

*Denny E. Faust*  
DEPUTY OIL & GAS INSPECTOR

AUG 19 1999

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

*OK*  
*Risk Bedrock.*  
**RECEIVED**  
MAY 27 1999  
OIL CON. DIV.  
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

*Approved*

Operator: Chateau Oil And Gas Telephone: (801) 584-6361  
Address: P.O. Box 58900, Salt Lake City, Utah 84158-0900  
WellName: CHAMPLIN #4 DK ( 86480 )  
Location: Unit or Qtr/Qtr Sec C Sec 35 T 27N R 4W County Rio Arriba  
PitType Dehydrator  
LandType: Forest

Pit Location: Pit dimensions: length 14 ft., width 13 ft., depth 9 ft.  
(Attach diagram)

Reference: Wellhead

Footage from reference: 102 ft.

Direction from reference: 93 Degrees East of North

Depth To Ground Water: Less than 50 feet (20 points)  
(Vertical distance from 50 feet to 99 feet (10 points)  
contaminants to seasonal Greater than 100 feet (0 points) 10  
high water elevation of  
ground water)

Wellhead Protection Area: Yes (20 points)  
(Less than 200 feet from a private No (0 points) 0  
domestic water source, or: less than  
1000 feet from all other water sources)

Distance To Surface Water: Less than 200 feet (20 points)  
(Horizontal distance to perennial 200 feet to 1,000 feet (10 points)  
lakes, ponds, rivers, streams, creeks, Greater than 1,000 feet (0 points) 0  
irrigation canals and ditches)

Ranking Score (TOTAL POINTS): 10

Date Remediation Started: 7/15/98

Date Completed: 7/15/98

Remediation Method: Excavation ☒

Approx. Cubic Yard 60

(check all appropriate sections)

Landfarmed ☒Insitu Bioremediation ☐

Other Landfarmed soil after mechanical aeration.

Remediation Location: Onsite ☒ Offsite

(ie. landfarmed onsite, name and location of offsite facility)

## General Description Of Remedial Action:

The pit was excavated to remove gross petroleum contamination. The excavated material was mechanically aerated and placed into an onsite landfarm.

Ground Water Encountered: No

Final Pit:

Sample location CHAMPLIN #4DK-V-EXWA-01

Closure Sampling:

(if multiple samples, attach sample results and diagram of sample locations and depths)

Two samples were collected, one sample from the excavation bottom and the second sample was made up of 4 points from each excavation wall.

Sample depth 9 feet

Sample date 7/15/98

Sample time 17:07

Sample Result

Benzene (ppm) &lt;0.05

Total BTEX (ppm) 35.890

Field Headspace (ppm)

TPH (ppm) 1070

Ground Water Sample: No

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 5-20-99

SIGNATURE



PRINTED NAME Mark Harvey for Williams Field Services  
AND TITLE

# PIT RETIREMENT FORM

Date: 7/15/98

86480

Weather PRTY CLOUDY ~ 90°

Well Name CHAMPLIN #40K Operator CHATEAU

Sec 35 T 27N R 4W UL C

Land Type: BLM STATE FEE INDIAN FOREST

County RIO ARriba

One Call Made (505-765-1234)?

☒ Y ☐ N

Line Marking Evident?

☒ Y ☐ N

## Pit Location:

Reference Wellhead ☒ Other ☐

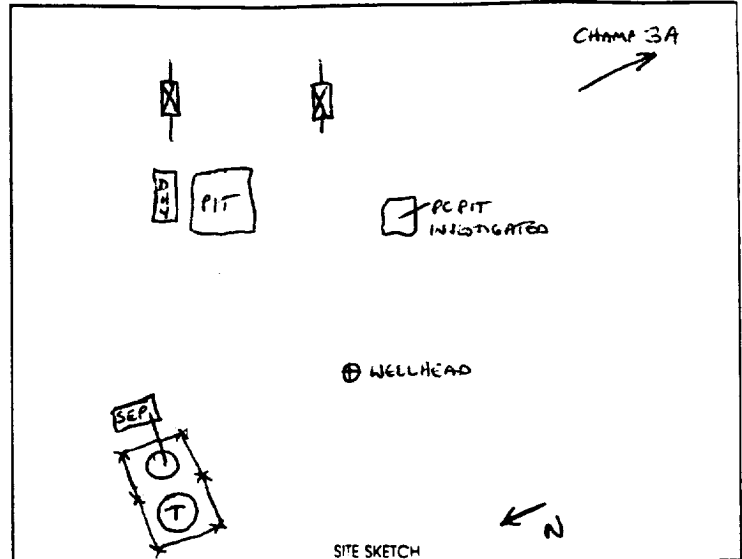
Distance from: 102'

Direction: 93 Degrees ☒ E ☐ N ☒

of  
W S

Starting Pit Dimensions 12' x 12' x 2'

Final Pit Dimensions 13' x 14' x 9'



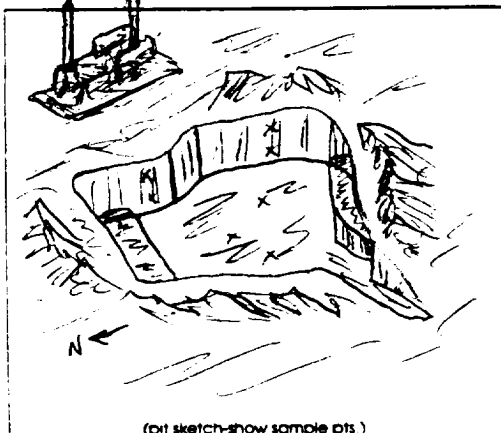
Organic Vapor Readings: Start	_____	Soil Description: <u>SILTY SAND</u>
	@ 2' _____	
	@ 4' _____	
	@ 6' _____	
	@ 8' _____	
	@ _____	
	@ _____	

Well Proximity To: Residence, Domestic Water Well, Stock Well NONE  
 Arroyo, Wash, Lake, Stream NONE  
 Estimated or Known Distance to Ground Water 75-100'

Source of Backfill (if other than processed material) \_\_\_\_\_

Samples collected: Type	Progress: Verification: ID <u>CHAMPLIN #40K-V-EXWA-01</u> <u>SOIL</u> / water
	Progress: Verification: ID <u>CHAMPLIN #40K-V-EXFL-01</u> <u>SOIL</u> / water
	Progress: Verification: ID _____ soil / water

Sample sent to Lab Via: Courier Hand Carried Other \_\_\_\_\_ Preservative: ICE Other \_\_\_\_\_



Comments: SET UP + BEGIN EXCAVATING - MATERIAL HAS MODERATE TO STRONG HYDROCARBON ODOR - SOIL FEELS 'OILY' - EXCAVATE TO 9' WHERE BEDROCK PREVENTS FURTHER EXCAVATING - SIDEWALL AGAINST DEHT REMAINS STAINED - SHRED ALL SOIL + PLACE IN ON-SITE LANDFARM - CJT RAMP + TERRACE EXCAVATION

Soil Shipped to: ON-SITE  
 Prepared by: M. [Signature]

**QWAL LABORATORIES, INC.**

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

**LABORATORY REPORT:****REFERENCE #:** 9807539

SENT WILLIAMS FIELD SERVICE-MS4JI  
TO: P.O. BOX 58900  
SALT LAKE CITY, UTAH 84108  
MARK HARVEY  
PROJECT: JICARILLA DISTRICT '98

DATE REPORTED: 07/23/98  
DATE COLLECTED: 07/15/98  
DATE RECEIVED: 07/17/98

**Reference Fraction:** 9807539-16A**Sample ID:** CHAMPLIN #4DK-V-EXWA-01**Sample Matrix:** SOIL**Sample Date Collected:** 07/15/98 17:07:00

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	1070	MG/KG	2.0	07/22/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND		0.050	07/21/98	JLO
TOLUENE		3.19		0.050	07/21/98	JLO
ETHYLBENZENE		ND		0.050	07/21/98	JLO
TOTAL XYLENES		32.7		0.050	07/21/98	JLO
BFB (SURROGATE)		114	125	75		

ND=NONE DETECTED

DL=DETECTION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

## Q W A L L A B O R A T O R I E S , I N C .

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 9807539

SENT WILLIAMS FIELD SERVICE-MS4JI  
TO: P.O. BOX 58900  
SALT LAKE CITY, UTAH 84108  
MARK HARVEY  
PROJECT: JICARILLA DISTRICT '98

DATE REPORTED: 07/23/98  
DATE COLLECTED: 07/15/98  
DATE RECEIVED: 07/17/98

Reference Fraction: 9807539-17A

Sample ID: CHAMPLIN #4DK-V-EXPL-01

Sample Matrix: SOIL

Sample Date Collected: 07/15/98 17:12:00

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	2220	MG/KG	40.0	07/22/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		0.55	MG/KG	0.50	07/21/98	JLO
TOLUENE		21.9	MG/KG	0.50	07/21/98	JLO
ETHYLBENZENE		4.49	MG/KG	0.50	07/21/98	JLO
TOTAL XYLENES		84.1	MG/KG	0.50	07/21/98	JLO
BFB (SURROGATE)		102	125	75		

ND=NONE DETECTED

DL=DETECTION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR



Environmental Services  
P.O. Box 58900  
Salt Lake City, UT 84158-0900

### **Pit Closure and Retirement Addendum- Risk Assessment**

The sample analyzed for confirmation at the Champlin # 4 DK exhibited slightly elevated levels of xylene. Xylene toxicity information indicates that such low levels (<200 ppm) pose very low risk to human health and the environment. This conclusion is based in part on the information below:

#### **Toxicity Information**

Xylene is a colorless liquid with a strong, sweetish aromatic odor. Studies have indicated that it is neither a carcinogen or mutagen. Bio-accumulation of xylene is limited due to the fact that it is rapidly metabolized and eliminated from the body in urine within a few hours. Rats and dogs exposed to xylene vapor for 13 weeks at 180 - 810 ppm showed no adverse effects related to dose or treatment. (1)

#### **Environmental Effects**

Xylene released to soil will volatilize and leach into the ground where it will degrade 70% under aerobic conditions in approximately 10 days or under anaerobic (six months before degradation starts) denitrifying conditions.(2) If released to surface water, the half life of xylene is approximately 1-5 days with the main attenuation process being volatilization.

When released to the atmosphere, xylene may degrade by reactions with hydroxyl radicals which are produced photochemically. As a result of this reaction, xylene has been determined to have a half life of 1.5 hours in summer and 15 hours in winter.(2)

EPA's Office of Air Quality Planning and Standards, has evaluated mixed xylenes for chronic toxicity in order to determine a hazard ranking under Section 112(g) of the Clean Air Act Amendments and assigned a composite score of 8. The scores are based on the minimal effect-dose and a rating on the type of effect. Scores range from 1 to 100, with 100 representing the most toxic. (3)

Based on an evaluation of topography, this site is believed to have ground water greater than 100' below ground surface. Due to the immobility of xylene through soil and a lack of continuous transporting mechanisms, it is very likely that the residual xylene remaining in the pit will degrade in the short term under existing conditions, or certainly during the life of the producing well. Observations and data collected from other sites suggests that the concentration of xylene would diminish vertically and likely be less than 10 ppm within the next 1-5 feet of soil depth. Bedrock was encountered which prevented further excavation. This condition retards vertical migration of contaminants and serves to significantly limit potential groundwater impact.

**Since there are no nearby receptors or domestic water sources, this site poses little risk to human health and the environment. Closure is justified based on the relatively low total petroleum hydrocarbon (TPH) concentration and the fact that benzene, toluene, and ethylbenzene meet applicable closure criteria.**

(1) Canadian Department of Occupational Health and Database, CCINFO Xylene 1991.

(2) *Handbook of Environmental Fate and Exposure Data for Organic Chemicals*, Vol 1, Large Production and Priority Pollutants, Philip H. Howard. Lewis Pub. 1989.

(3) USEPA. *Technical Background Document to Support Rulemaking Pursuant to the Clean air Act Section 112(g). Ranking of Pollutants with Respect to Hazard to Human Health*. EPAB450/3-92-010. Emissions Standards Division, Office of Air Quality Planning and Standards, Research Triangle Park, NC. 1994.

## Q W A L L A B O R A T O R I E S , I N C .

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 9808765

SENT WILLIAMS FIELD SERVICE-MS4JI  
TO: P.O. BOX 58900  
SALT LAKE CITY, UTAH 84108  
MARK HARVEY

DATE REPORTED: 08/31/98  
DATE COLLECTED: 08/21/98  
DATE RECEIVED: 08/25/98

PROJECT: JICARILLA DISTRICT '98

Reference Fraction: 9808765-14A

Sample ID: JIC/CHAMPLIN#4DK-V-LF-02

Sample Matrix: SOIL

Sample Date Collected: 08/21/98 09:28:00 / 17

TEST	METHOD	RESULT	UNITS	DL	ANALYZED BY
TPH	SW846-8015	31.7	MG/KG	2.0	08/28/98 SKW

ND-NONE DETECTED

DL-DETECTION LIMIT

SU-STANDARD UNITS

B-DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR