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# APPROVALS

YEAR(S):

12/10/1996



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

December 10, 1996

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. P-269-269-225**

Mr. B.D. Shaw  
Amoco Production Company  
200 Amoco Court  
Farmington, New Mexico 87401

**RE: FINAL SAN JUAN BASIN PIT CLOSURE REPORTS**

Dear Mr. Shaw:

The New Mexico Oil Conservation Division (OCD) has completed a review of Amoco Production Company's (Amoco) September 19, 1994 "AMOCO PRODUCTION COMPANY PIT CLOSURE VERIFICATIONS" which were submitted on behalf of Amoco by their consultant Blagg Engineering, Inc. This document contains "PIT REMEDIATION AND CLOSURE REPORTS" for 37 unlined pits in the San Juan Basin of Northwestern New Mexico.

The OCD's review of the above referenced document is addressed below:

A. The pit closure/soil remediation activities conducted at the sites listed below are **approved**.

1. Bolack B LS #5 (Separator pit)	Unit J, Sec. 33, T28N, R08W.
2. Elliott GC A#1 (Blow pit I)	Unit D, Sec. 14, T29N, R09W.
3. Federal F#1 (Separator pit)	Unit H, Sec. 16, T27N, R10W.
4. Hancock GC #1 (Compressor pit)	Unit L, Sec. 15, T30N, R12W.
5. Hancock GC #1 (Separator pit)	Unit L, Sec. 15, T30N, R12W.
6. Hargrave A#3 (Blow pit)	Unit B, Sec. 16, T27N, R10W.
7. Hargrave A#3 (Drip pit)	Unit B, Sec. 16, T27N, R10W.
8. R.P. Hargrave K#1 (Blow pit)	Unit M, Sec. 16, T27N, R10W.
9. R.P. Hargrave K#1 (Separator pit)	Unit M, Sec. 16, T27N, R10W.
10. R.P. Hargrave K#1E (Blow pit)	Unit C, Sec. 16, T27N, R10W.
11. R.P. Hargrave K#1E (Separator pit)	Unit C, Sec. 16, T27N, R10W.
12. Jones #5E (Blow pit)	Unit I, Sec. 35, T29N, R08W.
13. Jones A LS #1A (Separator pit)	Unit J, Sec. 10, T28N, R08W.
14. P.O. Pipkin #3E (Blow pit)	Unit I, Sec. 17, T27N, R10W.
15. P.O. Pipkin #4E (Blow pit)	Unit C, Sec. 17, T27N, R10W.
16. P.O. Pipkin #4E (Separator pit)	Unit C, Sec. 17, T27N, R10W.

Please be advised that OCD approval does not relieve Amoco of liability if remaining contaminants are found to pose a future threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve Amoco of responsibility for compliance with any other federal, state or local laws and/or regulations.

B. The pit remedial activities conducted at the sites listed below are satisfactory. However, according to the reports, onsite landfarming and/or composting actions are still continuing at the sites. Subsequently, the OCD cannot issue final closure approval at this time and approval of closure actions at these sites is **denied**. Please resubmit final closure reports for these sites upon completion of the landfarming and/or composting activities. The final reports will include the results of the soil remediation levels achieved, the laboratory analyses and associated quality assurance/quality control data and the disposition of the remediated soils.

1. A.L. Elliott C#1 (Blow pit) Unit B, Sec. 15, T29N, R09W.
2. A.L. Elliott C#1 (Separator pit) Unit B, Sec. 15, T29N, R09W.
3. A.L. Elliott D#9 (Blow pit) Unit N, Sec. 11, T29N, R09W.
4. A.L. Elliott E#1 (Blow pit) Unit D, Sec. 14, T29N, R09W.
5. Elliott GC A#1 (Blow pit) Unit D, Sec. 14, T29N, R09W.
6. R.P. Hargrave F#3 (Blow pit) Unit E, Sec. 16, T27N, R10W.
7. Schwerdtfeger A#3E (Blow pit) Unit L, Sec. 06, T27N, R08W.
8. Schwerdtfeger A#3E (Production pit) Unit L, Sec. 06, T27N, R08W.
9. Schwerdtfeger A#3E (Separator pit) Unit L, Sec. 06, T27N, R08W.
10. Schwerdtfeger A#3E (Dehy pit) Unit L, Sec. 06, T27N, R08W.
11. Schwerdtfeger A LS #22 (Separator) Unit D, Sec. 06, T27N, R08W.
12. Schwerdtfeger A LS #10 (Separator) Unit M, Sec. 31, T28N, R08W.

C. The final pit remedial contaminant levels at the sites listed below are in excess of the OCD's recommended remediation levels. Consequently, the OCD cannot issue final closure approval and approval of closure actions at these sites is **denied**. The OCD requests that Amoco address the extent of the remaining contamination at these sites. The OCD will reconsider issuing closure approval upon resubmission of pit closure forms which address the remaining extent of contamination at the sites. The resubmitted forms should include the completed form and all pertinent information related to the extent of contamination, the results of the soil remediation levels achieved, the results of the soil remediation levels achieved, the laboratory analyses and associated quality assurance/quality control data and the disposition of the remediated soils.

1. A.L. Elliott C#4 (Separator pit) Unit A, Sec. 15, T29N, R09W.
2. Jones #5E (Tank pit) Unit I, Sec. 35, T29N, R08W.
3. P.O. Pipkin #3 (Blow pit) Unit A, Sec. 17, T27N, R10W.
4. P.O. Pipkin #3 (Separator pit) Unit A, Sec. 17, T27N, R10W.
5. P.O. Pipkin #3E (Dehy pit) Unit I, Sec. 17, T27N, R10W.
6. P.O. Pipkin #3E (Separator pit) Unit I, Sec. 17, T27N, R10W.

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D. Ground water at the sites listed below is contaminated with petroleum related constituents in excess of New Mexico Water Quality Control Commission ground water standards and the extent of ground water contamination at the sites has not been determined. Therefore, approval of these pit closure forms is **denied**. The OCD requests that Amoco investigate the extent of contamination and, if necessary, remediate contaminated ground water pursuant to Amoco's November 21, 1995 ground water investigation/remediation work plan which was approved by the OCD on November 29, 1995.

- |                                    |                              |
|------------------------------------|------------------------------|
| 1. Jennapah GC A#1 (Separator pit) | Unit H, Sec. 36, T28N, R09W. |
| 2. Jennapah GC A#1 (Tank pit)      | Unit H, Sec. 36, T28N, R09W. |
| 3. Price #3 (Separator pit)        | Unit A, Sec. 15, T28N, R08W. |

To simplify the approval process for both Amoco and OCD, the OCD requests that Amoco submit all future pit closure reports only upon completion of all closure activities including onsite landfarming or composting of contaminated soils. The reports should include the completed form and all pertinent information related to the extent of contamination, the results of the soil remediation levels in the pits and landfarms, all laboratory analyses and associated quality assurance/quality control data and the disposition of all remediated soils.

If you have any questions, please call me at (505) 827-7154.

Sincerely,



William C. Olson  
Hydrogeologist  
Environmental Bureau

xc: OCD Aztec District Office  
Bill Liess, BLM Farmington District Office  
Nelson Velez, Blagg Engineering, Inc.  
Charmaine Tso, Navajo Nation EPA



Date Remediation Started: \_\_\_\_\_ Date Completed: 9/7/94

Remediation Method: Excavation  Approx. cubic yards 3060  
(Check all appropriate actions) Landfarmed  Insitu Bioremediation \_\_\_\_\_  
Other \_\_\_\_\_

Remediation Location: Onsite  offsite \_\_\_\_\_  
(i.e. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: \_\_\_\_\_  
Excavation of CONTAMINATED SOILS - OPEN GROUNDWATER TO ATMOSPHERE.  
INSTALL GROUNDWATER MONITORING WELLS.

Ground Water Encountered: No \_\_\_\_\_ Yes  Depth 27'

Final Pit: Sample location see Attached Documents

Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)  
Sample depth 27'  
Sample date 9-7-94 Sample time \_\_\_\_\_

Sample Results  
Benzene (ppm) 30.6 PPB  
Total BTEX (ppm) 1400 PPB  
Field headspace (ppm) \_\_\_\_\_  
TPH \_\_\_\_\_

Ground Water Sample: Yes  No \_\_\_\_\_ (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 9/13/94  
SIGNATURE B. Shaw PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator





**ON SITE  
TECHNOLOGIES, LTD.**

**AROMATIC VOLATILE ORGANICS**

Attn: *Nelson Velez*  
 Company: *Blagg Engineering*  
 Address: *P.O. Box 87*  
 City, State: *Bloomfield, NM 87413*

Date: *8/24/94*  
 Lab ID: *1835*  
 Sample ID: *2640*  
 Job No. *2-1000*

Project Name: *Jennapah A1*  
 Project Location: *PW 1 @ GW (22') - Production Pit*  
 Sampled by: *NV* Date: *8/23/94* Time: *10:40*  
 Analyzed by: *DLA* Date: *8/24/94*  
 Sample Matrix: *Liquid*

**Aromatic Volatile Organics**

<i>Component</i>	<i>Measured Concentration ug/L</i>	<i>Detection Limit Concentration ug/L</i>
<i>Benzene</i>	<i>235</i>	<i>0.2</i>
<i>Toluene</i>	<i>2,638</i>	<i>0.2</i>
<i>Ethylbenzene</i>	<i>38</i>	<i>0.2</i>
<i>m,p-Xylene</i>	<i>3,316</i>	<i>0.2</i>
<i>o-Xylene</i>	<i>790</i>	<i>0.2</i>
	<i>TOTAL 7,017 ug/L</i>	

*ND - Not Detectable*

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

Approved by: *JV*  
 Date: *8/24/94*



**ON SITE  
TECHNOLOGIES, LTD.**

**AROMATIC VOLATILE ORGANICS**

Attn: *R. E. O'Neill*  
 Company: *Blagg Engineering*  
 Address: *P.O. Box 87*  
 City, State: *Bloomfield, NM 87413*

Date: *9/7/94*  
 Lab ID: *2060*  
 Sample ID: *2894*  
 Job No. *2-1000*

Project Name: *Jennapah A #1*  
 Project Location: *Production Pit @ G.W.*  
 Sampled by: *REO* Date: *9/6/94* Time: *11:45*  
 Analyzed by: *DLA* Date: *9/7/94*  
 Sample Matrix: *Liquid*

**Aromatic Volatile Organics**

<i>Component</i>	<i>Measured Concentration ug/L</i>	<i>Detection Limit Concentration ug/L</i>
<i>Benzene</i>	<i>30.6</i>	<i>0.2</i>
<i>Toluene</i>	<i>6.3</i>	<i>0.2</i>
<i>Ethylbenzene</i>	<i>50.6</i>	<i>0.2</i>
<i>m,p-Xylene</i>	<i>1,082</i>	<i>0.2</i>
<i>o-Xylene</i>	<i>231</i>	<i>0.2</i>
	<i>TOTAL 1,400 ug/L</i>	

*ND - Not Detectable*

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

Approved by: *[Signature]*  
 Date: *9/7/94*