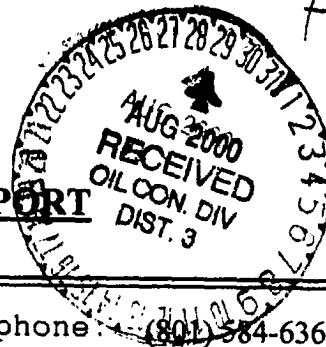


State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Approved
File



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: COZZENS #6 (32639)
Location: Unit or Qtr/Qtr Sec Sec 18 T 29N R 11W County San Juan
PitType Dehydrator
LandType Fee

Pit Location: Pit dimensions: length 18 ft., width 23 ft., depth 9 ft.
(Attach diagram)

Reference: Wellhead

Footage from reference: 101 ft.

Direction from reference: 17 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)	<u>10</u>
high water elevation of			
ground water)			

Wellhead Protection Area:	Yes	(20 points)	
(Less than 200 feet from a private	No	(0 points)	<u>0</u>
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)	<u>0</u>
irrigation canals and ditches)			

Ranking Score (TOTAL POINTS): 10

Date Remediation Started: 7/26/00

Date Completed: 7/26/00

Remediation Method: Excavation ☒

Approx. Cubic Yard

(check all appropriate sections)

Landfarmed ☐

Insitu Bioremediation ☒

Other

Remediation Location: Onsite ☒ Offsite

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

General Description Of Remedial Action:

The pit was excavated in order to expose soils to atmosphere. Fertilizer was added to excavated / aerated soil to facilitate further in-situ degradation of hydrocarbons. Bedrock encountered at 9'.

Ground Water Encountered: 0

Final Pit:

Sample location COZZENS #6-EX-V-01

Closure Sampling:

One sample was collected at 9' bgs on the excavation floor.

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

Sample depth 9'

Sample date 7/26/00

Sample time 16:05

Sample Result

Benzene (ppm) <0.05

Total BTEX (ppm) 11.33

Field Headspace (ppm)

TPH (ppm) 1130

Ground Water Sample: 0

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

DATE 8/25/00

SIGNATURE  FOR WFS

PRINTED NAME AND TITLE Mark Harvey for Williams Field Services Project Coordinator

Form B

The sample analyzed for confirmation at the Cozzens # 6 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 between 50' – 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. Notwithstanding, bedrock was discovered at the bottom of the excavation at 9'. This condition retards vertical migration of contaminants and serves to significantly limit potential groundwater impact.

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

1. Residual TPH concentrations are below levels considered problematic based on the criteria above.
2. Discharge has been eliminated thus there will be no future release to soils.
3. Depth to groundwater is estimated at greater than 50'.
4. Vertical migration of contamination is limited due to bedrock.
5. TPH / BTEX concentrations will not increase and will actually decrease over time from natural processes occurring in-situ.
6. Further excavation at the site would only result in removing a relatively small amount of affected soil before bedrock is reached.
7. Hydrocarbon degradation is well documented at other oil and gas production sites.

Since there are no nearby receptors or domestic water sources, this site poses little risk to human health and the environment. Closure and no further action is justified based on the relatively low total petroleum hydrocarbon (TPH) and BTEX concentrations. Additional information may be found in the Technical Background Document titled: *Risk Based Closure of Unlined Surface Impoundment Sites, San Juan Basin, New Mexico.*

QWAL LABORATORIES, INC.

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

LABORATORY REPORT:

REFERENCE #: 0008143

SENT **MHE**
TO: **1717 S 8TH ST**
COLORADO SPRINGS, CO 80906
CHM STRUHS
PROJECT: WILLIAMS COZZENS #6/OPAL30-LF

DATE REPORTED: 08/25/00
DATE COLLECTED: 07/26/00
DATE RECEIVED: 08/04/00

Reference Fraction: 0008143-02A
Sample ID: COZZENS #6-EX-V-01
Sample Date Collected: 07/26/00 16:05:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	1130	MG/KG	2.0	08/09/00	BEM
BTEX	OA1/8021B			3.0		
BENZENE		ND	MG/KG	0.050	08/21/00	MB
TOLUENE		ND	MG/KG	0.050	08/21/00	MB
ETHYLBENZENE		10.6	MG/KG	0.050	08/21/00	MB
TOTAL XYLENES		0.734	MG/KG	0.050	08/21/00	MB
BFB (SURROGATE)		122	125	75		

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

APPROVED BY:

Terry Koester
TERRY KOESTER
LABORATORY DIRECTOR

Start Date: 7/26/00 Completion Date: 7/26/00 Meter: 32639

Well Name: COZZENS #6 Un S 18T 29 R 11W County: San Juan

Operator: Burlington Resources (Williams Field Services)

Pit Type: Dehydrator Land Type: Fee

Pit Information:

Reference: Wellhead

Distance: 101

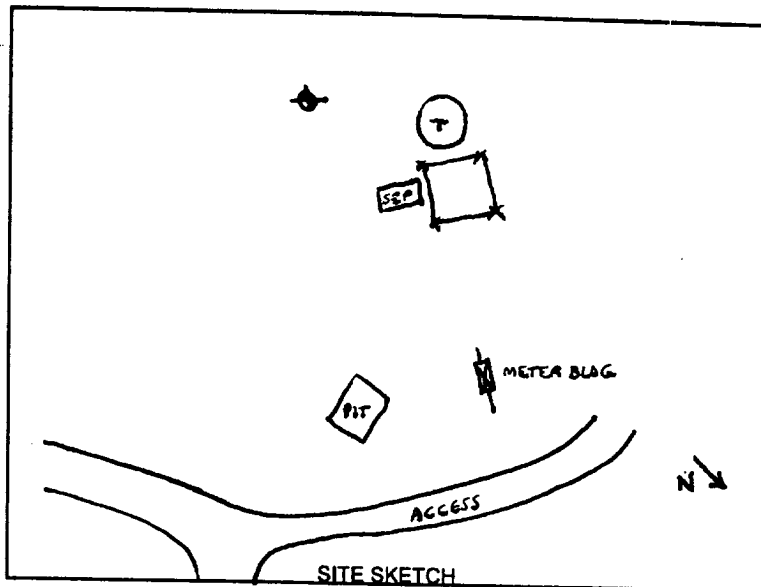
Degrees: 17 East of North

Starting Pit Dimensions: 14 X 14 X 2 ft.

Final Pit Dimensions: 18 X 23 X 9 ft.

Backfill Source: Pit Material

Soil Shipped To:



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

Organic Vapor Readings

OVM@0'

OVM@2'

OVM@4'

OVM@6'

OVM@8'

OVM@__'

OVM@__'

Soil Descriptions

silty sand

sand

sand and sandstone fragments

" " "

fractured sandstone - bedrock

Samples Collected:

ID	Cozzens #6 - EX - V -01	Soil/Water
ID		Soil/Water
ID		Soil/Water

Comments: Pit is non-vulnerable -- contamination associated with pit discovered by BR when conducting spill cleanup on-site. Excavated pit per NMOCD directive to allow volatilization / aeration of pit soils. Material had slight to moderate hydrocarbon odor. Encountered bedrock at 9' - fractured ss -- Mixed granular fertilizer with excavated material and replaced as fill -- collected soil sample at bottom of excavation

Prepared By: m. harvey

Date: 8/25/00

