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

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DEC - 6 1999
OIL CON. DIV.
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

Operator: Burlington Resources (Williams Field Services) Telephone: (801) 584-6361
Address: P.O. Box 58900, Salt Lake City, Utah 84158-0900
WellName SJ 28-6 UNIT #94A MV (85722)
Location Unit or Qtr/Qtr Sec P Sec 36 T 28N R 6W County Rio Arriba
PitType Dehydrator
LandType Fee

Pit Location: Pit dimensions: length 14 ft., width 14 ft., depth 4 ft.
(Attach diagram)

Reference: Wellhead

Footage from reference: 110 ft.

Direction from reference: 140 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)	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

(85722)

Date Remediation Started: 9/16/98 Date Completed: 9/16/98

Remediation Method: (check all appropriate sections)
Excavation ☑ Approx. Cubic Yard 30
Landfarmed ☑ Insitu Bioremediation
Other LF Headspace 12ppm

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 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 SJ 28-6#94A-V-EXFL

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 4 feet

Sample date 9/17/98 Sample time 14:00

Sample Result

Benzene (ppm) <0.050

Total BTEX (ppm) 148.8

Field Headspace (ppm)

TPH (ppm) 2020

Ground Water Sample: No

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

DATE 10-11-99 Rev

SIGNATURE

PRINTED NAME AND TITLE Mark Harvey for Williams Field Services

Form B

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

Pit Closure and Retirement Addendum- Risk Assessment

Any residual contamination remaining at the San Juan 28-6 #94 A MV poses low risk to human health and the environment. This conclusion is based in part on the information below:

Toxicity Information

Toxicity values for TPH have not been established due to the variability of the chemical makeup of TPH. Normally, the toxicity is based on the toxicity of the particular constituents of concern which may be present and are evaluated based on health-based standards. The most common constituents examined include benzene, ethylbenzene, toluene, and xylene.

In the absence of constituents of concern or when the concentrations of the constituents of concern are negligible, the acceptable level of TPH is established by considering the following:

- No liquid product should remain in the soil
- The TPH should not harm vegetation
- The TPH concentrations should not create an odor nuisance
- Hydrocarbon vapors which may emanate from the impacted soil should not generate harmful or explosive vapors
- Site monitoring should indicate that TPH levels are stable or declining

While residual TPH and / or BTEX contamination may exist at this site, excavation activities were suspended based on encountering bedrock or production equipment which limited continued safe excavation. Based on the analysis of the soil confirmation sample and the site conditions, closure of this site is warranted for the following reasons:

1. Soils which exhibited high levels of TPH and BTEX have been removed.
2. Residual TPH concentrations are below levels which would be problematic based on the criteria above.
3. Discharge has been eliminated and a steel tank installed to prevent any future release to soils.
4. Depth to groundwater is estimated at greater than 100'.
5. Vertical migration of contamination is limited due to bedrock and/or the low vertical hydraulic conductivity of underlying soils.
6. TPH concentrations will not increase and are likely to degrade over time in-situ.

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, ethylbenzene, and xylene meet applicable closure criteria. Additional information may be found in the Technical Background Document titled: *Risk Based Closure of Unlined Surface Impoundment Sites, San Juan Basin, New Mexico.*

PIT RETIREMENT FORM

Date: 9/16/98 85722 Weather _____

Well Name SJ 28-6 #94A Operator BURLINGTON Sec 36 T 28N R 6W UL P

Land Type: BLM STATE (FEE) INDIAN County RIO ARRIBA

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

Line Marking Evident? Y N

Pit Location:

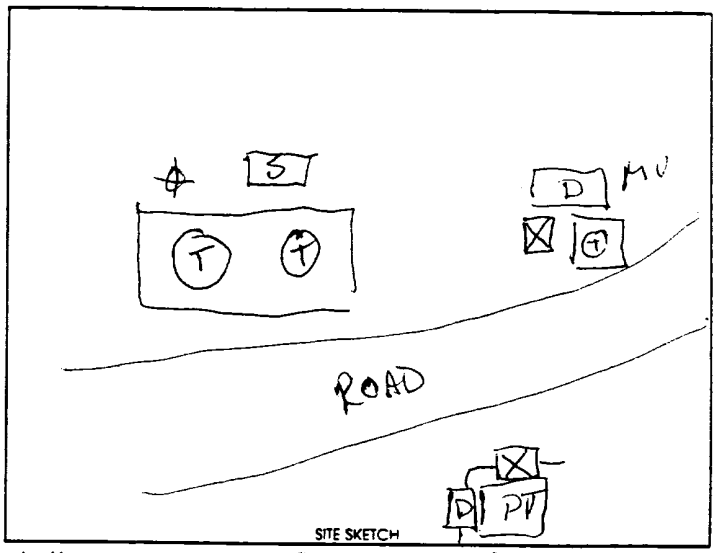
Reference Wellhead X Other _____

Distance from: 110

Direction: 140 Degrees X E N X of W S

Starting Pit Dimensions 10 x 10 x 2

Final Pit Dimensions 14 x 14 x 4



SITE SKETCH

Organic Vapor Readings: Start _____

@ 2' _____

@ 4' _____

@ 6' _____

@ 8' _____

@ _____

@ _____

Soil Description: SILTY SAND

SAND

SANDSTONE

Well Proximity To: Residence, Domestic Water Well, Stock Well _____

Arroyo, Wash, Lake, Stream MUNOZ WASH 200 feet NORTH

Estimated or Known Distance to Ground Water >75

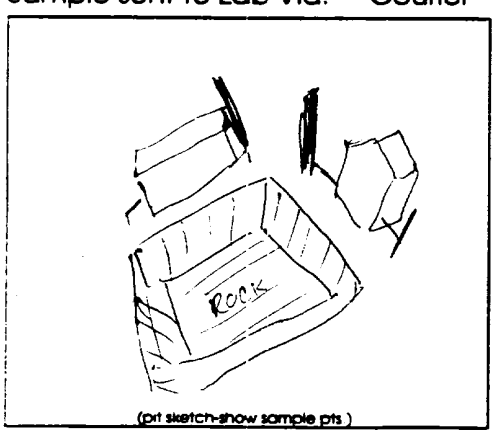
Source of Backfill (if other than processed material _____

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: TANK & LINER IN PIT EXCAVATED GROSSLY CONTAMINATED SOIL - HIT SANDSTONE @ 4 feet

Soil Shipped to: _____

Prepared by: AST

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 #:** 9809965

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

DATE REPORTED: 10/06/98
DATE COLLECTED: **09/17/98**
DATE RECEIVED: **09/30/98**

Reference Fraction:9809965-05A
Sample ID: SJ 28-6 #94A-V-EXFL /85722
Sample Date Collected: **09/17/9814:00:00**

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	2020	MG/KG	2.0	10/02/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND	MG/KG	0.050	10/01/98	JLO
TOLUENE		24.8	MG/KG	0.050	10/01/98	JLO
ETHYLBENZENE		ND	MG/KG	0.050	10/01/98	JLO
TOTAL XYLENES		124	MG/KG	0.050	10/01/98	JLO
BFB (SURROGATE)		109	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 #:** 9809965

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

DATE REPORTED: 10/06/98
DATE COLLECTED: **09/17/98**
DATE RECEIVED: **09/30/98**

Reference Fraction:9809965-06A
Sample ID: SJ 28-6 #94A-V-EXWA /85722
Sample Matrix: SOIL
Sample Date Collected: **09/17/9814:05:00**

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	434	MG/KG	2.0	10/02/98	SKW
BTEX	SW846 8021			3.0		
BENZENE		ND	MG/KG	0.050	10/01/98	JLO
TOLUENE		0.302	MG/KG	0.050	10/01/98	JLO
ETHYLBENZENE		ND	MG/KG	0.050	10/01/98	JLO
TOTAL XYLENES		1.72	MG/KG	0.050	10/01/98	JLO
BFB (SURROGATE)		113	125	75		

ND=NONE DETECTED
DL=DETECTION 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 #:** 9810160

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

DATE REPORTED: 10/12/98
DATE COLLECTED: **10/02/98**
DATE RECEIVED: **10/06/98**

Reference Fraction:9810160-02A 85722
Sample ID: 28-6#94A-V-LF-01
Sample Date Collected: **10/02/9816:00:00**

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	DL	ANALYZED	BY
TPH	SW846-8015	783	MG/KG	40.0	10/09/98	SKW

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

APPROVED BY: _____

TERRY KOESTER
LABORATORY DIRECTOR