

Denny L. Frost
DEPUTY OIL & GAS INSPECTOR

DEC 22 1997

Approved

Meter Number:89387
Location Name:Walker #3
Location:TN-31 RG-10
SC-10 UL-P
2 - Federal
NMOCD Zone:OUTSIDE
Hazard Ranking Score:00

RECEIVED
APR 14 1997

OIL CON. DIV.
DIST. 3

**RATIONALE FOR RISK-BASED CLOSURE OF PRODUCTION PITS
LOCATED OUTSIDE OF THE VULNERABLE ZONE
IN THE SAN JUAN BASIN**

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there are no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to the pit has been removed. There has been no discharge to the pits for at least 4 years and the pits have been closed for at least one year.

Each pit was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact of hydrocarbons with livestock and the populous is not likely.

In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within 20 feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

Sandstone	10^{-9} to 10^{-13} cm/sec
Shale	10^{-12} to 10^{-16} cm/sec
Clay	10^{-12} to 10^{-15} cm/sec

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until the source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.

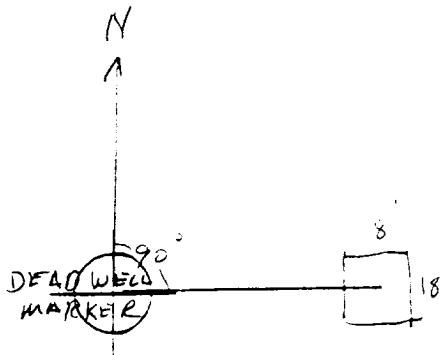
FIELD PIT SITE ASSESSMENT FORM

GENERAL	<p>Meter: <u>89387</u> Location: <u>WALKER #3</u></p> <p>Operator #: <u>5540</u> Operator Name: <u>KOLHENLO</u> P/L District: <u>AZTEC</u></p> <p>Coordinates: Letter: <u>P</u> Section <u>10</u> Township: <u>31</u> Range: <u>10</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>10/30/96</u> Area: _____ Run: _____</p>
SITE ASSESSMENT	<p>NMOCD Zone: (From NMOCD Maps) Inside _____ Outside _____</p> <p>Land Type: BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p>Depth to Groundwater</p> <p>Less Than 50 Feet (20 points) <input type="checkbox"/> (1)</p> <p>50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 100 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Wellhead Protection Area :</p> <p>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? _____ (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)</p> <p>Horizontal Distance to Surface Water Body</p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1)</p> <p>200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 1000 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Name of Surface Water Body _____</p> <p>(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) < 100' (Navajo Pits Only)</p> <p><input type="checkbox"/> (2) > 100'</p> <p>TOTAL HAZARD RANKING SCORE: <u>0</u> POINTS</p> <p>Remarks : <u>PCA Location, operator requesting operation and pit REMOVAL FOR BLM RESEEDING</u></p>
MARKS	

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 90 Footage from Wellhead 58'
b) Length : 14' Width : 18' Dep : 3'



REMARKS

Remarks :

Completed By:

Signature

10/30/96

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 89387 Location: Walker #3
 Coordinates: Letter: P Section 16 Township: 31 Range: 10
 Or Latitude _____ Longitude _____
 Date Started : 11-7-96 Area: _____ Run: _____

FIELD OBSERVATIONS

Sample Number(s): MK 554
 Sample Depth: 4' Feet
 Final PID Reading 313 ppm PID Reading Depth 4' Feet
 Yes No
 Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☐ (1) Approx. Cubic Yards _____
 Onsite Bioremediation ☐ (2)
 Backfill Pit Without Excavation ☒ (3)

Soil Disposition:

Envirotech ☐ (1) ☐ (3) Tierra
 Other Facility ☐ (2) Name: _____

Pit Closure Date: 11-7-96 Pit Closed By: Philip

REMARKS

Remarks : Arrived dug sample Hole Hit Rock 4'
Soil Grayish Black strong HYDROCARBON odor

Signature of Specialist: Morgan Killion



EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY

ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	MK554	947979
MTR CODE SITE NAME:	89387	Walker #3
SAMPLE DATE TIME (Hrs):	11/7/96	915
PROJECT:	PHASE I	
DATE OF TPH EXT. ANAL.:	11/13/96	11/13/96
DATE OF BTEX EXT. ANAL.:	11/12/96	11/12/96
TYPE DESCRIPTION:	VG	Gray clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	6.71	MG/KG	2	D		
TOLUENE	76.7	MG/KG	2	D		
ETHYL BENZENE	39.7	MG/KG	2	D		
TOTAL XYLENES	358	MG/KG	2	D		
TOTAL BTEX	481	MG/KG				
TPH (418.1)	5800	MG/KG			0.57	28
HEADSPACE PID	313	PPM				
PERCENT SOLIDS	79.0	%				

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

The Surrogate Recovery was at 87.8 % for this sample All QA/QC was acceptable.

The "D" qualifier indicates that the analyte is calculated based on a secondary dilution factor.

Narrative: _____

DF = Dilution Factor Used

Approved By: John T. Smith

INGVZPIT.XLS

Date: 11/15/04

BTEX SOIL SAMPLE WORKSHEET

File	:	947979	Date Printed	:	11/14/96
Soil Mass (g)	:	5.24	Multiplier (L/g)	:	0.00095
Extraction vol. (mL)	:	10	CAL FACTOR (Analytical):	:	400
Shot Volume (uL)	:	25	CAL FACTOR (Report):	:	0.38168

		DILUTION FACTOR:	2	Det. Limit
Benzene (ug/L)	:	17.60	Benzene (mg/Kg):	6.718 0.954
Toluene (ug/L)	:	201.00	Toluene (mg/Kg):	76.718 0.954
Ethylbenzene (ug/L)	:	104.00	Ethylbenzene (mg/Kg):	39.695 0.954
p & m-xylene (ug/L)	:	802.00	p & m-xylene (mg/Kg):	306.107 1.908
o-xylene (ug/L)	:	136.00	o-xylene (mg/Kg):	51.908 0.954
			Total xylenes (mg/Kg):	358.015 2.863
			Total BTEX (mg/Kg):	481.145

EL PASO FIELD SERVICES LABORATORY

EPA METHOD 8020 - BTEX

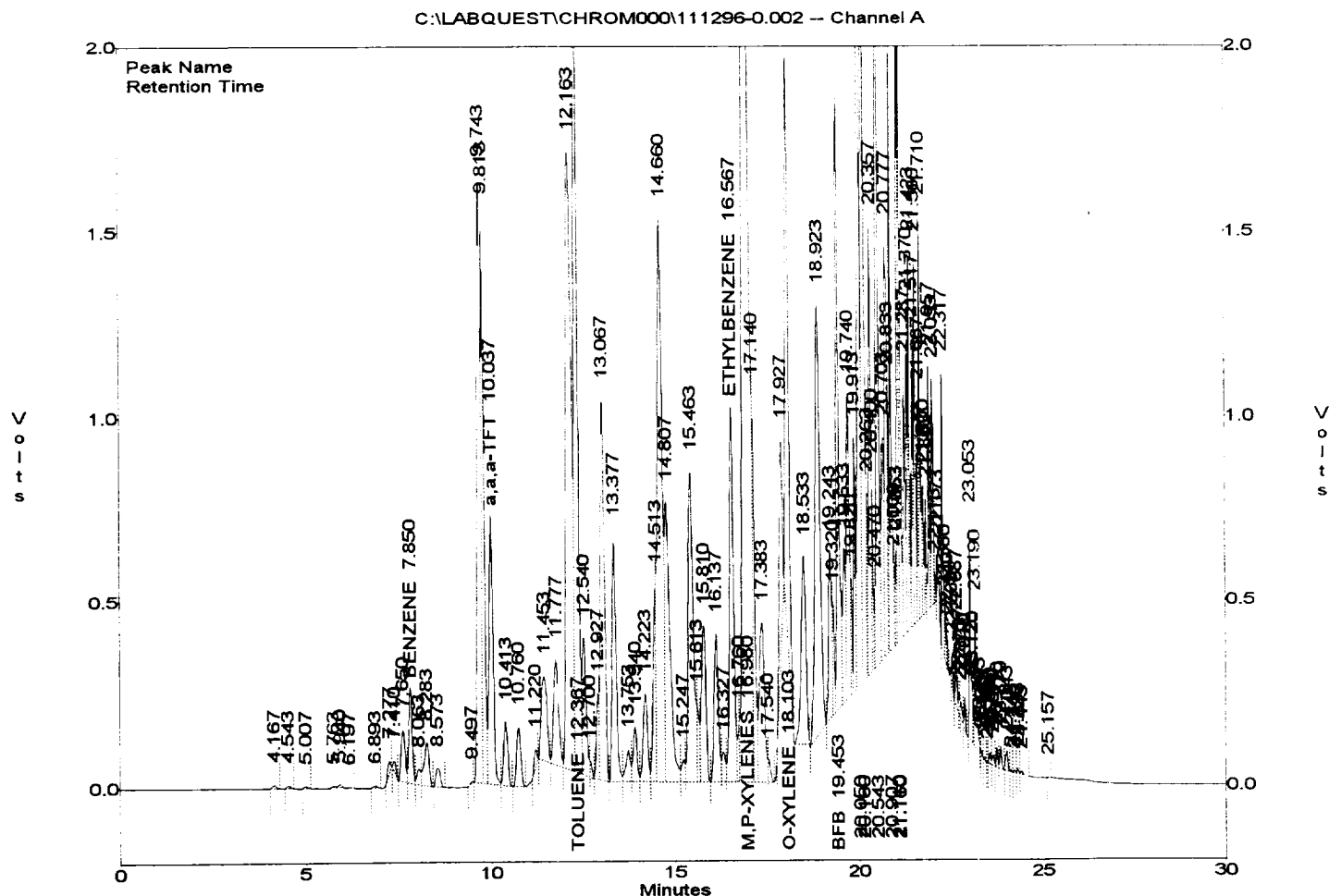
File : C:\LABQUEST\CHROM000\111296-0.002
 Method : C:\LABQUEST\METHODS\0-110496.MET
 Sample ID : 947979,5.24G,25U
 Acquired : Nov 12, 1996 17:35:29
 Printed : Nov 12, 1996 18:06:02
 User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	7.850	1572637	17.6012
a,a,a-TFT	10.037	5370923	117.8459
TOLUENE	12.367	15948065	201.2988
ETHYLBENZENE	16.567	7680812	103.8718
M,P-XYLENES	16.980	51940588	801.5455
O-XYLENE	18.103	9612295	135.9741
BFB	19.453	8199972	87.7931

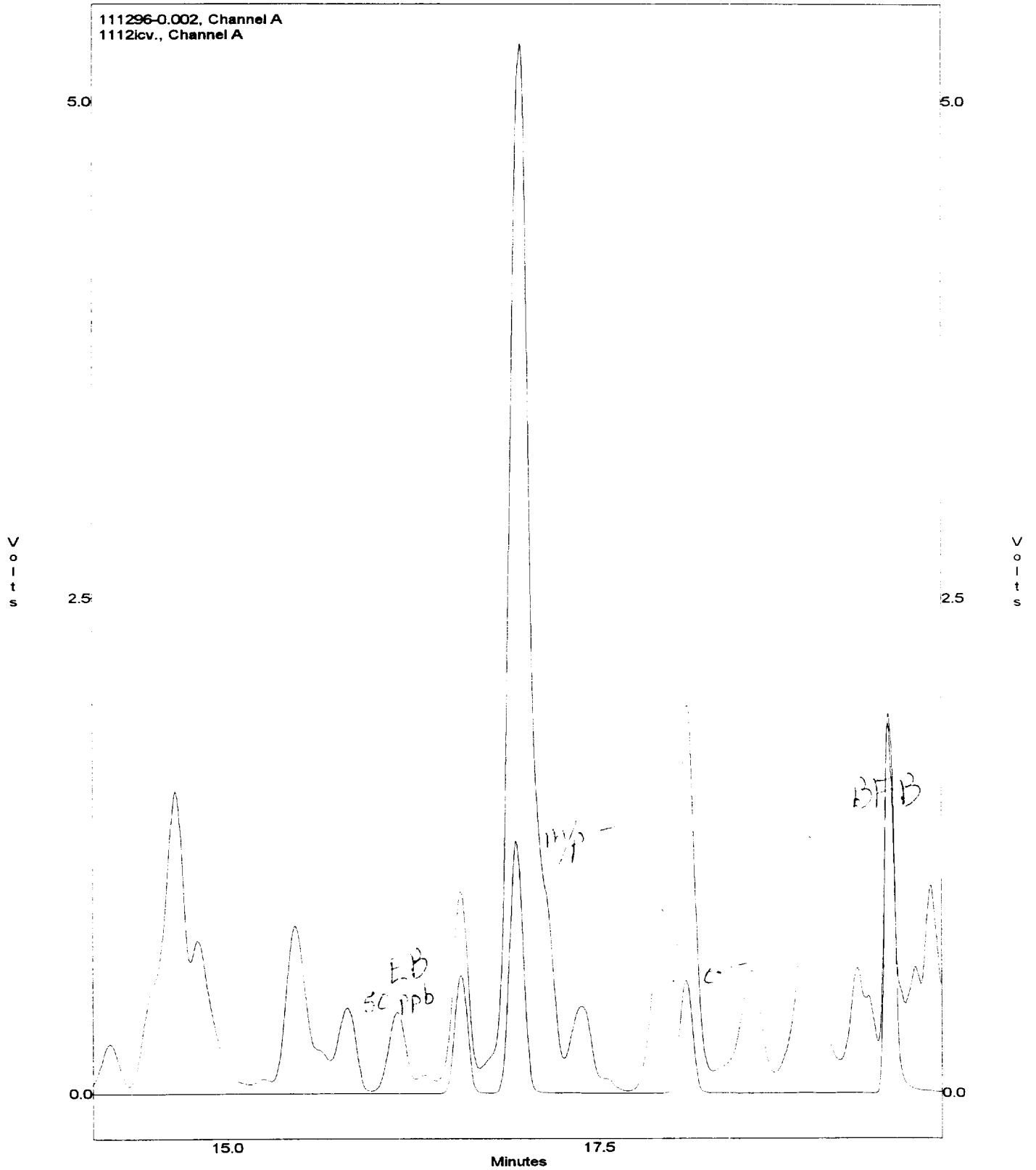
Channel A Group Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
TOTAL XYLENES		61552884	937.5196



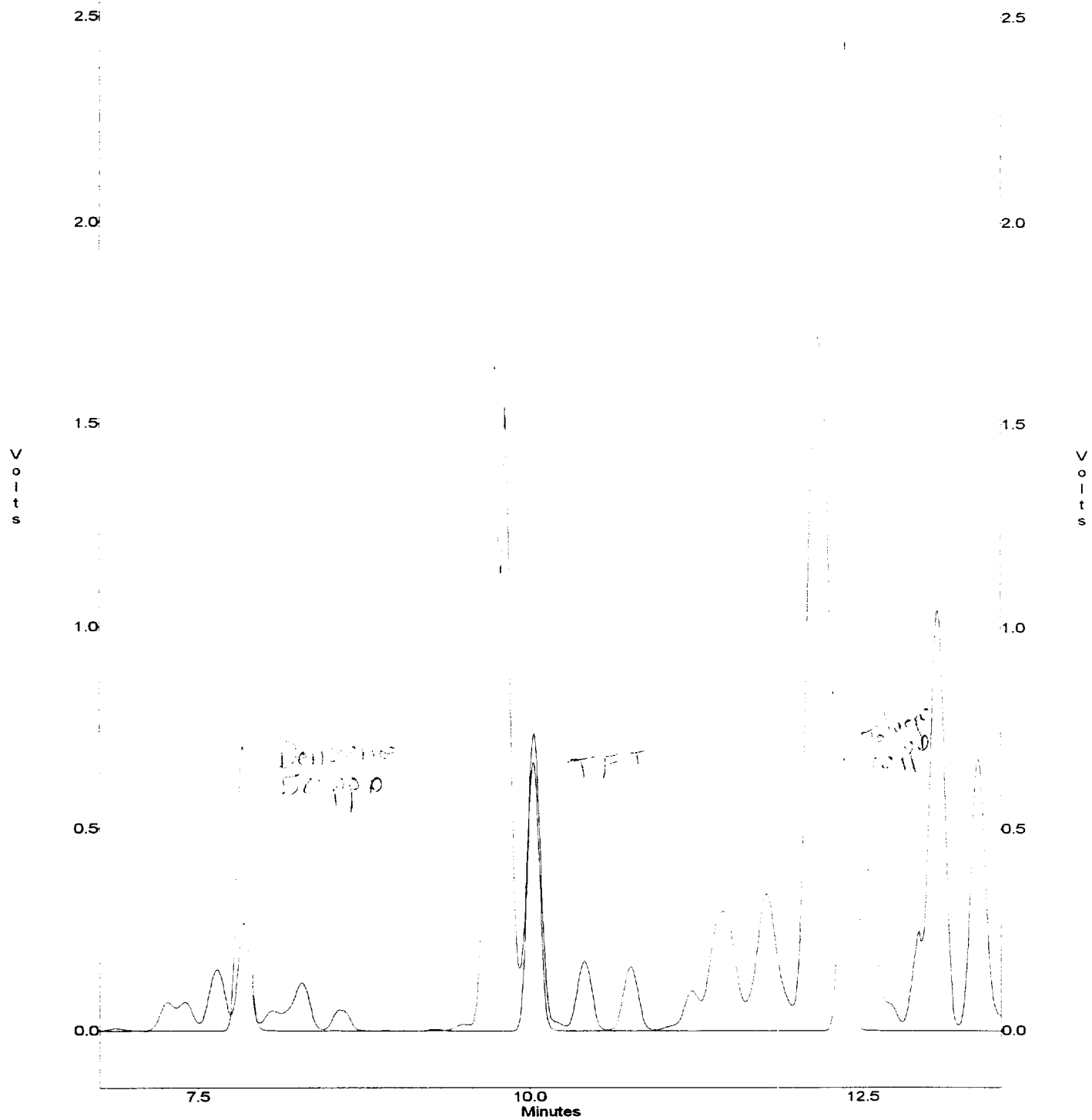
Stacked Traces

111296-0.002, Channel A
11121cv., Channel A



Stacked Traces

111296-0.002, Channel A
11121cv., Channel A



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

96/11/13 09:27

Sample identification
 947979

Initial mass of sample, g
 0.570

Volume of sample after extraction, ml
 20.000

Petroleum hydrocarbons, ppm
 5798.910
 Net absorbance of hydrocarbons (2930 cm⁻¹)
 0.208

