

District I
P.O. Box 1980, Hobbs, NM
District II OIL & GAS INSPECTOR
P.O. Drawer 105, Aztec, NM 86821
District III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

(Revised 3/9/94)

PIT REMEDIATION AND CLOSURE REPORT

Operator: Conoco, Inc Telephone: 915-686-5453

Address: 10 Destra Drive, Suite 100W, Midland, TX 79705-4500

Facility Or: 28-7 # 167 Pit #2

Well Name

Location: Unit or Qtr/Qtr K Sec 5 T27N R7W County San Juan

Pit Type: Separator X Dehydrator Other

Land Type: BLM X State Fee Other

Pit Location: Pit dimensions: length 8', width 8', depth 2'
(Attach diagram)

Reference: wellhead X other

Footage from reference: 37

Direction from reference: 72 Degrees East North
of
X West South X

RECEIVED
JUL 31 1997

OIL CON. DIV.
DIST. 2

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>0</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 1000 feet	(10 points)
Greater than 1000 feet	(0 points)
<u>0</u>	

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: 7- 16 - 1996 Date Completed: _____

Remediation Method: Excavation _____ Approx. cubic yards _____
(Check all appropriate sections) Landfarmed _____ Insitu Bioremediation _____
Other Natural attenuation _____

Remediation Location: Onsite X Offsite _____
(ie. landfarmed onsite, name and location of offsite facility) _____

General Description Of Remedial Action: Pit sampled by Conoco on 7-16-96. Conoco's sampler encountered bedrock at 1.5 feet below bottom of the pit. Sample headspace reading using PID = 581, Lab results of sample for TPH using EPA Method 418.1 were 29,700 ppm. Pit closed by backfilling during P&A and Follow up grab sample taken on 10/09/97 by On Site Technologies at center of pit at adepth of 3.5' below backfilled surface at bedrock.

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit: Sample location: Samples take at NE corner and E side of pit
Closure Sampling: Follow up grab sample center of pit

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

Sample depth Eighteen inches below bottom of the pit at bedrock
Follow up sample taken at 3.5' below backfilled surface.
Sample date 7-16-1996 Sample time 1245 hours

Sample Results

Follow up Sample

Benzene (ppm) _____ 1.2

Total BTEX (ppm) _____ 38.7

Field headspace (ppm) 581

TPH 29,700 13088.1

Ground Water Sample: Yes _____ No X (If yes, attach sample results)

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

DATE

SIGNATURE

Carl J. Coy

PRINTED NAME
AND TITLE

Carl J. Coy
FIELD SHEAR SPEC.

SITE SPECIFIC RISK EVALUATION SUMMARY

Well Name:
Well Site Location:
Pit Type:
Producing Formation:

Conoco 28-7 # 167 Pit #2
Unit K Sec. 5 T27N R7W
Separator Pit
Mesa Verde/Dakota Basin

Conclusion/ Recommendation:

Based upon the information given and risk assessment, we conclude that the residual hydrocarbon contamination in soil resulting from the subject earthen pit is very limited and the subsurface conditions (i.e. bedrock) are enough of a barrier to preclude impact to ground water. Refer to NMOCD's policy for approval for pit closures with shallow bedrock and no ground water impact. Conoco requests pit closure approval on this site.

Pit Assessment:

Ranking Score: 0 - 9
Horizontal Distance to Surface Water: >1000 ft.
Ground Water Depth: >1000 ft. (well location on top of Mesa)
Lateral Extent of Contamination: Confined to immediate pit area (8'X8')
Vertical Extent of Contamination: 1-2 ft. below bottom of pit (limited at bedrock)
Land Use: BLM rangeland and grazing
Ground Water Impact: None Identified as of (11/11/96)
Surface Water Impact: None Identified as of (11/11/96). Topographic information does not indicate probability of off site lateral fluid migration near earthen pit.

Field and Lab Soil Sample Results:

Sample Location	TPH (ppm)	PID (units)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylene (ppm)
Conoco 2-pt Composite (07/16/96)	29,700	581				
Follow up grab sample (10/09/96)	13088.1		1.2	38.7	20.9	481.7

Notes: TPH: Total Petroleum Hydrocarbons per EPA Method 418.1 or EPA Method 8015m.
PID: Results of field headspace testing.
BTEX: Volatile Organic Hydrocarbons per EPA Method 8020.
ppm: Parts per Million, equivalent to mg/Kg.

Remediation Summary:

Pit backfilled on March 26, 1997 by Rosenbaum Construction during site rehabilitation and re-seeding.

Submitted by:
Larry Trujillo

On Site Technologies Limited Partnership

**TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1**

Client: **Conoco, Inc.**
Project: Not Given
Matrix: Soil
Condition: Intact/Cool

Date Reported: 07/26/96
Date Sampled: 07/17/96
Date Received: 07/17/96
Date Extracted: 07/19/96
Date Analyzed: 07/19/96

Sample ID	Lab ID	Result mg/kg	Detection Limit mg/kg
28-7 #72 A - LF	0396G01350	822	20.0
28-7 #72 - LF	0396G01351	94.9	19.9
28-7 #167 Pit 1	0396G01352	20,700	1002
→ 28-7 #167 Pit 2	0396G01353	29,700	1002
28-7 #167 Pit 3	0396G01354	82.1	19.9
28-7 #202 Pit 2	0396G01355	44.3	20.0
28-7 #202 Pit 1	0396G01356	478	20.0
28-7 #67 Pit 1	0396G01357	9,190	996

ND - Analyte not detected at stated detection level.

References: **Method 418.1:** Petroleum Hydrocarbons, Total Recoverable, USEPA Chemical Analysis of Water and Waste, 1978.

Method 3550: Ultrasonic Extraction of Non-Volatile and Semi-Volatile Organic Compounds from Solids, USEPA SW-846, Rev. 1, July 1992.

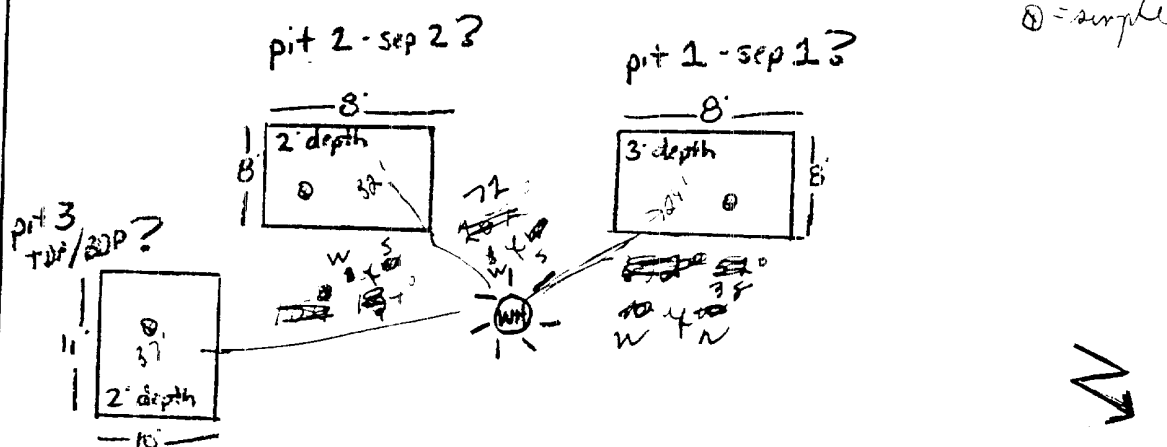
Analyst: dr

Reviewed: SB

PIT LOCATION AND COMPOSITE SAMPLE PROFILE MAP

WELL LOCATION: 28-7 #167 S 5 T 27 R 7 UNIT K

DATE STARTED: 7/16/96 DATE COMPLETED:



← [meter houses removed] →

- ① • fluid standing (black, oily)
 - soil severely stained along walls
 - sampled 1 1/2' w/ hand auger - TPH
 - OUM:
- ② • fluid standing (rusty liquid)
 - soil severely stained along walls
 - sampled TPH @ 1 1/2'
 - OUM: 273.07 ppm - after factor
- ③ • sampled TPH w/ hand Auger - 6"
 - surface clean - very hard calcare
 - OUM: 7.99 ppm - after factor

NITTO
AS FAR AS
SURFACE: i.e.
oil, staining etc.

○ SOIL SAMPLE LOCATION
△ BACKGROUND SAMPLE LOCATION

NOTES: Pit #2 SEP 2 S.J. #167

7/16/96 sampled 1 1/2' w/ hand auger 2 pt sample

~ hit rock @ 1 1/2'

pit had rusty brown liquid standing - side walls stained

PIT CLOSURE DOCUMENTATION - SAMPLING RESULTS NOTES

Pit # 2

SEP 2

S.S. 28-4 #167

LOCATION OF PIT

TYPE OF PIT:

DESCRIPTION OF SAMPLE	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #
DATE OF SAMPLE	7/16/96								
LOCATION OF SAMPLE	2 pit								
TYPE OF SAMPLE: (GRAB/COMPOSITE)	Composite								
DEPTH OF SAMPLE(S)	1 1/2'								
TEMPERATURE OF SAMPLE	78°								
FIELD METHOD RESULTS (PPMS)	581								
TPH VAPORS (EQUIV UNITS)	.47								
BENZENE RESPONSE FACTOR									
ADJUSTED FOR BENZENE EQUIV UNITS	273.07								
LAB RESULTS IN PPM:									
METHOD (418.1 OR MOD 8015)	418.1								
TPH	29,700								
NOTES	HIT BED - Rock								

OFF: (505) 325-5667



LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn: Myke Lane
 Company: On Site Technologies, Ltd.
 Address: 612 E. Murray Drive
 City, State: Farmington, NM 87401

Date: 11-Oct-96
 COC No.: 4496
 Sample No. 12498
 Job No. 4-1303

Project Name: Conoco #167
 Project Location: Pit #2
 Sampled by: RLC
 Analyzed by: DC/HR
 Sample Matrix: Soil

Date: 9-Oct-96 Time: 16:00
 Date: 10-Oct-96

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	3349.6	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	9738.4	mg/kg	5.0	mg/kg
	TOTAL	13088.1		mg/kg

Quality Assurance Report

GRO QC No.: 0493-STD
 DRO QC No.: 0489-STD

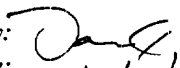
Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,235	8.5	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	111	10.8	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	113	111	(70-130)	1	20%
Diesel Range (C10-C28)	116	119	(70-130)	2	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: 
 Date: 10/11/96

P.O. BOX 2606 • FARMINGTON, NM 87499

- Technology. Regional Industry with the Edge.™

OFF: (505) 325-5667



LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: *Bobby Crabb*
Company: *On Site Technologies, Ltd.*
Address: *612 E. Murray Drive*
City, State: *Farmington, NM 87401*

Date: *15-Oct-96*
COC No.: *4496*
Sample No. *12498*
Job No. *4-1303*

Project Name: *Conoco #167*
Project Location: *Pit #2*
Sampled by: *RLC*
Analyzed by: *DC*
Sample Matrix: *Soil*

Date: *9-Oct-96* Time: *16:00*
Date: *14-Oct-96*

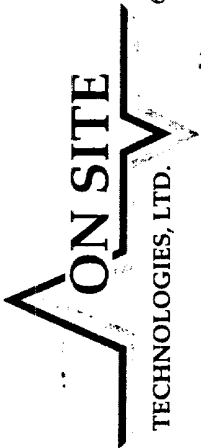
Laboratory Analysis

Component	Result	Units of Measure	Detection Limit	Units of Measure
Benzene	1296.9	ug/kg	0.2	ug/kg
Toluene	38739.3	ug/kg	0.2	ug/kg
Ethylbenzene	20952.6	ug/kg	0.2	ug/kg
m,p-Xylene	398193.7	ug/kg	0.2	ug/kg
o-Xylene	83598.0	ug/kg	0.2	ug/kg
	TOTAL	542780.4	ug/kg	

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
Date: *10/15/96*

P.O. BOX 2606 • FARMINGTON, NM 87499



CHAIN OF CUSTODY RECORD

4496

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 10.9.96

Page 1 of 1

Purchase Order No.: 4-1303		Job No.		Name My K. Payne / B. (KAP)		Title	
SEND INVOICE TO		Company		Mailing Address		City, State, Zip	
Address		City, State, Zip		Telephone No.		Telefax No.	
Sampling Location: # 167				ANALYSIS REQUESTED			
Sampler: RKC		Number of Containers		LAB ID			
SAMPLE IDENTIFICATION		SAMPLE DATE		MATRIX		PRES.	
PIT #1		10-9-96 1550		SOIL		✓	
PIT #2		" 1600		"		✓	
PIT #3		" 1605		"		✓	
Relinquished by: [Signature]		Date/Time 10.9.1800		Received by: [Signature]		Date/Time 11.10.1800	
Relinquished by:		Date/Time		Received by:		Date/Time	
Relinquished by:		Date/Time		Received by:		Date/Time	
Method of Shipment:		Rush		24-48 Hours		10 Working Days	
Authorized by: [Signature]		Date 10.9.96		Special Instructions:			