Blow - risk bedrock
Sep - risk bedrock

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
trict 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 7/16/96 due to LF

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 L.C. KELLY #1

Location: Unit or Qtr/Qtr Sec B M Sec 5 T30N R12W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other Blow

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

Pit Location: (Attach diagram)

Pit dimensions: length 41', width 43', depth 12'

Reference: wellhead X, other ___

Footage from reference: 273'

Direction from reference: 15 Degrees ___ East North ___ of X 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: 6/19/94 **Date Completed:** 6/19/94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 783

Landfarmed ___ Insitu Bioremediation ___

Other _____

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

General Description Of Remedial Action: _____

Excavation. CONTAMINATION WAS REMEDIATED BY DILUTION & AERATION. BEDROCK ENCOUNTERED @ 8½' BELOW GRADE. RBSL ASSESSED.

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 12'

Sample date 6/19/94 Sample time 1300

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) >100 @ 6½' 11/21/97 9N

TPH 277

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

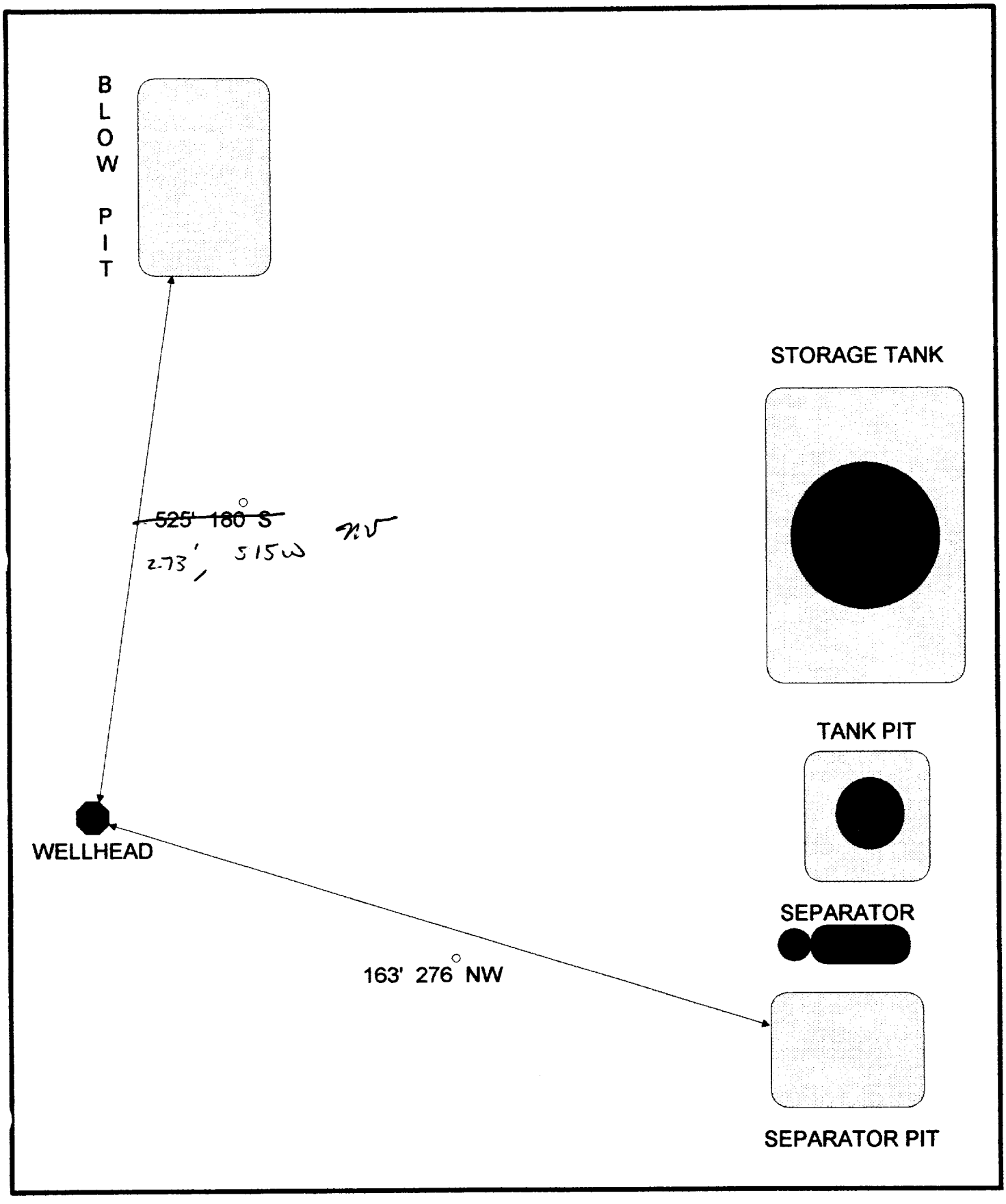
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 5/23/98

SIGNATURE B J Shaw PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

AMOCO PRODUCTION COMPANY

LC KELLY #1



FINAL PIT CLOSURE SAMPLING REPORT

OPERATOR : AMOCO PRODUCTION COMPANY

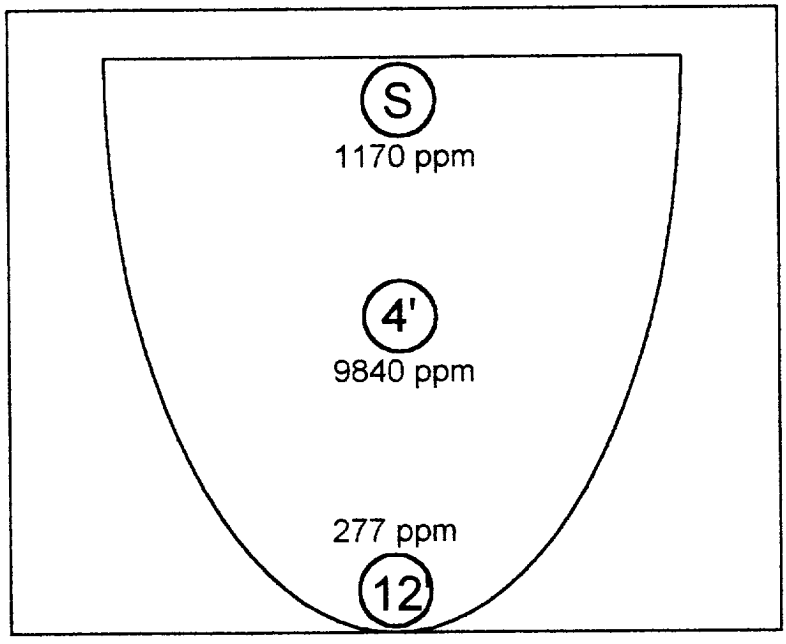
ADDRESS : 200 AMOCO COURT FARMINGTON, NM

WELL NAME OR FACILITY : L.C. KELLY #1

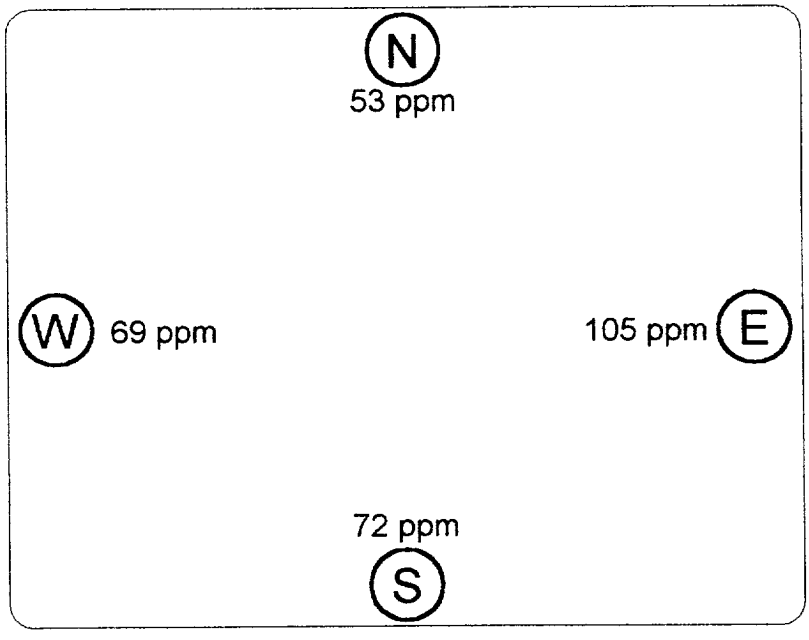
PIT TYPE : BLOW PIT LEGALS : SW/SW SEC.5 T30N R12W

DEPTH	TPH/PPM
SURFACE	1170
4'	9840
8'	2580
12'	277
	OVM
6½'	>100

SIDE VIEW



TOP VIEW



WALL	DEPTH	TPH/PPM
NORTH	8'	53
WEST	8'	69
SOUTH	8'	72
EAST	8'	105

Well Name:	**Kelly, L.C. #1**
Well Site location:	Unit M, Sec. 5, T30N, R12W
Pit Type:	Blow 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 loader encountered sandstone bedrock at 8.5 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 8.5 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 0.29 miles northwest of the nearest vulnerable area boundary (Flora Vista Arroyo).

   (Refer to Farmington North Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1979, (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.

CLIENT: AMOCO

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

LOCATION NO: WEE
C.O.C. NO: 5575

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: L.C. KELLY WELL #: 1 PITS: BLOW
QUAD/UNIT: M SEC: 5 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SW/4 SW/4 CONTRACTOR: WHOLE EARTH

DATE STARTED: 11/21/97
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NM/JCB

SOIL REMEDIATION:

REMEDIATION SYSTEM: DILUTION & AERATION
APPROX. CUBIC YARDAGE: 783
LAND USE: RANGE
LIFT DEPTH (ft): NA

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

BORING WAS CONDUCTED @ 273' S15W FROM WELL HEAD, ASSUMED AFTER CONDUCTING SITE WALK THAT PIT LOCATION FROM PIT CLOSURE RECORD WAS INACCURATE, ENCOUNTERED COMPETENT SAND-STONE @ 8½' BELOW GRADE, BORING CONSISTS OF DK. YELL. BROWN SAND TO 3', CLAY TO 5', MED GRAY HARD CLAY w/ STRONG HC ODOR TO 6½', OLIVE GRAY HARD CLAY TO 8½', COLLECTED 2 SAMPLE PTS. USING HAND AUGER (1'-2' DEPTHS BELOW GRADE) COLLECTED 5 PT. COMPOSITE SAMPLE FOR LAB ANALYSIS OF SUPPOSEDLY DILUTED & AERATED SOIL PLACED BACK INTO ASSUMED EXCAVATED AREA.

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS

SEE SITE MAP

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
DA-1	685
(5) @ 6½'	>100

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
DA-1	TPH (8015)	1035	ND

SCALE
0 FT

TRAVEL NOTES: CALLOUT: NA ONSITE: 11/21/97

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:	DA - 1	Date Reported:	11-26-97
Laboratory Number:	C552	Date Sampled:	11-21-97
Chain of Custody No:	5575	Date Received:	11-24-97
Sample Matrix:	Soil	Date Extracted:	11-24-97
Preservative:	Cool	Date Analyzed:	11-25-97
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)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**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: **L. C. Kelly #1 Blow Pit. 5 Pt. Composite.**

Analyst

Review

5796 U.S. Highway 64-3014 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
trict 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: L. C. Kelly #1

Location: Unit or Qtr/Qtr Sec M Sec 5 T30N R/2W County San Juan

Pit Type: Separator X Dehydrator ___ Other ___

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

Pit Location: (Attach diagram)
Pit dimensions: length 17', width 21', depth 8'
Reference: wellhead X, other ___
Footage from reference: 163'
Direction from reference: 86 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)	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: 6/19/94 **Date Completed:** 6/19/94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 105

Landfarmed ___ Insitu Bioremediation ___

Other _____

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

General Description Of Remedial Action: Excavation. CONTAMINATION WAS REMEDIATED BY DILUTION & AERATION. BEDROCK ENCOUNTERED @ 6½' BELOW GRADE. RISK ASSESSED.

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 8'

Sample date 6/19/94 Sample time 0900

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) >100 @ 4' 11/21/97 818

TPH 651

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 5/23/98

SIGNATURE B J Shaw PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

FINAL PIT CLOSURE SAMPLING REPORT

OPERATOR : AMOCO PRODUCTION COMPANY

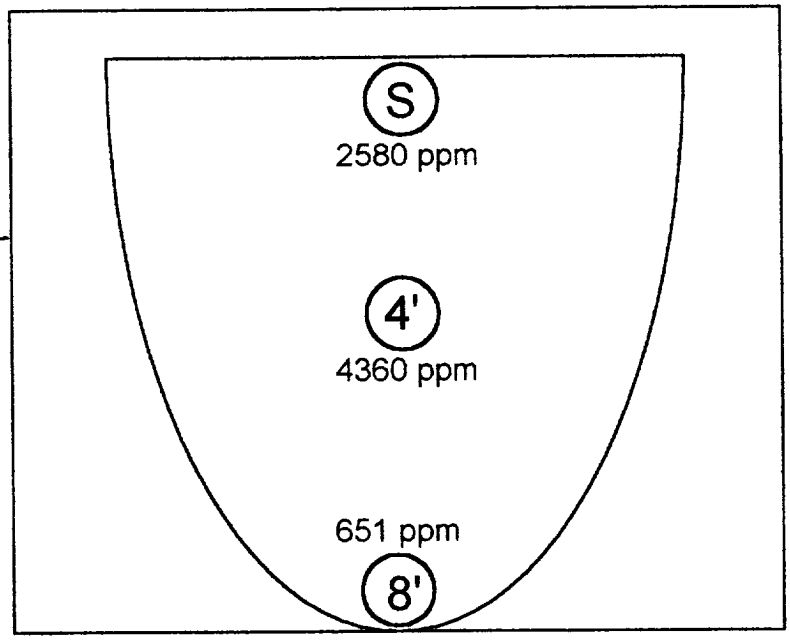
ADDRESS : 200 AMOCO COURT FARMINGTON, NM

WELL NAME OR FACILITY : L.C. KELLY #1

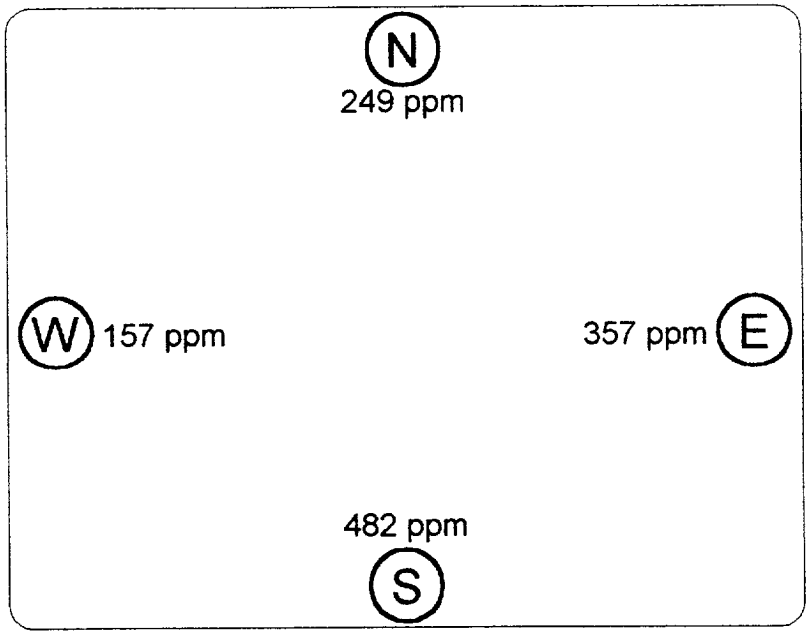
PIT TYPE : SEPARATOR LEGALS : SW/SW SEC.5 T30N R12W

DEPTH	TPH/PPM
SURFACE	2580
4'	4360
8'	651
	OUM
915 6ft 4'	>100

SIDE VIEW



TOP VIEW



WALL	DEPTH	TPH/PPM
NORTH	8'	249
WEST	8'	157
SOUTH	8'	482
EAST	8'	357

Well Name:	**Kelly, L.C. #1**
Well Site location:	Unit M, Sec. 5, T30N, R12W
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 loader encountered sandstone bedrock at 6.5 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 6.5 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 0.29 miles northwest of the nearest vulnerable area boundary (Flora Vista Arroyo).

   (Refer to Farmington North Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), photorevised 1979, (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.

CLIENT: AMOCO

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

LOCATION NO: WEE
C.O.C. NO: 5575

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: L.C. KELLY WELL #: 1 PITS: SEP
QUAD/UNIT: M SEC: 5 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SW/4 SW/4 CONTRACTOR: WHOLE EARTH

DATE STARTED: 11/21/97
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV/JCB

SOIL REMEDIATION:

REMEDIATION SYSTEM: DILUTION & AERATION
APPROX. CUBIC YARDAGE: 105
LAND USE: RANGE
LIFT DEPTH (ft): NA

FIELD NOTES & REMARKS:

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

NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

BORING CONDUCTED @ PIT CENTER ACCORDING TO PIT CLOSURE RECORD, ENCOUNTERED COMPETENT SANDSTONE @ 6½' BELOW GRADE, SOIL CONSIST OF MOSTLY CLAY VARYING FROM OLIVE GRAY TO MED. GRAY IN COLOR, HARD CLAY ENCOUNTERED @ 5' BELOW GRADE, HC ODOR EVIDENT IN GRAY DISCOLORED PORTION OF BORING, COLLECTED 3 SAMPLE PTS. USING HAND AUGER (1'-2' DEPTHS BELOW GRADE), 5 PT. COMPOSITE COLLECTED FOR LAB ANALYSIS OF SUPPOSEDLY DILUTED & AERATED SOIL PLACED BACK INTO EXCAVATED AREA.

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS

SEE SITE MAP

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
DA - 1	195.1
⑤ @ 4'	>100

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
DA - 1	TPH (8015)	1000	ND

SCALE
0 FT

TRAVEL NOTES: CALLOUT: NA ONSITE: 11/21/97

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:	DA - 1	Date Reported:	11-26-97
Laboratory Number:	C551	Date Sampled:	11-21-97
Chain of Custody No:	5575	Date Received:	11-24-97
Sample Matrix:	Soil	Date Extracted:	11-24-97
Preservative:	Cool	Date Analyzed:	11-25-97
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)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**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: **L. C. Kelly #1 Separator Pit. 5 Pt. Composite.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / AMOCO	L.C. KELLY #1	

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
DA-1	11/21/97	1000	C551	SOIL	1	✓						SEPARATOR PIT
DA-1	11/21/97	1035	C552	SOIL	1	✓						BLOW PIT
												BOTH SAMPLES
												PRESERV. - COOL
												& ARE 5 PT.
												COMPOSITES
			SAMPLES RECEIVED		COOL & INTACT	DLM						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	11/24/97	0805	Dawn L. Aplin	11-24-97	0805
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

Ref COC's 5575 → 5584
5605 → 5615

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