Meter Number:93184
Location Name:JICARILLA L #9
Location:TN-24 RG-05
SC-10 UL-D
6 - Jicarilla
NMOCD Zone:OUTSIDE
Hazard Ranking Score:00

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

EPFS EL PASO FIELD SERVICES

4

GENERAL

Meter: 93184 Location: Jicarilla L #9
Operator #: 9180 Operator Name: Meridian P/L District: OJITD
Coordinates: Letter: D Section 10 Township: 24N Range: 5W
Or Latitude _____ Longitude _____
Pit Type: Dehyarator X Location Drip: ___ Line Drip: ___ Other: _____
Site Assessment Date: 7-14-94 Area: 06 Run: 51

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps)
Inside ☐ (1)
Outside ☒ (2)

Land Type:
BLM ☐ (1)
State ☐ (2)
Fee ☐ (3)
Indian Jicarilla Apache

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 ; Is 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

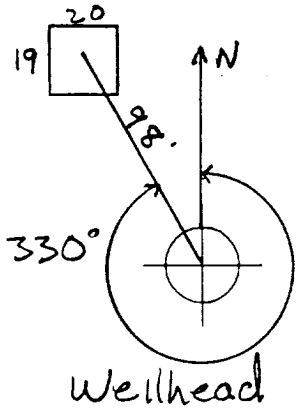
Remarks : Redline Book - outside, Vulnerable Zone Topo - outside, Two pits. Dehy pit is dry. Dehy still on location, routed into a tank

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 330 Footage from Wellhead 98

b) Length : 20 Width : 19 Depth : 3



REMARKS

Remarks :

Pictures @ Roll 2 #21

Completed By:

Signature

7-14-94

Date

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 93184 Location: Jicarilla C #9

Coordinates: Letter: D Section 10 Township: 24N Range: 5W

Or Latitude _____ Longitude _____

Date Started : 9/12/95 Run: 06 51

FIELD OBSERVATIONS

Sample Number(s): JK78 _____ _____ _____

Sample Depth: 11' Feet

Final PID Reading ~~420.0~~ 9/13/95 720.0 PID Reading Depth 11' Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation	☒	Approx. Cubic Yards 344 9/25/95
Onsite Bioremediation	☐	Dave From Jicarilla E.P.O. approved closure 9-18-95
Backfill Pit Without Excavation	☐	

Soil Disposition:

Envirotech ☒ Tierra ☐

Other Facility ☐ Name: _____

Pit Closure Date: 9-19-95 Pit Closed By: Philip

REMARKS

Remarks : Pit Pid Readings (N-9.0) (S-12.7) (E-6.0) (W-21.7)

Pit Size: 23x25x11 Hit Rock at 11'

Fence Size: 23x22x3 No Net

more than 100' From Ephemral Stream

Sprayed pit with soil enhancer 9-18-95

Signature of Specialist: James K. Kelly

(SP3191) 03/16/94

Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JK 78	947459
MTR CODE | SITE NAME:	93184	Jicarilla L #9
SAMPLE DATE | TIME (Hrs):	09-13-95	1016
PROJECT:	Jic Pits	
DATE OF TPH EXT. | ANAL.:	9-[illegible]-95	
DATE OF BTEX EXT. | ANAL.:	9/14/95	9/20/95
TYPE | DESCRIPTION:	VG	Limited Overburden Area

Field Remarks: (N-9.0)(S-12.7)(E-6.0)(W-21.7)

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 0.5	MG/KG				
TOLUENE	1.1	MG/KG				
ETHYL BENZENE	< 0.5	MG/KG				
TOTAL XYLENES	3.7	MG/KG				
TOTAL BTEX	4.8	MG/KG				
TPH (418.1)	223	MG/KG			2.0	22
HEADSPACE PID	720	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:

DF = Dilution Factor Used

Approved By: JK Date: 9-21-95

****
Test Method for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report
****

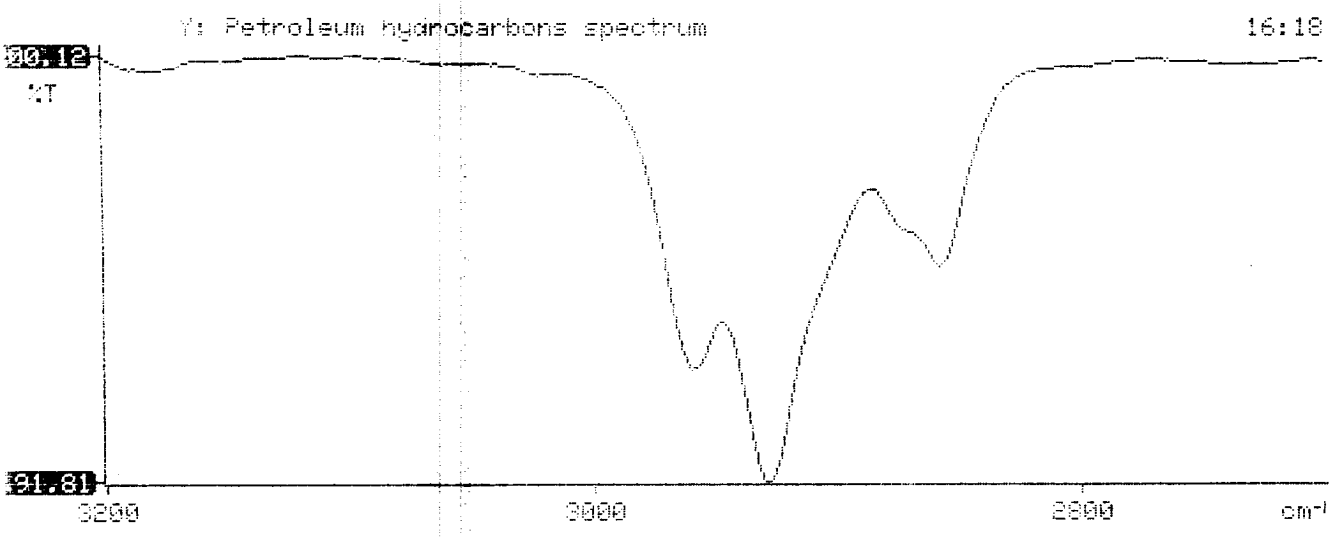
95/09/14 16:18

Sample identification
947459

Initial mass of sample, g
2.010

Volume of sample after extraction, ml
38.000

Petroleum hydrocarbons, ppm
22.588
Net absorbance of hydrocarbons (2930 cm-1)
0.037



BTEX SOIL SAMPLE WORKSHEET

File	947459	**Date Printed**	9/21/95	
Soil Mass (g)	4.99	**Multiplier (L/g)**	0.00100	
Extraction vol. (mL)	20	**DF (Analytical)**	200	
Shot Volume (uL)	100	**DF (Report)**	0.20040	
				Det. Limit
Benzene (ug/L)	0.00	**Benzene (mg/Kg):**	**0.000**	0.501
Toluene (ug/L)	5.48	**Toluene (mg/Kg):**	**1.098**	0.501
Ethylbenzene (ug/L)	0.63	**Ethylbenzene (mg/Kg):**	**0.126**	0.501
p & m-xylene (ug/L)	14.80	p & m-xylene (mg/Kg):	2.966	1.002
o-xylene (ug/L)	3.87	o-xylene (mg/Kg):	0.776	0.501
		Total xylenes (mg/Kg):	**3.741**	1.503
		Total BTEX (mg/Kg):	**4.966**	

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\092095-1.011
Method : C:\LABQUEST\METHODS\9001.MET
Sample ID : 947459,4.99G,100U
Acquired : Sep 20, 1995 17:21:57
Printed : Sep 20, 1995 17:48:23
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	4.917	0	0.0000
a,a,a TFT	6.690	4472973	96.8862
TOLUENE	8.727	1477231	5.4772
ETHYLBENZENE	12.743	161909	0.6335
M & P XYLENE	13.123	4512615	14.7825
O XYLENE	14.243	905030	3.8660
BFB	15.810	66603648	91.8808