Denny E. Foust
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
R is K-Belvak
RECEIVED
MAY 27 1999
OIL CON. DIV.
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

Operator: Chateau Oil And Gas Telephone: (801) 584-6361

Address: P.O. Box 58900, Salt Lake City, Utah 84158-0900

WellName: CHAMPLIN #2 PC (86479)

Location: Unit or Qtr/Qtr Sec J Sec 35 T 27N R 4W County Rio Arriba

PitType Drip

LandType: Forest

Pit Location: Pit dimensions: length 12 ft., width 12 ft., depth 5 ft.
(Attach diagram)

Reference: Wellhead

Footage from reference: 73 ft.

Direction from reference: 110 Degrees West of North

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)	10
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1,000 feet (10 points) Greater than 1,000 feet (0 points)	0
	Ranking Score (TOTAL POINTS):	10

Form A

(86479)

Date Remediation Started: 7/15/98 Date Completed: 7/15/98

Remediation Method: (check all appropriate sections)
Excavation ☑ Approx. Cubic Yard 25
Landfarmed ☑ Insitu Bioremediation
Other Landfarmed soil after mechanical aeration.

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility)
Onsite ☑ Offsite

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

Sample location CHAMPLIN #2PC-V-EXFL-01

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 5 feet

Sample date 7/15/98 Sample time 16:27

Sample Result

Benzene (ppm) <0.05

Total BTEX (ppm) 85.8

Field Headspace (ppm)

TPH (ppm) 12

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 AND TITLE Mark Harvey for Williams Field Services

Form B

PIT RETIREMENT FORM

86479

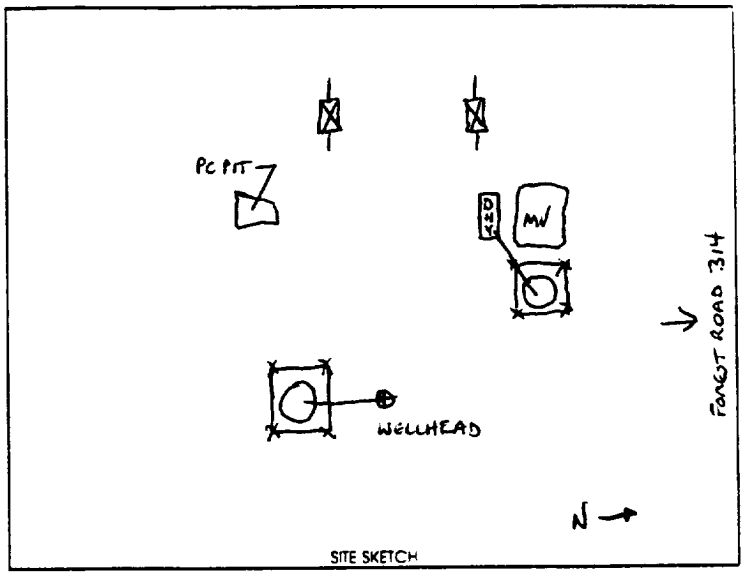
Date: 7/15/98 Weather PRTLY CLDY ~ 85°

Well Name CHAMPLIN #2 PC Operator CHATEAU Sec 35 T 27N R 4W UL J

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 X Other

Distance from: 73'

Direction: 110 Degrees E N X of X W S

Starting Pit Dimensions NA x x

Final Pit Dimensions 12 x 12 x 5

Organic Vapor Readings: Start

@ 2'

@ 4'

@ 6'

@ 8'

@

@

Soil Description: SILTY SAND

" " W/ BROKEN ROCK

SANDSTONE - BEDROCK

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

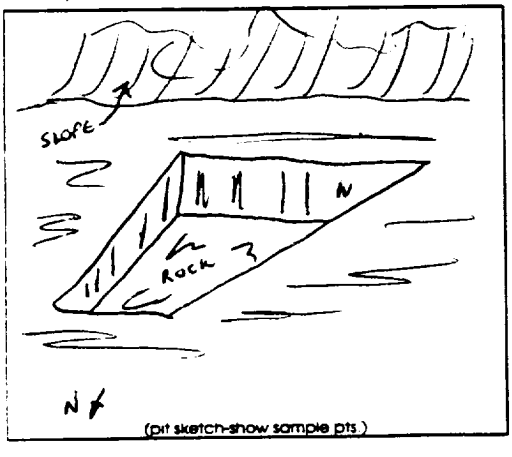
Samples collected: Type

Progress: Verification: ID CHAMPLIN #2 PC-V-EXWA-01 (soil) / water

Progress: Verification: ID CHAMPLIN #2 PC-V-EXFL-01 (soil) / water

Progress: Verification: ID soil / water

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



Comments: FOREST SERVICE SITE — PIT PREVIOUSLY BACKFILLED @ UNKNOWN TIME — EXCAVATE SOIL W/ MODERATE HYDROCARBON ODOR — ENCOUNTER ROCK FLOOR @ 4' — SIDEWALLS PREDOMINANTLY ROCK FROM 2-4' — SOME STANDING REMAINS ON FLOOR — LANDFARM EAST OF PIT —

Soil Shipped to: ON-SITE

Prepared by: M. Hunger

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 # 2PC 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 #:** 9807539

SENT TO: *WILLIAMS FIELD SERVICE-MS4JI*
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:9807539-13A
Sample ID: CHAMPLIN #2PC-V-EXFL-01
Sample Date Collected: **07/15/9816:27:00**

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	12.0	MG/KG	2.0	07/22/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND	MG/KG	5.0	07/21/98	JLC
TOLUENE		15.5	MG/KG	5.0	07/21/98	JLC
ETHYLBENZENE		ND	MG/KG	5.0	07/21/98	JLC
TOTAL XYLENES		70.3	MG/KG	5.0	07/21/98	JLC
BFB (SURROGATE)		107	125	75		

ND=NONE DETECTED
DL=DETECTION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: Terry Koester

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:9807539-12A
Sample ID: CHAMPLIN #2PC-V-EXWA-01 Sample Matrix: SOIL
Sample Date Collected: **07/15/9816:21:00**

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	10.6	MG/KG	2.0	07/22/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND	MG/KG	0.050	07/21/98	JLO
TOLUENE		ND	MG/KG	0.050	07/21/98	JLO
ETHYLBENZENE		ND	MG/KG	0.050	07/21/98	JLO
TOTAL XYLENES		ND	MG/KG	0.050	07/21/98	JLO
BFB (SURROGATE)		94	125	75		

ND=NONE DETECTED
DL=DETECTION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: Terry Koester
TERRY KOESTER
LABORATORY DIRECTOR

QWAL LABORATORIES, INC.

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

LABORATORY REPORT: **REFERENCE #:** 9808562

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

DATE REPORTED: 08/21/98
DATE COLLECTED: 08/11/98
DATE RECEIVED: 08/18/98

Reference Fraction:9808562-06A
Sample ID: CHAMPLIN #2PC-V-LF-01
Sample Date Collected: 08/11/9807:15:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	595	MG/KG	2.0	08/20/98	SKW

ND=NONE DETECTED
DL=DETECTION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: Terry A Koester

TERRY KOESTER
LABORATORY DIRECTOR