

RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: _____ Date Completed: 5-16-94

Remediation Method: Excavation X Approx. cubic yards 600
(Check all appropriate sections) Landfarmed X Insitu Bioremediation _____
Other _____

Remediation Location: Onsite X Offsite X SULLIVAN GC D#1
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: _____

Excavation

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit: Sample location see Attached Documents

Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)
Sample depth 14'

Sample date 5-16-94 Sample time _____

Sample Results

Benzene(ppm) ND

Total BTEX(ppm) 88

Field headspace(ppm) 1059

TPH 560

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. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
Environmental Engineer

'505' 632-1199
BLAGG ENGINEERING

CLIENT: Amoco

PIT NO: C4997

C.O.C. NO: 3584

FIELD REPORT: CLOSURE VERIFICATION

JCB No: _____

PAGE No: 1 of 2

LOCATION: LEASE: DAVIS GC WELL #: G1 PIT: BLOW

DATE STARTED: 5/10/94

DATE FINISHED: 5/10/94

UNIT: I SEC: 27 TWP: 29N RNG: 11W BM: NM CNTY: SAN JUAN ST: NM

ENVIRONMENTAL
SPECIALIST: NV

CONTRACTOR: P. VELASQUEZ

SOIL REMEDIATION: EXCAVATION APPROX. 37 FT. x 42 FT. x 21 FT. DEEP.

DISPOSAL FACILITY: LANDFARMED @ JUVUAN GC 0#1

LAND USE: INDUSTRIAL - ADJACENT TO BLOOMFIELD REFINERY

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 167 FEET N 81 W FROM WELLHEAD.

DEPTH TO GROUNDWATER: 50-100 NEAREST SURFACE WATER: >1000 NEAREST WATER SOURCE: >1000

NMOC Ranking Score: 10 NMOC TPH Closure Std: 1000 ppm

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

SOIL AND EXCAVATION DESCRIPTION: HIGHLY CONTAMINATED SOIL (APPARENT BY DISCOLORATION) EVIDENT ON WEST & NORTH SIDEWALLS; GREEN TO BLACK SAND, NON-COHESIVE, SLIGHTLY MOIST DENSE TO VERY DENSE. EAST & SOUTH SIDEWALLS CONSIST OF DR. YELLOWISH ORANGE SAND, NON-COHESIVE SLIGHTLY MOIST, FIRM TO VERY FIRM. BOTTOM OF EXCAVATION CONSIST OF POSSIBLE BEDROCK MATERIAL, GREEN DISCOLORATION, SLIGHTLY MOIST, HARD, & W/ STRONG HC ODOR.

- 100, 100 (W/S)) (5) @ 21' TIME - 0957

LAB SAMPLE COLLECTED FOR TPH (415.1) ⑤ @ 21' TIME - 0957

FIELD 418.1 CALCULATIONS

FIELD 418.1 CALCULATIONS						
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

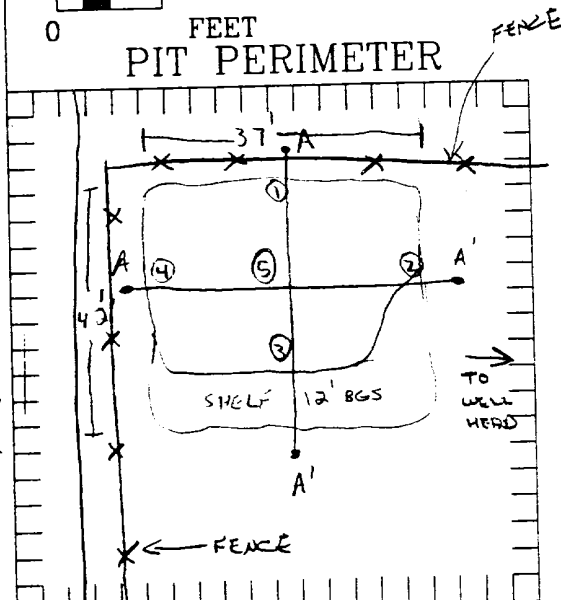
SCALE



0

FEET

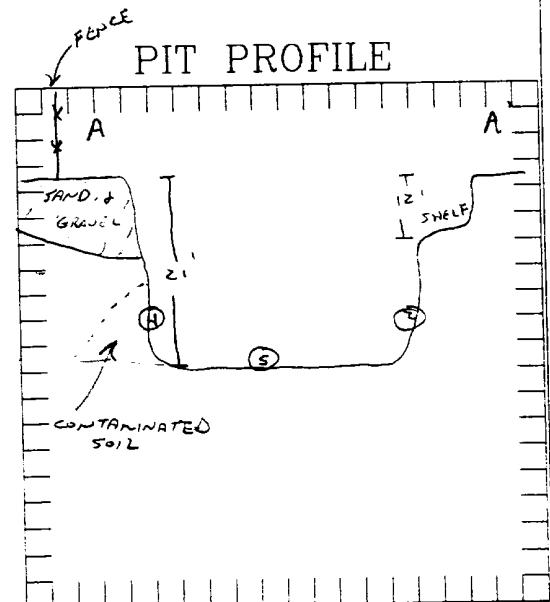
PIT PERIMETER



OVM RESULTS

[illegible]

PIT PROFILE



TRAVEL NOTES: CALLOUT: 5/9/94

ONSITE: 5/10/94

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Davis GC G #1

Unit I, Sec. 27, T29N, R11W

Blow pit

Chacra

Vulnerable

> 1000 ft.

> 50 ft.

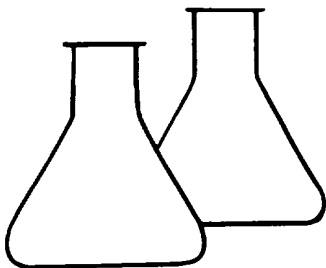
RISK ASSESSMENT

Pit remediation activities were terminated when trackhoe encountered siltstone bedrock at 19-21 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 siltstone bedrock located 19-21 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a greater depth below the siltstone 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 siltstone bottom creates enough of a 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 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg Eng./Amoco	Project #:	04034
Sample ID:	5 @ 21'	Date Sampled:	05-10-94
Laboratory Number:	7367	Date Received:	05-10-94
Sample Matrix:	Soil	Date Analyzed:	05-11-94
Preservative:	Cool	Date Reported:	05-11-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	37.7	5.0

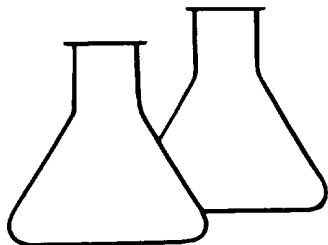
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Davis GC G1 Blow Pit C4997

Tony Tristano
Analyst

Morris D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	NS @ 14'	Date Sampled:	05-16-94
Laboratory Number:	7436	Date Received:	05-16-94
Sample Matrix:	Soil	Date Analyzed:	05-20-94
Preservative:	Cool	Date Reported:	05-20-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	560	15.0

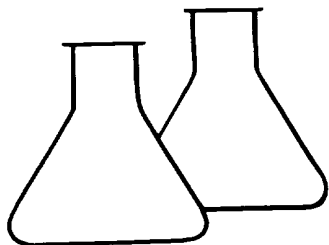
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Davis GC G #1 Blow Pit A0011

Tony Tristone
Analyst

Morris D Young
Review



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:	NS @ 14'	Date Reported:	05-24-94
Laboratory Number:	7436	Date Sampled:	05-16-94
Sample Matrix:	Soil	Date Received:	05-16-94
Preservative:	Cool	Date Extracted:	05-23-94
Condition:	Cool & Intact	Date Analyzed:	05-24-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.3
Toluene	760	26.6
Ethylbenzene	5,020	13.3
p,m-Xylene	53,800	20.0
o-Xylene	28,500	13.3

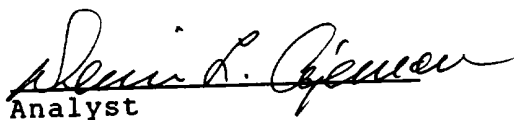
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	98 %
	Bromofluorobenzene	94 %

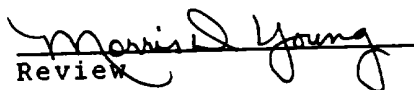
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

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: Davis GC G #1 Blow Pit A0011


Analyst


Review

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

APPROPRIATE

DISTRICT OFFICE

AND 1 COPY TO

SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORTOperator: Amoco Production Company Telephone: (505) - 326-9200Address: 200 Amoco Court, Farmington, New Mexico 87401Facility Or: DAVIS 6C '6' #1
Well NameLocation: Unit or Qtr/Qtr Sec I Sec 27 T 29N R 11W County SAN JUANPit Type: Separator ☒ Dehydrator ☐ Other ☐Land Type: BLM ☐, State ☐, Fee ☐, Other ☐ COM. AGMT.Pit Location: Pit dimensions: length 20', width 15', depth 15'
(Attach diagram)Reference: wellhead ☒, other ☐Footage from reference: 165Direction from reference: 60 Degrees ☒ East North ☒
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) 10Wellhead 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) 0Distance 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) 10

RANKING SCORE (TOTAL POINTS):

10

Date Remediation Started: _____ Date Completed: 5-16-94

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

Remediation Location: Onsite X Offsite X SULLIVAN EC D#1
(ie. landfarmed onsite, name and location of offsite facility)

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 8'

Sample date 5-16-94

Sample time _____

Sample Results

Benzene(ppm) ND

Total BTEX(ppm) 59

Field headspace(ppm) 1213

TPH 540

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. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw

BILL

(505) 632-1199
BLAKE ENGINEERING

CLIENT: <u>AMOCO</u>		PIT NO: <u>C4998</u> C.O.C NO: <u>3585</u>				
FIELD REPORT: CLOSURE VERIFICATION			JOB No: _____ PAGE No: <u>1</u> of <u>2</u>			
LOCATION: LEASE: <u>OAKS GC</u> WELL #: <u>G-1</u> PIT: <u>SEP</u> UNIT: <u>I</u> SEC: <u>Z7</u> TWP: <u>T29N</u> RNG: <u>R1W</u> BM: <u>NM</u> CNTY: <u>SAN JUAN</u> ST: <u>NM</u> CONTRACTOR: <u>P. VELASQUEZ</u>			DATE STARTED: <u>5/10/94</u> DATE FINISHED: <u>5/10/94</u> ENVIRONMENTAL SPECIALIST: <u>NV</u>			
SOIL REMEDIATION: EXCAVATION APPROX. <u>23'</u> FT. x <u>17'</u> FT. x <u>16'</u> FT. DEEP. DISPOSAL FACILITY: <u>LANDFARMED @ SULLIVAN GC D#1</u> LAND USE: <u>INDUSTRIAL - ADJACENT TO BURNFIELD REFINERY</u>						
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>173</u> FEET <u>N78E</u> FROM WELLHEAD DEPTH TO GROUNDWATER: <u>50-100</u> NEAREST SURFACE WATER: <u>> 1000</u> NEAREST WATER SOURCE: <u>> 1000</u> NMOC Ranking SCORE: <u>10</u> NMOC TPH CLOSURE STD: <u>1000 PPM</u> SOIL AND EXCAVATION DESCRIPTION:						
LAB SAMPLE COLLECTED FOR TPH (418.1) ⑤ @ 16' TIME - 1105						
FIELD 418.1 CALCULATIONS						
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE 0 FEET

PIT PERIMETER

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
DE 11'	6.4
DE 11'	2.2
SE 11'	1096
WC 12'	29.3
SE 16'	891

PIT PROFILE

TRAVEL NOTES: CALL OUT: 5/9/94 ONSITE: 5/10/94

RESULTS TO BOB MICOT 5/25/99 PEO

CLIENT: AMOCO

ENVIROTECH Inc.

PIT NO: A0011

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

C.D.C. NO: 3627

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140

PAGE No: 2 of 2

LOCATION: LEASE: DAVIS GC "G" WELL #: 1 PIT: Sep

DATE STARTED: 5-16-94

DATE FINISHED: _____

UNIT: I SEC: 27 TWP: 29N RNG: 11W BM: NM CNTY: SJ ST: NM

ENVIRONMENTAL SPECIALIST: PEO

CONTRACTOR: PAUL VERAQUEZ

SOIL REMEDIATION: EXCAVATION APPROX. 15 FT. x 20 FT. x 15 FT. DEEP.

DISPOSAL FACILITY: ON SITE LANDFARM @ SULLYAN GC 0 #1

LAND USE: INDUSTRIAL / REFINERY - STORAGE

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 165 FEET N 60° E FROM WELLHEAD.

DEPTH TO GROUNDWATER: 750' NEAREST SURFACE WATER: 71000' NEAREST WATER SOURCE: 71000'

NMOC Ranking Score: 10 NMOC TPH Closure Std: 1000 ppm

SOIL AND EXCAVATION DESCRIPTION: MOIST, BROWN, SILTY SAND - BOTTOM IS FINE SILTSTONE.
NO STAIN - MODERATE HYDROCARBON OIL.

BEDROCK
BOTTOM

RISK ASSESSED

21

FIELD 418.1 CALCULATIONS

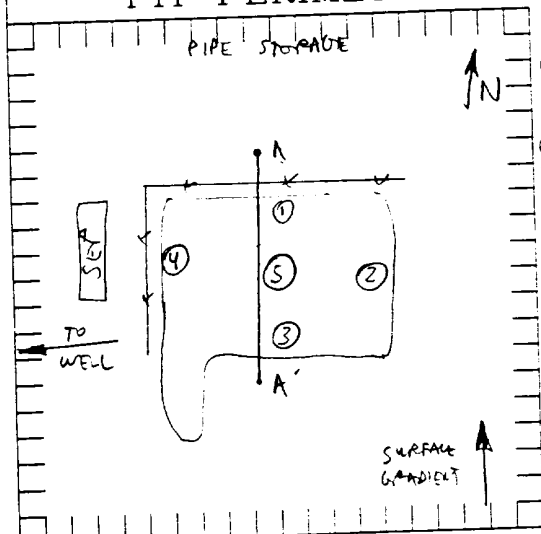
FIELD 418.1 CALCULATIONS					
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON/DILUTION	READING	CALC. ppm

SCALE



0 5 10 FEET

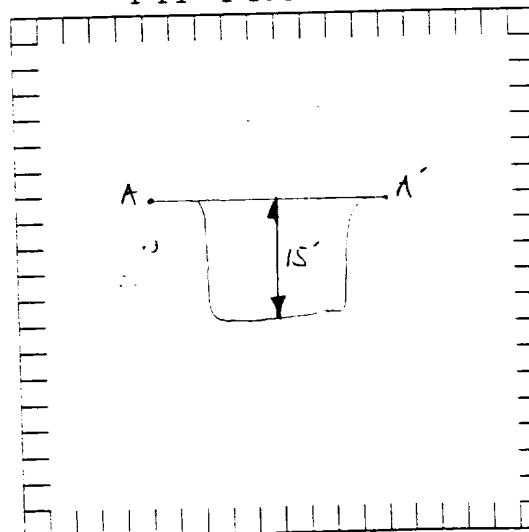
PIT PERIMETER



OVM RESULTS

[illegible]

PIT PROFILE



TRAVEL NOTES:

CALL OUT:

5-13-94

ONSITE:

5-16-94

0930

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Davis GC G #1

Unit I, Sec. 27, T29N, R11W

Separator pit

Chacra

Vulnerable

> 1000 ft.

> 50 ft.

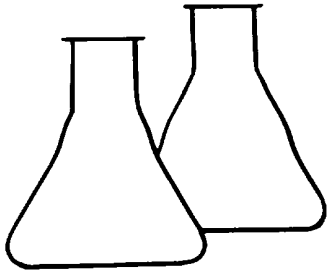
RISK ASSESSMENT

Pit remediation activities were terminated when trackhoe encountered siltstone bedrock at 15-16 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 siltstone bedrock located 15-16 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a greater depth below the siltstone 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 siltstone bottom creates enough of a 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 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg Eng./Amoco	Project #:	04034
Sample ID:	5 @ 16'	Date Sampled:	05-10-94
Laboratory Number:	7368	Date Received:	05-10-94
Sample Matrix:	Soil	Date Analyzed:	05-11-94
Preservative:	Cool	Date Reported:	05-11-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	880	5.0

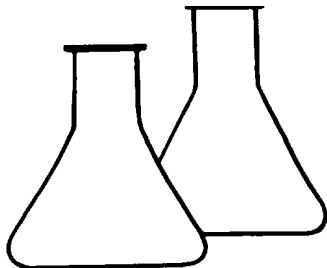
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Davis GC G1 Sep Pit C4998

Tony Tristano
Analyst

Marisa 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:	SS @ 8'	Date Sampled:	05-16-94
Laboratory Number:	7437	Date Received:	05-16-94
Sample Matrix:	Soil	Date Analyzed:	05-20-94
Preservative:	Cool	Date Reported:	05-20-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	540	15.0

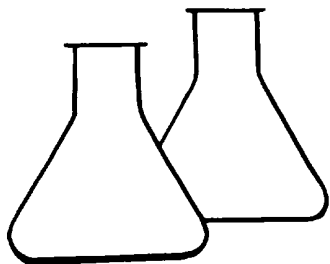
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Davis GC G #1 Sep Pit A0011

Tony Tristano
Analyst

Maris D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	SS @ 8'	Date Reported:	05-24-94
Laboratory Number:	7437	Date Sampled:	05-16-94
Sample Matrix:	Soil	Date Received:	05-16-94
Preservative:	Cool	Date Extracted:	05-23-94
Condition:	Cool & Intact	Date Analyzed:	05-24-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.2
Toluene	487	26.4
Ethylbenzene	2,030	13.2
p,m-Xylene	36,000	19.8
o-Xylene	21,000	13.2

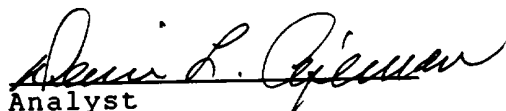
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	97 %
	Bromofluorobenzene	96 %

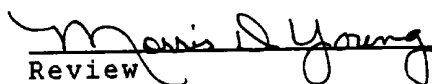
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

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: Davis GC "G" #1 Separator Pit A0011


Analyst


Review

