<u>District I</u> P.O. Box 1980, Hobbs, NM

<u>District II</u> P.O. Drawer **DD**, Artesia, NM 88211

District III

1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO PPROPRIATE DISTRICTOFFICE

DEPUTY OIL & GASHISPECTORFO

OIL CONSERVATION DIVISION

SANTA FE OFFICE

P.O. Box 2088 Santa Fe, New Mexico 87504-2088 AUG 2 7 1996 (Revised 3/9/94)

provel PIT REMEDIATION AND CLOSURE REPORT

Operator: Unocal North American	Telephone: (505) 632-1811		
Address: P.O. Box 850, Bloomfield, NM	87413		
Facility Or: Rincon 81 Well Name			
Location: Unit or Qtr/Qtr sec_K sec_/	7 T27M R6w County Rio Arriba		
Pit Type: Separator Dehydrator Other Separator / Dehydrator			
Land Type: BLM x , state , Fee ,	Other		
(Attach diagram)	25' , width 20' , depth 3'		
Footage from reference:			
· ——			
priection from ference:	Degrees East North of		
	West South		
Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)		
ground water)	EIVEN		
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	1 7 1994 Yes (20 points) No (0 points)0 ON DIV		
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)		
,	RANKING SCORE (TOTAL POINTS): 30		

	Report Unocal Rincon 81: Separator / Dehydrator		
Date Remediation Start	ed: 09/19/94 Date Completed: At time of P & A		
Remediation Method: E	xcavation X Approx. cubic yards 40		
•	andfarmed X Insitu Bioremediation		
o	ther		
Remediation Location: (ie. landfarmed onsite, name and location of offsite facility)	OnsiteOffsiteUnocal Rincon #253 adjacent location		
General Description Of	Remedial Action: Discharge stopped into unlined pit.		
Due to soil conditions	, pit was only excavated to 4 feet in depth. Pit will		
continue to be cleaned	up at time of P & A of well. Vertical extent of plume		
greater than 33 feet.			
Ground Water Encounter	red: No X Yes Depth		
Final Pit: Sample location <u>Approximate center of old pit</u> Closure Sampling: (if multiple samples.			
Closure Sampling: (if multiple samples,	Sample location <u>Approximate center of old pit</u>		
(if multiple samples, attach sample results and diagram of sample	Sample location Approximate center of old pit Sample depth 33'		
(if multiple samples, attach sample results			
(if multiple samples, attach sample results and diagram of sample	Sample depth 33'		
(if multiple samples, attach sample results and diagram of sample	Sample depth		
(if multiple samples, attach sample results and diagram of sample	Sample depth33' Sample date09/14/94 Sample time Sample Results		
(if multiple samples, attach sample results and diagram of sample	Sample depth		
(if multiple samples, attach sample results and diagram of sample	Sample depth33' Sample date09/14/94 Sample time Sample Results Benzene (ppm) N/A Total BTEX (ppm) N/A		
(if multiple samples, attach sample results and diagram of sample locations and depths)	Sample depth		
(if multiple samples, attach sample results and diagram of sample locations and depths) Ground Water Sample:	Sample depth33' Sample date09/14/94 Sample time Sample Results Benzene (ppm) N/A Total BTEX (ppm) N/A Field headspace (ppm) >2500 TPH N/A Yes NoX (If yes, attach sample results) THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST		
(if multiple samples, attach sample results and diagram of sample locations and depths) Ground Water Sample: I HEREBY CERTIFY THAT	Sample depth		



TOTAL PETROLEUM HYDROCARBONS

Attn:

Mike Tabet

Date:

7/21/94

Company: Unocal Corporation

Lab ID:

1670

Address:

P.O. Box 760

Sample No.

2045

City, State: Moab, UT 84532

Job No.

4-1107

Project Name:

Unocal Corporation Pit Assessments

Project Location:

Rincon 81 Dehy. Pit; 3ft. Composite

Sampled by:

JL/ML DC

Date: Date:

7/20/94 Time:

7/20/94

11:05

Analyzed by: Type of Sample:

Soil

Laboratory Analysis

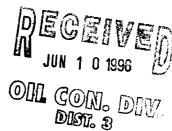
Laboratory		Total Petroleum
Identification	Sample Identification	Hydrocarbons
	Unocal Corporation Pit Assessments	
2045-1670	Rincon 81 Dehy. Pit; 3ft. Composite	20,147 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:

Unocal Corporation Oil & Gas Operations P.O. Box 760 Moab, Utah 84532 Telephone (801) 686-2236





June 3, 1996

State of New Mexico
Oil Conservation Division
Attn: Bill Olson
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: Vertical extent determination of Rincon Unit 81 MV dehydrator pit and Rincon 99A MV separator pit

The New Mexico Oil Conservation Division requested that Unocal determine vertical extent on two unlined pits located in the expanded vulnerable area of Unocal operated properties. The following is a report of the completion of that project, the results of the project and a risk assessment to close both unlined pits.

On May 7, 1996, Unocal determined vertical extent on the Rincon Unit 81 MV dehydrator pit and Rincon Unit 99A MV separator pit. The following report is submitted per NMOCD and BLM's request:

Rincon Unit 81 MV Dehydrator pit

- Unocal initially attempted to excavate and remediate soil in landfarm on 09/01/94. Soil was extremely sandy and pit was located next to a deep dry wash. Risk was to great to road and equipment. Pit was only excavated to approximately 4' deep. A double walled steel tank with leak detection was installed.
- 2. An effort was made to determine vertical extent at this time See Attachment 1: Power Augered to 33' depth and checked with PID. PID reading 2500 ppm.
- 3. An effort was made to determine pluming See Attachment 2: Power Augered three test holes. One test hole to a depth of 18', adjacent to existing pit, another test hole to a depth of 12' approximately 20' from existing pit and another test hole to a depth of 6' in the wash. PID indicated that pluming was not an issue. No ground water was encountered in any of these tests.
- 4. On May 7, 1996, Unocal drilled a test hole, using direct punch technology, in the same location where the unlined pit was located See Attachment 3 Sandstone rock was encountered at 50' depth. No ground water was encountered. PID readings varied at different depths. The lab analysis for TPH at 50' deep was 1405.5 mg/kg and BTEX was 219 ppm. It is estimated that groundwater depth at this location is 80' to 150' below the surface. This determination is made from a drilling log on a Meridian well S.J. 28-6 #53 drilling log for a cathodic protection anode See Attachment 4. This well is located approximately 1 mile from the Rincon Unit 81 along the same dry wash See Attachment 5. The ground water depth is estimated to be 100' to 150' deep at the Rincon Unit 81 because the Rincon Unit 81 well site is 100 to 200 feet higher in elevation than the Meridian well location.

Rincon Unit 99A MV Separator pit

 On 09/30/94 Unocal made their initial attempt to excavate and remediate contaminated soil from the Rincon Unit 99A separator/tank pit. Unocal excavated to a depth of 12' deep before the risk to the existing tank and separator forced them to cease excavation. A double walled steel tank with leak detection was installed.

- 2. On May 7, 1996 Unocal drilled a test hole, using direct punch technology, in the same location where the pit was located. See Attachment 6 Rock or hard shale was encountered at 20 'deep. No ground water was encountered. From 15' to 20' PID readings were minute. Actual lab tested TPH at 20' deep was 103.3 mg/kg. BTEX was not analyzed because of low PID readings.
- 3. No effort was made to determine pluming because of the extent of the depth, width and length of the original excavation. No pluming was evident at a 12' depth during initial excavation.

RISK ASSESSMENT

The same Risk Assessment methodology will be used as was used for all Rincon Unit pits that have received closure approvals. The criteria is as follows:

- 1. Actual impact to groundwater
- 2. Actual impact to surface water
- 3. TPH and BTEX of soil left un-excavated
- 4. Probability of contamination from un-excavated contaminated soil
- 5. Actual impact to groundwater expected from pluming of un-excavated contaminated soil
- Further excavation causing more damage to surrounding environment and oil field equipment than contamination is causing.

Rincon Unit 99A MV Separator Pit

Groundwater depth > 100' - See Attachment 7
@ 11' depth TPH = 12,050 mg/kg BTEX = 8.3 ppm
@ 15' depth PID = 60 ppm
Rock or hard shale encountered at 20' depth
No indication of pluming

PID readings are below regulation standard at the 15' depth. It is apparent that the majority of the contamination has been removed from this pit during the initial excavation. Coupled with the fact that goundwater is greater than 100' deep and separated from the remaining contamination by an impervious rock or shale layer, Unocal sees no impact to groundwater at this location and requests a pit closure approval from NMOCD and BLM for the Rincon Unit 99A MV separator pit.

Rincon Unit 81 MV Dehydrator Pit

Groundwater depths -? Drilling report on cathodic protection well on Meridian well approximately 1 mile from Rincon 81 indicates groundwater depth of 80'.

Unocal sampled at 33' and 50' depth

@ Excavation depth of 50', TPH = 1405.5 BTEX = 3.4 ppm

PID indicated diminishing value of units of organics as depths increased

Pluming was indicated but PID readings were below standard indicating no impact

@ 50' depth an impervious sandstone rock layer was encountered.

To excavate to a depth of 50' will require a very large hole in the ground

Because of the extremely sandy soil and low PID readings during the pluming test, it appears that the contamination went straight down. Ground water was not impacted due to the impervious layer of sandstone rock at 50' deep. Digging this pit at P&A will take careful consideration. Because of the extreme sandy conditions and the depth of the contamination, more damage could result from excavation

than what already exists. At this time Unocal sees no impact to groundwater at this location and requests a pit closure from NMOCD and BLM for the Rincon Unit 81 MV Dehydrator pit.

Should you require more information concerning either of these pits, please call me at 801-686-7604 or contact me at letterhead address.

Thank you.

Sincerely,
Mike Tabet

Union Oil Company of California, dba Unocal

Mike Tabet

Staff HES Coordinator

cc: Denny Foust vertext.doc

ON SITE TECHNOLOGIES, LTD.

TEST HOLE LOG and FIELD TESTING RESULTS

					3	
	PROJECT:_/	Phase II Pit	Rem. Unaci	<u>#/</u> JOB# <u>/</u>	1-//22 DATE: 10-14-4	14
	SITE LOCAT	ION: RIWCON	8/ TAN	K Dehyclient.		
	Pit Ver	tical extent	- Sampling	SAMPLE	ER: Jon Little	
	METHOD: 3" Power Auger to Depth 3" Hand Auger for Sumpli					
	TEST HOLE # LAB SAMPLE IDS 3" Hand Auger for				sumplin	
	DEPTH	SOIL TYPE	P.I.D. FIELD SCREENING	TPH EPA 418.1	OTHER REMARKS	
	24 TANK P.T Sout End	SAWDY Sill			Sample smalls Auch	
				 		
_	33' Dehy 7.7 = C	SAND VERY damp fill	>2500 units	75500 HM	T.D. @ 33 mark. exter of power susen	esion
-						
•						
	SITE SKETC	CH WEAT	HER	APP	PROX TEMP	
	SITE SKET	ch of KINCON	18/ Site has	s been Kewak	KECT SINCE PIT TEMMENI	ation
	,			·	\$.	
	To the Comp					
	The transfer of the transfer o					
	. /	Sample Me	A. Vie	E.	mr.	
	10	u d			70 70	
/	<u> </u>		105			
		(50	5) 325-8786	FAX (505) 327-1	1496	

3005 NORTHRIDGE DRIVE, SUITE F P.O.BOX 2606 FARMINGTON, NEW MEXICO 87499

ON SITE TECHNOLOGIES, LTD.

TEST HOLE LOG and FIELD TESTING RESULTS

PROJECT:	Unocal Pi-	Rem. PhA	<i>se</i>	DATE: 9-1-84
	_			
Dehy/	Compressore	Pit	SAMPLE	R:
			METHOD):
TEST HOLE	#	_LAB SAMPLE IC)s	
DEPTH	SOIL TYPE	P.I.D. FIELD SCREENING	TPH EPA 418.1	OTHER REMARKS
Test hole 1 1-12'	SANULY CLAY	149 units	NA	
•	Clay sand	+ 2500 units	N A	
•	sand.	+ 2500 UNITS	NA	
18' Tost hole q'2	SILTY SAND	4.4 anits	14/ r	
bothole 12'2	**	7. 2 units	NA	
testlile 2 15	••	15.7 anits	NA	
bestlike 18'	••	18.3 units	NA	
6'	Samda			
WASH #1	14-6	11.8 units	NA	
4'	SA woly	3.2 winds		
NASY # 5	3-3	3.2 units	NA	
SITE SKETCH WEATHER APPROX.TEMP.				
		dely		
		T Rose	20.	

(505) 325-8786 FAX (505) 327-1496

3005 NORTHRIDGE DRIVE, SUITE F PO BOX 2506 FARMING ON, NEW MEXICO 87499