relation to other pertinent site features.

   c. A summary of all laboratory analytic results of soil and water quality sampling including copies of the laboratory analyses and associated quality assurance/quality control data.

   d. A water table elevation map using the water table elevation of the ground water in all site monitor wells.

   e. A geologic log and well completion diagram for each monitor well or borehole.

   f. A work plan for remediation of contaminated soil and ground water.

4. TNMPLC will notify the OCD at least 48 hours in advance of scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve TNMPLC of liability if the investigation fails to adequately define the extent of contamination or, if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve TNMPLC of responsibility for compliance with any other federal, state or local laws and regulations

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Wayne Price, OCD Aztec Office
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September 24, 1997

Mr. Roger Anderson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Texas-New Mexico Pipe Line Company
Pipe Line Release Site No. 18
Lea County, New Mexico
Job No. 610057

Dear Mr. Anderson:

This letter provides written notification of the discovery of Phase-Separate Hydrocarbon (PSH) on ground water at the above referenced site during subsurface investigation activities.

On March 9 and 14, 1997, KEI advanced exploratory holes at the referenced site, which is located in the NW/4, NW/4 Section 7, Township 20 South, Range 37 East in Lea County, New Mexico. Monitoring wells were installed at the site on April 7 and 8, 1997. The exploratory work had previously been approved by the New Mexico Oil Conservation Division. At an approximate depth of 32 feet below ground surface, PSH has been observed on the ground water.

KEI has already installed additional soil borings and monitoring wells at the site to further characterize the nature and extent of hydrocarbon impact to ground water. A report summarizing this additional work is in preparation and will be provided to OCD upon its completion.

If you have any questions please contact me at (210) 680-3767.

Respectfully,

J. Michael Hawthorne, P.G., REM
Senior Geologist

cc: TNMPL, Tony Savoie
OCD Hobbs District Office, Wayne Price

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