

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: 3 - TEC

Telephone: (801) 584-6361

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

WellName: NM Federal N #4

(32587)

Location: Unit or Qtr/Qtr ^{NE/NE} Sec 7 T 30N R 12W County San Juan

PitType Dehydrator

LandType: BLM

Pit Location: Pit dimensions: length 15 ft., width 18 ft., depth 13 ft.

(Attach diagram)

Reference: Wellhead

Footage from reference: 45 ft.

Direction from reference: 232 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

Date Remediation Started: 11/17/00

Date Completed: 11/17/00

Remediation Method: Excavation ☒

Approx. Cubic Yard 130

(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. Encountered BEDROCK at 13'. The excavated material was mechanically aerated and placed into an onsite landfarm.

Ground Water Encountered: 0

Final Pit:

Sample location NM FED N#4-V-EXFL-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 13'

Sample date 11/17/00

Sample time 12:40

Sample Result

Benzene (ppm) 16.4

Total BTEX (ppm) 690

Field Headspace (ppm)

TPH (ppm) 3830

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 TITLEMark Harvey for Williams Field Services
Proj. Coordinato

PIT ASSESSMENT FORM

AssessDate: 11-17-00

Meter: 32587

Well Name: NM FEDERAL N#4

Un^{NZ}_{NE} S Z T 30N R 12W

County: SAN JUAN

Operator: 3 TEC

Pit Type: DEHY-TINHORN Land Type: BLM?

Pit Information:

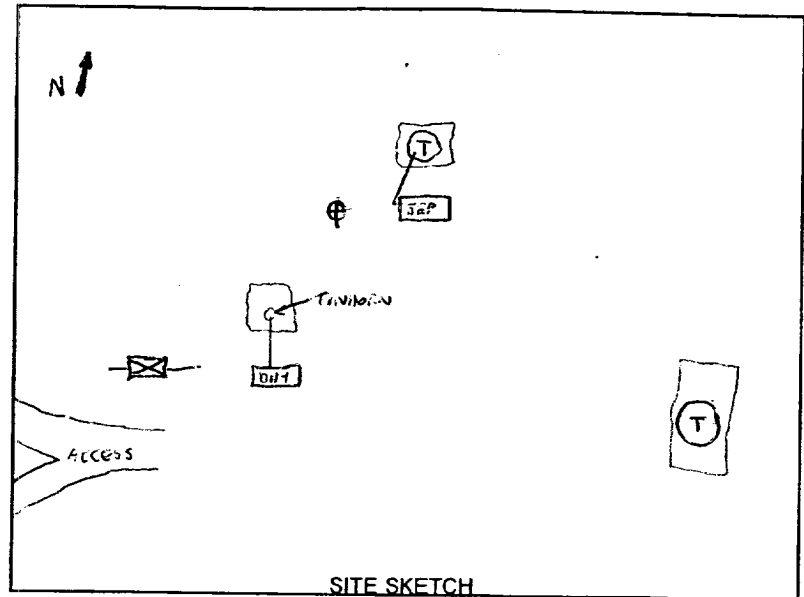
Reference: WELLHEAD

Distance: 45'

Degrees: 232° E of N

Starting Pit Dimensions: NA X X ft.
15 x 18 x 13

Ground Water Encountered? No ☐



Ranking Information:

Depth To Ground Water:

☐ <50 ft

☐ >50 ft <100 ft

☒ >100 ft

Wellhead Protection Area: <200 ft from private domestic source, or; <1,000 ft from all other sources

☐ Yes

☒ No

Distance To Surface Water:

☐ <200 ft

☐ >200 ft <1,000 ft

☒ >1,000 ft

Sampling Information:

GeneralDescription:

DEHY DISCHARGES TO PERFORATED DRUM W/ CUT OFF BOTTOM LIKE TINHORN -
SILTY SAND MATERIAL HAS WEATHERED HYDROCARBONS OVER - EXCAVATE SOIL &
REMOVE DRUM - SAND 2' BGS - TO 13' WHERE MUDSTONE ENCOUNTERED -
SOME STAINING TRENDING NW - CUT OUT - FLOOR HAS SOME OIL BUT APPEARS
TO BE CONFINING VERTICAL MIGRATION - EXCAVATE TO 15' - SIDEWALL
SLOTTING - SAMPLE FLOOR + WALLS W/ HOE & BUCKET - CUT TERRACES - RAMP - STRENGTH LF

SampleLocation:

Sample ID: NM FED N#4-V-EXFL-01 NM FED N#4-V-EXWA-01

SampleTime: 12:40/12:44

SamplerName: MARK HARVEY

Sample Headspace (ppm):

Prepared By: M. Harvey

Preparation Date:

Ready For Closure? ☐



Environmental Services
187 CR 4980
Bloomfield, NM 87413

Pit Closure and Retirement Addendum- Risk Assessment

The sample analyzed for confirmation at the **NM Federal N #4** exhibited slightly elevated levels of total petroleum hydrocarbons (TPH) and / or BTEX. Toxicity information indicates that such low levels pose little 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 particular constituents of concern that may be present and which 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 low, 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

Environmental and Site Conditions

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 these types of contaminants through soil and a lack of continuous transporting mechanisms, it is very likely that the residual contamination 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 contaminant concentrations would diminish vertically and likely be less than 10 ppm within the next 4 - 10 feet of *soil* depth. Notwithstanding, bedrock was discovered at 3 1/2' on the pit bottom. This condition retards vertical migration of contaminants and serves to significantly limit potential groundwater impact.

While residual TPH and/or BTEX may exist at this site, closure of this site is warranted for the following reasons:

1. The majority of soils which exhibited high levels of TPH and BTEX have been removed.
2. Residual TPH concentrations are below levels considered 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 / BTEX concentrations will not increase and will likely degrade over time from natural processes occurring in-situ.
7. Further excavation at the site is impractical due to bedrock.

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 all closure criteria cannot be practically attained. Additional information may be found in the Technical Background Document titled: *Risk Based Closure of Unlined Surface Impoundment Sites, San Juan Basin, New Mexico.*

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 #: 0011536

SENT WILLIAMS FIELD SERVICE
TO: 295 CHIPETA WAY
SALT LAKE CITY, UTAH 84158
MARK HARVEY
PROJECT: TAA PITS

DATE REPORTED: 11/30/00
DATE COLLECTED: 11/17/00
DATE RECEIVED: 11/21/00

Reference Fraction: 0011536-04A
Sample ID: NM FED N#4-V-EXFL-01 32587
Sample Date Collected: 11/17/00 12:40:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	3830	MG/KG	20.0	11/22/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		16.4	MG/KG	0.50	11/28/00	MB
TOLUENE		166	MG/KG	0.50	11/28/00	MB
ETHYLBENZENE		35.6	MG/KG	0.50	11/28/00	MB
TOTAL XYLENES		472	MG/KG	0.50	11/28/00	MB
BFB (SURROGATE)		111	125	75		

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

APPROVED BY:


TERRY KOESTER
LABORATORY DIRECTOR

11/30/00 15:42 FAX 13162327730

QWAL LAB

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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 #: 0011536

SENT WILLIAMS FIELD SERVICE
TO: 295 CHIPETA WAY
SALT LAKE CITY, UTAH 84158
MARK HARVEY
PROJECT: TAA PITS

DATE REPORTED: 11/30/00
DATE COLLECTED: 11/17/00
DATE RECEIVED: 11/21/00

Reference Fraction: 0011536-03A

Sample ID: NM FED N#4-V-EXWA-01 32587

Sample Matrix: SOIL

Sample Date Collected: 11/17/00 12:44:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED BY
TPH-DRO	SW846-8015D	1110	MG/KG	2.0	11/22/00 BEM
BTEX	OA1/8021B			3.0	
BENZENE		0.898	MG/KG	0.10	11/28/00 MB
TOLUENE		11.3	MG/KG	0.10	11/28/00 MB
ETHYLBENZENE		2.50	MG/KG	0.10	11/28/00 MB
TOTAL XYLENES		61.21	MG/KG	0.10	11/28/00 MB
BFB (SURROGATE)		118	125	75	

ND=NONE DETECTED

PQL=PRACTICAL QUANTITATION 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 WILLIAMS GAS PIPELINE
TO: 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: 0012155-09A
Sample ID: NM FED N#4-V-LF-01 32587
Sample Date Collected: 12/04/00 10:32:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED BY
TPH-DRO	SW846-8015D	119	MG/KG	2.0	12/11/00 BEI
BTEX	OAI/8021B			3.0	
BENZENE		ND	MG/KG	0.050	12/07/00 MB
TOLUENE		0.118	MG/KG	0.050	12/07/00 MB
ETHYLBENZENE		ND	MG/KG	0.050	12/07/00 MB
TOTAL XYLENES		1.47	MG/KG	0.050	12/07/00 MB
BFB (SURROGATE)		84	125	75	

ND=NONE DETECTED

PQL=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

TERRY KOESTER
LABORATORY DIRECTOR