

*Denney & Felt*  
**EL PASO FIELD SERVICES**  
**DEPUTY PRODUCTION PIT CLOSURE**

DEC 21 1998

**LINDRITH #39**  
**Meter/Line ID - 73047**

**RECEIVED**  
JUL 2 1998

**Legals - Twn: 24 Rng: 03**  
**NMOCD Hazard Ranking: 40**  
**Operator: MERIDIAN OIL INC**

**SITE DETAILS**

**Sec: 16 Unit: A**  
**Land Type: 4 - Fee**  
**Pit Closure Date: 10/12/94**

**OIL CON. DIV.**  
**DIST. 3**

**RATIONALE FOR RISK-BASED CLOSURE:**

The above mentioned production pit was assessed and ranked according to the criteria in the New Mexico Conservation Division's Unlined Surface Impoundment Closure Guidelines.

The primary source, discharge to the pit, has been removed. There has been no discharge to the production pit for at least five years and the pit has been closed for at least three years.

The production pit has been remediated to the practical extent of the trackhoe or to the top of bedrock. Initial laboratory analysis has indicated that the soil remaining at the bottom of the excavation is above standards based on the hazard ranking score. Contaminated soil was removed and transported to an approved landfarm for disposal. The initial excavation was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching any residual hydrocarbons remaining in the soil. Therefore, further mobility of residual hydrocarbons is unlikely.

Since the soil samples from the initial excavation were above standards, a test boring was drilled and a sample was collected to evaluate the vertical extent of impact to soils. Test boring sample results indicated soils below standards beneath the original excavation.

El Paso Field Services Company (EPFS) requests closure of the above mentioned production pit location for the following reasons:

- Discharge to the pit has not occurred in over five years and the pit has been closed for over three years.
- The bulk of the impacted soil was removed during the initial excavation.
- The excavation was backfilled with clean soil and graded to divert precipitation away from the excavation area.
- All source material has been removed from the ground surface, eliminating potential direct contact with livestock and the general public.
- Groundwater was not encountered in the initial excavation or test boring; therefore, impact to groundwater is unlikely.
- Soil samples collected beneath the initial excavation were below standards.
- No potential receptors are within 1,000 feet of the site.
- Residual hydrocarbons remaining in the soil at the bottom of the initial excavation will naturally degrade in time with minimal risk to the environment.

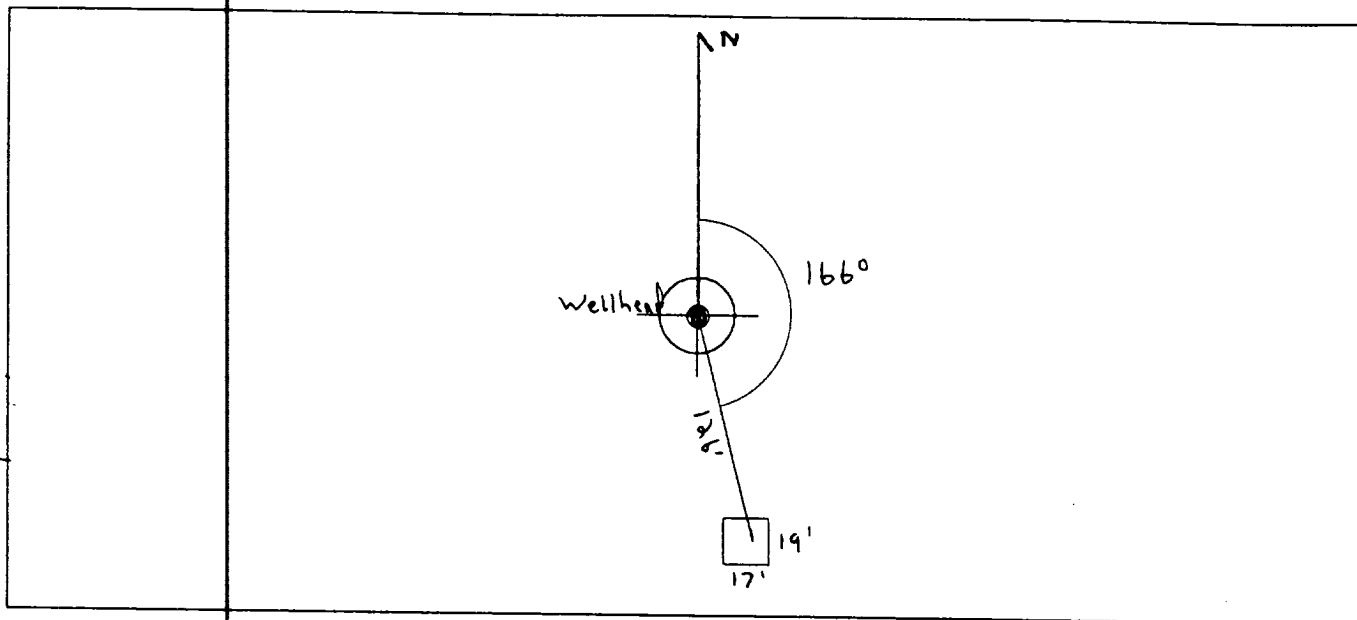
# FIELD PIT SITE ASSESSMENT FORM

GENERAL	Meter: <u>73047</u> Location: <u>Lindeth #39</u> Operator #: <u>2999</u> Operator Name: <u>MDI</u> P/L District: <u>DJITO</u> Coordinates: Letter: <u>A</u> Section <u>16</u> Township: <u>24</u> Range: <u>3</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator _____ Location Drip: <input checked="" type="checkbox"/> Line Drip: _____ Other: _____ Site Assessment Date: <u>8/2/94</u> Area: <u>08</u> Run: <u>83</u>								
SITE ASSESSMENT	<b>NMOCD Zone:</b> (From NMOCD Maps)								
	<b>Land Type:</b> <table border="0"> <tr> <td>BLM</td> <td><input type="checkbox"/> (1)</td> </tr> <tr> <td>State</td> <td><input type="checkbox"/> (2)</td> </tr> <tr> <td>Fee</td> <td><input checked="" type="checkbox"/> (3)</td> </tr> <tr> <td>Indian</td> <td>_____</td> </tr> </table>		BLM	<input type="checkbox"/> (1)	State	<input type="checkbox"/> (2)	Fee	<input checked="" type="checkbox"/> (3)	Indian
BLM	<input type="checkbox"/> (1)								
State	<input type="checkbox"/> (2)								
Fee	<input checked="" type="checkbox"/> (3)								
Indian	_____								
	<b>Depth to Groundwater</b> Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2) Greater Than 100 Ft (0 points) <input type="checkbox"/> (3)								
	<b>Wellhead Protection Area :</b> Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)								
	<b>Horizontal Distance to Surface Water Body</b> Less Than 200 Ft (20 points) <input checked="" type="checkbox"/> (1) 200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2) Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)								
	Name of Surface Water Body <u>Cañada Largo</u> (Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)								
	Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) < 100' (Navajo Pits Only) <input type="checkbox"/> (2) > 100'								
	<b>TOTAL HAZARD RANKING SCORE:</b> <u>42</u> POINTS								
REMARKS	Remarks : <u>Redline Book - Inside</u> <u>Vulnerable Zone Type - Inside</u> <u>Pit. Will close. Pit day has v. small amount of liquid in it</u>								
	<u>DIGHAUL</u>								

## ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 166° Footage from Wellhead 126'  
b) Length : 19' Width : 17' Depth : 4'



## REMARKS

Remarks :

Pictures @ 1227

Completed By:

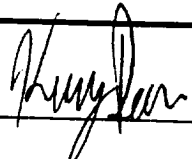
Cory Chase  
Signature

8/2/94  
Date

# **PHASE I EXCAVATION**



# FIELD PIT REMEDIATION/CLOSURE FORM

<b>GENERAL</b>	<p>Meter: <u>73047</u> Location: <u>Lindrieth #39</u></p> <p>Coordinates: Letter: <u>A</u> Section <u>16</u> Township: <u>24</u> Range: <u>3</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>10/12/94</u> Run: <u>08</u> <u>83</u></p>
<b>FIELD OBSERVATIONS</b>	<p>Sample Number(s): <u>KD335</u></p> <p>Sample Depth: <u>12'</u> Feet</p> <p>Final PID Reading <u>476 ppm</u> PID Reading Depth <u>12'</u> Feet</p> <p style="text-align: center;">Yes No</p> <p>Groundwater Encountered <input type="checkbox"/> <input checked="" type="checkbox"/> Approximate Depth _____ Feet</p>
<b>CLOSURE</b>	<p>Remediation Method :</p> <p>Excavation <input checked="" type="checkbox"/> Approx. Cubic Yards <u>50</u></p> <p>Onsite Bioremediation <input type="checkbox"/></p> <p>Backfill Pit Without Excavation <input type="checkbox"/></p> <p>Soil Disposition:</p> <p>Envirotech <input checked="" type="checkbox"/> <input type="checkbox"/> Tierra</p> <p>Other Facility <input type="checkbox"/> Name: _____</p> <p>Pit Closure Date: <u>10/12/94</u> Pit Closed By: <u>BEI</u></p>
<b>REMARKS</b>	<p>Remarks : <u>EXCAVATED pit to 12', TOOK PID Sample, Closed pit</u></p> <p>_____</p> <p>_____</p>
	<p>Signature of Specialist: <u></u></p>



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD 335	946412
MTR CODE   SITE NAME:	73 047	N/A
SAMPLE DATE   TIME (Hrs):	10-12-94	1300
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	10-17-94	10-17-94
DATE OF BTEX EXT.   ANAL.:	10-19-94	10-21-94
TYPE   DESCRIPTION:	VC	Light Grey Sand + Clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	6.7	MG/KG	20			
TOLUENE	89	MG/KG	20			
ETHYL BENZENE	11	MG/KG	20			
TOTAL XYLENES	110	MG/KG	20			
TOTAL BTEX	217 <sup>KD</sup> 216.7 <sup>11/3/94</sup>	MG/KG				
TPH (418.1)	5710	MG/KG			1.61	2E
HEADSPACE PID	476	PPM				
PERCENT SOLIDS	30.2	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99 % for this sample All QA/QC was acceptable.  
Narrative:

ATI results attached.

DF = Dilution Factor Used

Approved By:

Date:

11/3/94

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*****
*                               *
*      Test Method for         *
*      Oil and Grease and Petroleum Hydrocarbons *
*      in Water and Soil      *
*                               *
*      Perkin-Elmer Model 1600 FT-IR *
*      Analysis Report         *
*****

```

# 04/10/17 13:03

# Sample identification  
# 046-12

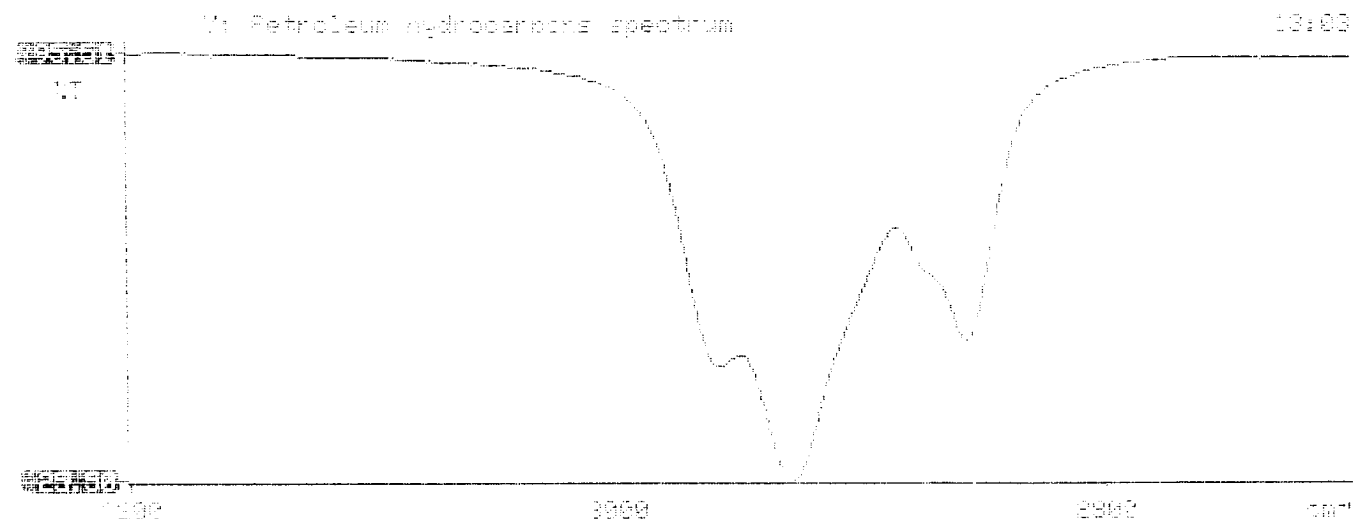
# Initial mass of sample, g  
# 1.610

# Volume of sample after extraction, ml  
# 20.000

# Petroleum hydrocarbons, ppm  
# 5713.033

# Net absorbance of hydrocarbons (2930 cm-1)  
# 0.571

#  
#  
#







Analytical **Technologies**, Inc.

2709-D Pan American Freeway NE Albuquerque, NM 87107  
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **410405**

October 26, 1994

El Paso Natural Gas Company  
P.O. Box 4990  
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On **10/18/94**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

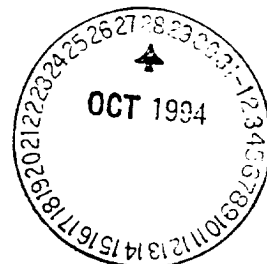
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.  
Project Manager

H. Mitchell Rubenstein, Ph.D.  
Laboratory Manager

MR:jt

Enclosure



# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 410405  
 PROJECT # : 24324  
 PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
19	946410	NON-AQ	10/12/94	10/19/94	10/21/94	20
20	946411	NON-AQ	10/12/94	10/19/94	10/20/94	1
21	946412	NON-AQ	10/12/94	10/19/94	10/21/94	20
PARAMETER			UNITS	19	20	21
BENZENE			MG/KG	<0.5	<0.025	6.7
TOLUENE			MG/KG	5.5	<0.025	89
ETHYLBENZENE			MG/KG	3.2	<0.025	11
TOTAL XYLENES			MG/KG	76	<0.025	110

## SURROGATE:

BROMOFLUOROBENZENE (%) 121\* 97 99

\*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

# PHASE II



# RECORD OF SUBSURFACE EXPLORATION

## PHILIP ENVIRONMENTAL

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1

Well #

Page 1 of 1

Project Name EPNG PITS

Project Number 14509 Phase 6000 / 77

Project Location Linderoth Unit #29 785 7304

Elevation

Borehole Location

GWL Depth

Logged By CM CHANCE

Drilled By M. DONOHUE K. Padilla

Date/Time Started 6/7/95-1245

Date/Time Completed 6/7/95-1430

Well Logged By CM Chance

Personnel On-Site K. Padilla, F. Rivera, D. Tsolatsis

Contractors On-Site

Client Personnel On-Site

Drilling Method 4 1/4" ID HSA

Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ BH HS			Drilling Conditions & Blow Counts
0				Backfill to 12'						
5										
10										
15	1	13-17	4"	Grn silty SAND, vf-f sand, loose, sl moist, dbr		0	28	270	1256	hr
20	2	20-25	6"	Grn silty SAND, vf-f sand, med dense, sl moist, dbr		0	130	350	1307	
25	3	23-24	5"	Grn silty SAND, vf-f sand, dense, sl moist		0	80	36	1320	Refusal @ 23'
30				TDB 24'						
35										
40										

Comments: Refusal @ 24'. 23-24' sample (CMC43) sent to Lab (BTEX+TPH). BH grouted to surface

Geologist Signature



Phase II

CML-14H SMT #37

## FIELD SERVICES LABORATORY

## ANALYTICAL REPORT

## PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

## SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	cmc 43	946884
MTR CODE   SITE NAME:	73047	N/A
SAMPLE DATE   TIME (Hrs):	6-7-95	1320
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	6-9-95	6-9-95
DATE OF BTEX EXT.   ANAL.:	6-14-95	6-15-95
TYPE   DESCRIPTION:	VG	Light grey sand

REMARKS:

## RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	20.025	MG/KG				
TOLUENE	20.025	MG/KG				
ETHYL BENZENE	20.025	MG/KG				
TOTAL XYLENES	0.031	MG/KG				
TOTAL BTEX	0.106	MG/KG				
TPH (418.1)	32.7	MG/KG			2.0	28
HEADSPACE PID	304	PPM				
PERCENT SOLIDS	90.7	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 92 % for this sample All QA/QC was acceptable.

Narrative:

ATI Results attached.

DF = Dilution Factor Used

Approved By:

Date:

6/28/95

1. Test Method for  
 2. Dissolved Gases and Petroleum Hydrocarbons  
 3. in Water and Oil  
 4.  
 5. Perkin-Elmer Model 1500 FT-IR  
 6. Analysis Report  
 7.

8. 07/10/97 11:57  
 9.

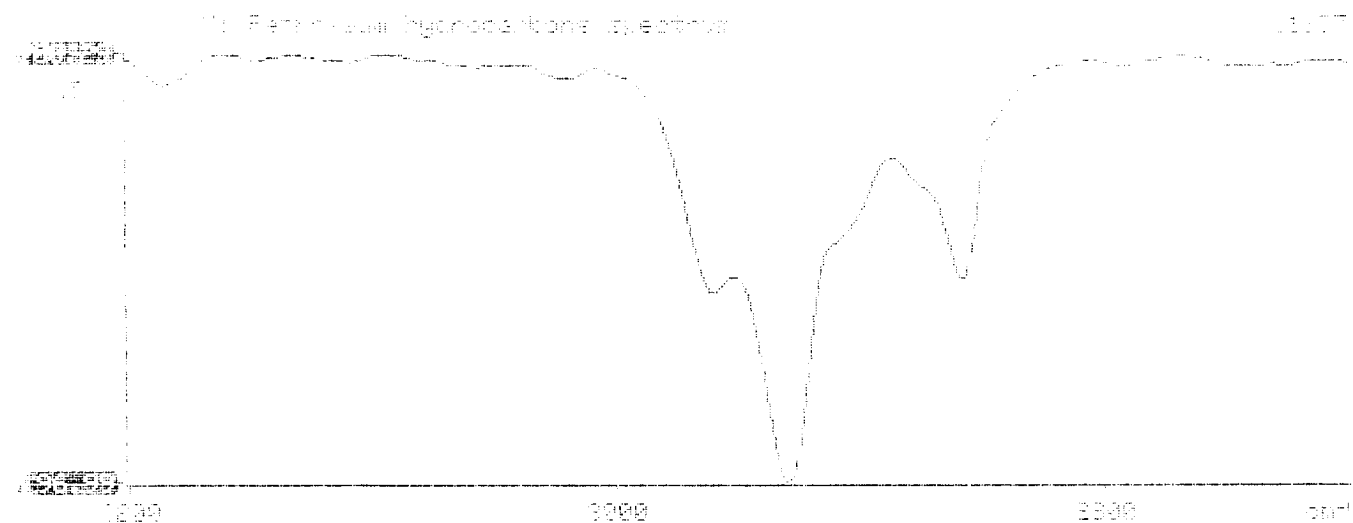
10. Sample Identification  
 11. 146591  
 12.

13. Initial mass of sample, g  
 14. 0.000  
 15.

16. Volume of sample after extraction, ml  
 17. 0.000  
 18.

19. Petroleum hydrocarbons, ppm  
 20. 0.000  
 21.

22. Net absorbance of hydrocarbons (2930 cm<sup>-1</sup>)  
 23. 0.000  
 24.





Analytical **Technologies**, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107  
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **506363**

June 19, 1995

El Paso Natural Gas Co.  
P.O. Box 4990  
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On **06/14/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

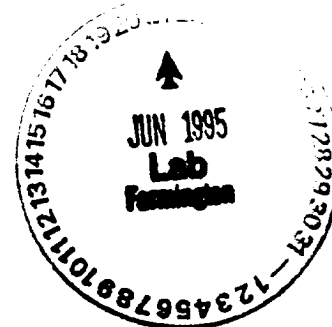
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill  
Project Manager

H. Mitchell Rubenstein, Ph.D.  
Laboratory Manager

MR:jt

Enclosure





# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 506363  
 PROJECT # : 24324  
 PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	946884	NON-AQ	06/07/95	06/14/95	06/15/95	1
05	946885	NON-AQ	06/07/95	06/14/95	06/15/95	1
06	946886	NON-AQ	06/08/95	06/14/95	06/15/95	1

PARAMETER	UNITS	04	05	06
BENZENE	MG/KG	<0.025	<0.025	<0.025
TOLUENE	MG/KG	<0.025	0.061	<0.025
ETHYLBENZENE	MG/KG	<0.025	<0.025	<0.025
TOTAL XYLENES	MG/KG	0.031	0.35	<0.025

## SURROGATE:

BROMOFLUOROBENZENE (%)	92	93	99
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