Blow - risk bedrock
Sep - risk bedrock B0107

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

Denied 12/9/96 due to TPH and BTEX

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

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name: USA C.A. MCADAMS D #1

Location: Unit or Qtr/Qtr Sec K Sec 20 T 27 N R 10 W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other Blow

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

Pit Location: (Attach diagram)
Pit dimensions: length 35', width 35', depth 5'
Reference: wellhead X, other ___
Footage from reference: 300
Direction from reference: 60 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)	20
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):	20

B0107

Date Remediation Started: _____ **Date Completed:** 9-29-94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 150

Landfarmed ___ Insitu Bioremediation ___

Other Compost

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

General Description Of Remedial Action: _____

Excavation Bedrock Bottom. 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 2'

Sample date 4-29-94 Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 42

TPH 4200 ppm

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 10/3/94

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

RESULTS TO ED P, 9-29-94 PEO

CLIENT: AMOCO

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

LOCATION NO: B0107
C.O.C. NO: _____

FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: NAME: C.A. MCADAMS (U.SA) D WELL #: 1 PIT: BLOW
QUAD/UNIT: K SEC: 20 TWP: 27N RNG: 10W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NE/4 SW/4 CONTRACTOR: EPC

DATE STARTED: 9-29-94
DATE FINISHED: —
ENVIRONMENTAL SPECIALIST: PEO

SOIL REMEDIATION: EXCAVATION APPROX. 35 FT. x 35 FT. x 5 FT. DEEP.
DISPOSAL FACILITY: ON SITE - COMPOST CUBIC YARDAGE: 150
LAND USE: RANGE LEASE: FED. LSE.# SF-077941-A

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 300 FEET N60°W FROM WELLHEAD.
DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION: MOIST, BROWN SILTY SAND TO CLAYEY SAND. ROCKS IN PIT BOTTOM. HARD SANDSTONE BOTTOM. MAJORITY OF CONTAMINATED SOIL APPEARS TO BE EXCAVATED. HARD BOTTOM SATURATED WITH HYDROCARBONS. SOME WALL CONTAMINATION REMAINS.

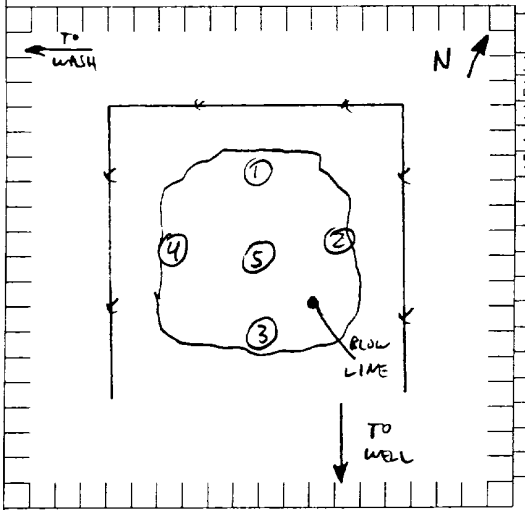
BGT Abandoned SLV

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
SS@2'	1164	10.0	20.0	947 10	201	4020
"	1164-D	10.0	20.0	940 10	211	4220

SCALE
0 10 20 FT

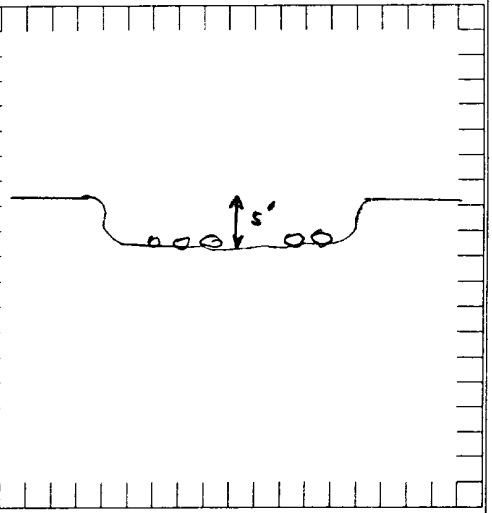
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS @ 3'	6
2 ES @ 3'	6
3 SS @ 2'	42
4 WS @ 3'	5
5 CB @ 5'	547
LAB	SAMPLES

PIT PROFILE



TRAVEL NOTES: CALLOUT: 9-29-94 ONSITE: 9-29-94 1000

Well Name:	**McAdams CA D #1**
Well Site location:	Unit K, Sec. 20, T27N, R10W
Pit Type:	Blow Pit
Producing Formation:	Basin Dakota
Pit Category:	Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	< 50 ft.

RISK ASSESSMENT (vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 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 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.

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.

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:	S Side @ 2'	Date Analyzed:	9-29-94
Project Location:	C.A. Mc Adams D 1	Date Reported:	9-29-94
Laboratory Number:	TPH-1164	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**4000**	**100**

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4,020	4,220	5

*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: Blow Pit - B0107

R. E. Oneal
Analyst

J. C. Blagg
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:	S Side @ 2'	Date Analyzed:	9-29-94
Project Location:	C.A. Mc Adams D 1	Date Reported:	9-29-94
Laboratory Number:	TPH-1164 Duplicate	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**4200**	**100**

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4,020	4,220	5

*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: Blow Pit - B0107

R. E. O'Neill
Analyst

J. C. Blagg
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:	S Side @ 2'	Date Analyzed:	9-29-94
Project Location:	C.A. Mc Adams D 1	Date Reported:	9-29-94
Laboratory Number:	TPH-1164	Sample Matrix:	Soil

Sample Weight:	10.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	10	(unitless)
TPH Reading:	201	mg/kg

TPH Result:	4020.0	mg/kg
Reported TPH Result:	4000	mg/kg
Actual Detection Limit:	100.0	mg/kg
Reported Detection Limit	100	mg/kg

QA/QC:	Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
	4020	4220	5

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

Comments: Blow Pit - B0107

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:	S Side @ 2'	Date Analyzed:	9-29-94
Project Location:	C.A. Mc Adams D 1	Date Reported:	9-29-94
Laboratory Number:	TPH-1164 Duplicate	Sample Matrix:	Soil

Sample Weight:	10.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	10	(unitless)
TPH Reading:	211	mg/kg

TPH Result:	4220.0	mg/kg
Reported TPH Result:	4200	mg/kg
Actual Detection Limit:	100.0	mg/kg
Reported Detection Limit	100	mg/kg

QA/QC:

Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
4020	4220	5

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

Comments: Blow Pit - B0107

80107

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: USA C. A. MCADAMS D #1
Well Name

Location: Unit or Qtr/Qtr Sec K Sec 20 T 27 N R 10 W County SAN JUAN

Pit Type: Separator X Dehydrator ___ Other ___

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

Pit Location: (Attach diagram)
Pit dimensions: length 20', width 20', depth 6'
Reference: wellhead X, other ___
Footage from reference: 145
Direction from reference: 30 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)	20
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):	20

Date Remediation Started: _____ **Date Completed:** 9-29-94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 75

Landfarmed ___ Insitu Bioremediation ___

Other COMPOST

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

General Description Of Remedial Action: _____

Excavation - BEDROCK BOTTOM. 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 3'

Sample date 9-29-94 Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 819

TPH 13,400 ppm

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 ~~10/3/94~~ 5/24/98 ~~9/1~~

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

RESULTS TO ED P. 9-29-94 RLC

CLIENT: Amoco

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

LOCATION NO: B0107
C.O.C. NO: _____

FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: NAME: C. A. McADAMS D WELL #: 1 PIT: SEP. (USA)
QUAD/UNIT: K SEC: 20 TWP: 27N RNG: 10W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NE/4 SW/4 CONTRACTOR: EPC

DATE STARTED: 9-29-94
DATE FINISHED: —
ENVIRONMENTAL SPECIALIST: RLC

SOIL REMEDIATION: EXCAVATION APPROX. 20 FT. x 20 FT. x 6 FT. DEEP.
DISPOSAL FACILITY: ON SITE - COMPOST CUBIC YARDAGE: 75
LAND USE: RANGE LEASE: FED. LSE. # SF-077941-A

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 145 FEET N30°W FROM WELLHEAD.
DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION: BROWN → GRAY, MOIST SILTY SAND 0-3' TO CLAYEY SILT TO BEDROCK BOTTOM. ODOR + STAIN IN SIDEWALLS + BOTTOM, EQUIPMENT TO WEST - CANNOT EXCAVATE FURTHER.

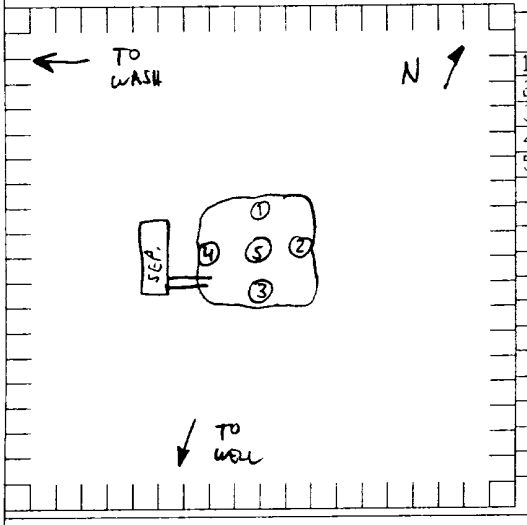
RISK ASSESSED SMV

FIELD 418.1 CALCULATIONS

	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
③	SS@3'	1165	10.0	20.0	1431 - 10 -	670	13,400

SCALE
0 10 20 FT

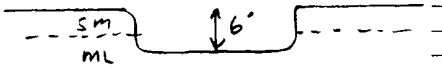
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS @ 4'	3
2 ES @ 4'	54
3 SS @ 3'	819
4 WS @ 3'	660
5 CB @ 6'	450
LAB	SAMPLES

PIT PROFILE



TRAVEL NOTES: CALLOUT: 9-29-94 ONSITE: 9-29-94 1100

Well Name:	**McAdams CA D #1**
Well Site location:	Unit K, Sec. 20, T27N, R10W
Pit Type:	Separator Pit
Producing Formation:	Basin Dakota
Pit Category:	Vulnerable
Horizontal Distance to Surface Water:	> 1000 ft.
Vicinity Groundwater Depth:	< 50 ft.

RISK ASSESSMENT (vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 6 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 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.

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.

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:	S Side @ 3'	Date Analyzed:	9-29-94
Project Location:	C.A. Mc Adams D 1	Date Reported:	9-29-94
Laboratory Number:	TPH-1165	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**13400**	**100**

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4,020	4,220	5

*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: Separator Pit - B0107

R. E. O'Neill
Analyst

J. C. Blagg
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:	S Side @ 3'	Date Analyzed:	9-29-94
Project Location:	C.A. Mc Adams D 1	Date Reported:	9-29-94
Laboratory Number:	TPH-1165	Sample Matrix:	Soil

Sample Weight:	10.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	10	(unitless)
TPH Reading:	670	mg/kg

TPH Result:	13400.0	mg/kg
Reported TPH Result:	13400	mg/kg
Actual Detection Limit:	100.0	mg/kg
Reported Detection Limit	100	mg/kg

QA/QC:

Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
4020	4220	5

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

Comments: Separator Pit - B0107

R V

CLIENT: AMOCO

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

LOCATION NO: 80107
C.O.C. NO: ANALY.

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: C. A. MCADAMS D #1 LEASE: SF-077941-A
QUAD/UNIT: K SEC: 20 TWP: 27 N RNG: 10 W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NE/SW CONTRACTOR: EPC

DATE STARTED: 3-26-96
DATE FINISHED: 3-26-96
ENVIRONMENTAL SPECIALIST: REG

SOIL REMEDIATION:

REMEDIATION SYSTEM: COMPOST APPROX. CUBIC YARDAGE: 225 +
LAND USE: RANGE

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

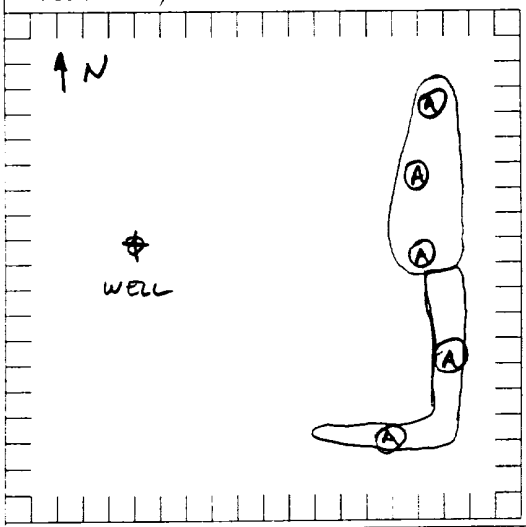
COMPOST PILES PUSHED TO EDGE OF LOCATION.
SOIL CONSISTS OF MOIST, BROWN, COMPOSTED SILTY-SAND. - NO ODOR / NO STAIN.

CLOSE C.P.

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS



SCALE
0 FT

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
COMP. A	0

LAB SAMPLES

SAMPLE ID	ANALYSIS
COMP. A	8015 = NA

TRAVEL NOTES: CALLOUT: 3-25-96 ONSITE: 3-26-96 1115

FORM REVISED 1/96

-

ANAITAS
ENVIRONMENTAL LABS

TOTAL VOLATILE PETROLEUM HYDROCARBONS

Gasoline Range Organics

Blagg Engineering, Inc.

Project ID:	C.A. McAdams D #1	Report Date:	04/04/96
Sample Matrix:	Soil	Date Sampled:	03/26/96
Preservative:	Cool	Date Received:	03/26/96
Condition:	Intact	Date Extracted:	03/28/96
		Date Analyzed:	03/28/96

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Comp. A	2986	ND	16.5

ND- Analyte not detected at the stated detection limit.

Quality Control:

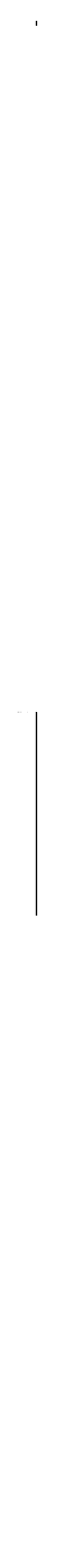
Surrogate	% Recovery	Acceptance Limits
Trifluorotoluene	89%	50 - 150%

Reference: Method for the Determination of Gasoline Range Organics, State of Tennessee, Department of Environment and Conservation, Division of Underground Storage Tanks.

Comments:

Analyst

Review



ANAITAS
ENVIRONMENTAL LABS

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Diesel Range Organics

Blagg Engineering, Inc.

Project ID:	C.A. McAdams D #1	Report Date:	04/04/96
Sample Matrix:	Soil	Date Sampled:	03/26/96
Preservative:	Cool	Date Received:	03/26/96
Condition:	Intact	Date Extracted:	03/28/96
		Date Analyzed:	03/28/96

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Comp. A	2986	ND	18.7

ND- Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	% Recovery	Acceptance Limits
o - Terphenyl	115%	50 - 150%

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments:

Analyst

Review