Abd compressor - OK C4513
Abd blow pit - OK
Add Dehy - risk bedrock
Sep - risk - bedrock

District I
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District II
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

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

Denied 1/16/96 due to LT

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name LEFKOVITZ GC B #1E

Location: Unit or Qtr/Qtr Sec P Sec 25 T 29 N R 10 W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other ABAN. COMPRESSOR

Land Type: BLM X, State ___, Fee ___, Other COM. AGMT.

Pit Location: (Attach diagram)
Pit dimensions: length 15', width 8', depth 11'
Reference: wellhead X, other ___
Footage from reference: 80'
Direction from reference: 90 Degrees ___ East North X of X West South ___

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)	10
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)	0
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)	0
	RANKING SCORE (TOTAL POINTS):	10

Date Remediation Started: _____ **Date Completed:** 4/4/94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 49

Landfarmed X Insitu Bioremediation ___

Other _____

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

General Description Of Remedial Action: Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 2.7 NV

TPH ND

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 4/25/94

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

RESULTS TO Bob McCoy 4-11-94 TPH = ND

CLOSE

ALSO: LEFTHOUTZ C1

ENVIROTECH Inc.

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

PIT NO: C4513
C.D.C NO: 3478

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140
PAGE No: 1 of 1

LOCATION: LEASE: LEFTHOUTZ GC "B" WELL #1E QD SE/4 SE/4 (P)
SEC: 25 TWP: 29N RNG: 10W BM: NM CNTY: SJ ST: NM PIT: Comp. Abandoned
CONTRACTOR: PAUL VELASQUEZ
EQUIPMENT USED: EXCAVATOR

DATE STARTED: 4-4-94
DATE FINISHED: 4-4-94
ENVIRONMENTAL SPECIALIST: RCO

SOIL REMEDIATION: QUANTITY: PIT ~ 8' x 15' x 11' DEEP
DISPOSAL FACILITY: ON SITE
LAND USE: RANGE
SURFACE CONDITIONS: EXCAVATED PRIOR TO ARRIVAL

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 80 FEET WEST FROM WELLHEAD.
PIT APPEARS TO BE ABANDONED - NO COMPRESSOR ON SITE.
SOILS: SILTY SAND W. ORGANICS. - NO ODOR OR STAINING.

ENVIROTECH ASSESSMENT DONE 9-11-92 INDICATED NO CONTAMINATION TO 6'.

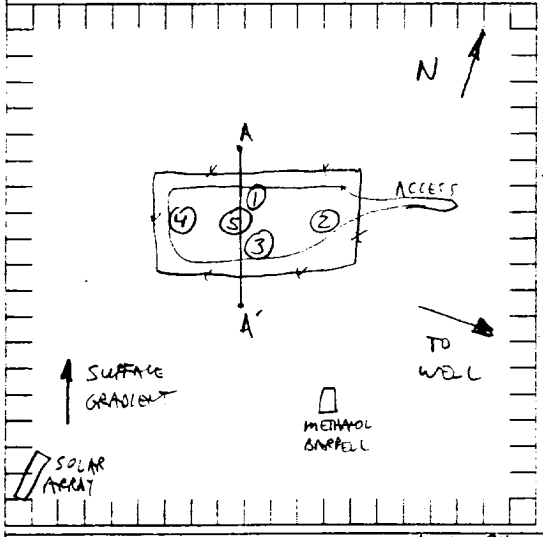
FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

DEPTH TO GROUNDWATER: > 50'
NEAREST WATER COURSE: > 1000'
NEAREST SURFACE WATER: > 1000'
NMOCD RANKING SCORE: 10
NMOCD TPH CLOSURE STD: 1000 PPM TPH

SCALE
0 5 10 FEET

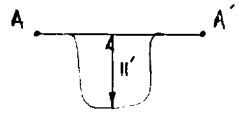
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
(1) WS@8'	3.9
(2) ES@6'	3.1
(3) SS@2'	3.1
(4) WS@6'	2.7
(5) C@12'	2.7
	LAB
(5)	418.1

PIT PROFILE



TRAVEL NOTES: CALLOUT: 4-1-94 ONSITE: 4-4-94 0930

N

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	5 CB @ 12'	Date Sampled:	04-04-94
Laboratory Number:	7146	Date Received:	04-04-94
Sample Matrix:	Soil	Date Analyzed:	04-08-94
Preservative:	Cool	Date Reported:	04-08-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	ND	20.0

ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Lefkovitz GC "B" #1E Compr. Pit C4513

Analyst

Review

C4509

District I
P.O. Box 1980, Hobbs, NM
District II
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

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name LEFHOULT 2 6C B # 1E

Location: Unit or Qtr/Qtr Sec P Sec 25 T 29 N R 10 W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other BLOW

Land Type: BLM X, State ___, Fee ___, Other COM AGMT:

Pit Location: (Attach diagram)
Pit dimensions: length 50', width 50', depth 22'
Reference: wellhead X, other ___
Footage from reference: 120'
Direction from reference: 0 Degrees ___ East North X of ___ West South ___

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)	10
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)	0
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)	0
	RANKING SCORE (TOTAL POINTS):	10

Date Remediation Started: _____ **Date Completed:** 4/4/94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 2037

Landfarmed X Insitu Bioremediation ___

Other _____

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

General Description Of Remedial Action: _____

Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit:
Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

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 4/25/94

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

BTEX: PASSED RESULTS TO BOB McCOY 4-11-94 R Eo

TPH = 212 CLOSE

ALSO: LEFHOUITZ C1

ENVIROTECH Inc.

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

PIT NO: C4509
C.O.C. NO: 3479

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140
PAGE No: 1 of 1

LOCATION: LEASE LEFHOUITZ GC "B" WELL # 1E QD. SE/4 SE/4 (P)
SEC: 25 TWP: 29 N RNG: 10 W BM: NM CNTY: SJ ST NM PIT BLOW
CONTRACTOR: PAUL VELASQUEZ
EQUIPMENT USED: EXCAVATOR

DATE STARTED: 4-4-94
DATE FINISHED: 4-4-94
ENVIRONMENTAL SPECIALIST: R Eo

SOIL REMEDIATION: QUANTITY: PIT ~ 50' x 50' x 22' DEEP
DISPOSAL FACILITY: ON SITE
LAND USE: RANGE
SURFACE CONDITIONS: EXCAVATED PRIOR TO APRIL

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 120 FEET NORTH FROM WELLHEAD.

SAMPLES 1-5: MOIST, BROWN, SILTY SAND - NO ODOR OR STAINING.

" " 6: MOIST, GRAY, SILTY SAND - HYDROCARBON ODOR & STAIN.

BOTTOM SAMPLE QUESTIONABLE IF ON UNDISTURBED BOTTOM - SOME SLOUGHING INTO HOLE.

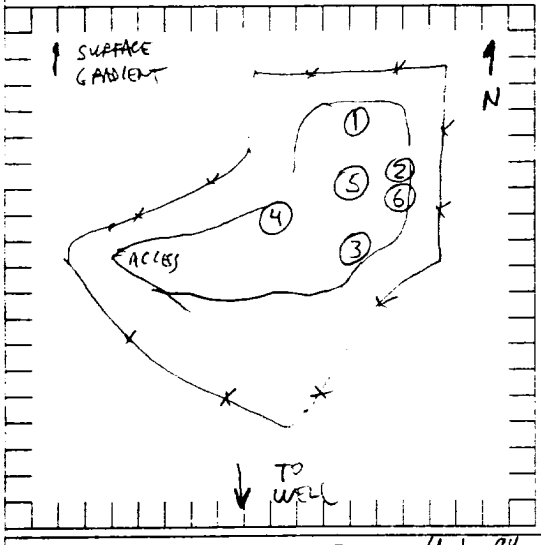
FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm

DEPTH TO GROUNDWATER: >50'
NEAREST WATER SOURCE: >1000'
NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 10
NMOCD TPH CLOSURE STD: 1000 PPM TPH

SCALE
0 10 20 FEET

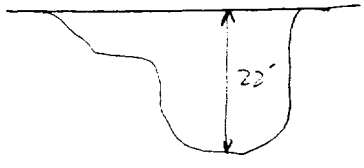
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
① NS@15'	3.1
② ES@15'	2.7
③ SS@12'	2.3
④ WS@10'	2.3
⑤ B@23'	406
⑥ ES@20'	760
	LAB
⑥	418.1
	BTEX

PIT PROFILE



TRAVEL NOTES CALLOUT: 4-1-94 ONSITE: 4-4-94 1020

N

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PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	6 ES @ 20'	Date Reported:	04-05-94
Laboratory Number:	7147	Date Sampled:	04-04-94
Sample Matrix:	Soil	Date Received:	04-04-94
Preservative:	Cool	Date Extracted:	04-04-94
Condition:	Cool & Intact	Date Analyzed:	04-04-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	19.7
Toluene	462	39.4
Ethylbenzene	68	19.7
p,m-Xylene	2,310	19.7
o-Xylene	537	19.7

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	112 %
	Bromofluorobenzene	111 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Lefkovitz GC "B" #1E Blow Pit C4509

Tony Tristano
Analyst

Review

ENVIROTECH LABS

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	6 ES @ 20'	Date Sampled:	04-04-94
Laboratory Number:	7147	Date Received:	04-04-94
Sample Matrix:	Soil	Date Analyzed:	04-08-94
Preservative:	Cool	Date Reported:	04-08-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	212	20.0

ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Lefkovitz GC "B" #1E Blow Pit C4509

Tony Tristano
Analyst

David D Young
Review

3479

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS	C4.509
AMOCO # 92140	LEFKOVITZ GC "B" #1E BLOW PIT		

Sampler: (Signature)	Chain of Custody Tape No.
R. E. O'Neill	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	418.1	BTEX					Remarks
(6) ES @ 20'	4-4-94	1100	7147	SOIL	1	✓	✓					RUSH

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
R. E. O'Neill	4-4-94	1911	Tony Tristano	4/4/94	1411
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

san juan repro Form 578-81

A 000-1

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P O Box 1980, Hobbs, NM
District II
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

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

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) -326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: LEFKOVITZ G.C. "B" #1E
Well Name

Location: Unit or Qtr/Qtr Sec P Sec 25 T 29N R 10W County SAN. JUAN

Pit Type: Separator ___ Dehydrator X Other ___

Land Type: BLM X, State ___, Fee ___, Other COM. AGMT.

Pit Location: (Attach diagram)
Pit dimensions: length 20', width 20', depth 20'
Reference: wellhead X, other ___
Footage from reference: 100
Direction from reference: 60 Degrees X East North ___ of ___ West South X

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)	0
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)	0
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)	0
	RANKING SCORE (TOTAL POINTS):	0

Date Remediation Started: _____ Date Completed: 5-13-94

Remediation Method: (Check all appropriate sections)
Excavation X Approx. cubic yards _____
Landfarmed X Insitu Bioremediation ___
Other Compost

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

General Description Of Remedial Action:
Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit:
Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents
Sample depth _____
Sample date 5-13-94 Sample time _____

Sample Results

Benzene(ppm) _____
Total BTEX(ppm) _____
Field headspace(ppm) 558
TPH 1100

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 5/25/94

SIGNATURE B J Shaw PRINTED NAME AND TITLE Buddy D. Shaw, Env. Tech.

P 20

RESULTS TO BOB McCOY 5/13/94 REE

CLIENT: AMOCO

ENVIROTECH Inc.

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

PIT NO: A0007 NEW

C.O.C. NO: ——

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140
PAGE No: 1 of 1

LOCATION: LEASE: LEFHOLTZ GC WELL #: 1E PIT: DEHY (2)
SE/4 SE/4 UNIT: P SEC: 25 TWP: 29N RNG: 10W BM: NM CNTY: S.J. ST: NM

DATE STARTED: 5-13-94
DATE FINISHED: ——

CONTRACTOR: PAUL VELASQUEZ

ENVIRONMENTAL SPECIALIST: REE

SOIL REMEDIATION: EXCAVATION APPROX. 20 FT. x 20 FT. x 20 FT. DEEP.

DISPOSAL FACILITY: ON SITE - COMPOST

LAND USE: RANGE - FEDERAL LEASE # SW-000250

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 100 FEET S60°E FROM WELLHEAD.

DEPTH TO GROUNDWATER: ~~250~~ 3100' NW NEAREST SURFACE WATER: >1000' NEAREST WATER SOURCE: >1000'

NMOCD RANKING SCORE: ~~10~~ 0 NMOCD TPH CLOSURE STD: ~~1000~~ 5000 NW PPM

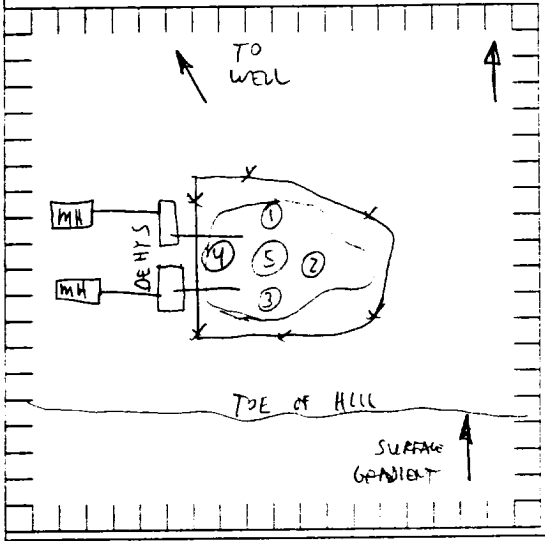
SOIL AND EXCAVATION DESCRIPTION: MIXED BROWN/GRAY SILTY SAND - SANDSTONE BOTTOM. PIT STILL IN USE. SOME ODOR AND STAINING APPARENT.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
CBC@20'	6AC#494	10.00	20.00	1	528	1056

SCALE
0 10 20 FEET

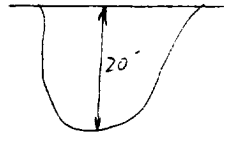
PIT PERIMETER



OVM RESULTS

	SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	NSe15'	461
2	ESe15'	103
3	SSe15'	535
4	WSe15'	527
5	CBe20'	558

PIT PROFILE



TRAVEL NOTES: CALLOUT: 5-13-94 ONSITE: 5-13-94 1300

Well Name:	**Lefkovitz GC B #1E**
Well Site location:	Unit P, Sec. 25, T29N, R10W
Pit Type:	Dehydrator Pit
Producing Formation:	Basin Dakota
Pit Category:	Non Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 20 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 20 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.

2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.

3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.

4. Well site located within the **non-vulnerable area** and is approximately 0.02 miles southwest of the nearest vulnerable area boundary (San Juan River).

(Refer to Blanco Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), provisional edition 1985, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the subsurface lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

ENVIROTECH LABS

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FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	93163
Sample ID:	CB @ 20'	Date Analyzed:	5-13-94
Project Location:	Lefkovitz GC B 1E	Date Reported:	5-16-94
Laboratory Number:	GAC0494	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**1100**	**10**

ND = Not Detectable at stated detection limits.

QA/QC:

QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
11,000	12,600	14

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Dehydrator Pit A0007

R. E. O'Neill
Analyst

Review

3478

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS	C4513
AMOCO # 92140	COMPR. PIT LEFHOLITZ GC "B" # 1E		

Sampler: (Signature)	Chain of Custody Tape No.
R. E. O'Neill	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	418.1						Remarks
(5) CB @ 12'	4-4-94	1000	7146	SOIL	1	V						RUSH

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
R. E. O'Neill	4-4-94	1409	Tony Tristano	4/4/94	1409
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

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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

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name LEF HOULTZ GC B # 1E

Location: Unit or Qtr/Qtr Sec P Sec 25 T 29N R 10W County SAN JUAN

Pit Type: Separator X Dehydrator ___ Other ___

Land Type: BLM X, State ___, Fee ___, Other COM. AGMT.

Pit Location: (Attach diagram)
Pit dimensions: length 20', width 12', depth 16'
Reference: wellhead X, other ___
Footage from reference: 160'
Direction from reference: 90 Degrees X East North X of ___ West South ___

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)	10
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)	0
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)	0
	RANKING SCORE (TOTAL POINTS):	10

Date Remediation Started: _____ **Date Completed:** 4/4/94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 142

Landfarmed X Insitu Bioremediation ___

Other _____

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

General Description Of Remedial Action: _____

Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit:
Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

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 4/25/94

SIGNATURE BJ Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

F20

BTEX : PASS RESULTS TO BOB MCCOY 4-11-94

TPH = 151 CLOSE

ALSO: LEFCOVITZ C1

ENVIROTECH Inc.

5796 US HWY 64, FARMINGTON, NM 87401
(505) 632-0615

PIT NO: C4508
COST ID: 3480

FIELD REPORT: CLOSURE VERIFICATION

JOB #: 92140
PAGE NO: 1 of 1

LOCATION: LEASE: LEFKOVITZ GC WELL #: 1E "B" QD: SE/4 SE/4 (P)
SEC: 25 TWP: 29N RNG: 10W BM: NM CNTY: SJ ST: NM PIT: SEP
CONTRACTOR: PAUL VELASQUEZ
EQUIPMENT USED: EXCAVATOR

DATE STARTED: 4-9-94
DATE FINISHED: 4-9-94
ENVIRONMENTAL SPECIALIST: REO

SOIL REMEDIATION: QUANTITY: PIT ~ 12' x 20' x 16' DEEP
DISPOSAL FACILITY: ON SITE
LAND USE: RANGE
SURFACE CONDITIONS: EXCAVATED PRIOR TO ARRIVAL

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 160 FEET EAST FROM WELLHEAD.
DOUBLE COMPLETION WELL - 2 SEPARATORS.
UNABLE TO OBTAIN BOTTOM SAMPLE DUE TO SIDEWALL SLOUGHING
PIT WALLS CONSIST OF A SOFT → HARD GRAY/BROWN SHALE.
EXCAVATION LIMITED DUE TO CLIFF + EQUIPMENT.

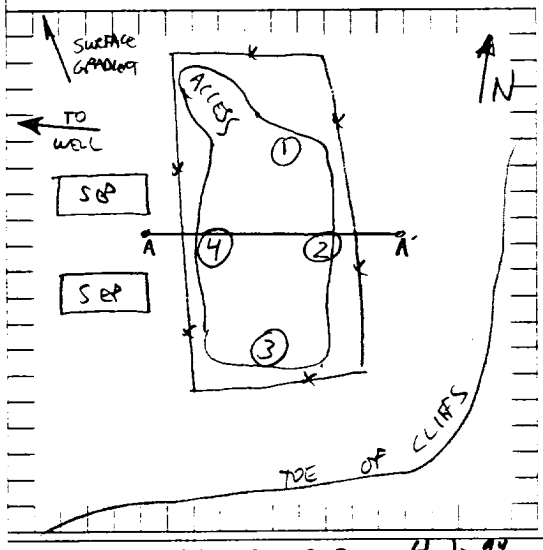
FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm

DEPTH TO GROUNDWATER: >50'
NEAREST WATER COURSE: >1000'
NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 10
NMOCD TPH CLOSURE STD: 1000ppm TPH

SCALE
0 5 10 FEET

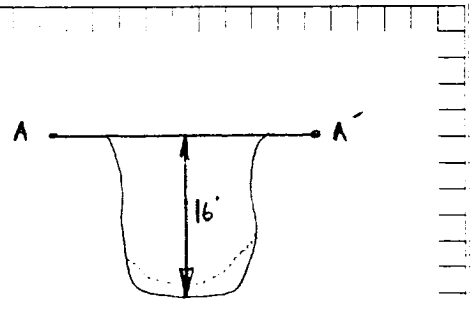
PIT PERIMETER



OVM RESULTS

SAMPLE I.D.	FIELD HEADSPACE PID (ppm)
(1) NS@8'	981
(2) ES@12'	695
(3) SS@11'	921
(4) WS@11'	652
	LAB
(1)	418.1 BTEX

PIT PROFILE



TRAVEL NOTES: CALLOUT: 4-1-94 ONSITE: 4-9-94 0830

N

Well Name:	**Lefkovitz GC B #1E**
Well Site location:	Unit P, Sec. 25, T29N, R10W
Pit Type:	Separator Pit
Producing Formation:	Basin Dakota
Pit Category:	Non Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 16 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow shale bedrock located 16 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale bedrock.

2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.

3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.

4. Well site located within the **non-vulnerable area** and is approximately 0.02 miles southwest of the nearest vulnerable area boundary (San Juan River).

(Refer to Blanco Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), provisional edition 1985, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the subsurface lateral impact from the earthen pit is very limited and that the shale bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	1 NS @ 8'	Date Reported:	04-05-94
Laboratory Number:	7148	Date Sampled:	04-04-94
Sample Matrix:	Soil	Date Received:	04-04-94
Preservative:	Cool	Date Extracted:	04-04-94
Condition:	Cool & Intact	Date Analyzed:	04-05-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	19.7
Toluene	414	39.4
Ethylbenzene	281	19.7
p,m-Xylene	8,100	19.7
o-Xylene	1,730	19.7

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	90 %
Bromofluorobenzene	119 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Lefkovitz GC "B" #1E Sep Pit C4508

Tony Tristano
Analyst

David D Young
Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	1 NS @ 8'	Date Sampled:	04-04-94
Laboratory Number:	7148	Date Received:	04-04-94
Sample Matrix:	Soil	Date Analyzed:	04-08-94
Preservative:	Cool	Date Reported:	04-08-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	151	20.0

ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Lefkovitz GC "B" #1E Sep Pit C4508

Tony Tristano
Analyst

Review

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS	C4.508
AMOCO # 92140	LEFTOVITZ GC "B" #1E SEP. PIT		

Sampler: (Signature)	Chain of Custody Tape No.
K. E. O'Neill	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	418.1	BTEX					Remarks
① NS @ 8'	4-4-94	0900	7148	SOIL	1	✓	✓					RUSH

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
K. E. O'Neill	4-4-94	1414	Tony Tristano	4/4/94	1414
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: 80098
C.O.C. NO: _____

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: LEFROUIT 2 GC WELL #: 8 1E PITS: -
QUAD/UNIT: P SEC: 25 TWP: 29N RNG: 10W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SE/4 SE/4 CONTRACTOR: P. VELASQUEZ

DATE STARTED: 9/21/94
DATE FINISHED: _____
ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION:

REMEDIATION SYSTEM: COMPOSTED
APPROX. CUBIC YARDAGE: 580
LAND USE: RANGE
LEASE: SF - 076958 SW - 000250

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: 1000 PPM

COMPOSITE - DK. YELL. BROWN SAND, NON-COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, WARM.

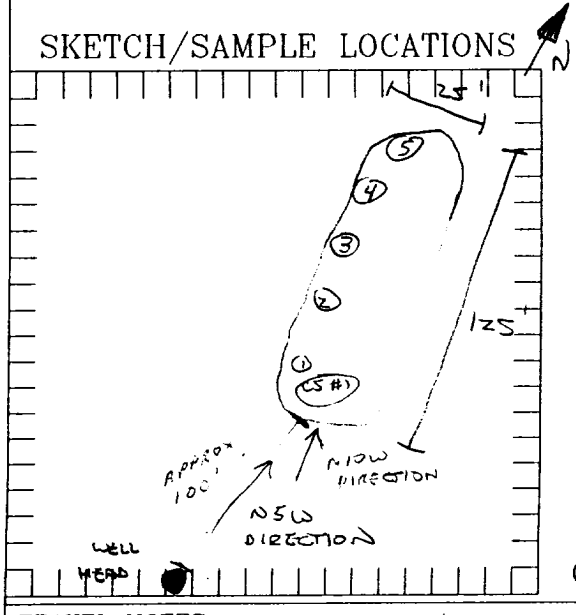
CS # 1 - BLACK SAND, NON-COHESIVE, SLIGHTLY MOIST, LOOSE TO LOOSE, WARM.

TPH (418.1) RESULTS MAY CONTAIN CONCENTRATIONS OF ORGANIC MATERIAL FROM COMPOST MATERIAL, THEREFORE VALUES FOR HYDROCARBON CONTENT PROBABLY ARE LESS THAN 100 PPM FOR CLOSURE OF THE SOIL SAMPLED.

FIELD 418.1 CALCULATIONS

	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0805	COMPOSITE	TPH-1151	5	20	1:1	75	300
0820	CS #1	TPH-1152	5	20	1:1	32	128

SKETCH/SAMPLE LOCATIONS



SCALE
0 FT

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
CS-1	48.9

LAB SAMPLES

SAMPLE ID	ANALYSIS

TRAVEL NOTES: CALLOUT: 9/20/94 ONSITE: 9/21/94

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	
Sample ID:	Composite	Date Analyzed:	9-21-94
Project Location:	Lefkovitz GC B 1 E	Date Reported:	9-21-94
Laboratory Number:	TPH-1151	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**300**	**20**

ND = Not Detectable at stated detection limits.

QA/QC:

QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
372	416	11.17

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Compost Stockpile - B0098

Analyst

Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	
Sample ID:	CS # 1	Date Analyzed:	9-21-94
Project Location:	Lefkovitz GC B 1 E	Date Reported:	9-21-94
Laboratory Number:	TPH-1152	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**130**	**20**

ND = Not Detectable at stated detection limits.

QA/QC:

QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
372	416	11.17

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Compost Stockpile – B0098

Analyst

Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:	**********		
Client:	Amoco	Project #:	
Sample ID:	Composite	Date Analyzed:	9-21-94
Project Location:	Lefkovitz GC B 1 E	Date Reported:	9-21-94
Laboratory Number:	TPH-1151	Sample Matrix:	Soil

Sample Weight:	5.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	1	(unitless)
TPH Reading:	75	mg/kg

TPH Result:	300.0	mg/kg
Reported TPH Result:	300	mg/kg
Actual Detection Limit:	20.0	mg/kg
Reported Detection Limit:	20	mg/kg

QA/QC:

Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
372	416	11.17

Comments: **********Max Characters**********

Comments: Compost Stockpile – B0098

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:	**********		
Client:	Amoco	Project #:	
Sample ID:	CS # 1	Date Analyzed:	9-21-94
Project Location:	Lefkovitz GC B 1 E	Date Reported:	9-21-94
Laboratory Number:	TPH-1152	Sample Matrix:	Soil

Sample Weight:	5.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	1	(unitless)
TPH Reading:	32	mg/kg

TPH Result:	128.0	mg/kg
Reported TPH Result:	130	mg/kg
Actual Detection Limit:	20.0	mg/kg
Reported Detection Limit:	20	mg/kg

QA/QC:

Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
372	416	11.17

Comments: **********Max Characters**********

Comments: Compost Stockpile – B0098

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: A0007
C.O.C. NO: 5778

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: LEFROVITZ GC B WELL #: 1E PITS: comp, DEHY, BWW, SEP.
QUAD/UNIT: P SEC: 25 TWP: 29N RNG: 10W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SE/4 SE/4 CONTRACTOR: P & S

DATE STARTED: 5/8/98
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV

SOIL REMEDIATION:
REMEDIATION SYSTEM: LANDFARM
LAND USE: RANGE
APPROX. CUBIC YARDAGE: 50
LIFT DEPTH (ft): 6" - 1'

FIELD NOTES & REMARKS:
DEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: 1000 PPM

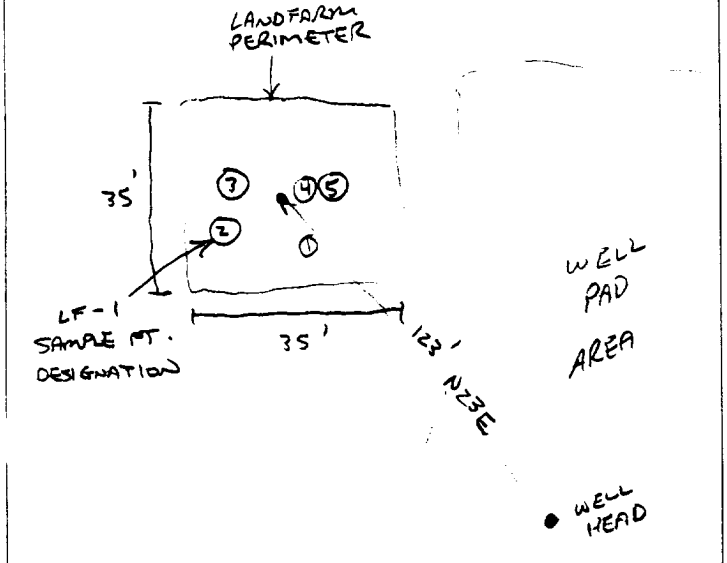
MOSTLY OR. YELL. BROWN SAND, NON COHESIVE SLIGHTLY MOIST, FIRM, NO APPARENT STAINING OR HC ODOR OBSERVED, SAMPLING DEPTH RANGE FROM 4" TO 1', COLLECTED 5 PT. COMPOSITE FOR LAB ANALYSIS NO APPARENT HC ODOR IN OVM SAMPLE. MAJORITY OF SOIL DEPOSED SOMEWHERE WITHIN ARMENTA CANYON AREA.

CLOSED

FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SKETCH/SAMPLE LOCATIONS



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
LF-1	0.0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	TPH (8015)	1330	9.4

SCALE
0 FT

TRAVEL NOTES: CALLOUT: NA ONSITE: 5/8/98

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	05-12-98
Laboratory Number:	D251	Date Sampled:	05-08-98
Chain of Custody No:	5778	Date Received:	05-11-98
Sample Matrix:	Soil	Date Extracted:	05-12-98
Preservative:	Cool	Date Analyzed:	05-12-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**9.4**	**0.1**
Total Petroleum Hydrocarbons	**9.4**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Lefkovitz GC B #1E Landfarm. 5 Pt. Composite.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / AMOCO	LANDFARM LEFROVITZ GC B #1E	
Sampler: (Signature) Nelson Velez	Chain of Custody Tape No. 04034-10	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)						Remarks
												PRESERV. - COOL
LF-1	5/8/98	1330	D251	SOIL	1	✓						5 PT. COMPOSITE
				SAMPLE RECEIVED COOL & INTACT								DLH

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	5/11/98	1349	Dan L. Hyden	5-11-98	1349
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
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