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APPROVALS

YEAR(S):

1991

Wcl



STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

MATTHEW BACA
DEPUTY SECRETARY

December 2, 1991

Derin R. Warren
Environmental Representative
Meridian Oil Inc.
P.O. Box 4289
Farmington, NM. 87499-4289

Re: Federal A2E Well, E-25-30N-13W, Tank Removal

Dear Mr. Warren:

Your request for approval to cover the excavation on the referenced well site is hereby granted, providing that you install three pvc monitoring wells in the locations and depths that you and I discussed by telephone today. Inspection of the monitoring wells must be conducted by your field personnel on a regular basis with any occurrences of hydrocarbons reported to this office immediately. Excavation fill dirt must be clean of all hydrocarbons and remediation activities must continue on the contaminated soil that was removed to the plastic liner. As we discussed previously, total organic vapor must be below 100 ppm by field method and the sum of all detected aromatics must be less than 50 ppm, and benzene must be less than 10 ppm by laboratory method.

If you have any questions, please notify either me or Denny Foust with this office or Roger Anderson of the Santa Fe office at (505) 827-5884.

Your's truly,

A handwritten signature in cursive script, appearing to read "Ernie Busch".

Ernie Busch
Deputy Oil & Gas Inspector

xc: Roger Anderson
Denny Foust
Don Ellsworth-BLM Farmington


MERIDIAN OIL

November 25, 1991

RECEIVED
NOV 25 1991
OIL CON. DIV.
DIST. 3

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410
Attn: Ernie Busch

RE: Federal A2E Tank Removal

Dear Mr. Busch:

This correspondence is submitted to you as a record of the remediation activities conducted by Meridian Oil, Inc. at the Federal A2E well site following the discovery of a small liquid hydrocarbon release from an underground tank.

On October 18, 1991 a 210 bbl underground light crude oil collection tank was removed by C F & M Oilfield Services. A (four) 4-inch threaded plug near the bottom was observed leaking as the tank was removed. Free hydrocarbon liquids were found in the soil at the bottom of the excavation approximately 10 feet below ground level. An analysis of the liquids from the soil and of the normal production of the well are attached.

The Aztec office of the OCD was notified of the discovery on the same day. This notification followed confirmation by Robert Sweeny of the State Environmental Department that the tank at Federal A2E did not come under state UST removal guidelines and therefore clean up was to be administered by the OCD.

Guidelines for clean up of the hydrocarbon as we discussed October 22, 1991 and again at various times as the project progresses:

- 1) Remove contaminated soil to a depth of 10 feet below the source of the leak, or excavate to soil containing less than 100 ppm TPH.
- 2) Reduce the concentration of hydrocarbon in the soil excavated to less than 100 TPH by spreading to a depth of 6 inches on a liner for bioremediation/weathering or dispose of the soil at a permitted landfarming operation.
- 3) Verify the limits and stability of any hydrocarbon down gradient of the source.

Clean up according to these guidelines was completed November 12, 1991. Approximately 260 cubic yards of soil with varying concentrations of hydrocarbon were excavated, with approximately 150 cubic yards of soil spread to an average depth of 6 inches on a 12 mil. reinforced polypropylene liner. The remaining 110 cubic yards of soil is being stored on the liner for spreading at a later date or may be removed to a permitted landfarming operation.

As you witnessed November 12, soil samples were taken down gradient from the leak by a 12 inch diameter, truck mounted, power auger. Samples were collected at 2 feet vertical intervals until sandstone was struck at each of 14 test locations. The samples were measured on site by the headspace method for TPH at 100 to 130° F. A portable organic vapor monitor with a photo ionization detector calibrated to benzene was used. Results of these analyses are attached.

The absence of registered fresh water wells in this section has been confirmed by Charles Wohlenberg at the State Engineers Office.

Observations by yourself, OCD representative Denny Foust, and myself indicate that any residual hydrocarbon present has been contained and stabilized in a naturally occurring 9 - 10 foot thick layer of clay on top of a contiguous layer of sandstone, as confirmed by the results of the augured soil samples.

As per our discussions, we request that your office provide Meridian with written confirmation regarding NMOCD approval for closure of this excavation.

Please call if you have any questions or desire any additional information. Your prompt attention to this matter will be greatly appreciated.

Sincerely,



Derin R. Warren
Environmental Representative

Attachment (s)

xc: P.L. Matter
M.J. McErany

DRW/vka:161

EXCAVATION AND AUGER TEST LOCATIONS

MERIDIAN FED. A 2 E

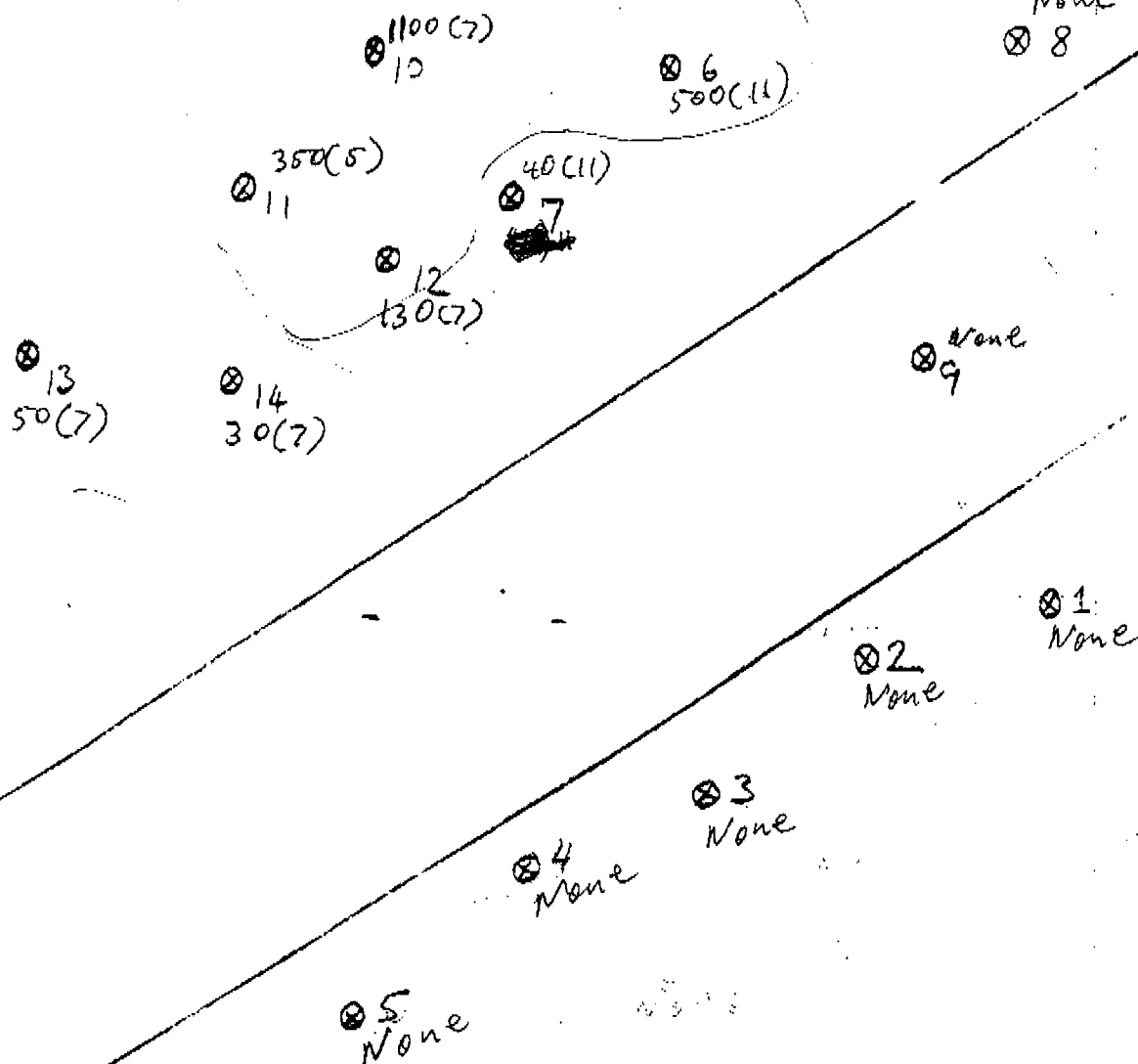
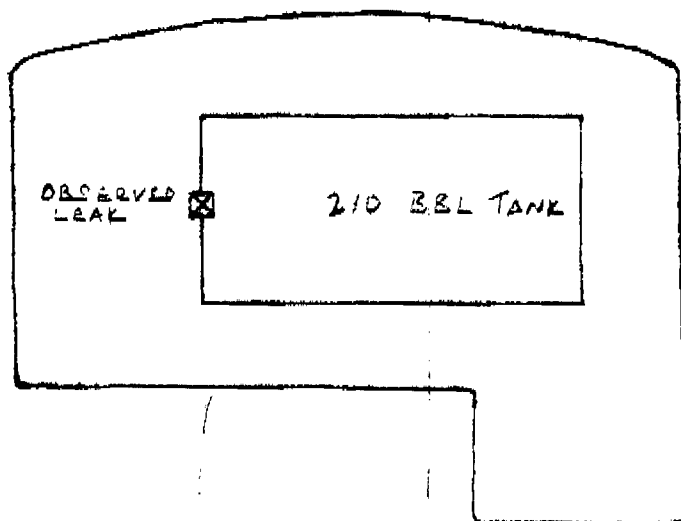
NORTH

RECEIVED

NOV 26 1991.

OIL CON. DIV.,
DIST. 3

APPARENT
GRADIENT



ORGANIC VAPOR CONCENTRATION IN SOIL,
HEADSPACE MEASUREMENTS IN PARTS PER MILLION

DEPTH IN FEET FROM SURFACE

LOCATION NUMBERS	DEPTH IN FEET FROM SURFACE										
	5	6	7	8	9	10	11	12	13	14	15
1	NONE DETECTED *										
2	NONE DETECTED										
3	NONE DETECTED										
4	NONE DETECTED										
5	NONE DETECTED										
6							500				
7							40				
8	NONE DETECTED										
9	NONE DETECTED										
10	500		1100		500		950		430		
11	350		300		200		50				
12			130		35						
13			50								
14			30								

* Detection Limit: 0.2 ppm Total Organic Vapor

ANACHEM, INC.
CRUDE OIL ANALYSIS
LAB NO: 31855
I.D.: FEDA2E

SAMPLE I.D.:	SPECIFIC GRAVITY:	DISTILLATION			Bottom	PARAFFINS:
		Initial	Mid-Point	Final		
LIQUIDS FROM PIT	0.7456 API Grav: 58.280	81° C -----	86° C 56.3 %	135° C 96.2 %	----- 3.8 %	----- 0.0 %
SEPARATOR	0.7593 API Grav: 54.856	110° C -----	147° C 70.8 %	202° C 95.1 %	----- 4.9 %	----- 0.0 %
METHOD:	ASTM D1298	ASTM E133 / D850				COLD ACETONE INSOLUABLE



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1000 RIO BRAZOS ROAD
ALTEC, NEW MEXICO 87410
(505) 334-6178

FAX TRANSMITTAL SHEET, DATE: 12-3-91

TO: ROGER ANDERSON

FROM: Ernie Busch

FAX: 505-334-6170

COMMENTS: The monitoring well locations
will be sites #12, 13 & 14

NO.OF PAGES INCLUDING COVER: 7

CHARGES: _____. REMIT TO LETTERHEAD
ADDRESS: _____