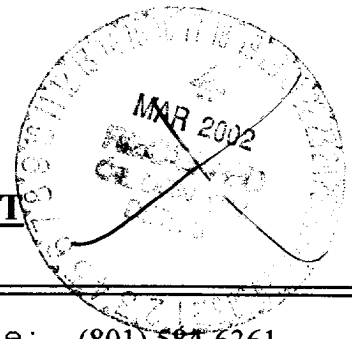
State of New Mexico
Energy, Minerals and Natural Resources Department

Risk
Bedrock

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



PIT REMEDIATION AND CLOSURE REPORT

Operator: Telephone: (801) 584-6361

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

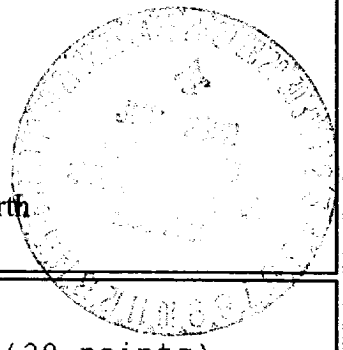
WellName: HOLDER A #1E (39302)

Location: Unit or Qtr/Qtr SE/NE Sec 6 T 30N R 12W County San Juan

PitType Dehydrator

LandType: BLM

Pit Location: Pit dimensions: length 14 ft., width 14 ft., depth 3 ft.
(Attach diagram)



Reference: Wellhead

Footage from reference: 112 ft.

Direction from reference: 203 Degrees East 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)	0
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):	0

Form A

(39302)

Date Remediation Started: 11/20/00 Date Completed: 11/20/00

Remediation Method: (check all appropriate sections) Excavation ☑ Approx. Cubic Yard 22

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. Encountered BEDROCK at 3'. The excavated material was mechanically aerated and placed into an onsite landfarm.

Ground Water Encountered: 0

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

Sample location HOLDER A#1E-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 3'

Sample date 11/20/00 Sample time 15:07

Sample Result

Benzene (ppm) 9.14

Total BTEX (ppm) 92.95

Field Headspace (ppm)

TPH (ppm) 766

Ground Water Sample: 0

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

DATE 12-20-01

SIGNATURE

PRINTED NAME AND TITLE Mark Harvey for Williams Field Services P. C.

Form B

PIT RETIREMENT FORM

39302

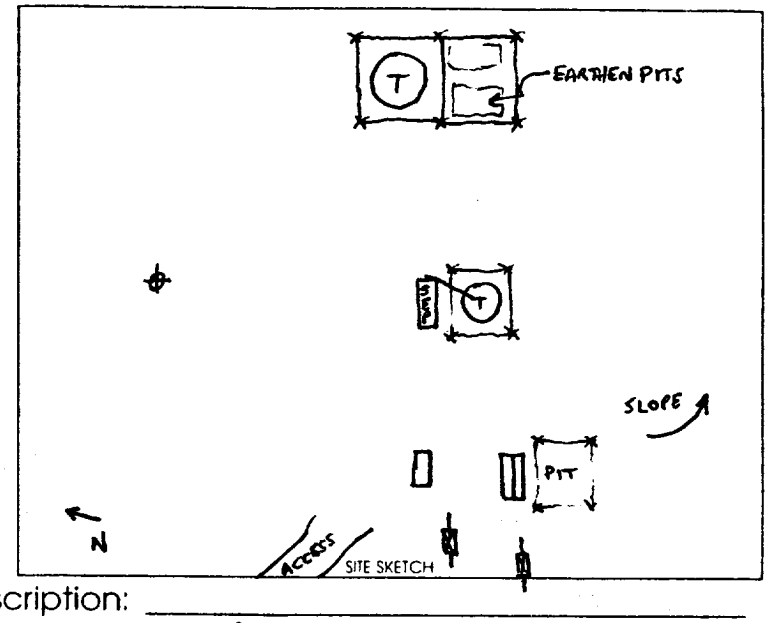
Date: 11-20-00 Weather MOSTLY SUNNY - 40°

Well Name HOLDER A #1E Operator _____ Sec 6 T 30N R 12W UL SE/4 NE/4

Land Type: BLM STATE FEE INDIAN County SAN JUAN

One Call Made (505-765-1234)? (Y) N

Line Marking Evident? (Y) N



Pit Location:

Reference Wellhead X Other _____

Distance from: 112'

Direction: 203 Degrees X E N X of W S

Starting Pit Dimensions 13 x 13 x 1

Final Pit Dimensions 14' x 14' x 3'

Organic Vapor Readings: Start _____

@ 2' _____

@ 4' _____

@ 6' _____

@ 8' _____

@ _____

@ _____

Soil Description: SAND TO 3' BGS

BEDROCK

Well Proximity To: Residence, Domestic Water Well, Stock Well > 1 MILE

Arroyo, Wash, Lake, Stream ~ ½ MILE

Estimated or Known Distance to Ground Water > 100'

Source of Backfill (if other than processed material _____

Samples collected: Type Progress: Verification: ID _____ soil / water

Progress: Verification: ID _____ soil / water

Progress: Verification: ID _____ soil / water

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

(pit sketch-show sample pts.)

Comments: SET UP + PULL FENCE — SANDY TO 3' BGS - STAINED MATERIAL ON SIDEWALLS - CUT OUT UNTIL GENERALLY CLEAN - ROCK ENCOUNTERED @ 3' LIMITING FURTHER EXCAVATION - ROCK SIDEWALL AGAINST SOUTH SLOPE - SHRED + LF —

Soil Shipped to: _____

Prepared by: M. Hunley

Environmental Services
187 CR 4980
Bloomfield, NM 87413

Pit Closure and Retirement Addendum- Risk Assessment

The sample analyzed for confirmation at the Holder A #1E exhibited slightly elevated levels of xylene. Xylene toxicity information indicates that such low levels (<100 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. 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.

QWAL LABORATORIES, INC.

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

LABORATORY REPORT: **REFERENCE #:** 0011655

SENT TO: *WILLIAMS GAS PIPELINE*
187 COUNTY ROAD # 4980
BLOOMFIELD, NM 87413
MARK HARVEY
PROJECT: TAA PITS

DATE REPORTED: **12/05/00**
DATE COLLECTED: **11/20/00**
DATE RECEIVED: **11/28/00**

Reference Fraction: 0011655-04A
Sample ID: HOLDER A#1E-V-EXFL-01 39302
Sample Matrix: **SOIL**
Sample Date Collected: **11/20/0015:07:00**

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	766	MG/KG	2.0	11/30/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		9.14	MG/KG	0.50	11/29/00	MB
TOLUENE		22.4	MG/KG	0.50	11/29/00	MB
ETHYLBENZENE		1.01	MG/KG	0.50	11/29/00	MB
TOTAL XYLENES		60.4	MG/KG	0.50	11/29/00	MB
BFB (SURROGATE)		101	125	75		

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: _____
TERRY KOESTER
LABORATORY DIRECTOR

QWAL LABORATORIES, INC.

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

LABORATORY REPORT: **REFERENCE #:** 0011655

SENT TO: ***WILLIAMS GAS PIPELINE***
187 COUNTY ROAD # 4980
BLOOMFIELD, NM 87413
MARK HARVEY
PROJECT: TAA PITS

DATE REPORTED: **12/05/00**
DATE COLLECTED: **11/20/00**
DATE RECEIVED: **11/28/00**

Reference Fraction:0011655-03A
Sample ID: HOLDER A#1E-V-EXWA-01 36302
Sample Matrix: SOIL
Sample Date Collected: **11/20/0015:11:00**

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	1110	MG/KG	2.0	11/30/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		10.8	MG/KG	0.50	11/29/00	MB
TOLUENE		9.67	MG/KG	0.50	11/29/00	MB
ETHYLBENZENE		1.27	MG/KG	0.50	11/29/00	MB
TOTAL XYLENES		55.4	MG/KG	0.50	11/29/00	MB
BFB (SURROGATE)		107	125	75		

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: 

TERRY KOESTER
LABORATORY DIRECTOR

QWAL LABORATORIES, INC.

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

LABORATORY REPORT: **REFERENCE #:** 0012155

SENT TO: *WILLIAMS GAS PIPELINE*
187 COUNTY ROAD # 4980
BLOOMFIELD, NM 87413
MARK HARVEY
PROJECT: TAA PITS

DATE REPORTED: 12/12/00
DATE COLLECTED: 12/04/00
DATE RECEIVED: 12/06/00

Reference Fraction:0012155-02A
Sample ID: HOLDER A#1E-V-LF-01 39302
Sample Matrix: SOIL
Sample Date Collected: 12/04/0011:38:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	202	MG/KG	2.0	12/08/00	BEN
BTEX	OA1/8021B			3.0		
BENZENE		ND	MG/KG	0.050	12/07/00	MB
TOLUENE		5.90	MG/KG	0.050	12/07/00	MB
ETHYLBENZENE		ND	MG/KG	0.050	12/07/00	MB
TOTAL XYLENES		27.1	MG/KG	0.050	12/07/00	MB
BFB (SURROGATE)		124	125	75		

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY:
TERRY KOESTER
LABORATORY DIRECTOR