

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

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SEP 23 1999
OIL CON. DIV.
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

Operator: Phillips Petroleum (Williams Field Services) **Telephone:** (801) 584-6361
Address: P.O. Box 58900, Salt Lake City, Utah 84158-0900
WellName: SJ 29-5 UNIT #53 (86652)
Location: Unit or Qtr/Qtr Sec L Sec 32 T 29N R 5W County Rio Arriba
PitType: Dehydrator
LandType: State

Pit Location: Pit dimensions: length 19 ft., width 19 ft., depth 9 ft.
(Attach diagram)

Reference: Wellhead

Footage from reference: 64 ft.

Direction from reference: 275 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) <u>10</u>

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) <u>0</u>

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) <u>0</u>

Ranking Score (TOTAL POINTS): 10

Date Remediation Started: 11/5/96

Date Completed: 11/18/96

Remediation Method: Excavation ☒
(check all appropriate sections)

Approx. Cubic Yard 120

Landfarmed ☒Insitu Bioremediation ☐

Other Landfarmed soil after mechanical aeration. Returned to site 4/6/99 w/probe. Met refusal at 11' bgs.

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. The excavated material was mechanically aerated, mixed with fertilizer, and placed into an onsite landfarm. After remediation goals were confirmed, the soil was returned to the excavation.

Ground Water Encountered: No

Final Pit:

Sample location SJ 29-5 #53 EX-V-01

Closure Sampling:

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

A composite sample, made up of 4 points from each excavation face, was collected..

Sample depth Up to 9 feet.

Sample date 11/12/96

Sample time 11:35

Sample Result

Benzene (ppm) <0.56

Total BTEX (ppm) <3.36

Field Headspace (ppm)

TPH (ppm) <24.4

Ground Water Sample: No

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

DATE 9-20-99

SIGNATURE  FOR WFSPRINTED NAME
AND TITLEMARK HARVEY
PROJECT COORDINATOR



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 San Juan 29-5 #53 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 within 4' of 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 would only result in removing a relatively small amount of affected soil before bedrock is reached.

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.*

86652 X

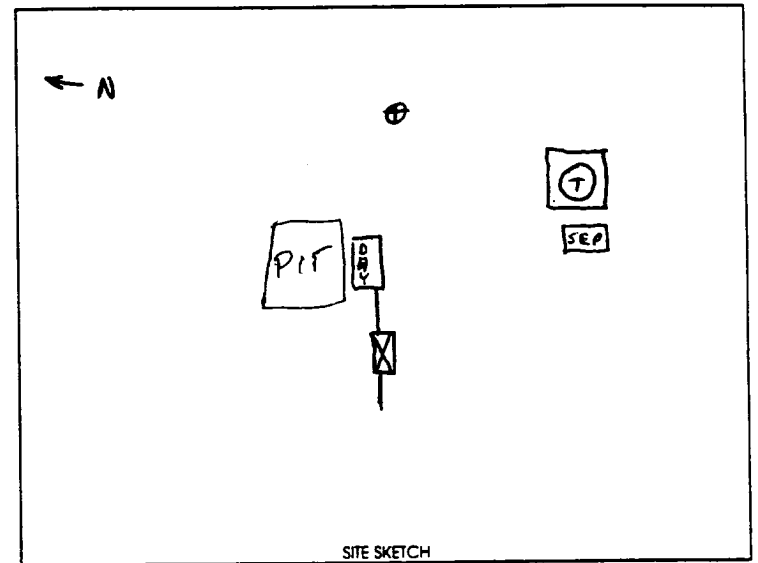
PIT RETIREMENT FORM

Date: 11-5-96 Weather SONNY/CLEAR/50°F
Well Name SJ 29-5 #53 Operator PHILLIPS PETROLEUM Sec 32 T29N R5W UL 990'W
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: 64'
Direction: 285 Degrees X E N X
of _____
W S _____

Starting Pit Dimensions 11' x 9' x 3'
Final Pit Dimensions 19' x 19' x 9'



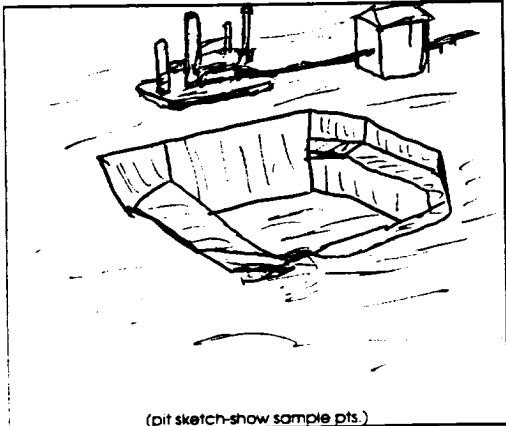
Organic Vapor Readings: Start _____ Soil Description: BROWN CLAYEY SILT + SAND
@ 2' _____
@ 4' _____
@ 6' _____
@ 8' _____
@ _____
@ _____
_____ SILTY CLAY TO CLAYEY SILT

Well Proximity To: Residence, Domestic Water Well, Stock Well _____
Arroyo, Wash, Lake, Stream WASH ~ 175' WEST OF LOCATION (CROSS TO ACCESS)
Estimated or Known Distance to Ground Water _____

Source of Backfill (if other than processed material) _____

Samples collected: Type _____ Progress: Verification: ID SJ 29-5 #53 EX-V-01 soil / water
Progress: Verification: ID SJ 29-5 #53 LF-V-01 soil / water
Progress: Verification: ID _____ soil / water

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



Comments: SITE IS ~ 1 MILE SOUTH OF CIRCLE 5 ON GREAT AMERICAN HWY
- SET UP, EXCAVATED SOIL, SHREDDED SOIL, ADDED
FERTILIZER, LAND FARMED MATERIAL

Soil Shipped to: _____
Prepared by: Alb. J. Harris



Organic Analysis - Pit Closure

Williams Field Services

Project ID: OCD Pits
Sample ID: SJ 29-5 #53 EX-V-01
Lab ID: 5624
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 11/18/96
Date Sampled: 11/12/96
Date Received: 11/12/96
Date Extracted: 11/13/96
Date Analyzed: 11/15/96

Target Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)
Total Aromatic Hydrocarbons	ND	
Benzene	ND	0.56
Toluene	ND	0.56
Ethylbenzene	ND	0.56
m,p-Xylenes	ND	1.12
o-Xylene	ND	0.56
Total Recoverable Petroleum Hydrocarbons	ND	24.4

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	95	81 - 117%
	Bromofluorobenzene	89	74 - 121%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste,
SW-846, United States Environmental Protection Agency, September, 1986;
Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of
Water and Waste, United States Environmental Protection Agency, 1978.

Comments:

Review



Organic Analysis - Pit Closure

Williams Field Services

Project ID: OCD Pits
Sample ID: SJ 29-5 #53 LF-V-01
Lab ID: 5625
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 11/18/96
Date Sampled: 11/12/96
Date Received: 11/12/96
Date Extracted: 11/13/96
Date Analyzed: 11/15/96

Target Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)
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Total Aromatic Hydrocarbons

ND

Benzene

ND

0.24

Toluene

ND

0.24

Ethylbenzene

ND

0.24

m,p-Xylenes

ND

0.49

o-Xylene

ND

0.24

Total Recoverable Petroleum Hydrocarbons

ND

24.9

Quality Control:SurrogatePercent RecoveryAcceptance Limits

Trifluorotoluene

92

81 - 117%

Bromofluorobenzene

90


74 - 121%

Reference:

Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
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Comments:


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