Denny L. Foust
DEPUTY OIL & GAS INSPECTOR
DEC 22 1997
Approved

Meter Number:89405
Location Name:Walker #5
Location:TN-31 RG-10
SC-13 UL-A
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

Meter: 89405 Location: WALKER #5

Operator #: 5540 Operator Name: KOCH EXPL CO P/L District: AZTEC

Coordinates: Letter: A Section 13 Township: 31 Range: 10

Or Latitude _____ Longitude _____

Pit Type: Dehydrator ___ Location Drip: X Line Drip: ___ Other: _____

Site Assessment Date: 10/30/96 Area: ___ Run: ___

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps)

Inside ☐ (1)

Outside ☒ (2)

Land Type:

BLM ☒ (1)

State ☐ (2)

Fee ☐ (3)

Indian _____

Depth to Groundwater

Less Than 50 Feet (20 points) ☐ (1)

50 Ft to 99 Ft (10 points) ☐ (2)

Greater Than 100 Ft (0 points) ☒ (3)

Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or : s it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☐ (1)

200 Ft to 1000 Ft (10 points) ☐ (2)

Greater Than 1000 Ft (0 points) ☒ (3)

Name of Surface Water Body _____

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)

☐ (2) > 100'

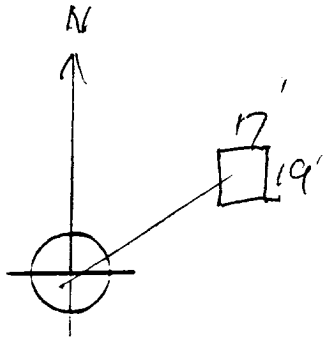
TOTAL HAZARD RANKING SCORE: 0 **POINTS**

Remarks : P&A location, operator requesting operation and pit removal for BLM reseeding

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 70 Footage frc Wellhead 54

b) Length : 17' Width : 19' Dep : 2'



ORIGINAL PIT LOCATION

Remarks :

REMARKS

Completed By:

Signature

10/30/96

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 89405 Location: walker #5

Coordinates: Letter: A Section 13 Township: 31 Range: 10

Or Latitude _____ Longitude _____

Date Started : 11-7-96 Area: ____ Run: ____

FIELD OBSERVATIONS

Sample Number(s): MK555 _____ _____ _____

Sample Depth: 8' Feet

Final PID Reading 203 ppm PID Reading Depth 8' 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 8'
Pit Had about 4" of Rain water In it

Signature of Specialist: Morgan Kieran

(SP3191) 04/07/94

EPFS

EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	MK555	947980
MTR CODE | SITE NAME:	89405	Walker #5
SAMPLE DATE | TIME (Hrs):	11/7/96	1025
PROJECT:	PHASE I	
DATE OF TPH EXT. | ANAL.:	11/14/96	11/14/96
DATE OF BTEX EXT. | ANAL.:	11/12/96	11/12/96
TYPE | DESCRIPTION:	VG	Brown/yellow clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.5	MG/KG				
TOLUENE	<0.5	MG/KG				
ETHYL BENZENE	<0.5	MG/KG				
TOTAL XYLENES	3.46	MG/KG				
TOTAL BTEX	3.46	MG/KG				
TPH (418.1)	465	MG/KG			2.29	28
HEADSPACE PID	203	PPM				
PERCENT SOLIDS	86.6	%				

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

The Surrogate Recovery was at 94.6 % for this sample All QA/QC was acceptable.

Narrative: _____

DF = Dilution Factor Used

Approved By: _____ INGVZPIT.XLS Date: 11/15/96

BTEX SOIL SAMPLE WORKSHEET

File :	947980	Date Printed :	11/14/96	
Soil Mass (g) :	5.08	Multiplier (L/g) :	0.00098	
Extraction vol. (mL) :	10	CAL FACTOR (Analytical):	200	
Shot Volume (uL) :	50	CAL FACTOR (Report):	0.19685	
		DILUTION FACTOR:	1	Det. Limit
Benzene (ug/L) :	0.00	Benzene (mg/Kg):	**0.000**	0.492
Toluene (ug/L) :	0.00	Toluene (mg/Kg):	**0.000**	0.492
Ethylbenzene (ug/L) :	1.36	Ethylbenzene (mg/Kg):	**0.268**	0.492
p & m-xylene (ug/L) :	16.40	p & m-xylene (mg/Kg):	3.228	0.984
o-xylene (ug/L) :	1.16	o-xylene (mg/Kg):	0.228	0.492
		Total xylenes (mg/Kg):	**3.457**	1.476
		Total BTEX (mg/Kg):	**3.724**	

EL PASO FIELD SERVICES LABORATORY
EPA METHOD 8020 - BTEX

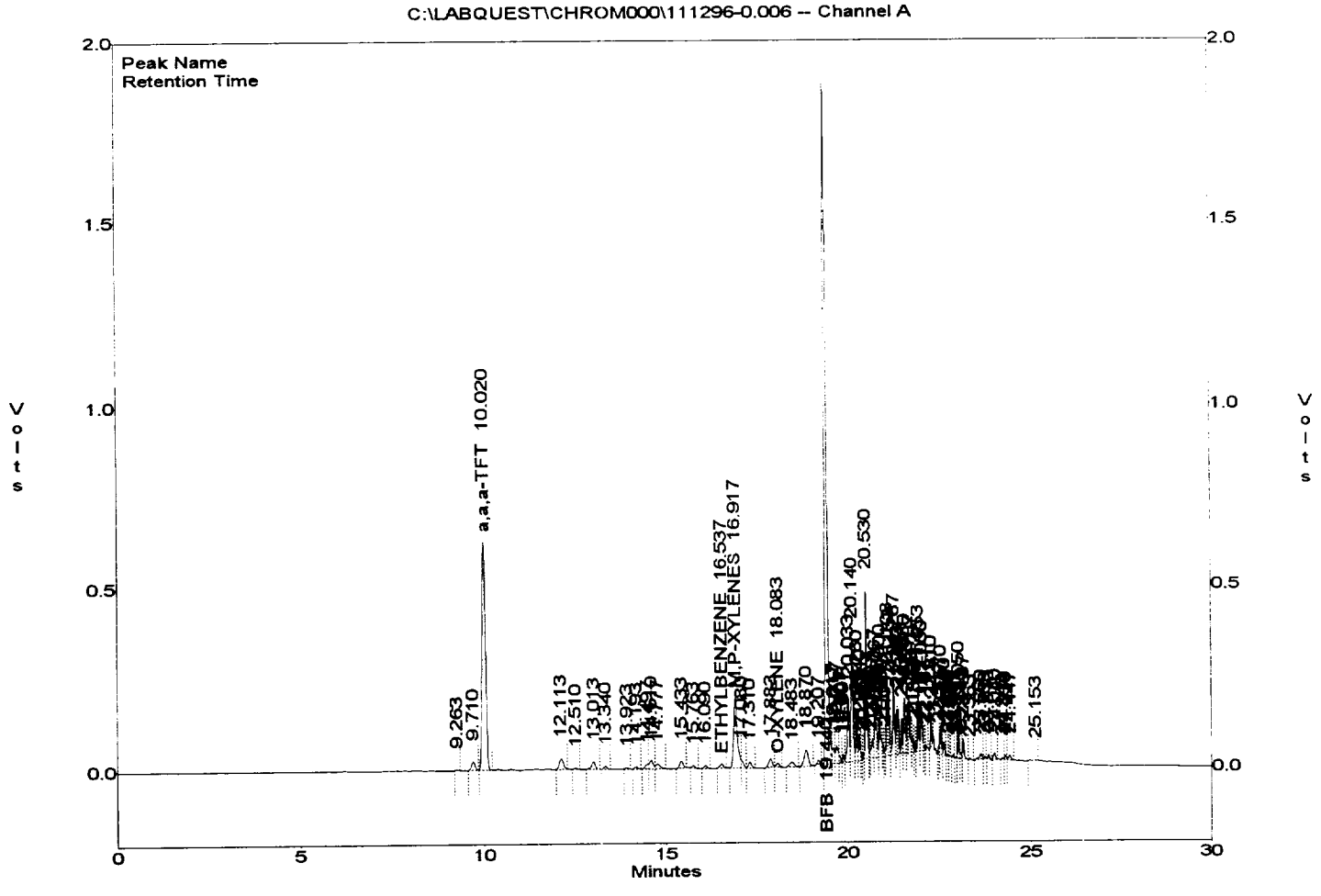
File : C:\LABQUEST\CHROM000\111296-0.006
Method : C:\LABQUEST\METHODS\0-110496.MET
Sample ID : 947980,5.08G,50U
Acquired : Nov 12, 1996 20:22:00
Printed : Nov 12, 1996 20:52:28
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	7.797	0	0.0000
a,a,a-TFT	10.020	4170728	91.5119
TOLUENE	12.327	0	0.0000
ETHYLBENZENE	16.537	72984	1.3633
M,P-XYLENES	16.917	1385491	16.4218
O-XYLENE	18.083	58442	1.1573
BFB	19.440	8834579	94.5875

Channel A Group Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
TOTAL XYLENES		1443933	17.5791



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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                     *
**********************************************************
*
 96/11/14   11:01
*
*   Sample identification
 947980
*
*   Initial mass of sample, g
 2.290
*
*   Volume of sample after extraction, ml
 28.000
*
*   Petroleum hydrocarbons, ppm
 465.200
*   Net absorbance of hydrocarbons (2930 cm-1)
 0.068
*
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*
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