

Denny E. Faust
District I
DEPUTY OIL & GAS INSPECTOR
P.O. Box 1960, Hobbs, NM

District II
P.O. Drawer DD, Aztec, NM 87411
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

SEP 26 1997

Approval
PIT REMEDIATION AND CLOSURE REPORT

Operator: Phillips Petroleum Company Telephone: (505) 599-3462

Address: 5525 Hwy. 64, NBU 3004, Farmington, NM 87401

Facility Or: San Juan 29 - 5 Unit # 87
Well Name

Location: Unit or Qtr/Qtr Sec C NENW Sec 25 T 29N R 5W County Rio Arriba

Pit Type: Separator X Dehydrator _____ Other _____

Land Type: BLM _____, State _____, Fee _____, Other US Forest

Pit Location: Pit dimensions: Length 45 ft, width 45 ft, depth 20 ft
(Attach diagram)

Reference: wellhead X other _____

Footage from reference: 90 ft

Direction from reference: _____ Degrees X East of North _____
West South _____

Depth to Ground Water: 60 ft
(vertical distance from
contaminants to seasonal
highwater elevation of
ground water)

Less than 50 feet	(20 points)
<u>X</u> 50 ft to 99 feet	(10 points)
Greater than 100 feet	(0 points)
	<u>10</u>

Wellhead Protection Area:
(less than 200 feet from a private 800 ft
domestic water source, or: less than
1000 feet from all other water sources).

<u>X</u> Yes (20 points)	
No (0 points)	<u>20</u>

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)
<u>X</u> Greater than 1000 feet	(0 points)
	<u>0</u>

Date Remediation Started: <u>8/30/94</u>		Dated Completed: <u>6/23/97</u>	
Excavation <u>X</u>		Approx. cubic yards <u>725</u>	
Landfarmed <u>X</u>		Insitu Bioremediation _____	
Other _____			
Remediation Method: Onsite <u>X</u>		Offsite _____	
(Check all appropriate sections)			
General Description of Remedial Action- <u>The pit was assessed on 8/30/94 and determined to be above closure limits. Excavation of the pit was executed on 10/28/94, 7/19/95, 1/29/96, 1/30/96, 2/5/96, and 2/27/97 and was determined to be within NMOCD and BLM guidelines on 2/27/97. Excavated soil was landfarmed on location and tested within NMOCD and BLM guidelines on 6/23/97.</u>			
Ground Water Encountered: No <u>X</u> Yes _____ Depth _____			
Final Pit: Closure Sampling (if multiple samples, attach sample results and diagram of sample locations and depths)	Sample location <u>20 feet below ground level in center of pit</u>		
	Sample depth <u>20' below ground level</u>		
	Sample date <u>2/27/97</u>	Sample time <u>10:00</u>	
	Sample Results		
	Benzene(ppm) _____		
	Total BTEX (PPM) _____		
	Field Headspace (ppm) <u>0.0</u>		
	TPH <u>82 ppm</u>		
Ground Water Sample: Yes No <u>X</u> (if yes, attach sample results)			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETED TO THE BEST OF MY KNOWLEDGE AND BELIEF.			
DATE <u>7/22/96</u>		PRINTED NAME <u>Bob Wirtanen</u>	
SIGNATURE <u>RA Wirtanen</u>		and TITLE <u>Sr. Safety & Environmental Specialist</u>	

ENVIROTECH Inc.

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

PIT NO: PA-239

C.D.C. NO: _____

FIELD REPORT: SITE ASSESSMENT

JOB No: 93162
PAGE No: 1 of 1

PROJECT: PIT ASSESSMENT
CLIENT: Phillips Petroleum
CONTRACTOR: ENVIROTECH INC.
EQUIPMENT USED: _____

DATE STARTED: 8-30-94
DATE FINISHED: 8-31-94
ENVIRO. SPCLT: CJC
OPERATOR: _____
ASSISTANT: _____

LOCATION: LEASE: San Juan 29-5 WELL: # 87 QD: 1040' FNL & 1830' FNL (C)
SEC: 25 TWP: 29N RNG: 9W PM: CNTY: R.A. ST: NM PIT: Separator

LAND USE: Range

SURFACE CONDITIONS: _____

PIT CENTER IS LOCATED APPROXIMATELY 72 FEET East OF WELLHEAD.

0'- 3' Clay, dry, tan, no odor

3'- 6' Clay, sand, tan, dark grey, green, strong, soft, moist

6'- 11' Clay, sand, tan, grey, dry, odor, soft

11'- 14' Clay, sand, grey, green, dry, strong odor, becoming hard on bottom, sandstone; grey/green, hard

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
T1 @ 6'	689	10	20	10	379	7580
T1 @ 11'	700	10	20	10	449	8980
T1 @ 14'	701	10	20	10	86	1320

DEPTH TO GROUNDWATER: 60'
NEAREST WATER SOURCE/TYPE: > 1000
NEAREST SURFACE WATER: > 1000
NMDCD RANKING SCORE: 0
NMDCD TPH CLOSURE STD: < 1000

SAMPLE INVENTORY

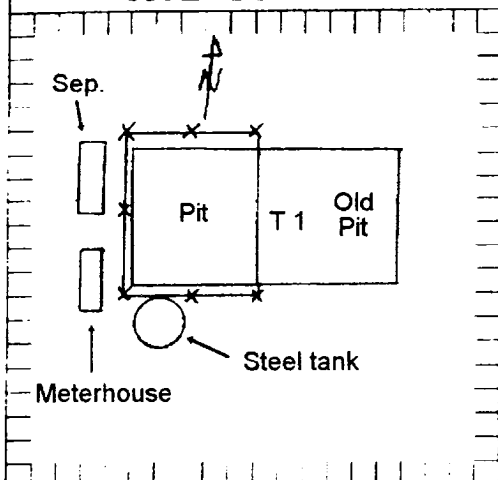
SMPL ID.	SMPL TYPE	LABORATORY ANALYSIS

SCALE



0 20 FEET

SITE DIAGRAM



TH#	SOIL TYPE	SMPL OVM/TYPE	TH#	SOIL TYPE	SMPL OVM/TYPE	TH#	SOIL TYPE	SMPL OVM/TYPE	TH#	SOIL TYPE	SMPL OVM/TYPE
0											
1											
2											
3	clay, grab	301									
4											
5											
6	sandy/clay, grab	446/7580									
7											
8											
9											
10											
11	clay, grab	302/8980									
12											
13	clay/sand										
14	sandstone, grey/green	218/1320; T1 14'									

SOIL TYPE: C - Clay, M - Sil. S - Sand, G - Gravel, P - Plasticity: L - None, P - Plastic, Grading: P - Poorly, G - Well

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

5796 U.S. HIGHWAY 64 - 3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

Field TPH-Worksheet

Max Characters:

Client:

Sample ID:

Project Location:

Laboratory Number:

Phillips Petroleum

T-1 @ 6.0'

San Juan 29-5 #87

GAC0689

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

93163

8-30-94

9-23-94

Soil

*****Max Characters*****

Comments:

Separator Pit PA239

Sample Weight:

10.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

10 (unitless)

TPH Reading:

379 mg/kg

TPH Result:

7580.0 mg/kg

Reported TPH Result:

7580 mg/kg

Actual Detection Limit:

100.0 mg/kg

Reported Detection Limit:

100 mg/kg

QA/QC:

Original

TPH mg/kg

2

Duplicate

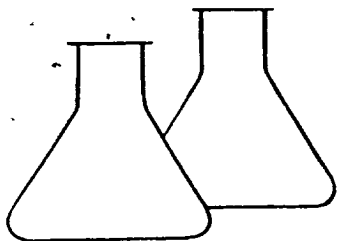
TPH mg/kg

2

%

Diff.

0



ENVIROTECH LABS

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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Phillips Petroleum
Sample ID: T-1 @ 11.0'
Project Location: San Juan 29-5 #87
Laboratory Number: GAC0700

Project #: 93163
Date Analyzed: 8-30-94
Date Reported: 9-23-94
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	8,980	100

ND = Not Detectable at stated detection limits.

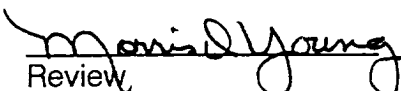
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	2	2	0

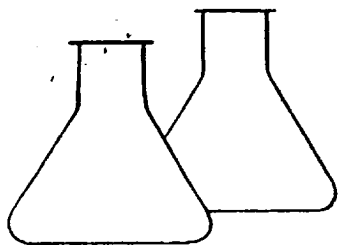
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239


Analyst


Review



ENVIROTECH LABS

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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	T-1 @ 14.0'	Date Analyzed:	8-30-94
Project Location:	San Juan 29-5 #87	Date Reported:	9-23-94
Laboratory Number:	GAC0701	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	1,720	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	2	2	0

*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 PA239

C. Jack Collins
Analyst

Morris D. Young
Review

CLIENT: Phillips Petroleum**ENVIROTECH Inc.**5798 US HWY. 84, FARMINGTON, NM 87401
(505) 832-0815PIT NO: PA 239C.O.C. NO: 3989**FIELD REPORT: CLOSURE VERIFICATION**JOB No: 93163PAGE No: 1 of 1LOCATION: NAME: San Juan 29-5 WELL #: 87 PIT: Separator
QUAD/UNIT: C SEC: 25 TWP: 29N RNG: 5W BM: NM CNTY: RA ST: NM
QTR/FOOTAGE: 1040' ENL 1830' FNL CONTRACTOR: Cimarron BackhoeDATE STARTED: 10-28-94
DATE FINISHED: 10-28-94ENVIRONMENTAL
SPECIALIST: CJCSOIL REMEDIATION: EXCAVATION APPROX. 15 FT. x 21 FT. x 15 FT. DEEP.DISPOSAL FACILITY: On site landfarm CUBIC YARDAGE: 175LAND USE: Forest Service LEASE: SF 078917FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 79 FEET SE FROM WELLHEAD.DEPTH TO GROUNDWATER: 60 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000NMDCD RANKING SCORE: 10 NMDCD TPH CLOSURE STD: 1000 PPM

SOIL AND EXCAVATION DESCRIPTION:

0' - 6' Clay, sand, tan, soft, no odor

6' - 11' Clay, sand, tan, grey, strong odor, odor

11' - 15' Clay sand, some sandstone slabs, 3' x 2',

@ 15' Still in clay/shale

S. 3 @ 10'		875	10.35	20	1	22	42.5
		FIELD 4181 CALCULATIONS					
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm	
3m 5 @ 15'	876	10.45	20	10	175	3349	
N. 1 @ 10'	877	10.28	20	1	493	959	
E. 2 @ 10'	878	10.66	20	1	12	22.5	
W. 4 @ 10'	879	10.35	20	100	89	17,198	
6 @ 9'	880	10.09	20	1	7	14	

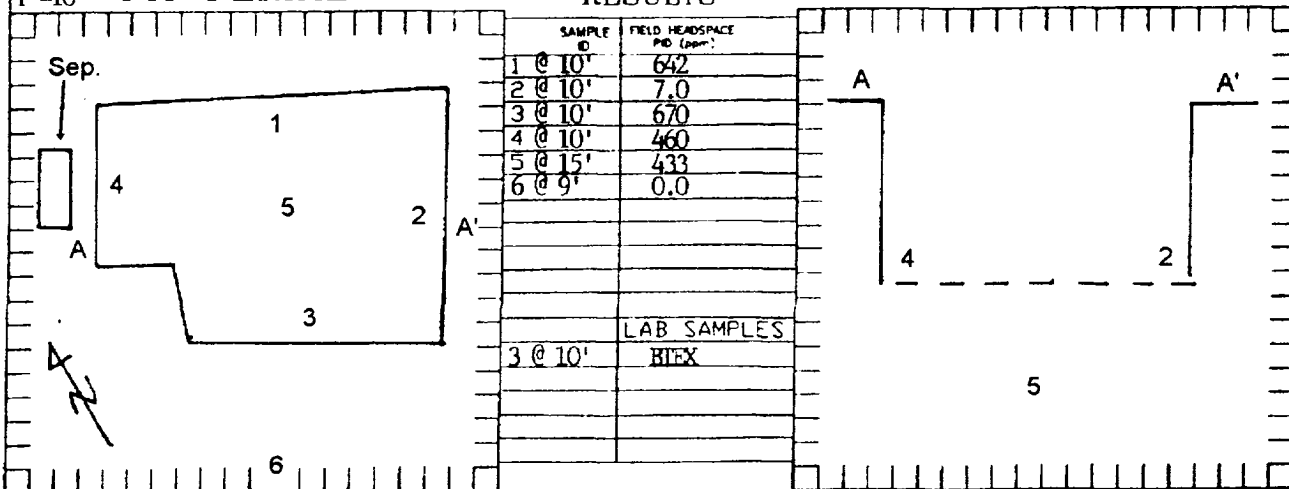
SCALE



0

10 FEET

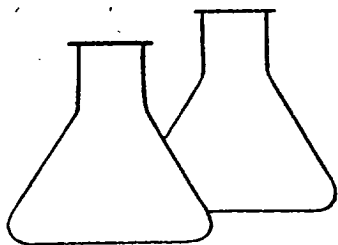
1"=10'

PIT PERIMETER**RESULTS****PIT PROFILE**

TRAVEL NOTES:

CALLOUT: _____

ONSITE: _____



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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	3 @ 10.0'	Date Analyzed:	10-28-94
Project Location:	San Juan 29-5, #87	Date Reported:	11-08-94
Laboratory Number:	GAC0875	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	43	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	760 *	790	4

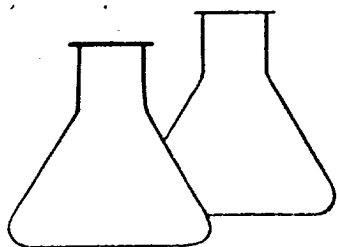
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

P. Jack Collins
Analyst

Steve W. Sander
Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	5 @ 15.0'	Date Analyzed:	10-28-94
Project Location:	San Juan 29-5, #87	Date Reported:	11-08-94
Laboratory Number:	GAC0876	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	3,300	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	760 *	790	4

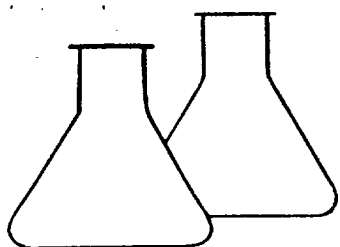
* Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

P. Jack Collins
Analyst

Steve W. Jendro
Review



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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Phillips Petroleum
Sample ID: 1 @ 10.0'
Project Location: San Juan 29-5, #87
Laboratory Number: GAC0877

Project #: 93163
Date Analyzed: 10-28-94
Date Reported: 11-08-94
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	960	10

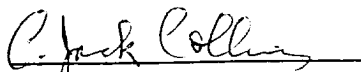
ND = Not Detectable at stated detection limits.

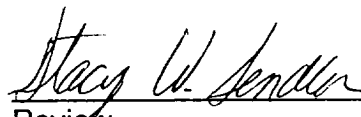
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	760 *	790	4

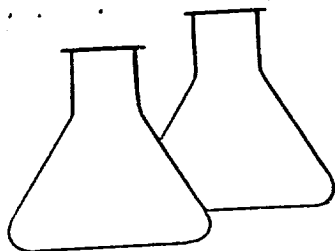
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239


Analyst


Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Phillips Petroleum
Sample ID: 2 @ 10.0'
Project Location: San Juan 29-5, #87
Laboratory Number: GAC0878

Project #: 93163
Date Analyzed: 10-28-94
Date Reported: 11-08-94
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	23	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	760 *	790	4

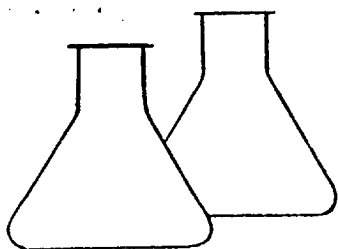
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Stacy W. Sander
Review



ENVIROTECH LABS

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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	4 @ 10.0'	Date Analyzed:	10-28-94
Project Location:	San Juan 29-5, #87	Date Reported:	11-08-94
Laboratory Number:	GAC0879	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	17,000	1,000

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	760 *	790	4

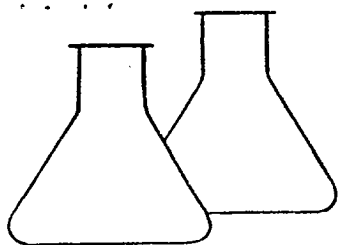
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

Jack Collins
Analyst

Hay W. Sander
Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Phillips Petroleum
Sample ID: 6 @ 9.0'
Project Location: San Juan 29-5, #87
Laboratory Number: GAC0880

Project #: 93163
Date Analyzed: 10-28-94
Date Reported: 11-08-94
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	14	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	760 *	790	4

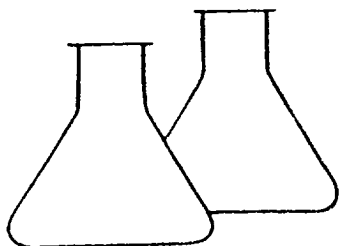
* Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

P. Jack Collins
Analyst

Mary W. Jendler
Review



ENVIROTECH LABS

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

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:		Project #:	93163
Sample ID:	3 @ 10'	Date Reported:	11-11-94
Laboratory Number:	8028BTEX.	Date Sampled:	10-28-94
Chain of Custody	3989	Date Received:	10-28-94
Sample Matrix:	Soil	Date Extracted:	11-09-94
Preservative:	Cool	Date Analyzed:	11-09-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	13.4
Toluene	ND	26.9
Ethylbenzene	ND	13.4
p,m-Xylene	ND	20.2
o-Xylene	ND	20.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	107 %
	Bromofluorobenzene	100 %

Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

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: San Juan 29-5 # 87

Rex L. Houffin
Analyst

Stacy W. Sandler
Review

CLIENT: Phillips Petroleum

ENVIROTECH Inc.

PIT NO: PA 2395796 US HWY. 84, FARMINGTON, NM 87401
(505) 832-0815C.D.C. NO: 4300

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 93163PAGE No: 1 of 1LOCATION: NAME: San Juan 29-5 WELL #: 87 PIT: SeparatorDATE STARTED: 7-19-95QUAD/UNIT: NE NW SEC. 25 TWP. 29N RNG. 5W BM: CNTY: RA ST: NMDATE FINISHED: QTR/FOOTAGE: 1040'FWL, 1830'FWL CONTRACTOR: RosenbaumENVIRONMENTAL
SPECIALIST: CJCSOIL REMEDIATION: EXCAVATION APPROX. 40 FT. x 36 FT. x 15 FT. DEEP.DISPOSAL FACILITY: On site land farm CUBIC YARDAGE: 800 cyLAND USE: Forest Service LEASE: SF 078917FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 75 FEET East FROM WELLHEAD.DEPTH TO GROUNDWATER: 60' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: 800'NMCD RANKING SCORE: 30 NMCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

0' - 15' Shale, tan, maroon, dry, slightly weathered

7	Test 2 @13'	1117	10.42	20	1	30	57.6
6	Test 1 @17'	1116	10.72	20	1	33	61.6

FIELD 418.1 CALCULATIONS

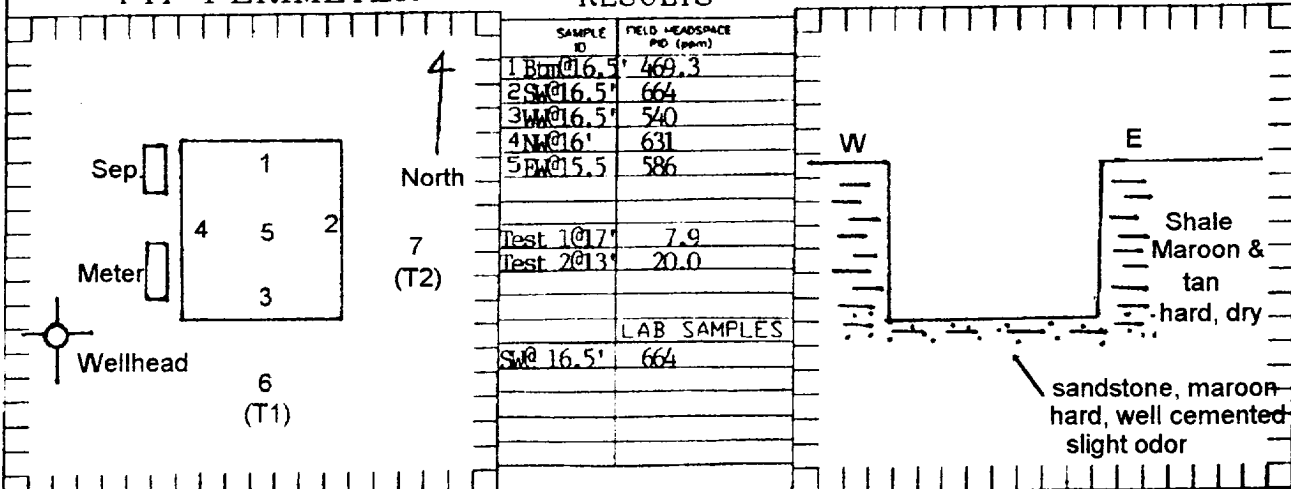
SAMPLE I.D.	LAB No.	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
5 Btm @ 16.5'	1111	10.08	20	1	34	67.5
3 SW @ 16.5	1112	10.72	20	1	110	205
4 WW @ 16.5	1113	10.39	20	1	102	1963
1 NW @ 16.0	1114	10.91	20	1	42	77.0
2 EW @ 15.5	1115	10.52	20	1	330	627

1" = 40'
SCALE
0 20' FEET

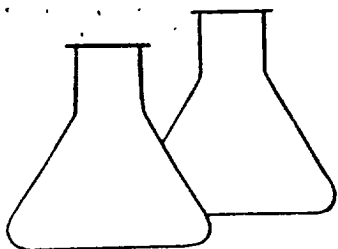
PIT PERIMETER

RESULTS

PIT PROFILE



TRAVEL NOTES: CALLOUT: _____ ONSITE: _____



ENVIROTECH LABS

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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	BTM @ 16.5'	Date Analyzed:	07-19-95
Project Location:	San Juan 29-5, #87	Date Reported:	07-27-95
Laboratory Number:	GAC1111	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	67	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	46 *	50	8

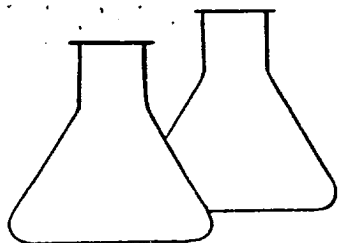
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Stacy W. Jender
Review



ENVIROTECH LABS

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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	S WALL @ 16.5'	Date Analyzed:	07-19-95
Project Location:	San Juan 29-5, #87	Date Reported:	07-27-95
Laboratory Number:	GAC1112	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	205	10

ND = Not Detectable at stated detection limits.

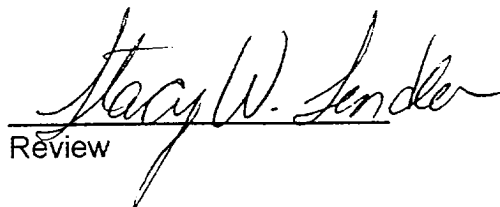
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff
	46 *	50	8

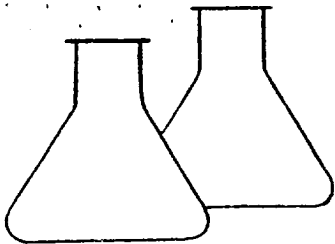
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239


Analyst


Review



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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	W WALL @ 16.5'	Date Analyzed:	07-19-95
Project Location:	San Juan 29-5, #87	Date Reported:	07-27-95
Laboratory Number:	GAC1113	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	1,963	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	46 *	50	8

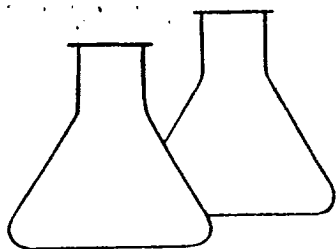
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Henry W. Jendro
Review



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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	N. WALL @ 16.0'	Date Analyzed:	07-19-95
Project Location:	San Juan 29-5, #87	Date Reported:	07-27-95
Laboratory Number:	GAC1114	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	77	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	46 *	50	8

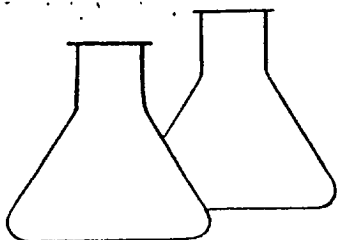
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Steve W. Sander
Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	E. WALL @ 15.5'	Date Analyzed:	07-19-95
Project Location:	San Juan 29-5, #87	Date Reported:	07-27-95
Laboratory Number:	GAC1115	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	630	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	46 *	50	8

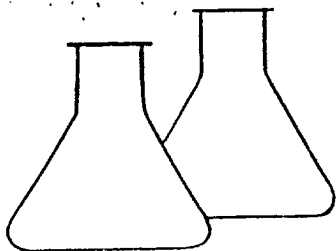
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Harold M. Brown
Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Phillips Petroleum
Sample ID: TEST1 @ 17.0'
Project Location: San Juan 29-5, #87
Laboratory Number: GAC1116

Project #: 93163
Date Analyzed: 07-19-95
Date Reported: 07-27-95
Sample Matrix: Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	62	10

ND = Not Detectable at stated detection limits.

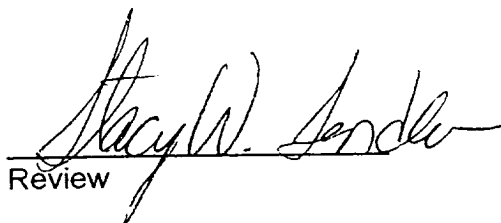
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	46 *	50	8

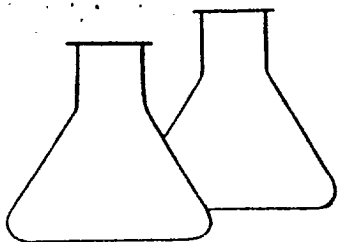
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239


Analyst


Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	TEST2 @ 13.0'	Date Analyzed:	07-19-95
Project Location:	San Juan 29-5, #87	Date Reported:	07-27-95
Laboratory Number:	GAC1117	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	58	10

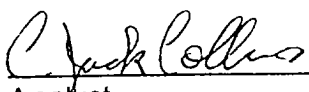
ND = Not Detectable at stated detection limits.

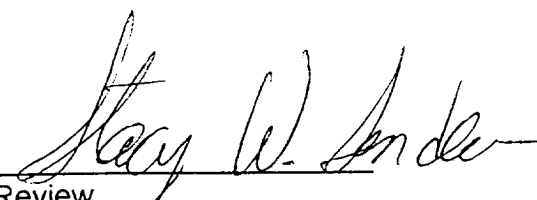
QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	46 *	50	8

*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 PA239


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Phillips Petroleum	Project #:	93163
Sample ID:	S. Wall @ 17'	Date Reported:	07-20-95
Laboratory Number:	8732	Date Sampled:	07-19-95
Chain of Custody:	4300	Date Received:	07-19-95
Sample Matrix:	Soil	Date Analyzed:	07-20-95
Preservative:	Cool	Date Extracted:	07-19-95
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	35.4	29.5
Toluene	1,990	33.8
Ethylbenzene	477	31.6
p,m-Xylene	5,430	27.0
o-Xylene	2,360	29.3

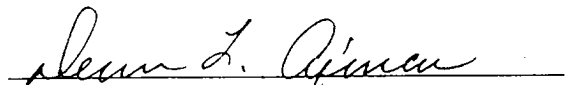
ND - Parameter not detected at the stated detection limit.

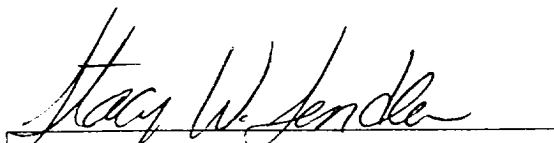
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	100 %

References: 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. 1994.

Comments: San Juan 29-5 #87, Pit # PA239.


Analyst


Review

CHAIN OF CUSTODY RECORD

[illegible]**ENVIROTECH INC.**

5796 U.S. Highway 64-3014

Farmington, New Mexico 87401

(505) 632-0615

PIT NO: PA 239

C.D.C. NO:

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 93163

PAGE No: 1 of 1

LOCATION: NAME: San Juan 29-5 WELL #: 87 PIT: Separator

DATE STARTED: 1-29-96

DATE FINISHED: _____

QUAD/UNIT: C SEC: 25 TWP: 29N RNG: SW BM: NM CNTY: RA ST: NM

ENVIRONMENTAL
SPECIALIST: CJC

QTR/FOOTAGE: 1040' FNL 1830' FNL CONTRACTOR:

SOIL REMEDIATION: EXCAVATION APPROX. 12' FT. x 16' FT. x 20' FT. DEEP.

DISPOSAL FACILITY: On site landfarm CUBIC YARDAGE: 142

LAND USE: Range LEASE: SE 078917

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 90' FEET SE FROM WELLHEAD.

DEPTH TO GROUNDWATER: 60' NEAREST WATER SOURCE: 800' NEAREST SURFACE WATER: > 1000

NMDCD RANKING SCORE: 30 NMDCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

Clay and shale, grey/green, maroon, grey, dry, no odor, 0'-13'; strong odor 13'-20'

FIELD 418.1 CALCULATIONS

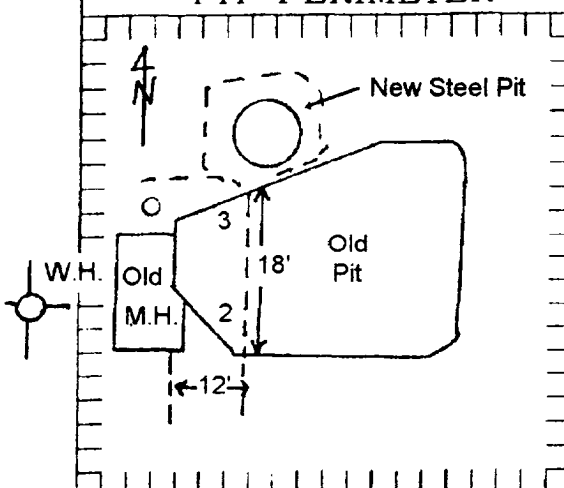
	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1	Well @6'	1152	9.75	20	1	25	51
2	Btm @20'	1153	10.77	20	1	24	44
3	Well @18'	1154	10.74	20	1	18	34

SCALE



0 FEET

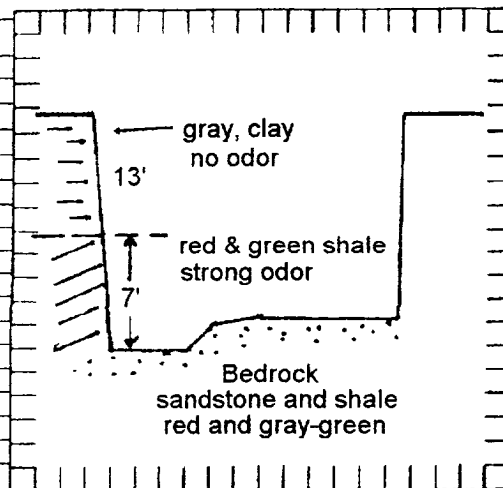
PIT PERIMETER



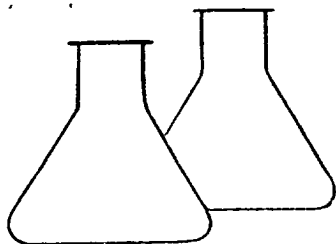
OVM RESULTS

[illegible]

PIT PROFILE



TRAVEL NOTES: CALLOUT: 11:00 _____ ONSITE: 12:00 _____



ENVIROTECH LABS

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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **NW @ 6.0'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1152**

Project #: **93163**
Date Analyzed: **01/29/96**
Date Reported: **02/06/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	51	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample _____TPH mg/kg	Duplicate _____TPH mg/kg	% *Diff.
	100	109	9

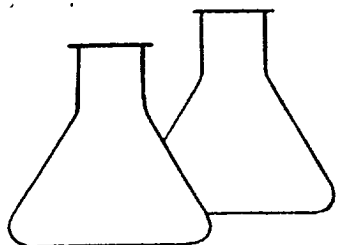
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Lu Shaharlang
Review



ENVIROTECH LABS

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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **BTM @ 20.0'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1153**

Project #: **93163**
Date Analyzed: **01/29/96**
Date Reported: **02/08/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	45	10

ND = Not Detectable at stated detection limits.

<u>QA/QC:</u>	<u>QA/QC Sample TPH mg/kg</u>	<u>Duplicate TPH mg/kg</u>	<u>% *Diff.</u>
	100	109	9

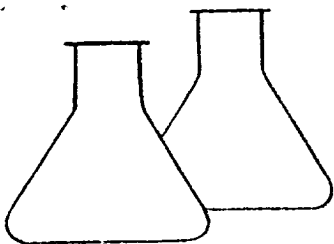
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

P. Jack Collins
Analyst

A. Chabot
Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **NW @ 18.0'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1154**

Project #: **93163**
Date Analyzed: **01/29/96**
Date Reported: **02/06/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	34	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample _____ TPH mg/kg	Duplicate _____ TPH mg/kg	% *Diff.
	100	109	9

*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 PA239

P. Jack Collins
Analyst

A. Chabot
Review

PIT NO: PA 239

C.O.C. NO: _____

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 93163

PAGE No: 1 of 1

LOCATION: NAME: San Juan 29-5 WELL #: 87 PIT: Separator
QUAD/UNIT: C SEC: 25 TWP: 29N RNG: 5W BM: NM CNTY: RA STNM
QTR/FOOTAGE: 1040' ENL 1830' ENL CONTRACTOR: _____

DATE STARTED: 1-30-96

DATE FINISHED: _____

ENVIRONMENTAL
SPECIALIST: CJC

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

DISPOSAL FACILITY: On site landfarm CUBIC YARDAGE:

LAND USE: Forest Service LEASE: SF078917

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 90 FEET East FROM WELLHEAD.

DEPTH TO GROUNDWATER: 60 NEAREST WATER SOURCE: 800' NEAREST SURFACE WATER: > 1000

NMDCD RANKING SCORE: 30 NMDCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

FIELD 418.1 CALCULATIONS

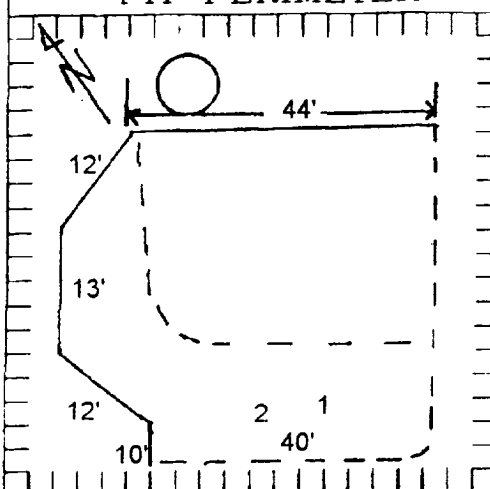
		FIELD 4181 CALCULATIONS					
	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1	SW @ 17'	1155	9.22	20	1	25	54
2	SW @ 19'	1156	10.25	20	1	24	49

SCALE

0

FEET

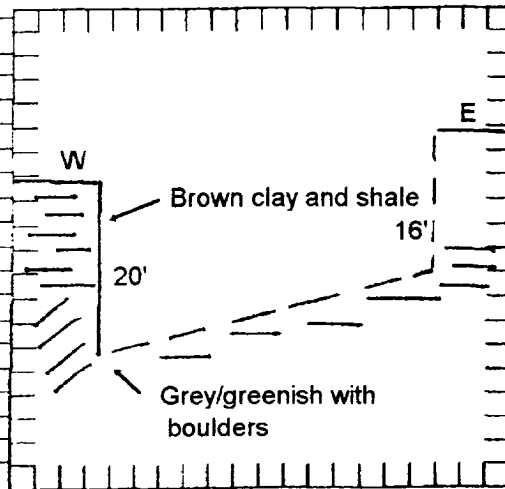
PIT PERIMETER



OVM RESULTS

[illegible]

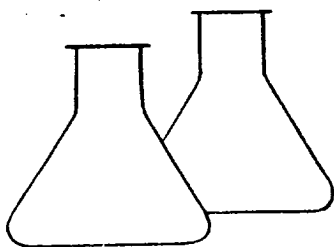
PIT PROFILE



TRAVEL NOTES.

CALLOUT: _____ ONSITE: _____

ON SITE:



ENVIROTECH LABS

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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **SW @ 17.0'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1155**

Project #: **93163**
Date Analyzed: **01/30/96**
Date Reported: **02/06/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	54	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	100	109	9

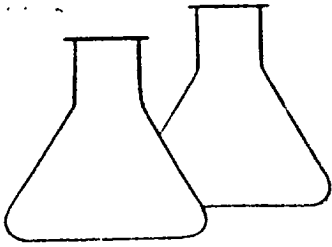
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

Ch. Chaharlang
Review



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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **SW @ 19.0'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1156**

Project #: **93163**
Date Analyzed: **01/30/96**
Date Reported: **02/06/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	47	10

ND = Not Detectable at stated detection limits.

<u>QA/QC:</u>	<u>QA/QC Sample TPH mg/kg</u>	<u>Duplicate TPH mg/kg</u>	<u>% *Diff</u>
	100	109	9

*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 PA239

C. Jack Collins
Analyst

Ar. Chaharlang
Review

PIT NO. PA 239

C.D.C. NO:

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 93163

PAGE No: 1 of 1

LOCATION: NAME: San Juan 29-5 WELL #: 87 PIT: Separator

DATE STARTED: 2-5-96

DATE FINISHED: 2-5-96

QUAD/UNIT: C SEC: 25 TWP: 29N RNG: 5W BM: NM CNTY: RA ST: NM

ENVIRONMENTAL SPECIALIST: CJC

QTR/FOOTAGE: 1040' FNL, 1830' FWL CONTRACTOR: Jay/Rosebaum

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

DISPOSAL FACILITY: On site landfarm CUBIC YARDAGE:

LAND USE: Forest Service LEASE: SF078917

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 90 FEET East FROM WELLHEAD.

DEPTH TO GROUNDWATER: 60' NEAREST WATER SOURCE: 800' NEAREST SURFACE WATER: > 1000'

NMDCD RANKING SCORE: 30 NMDCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

Clay, shale, fine sand, with boulders to 2', hard on bottom. Grey, green, maroon, tan, dry.

FIELD 418.1 CALCULATIONS

FIELD 418.1 CALCULATIONS							
	SAMPLE I.D.	LAB No.	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1	SW @ 19'	1161	10.60	20	1	18	34
2	SW @ 18'	1162	10.45	20	1	17	32

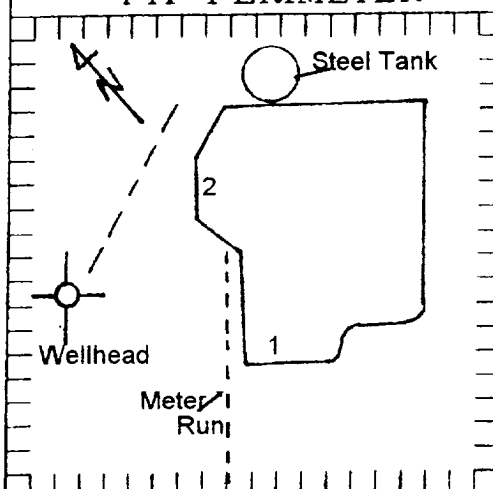
 $1'' = 40'$

SCALE

0

40 FEET

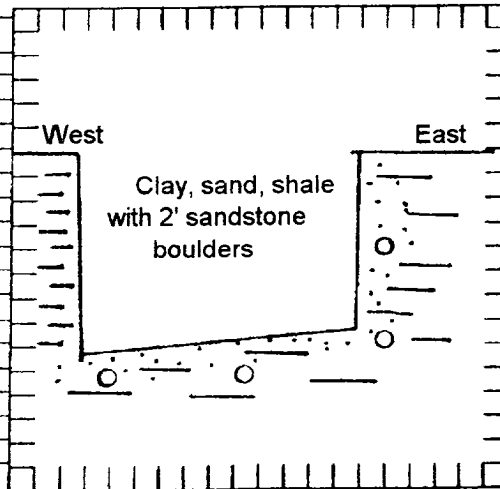
PIT PERIMETER



OVM RESULTS

[illegible]

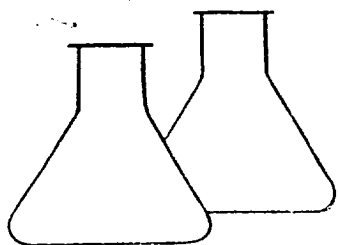
PIT PROFILE



TRAVEL NOTES:

CALLOUT:

ON SITE:



ENVIROTECH LABS

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FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **SW @ 19'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1161**

Project #: **93163**
Date Analyzed: **02/05/96**
Date Reported: **02/06/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	34	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample	Duplicate	%
	TPH mg/kg	TPH mg/kg	*Diff.
	100	109	9

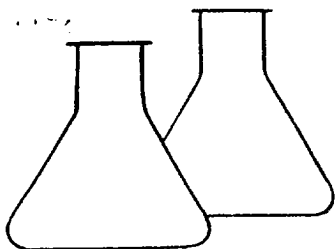
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

A. Chabot
Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401

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

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: **Phillips Petroleum**
Sample ID: **WW @ 18'**
Project Location: **San Juan 29-5, #87**
Laboratory Number: **GAC1162**

Project #: **93163**
Date Analyzed: **02/05/96**
Date Reported: **02/06/96**
Sample Matrix: **Soil**

<u>Parameter</u>	<u>Result, mg/kg</u>	<u>Detection Limit, mg/kg</u>
Total Recoverable Petroleum Hydrocarbons	33	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample _____TPH mg/kg	Duplicate _____TPH mg/kg	% *Diff.
	100	109	9

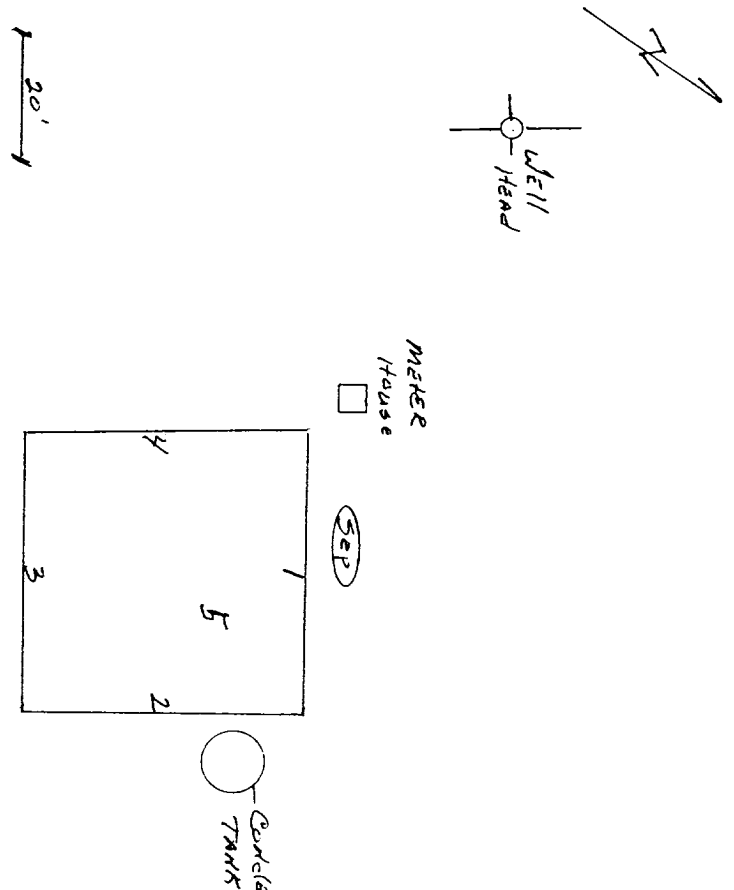
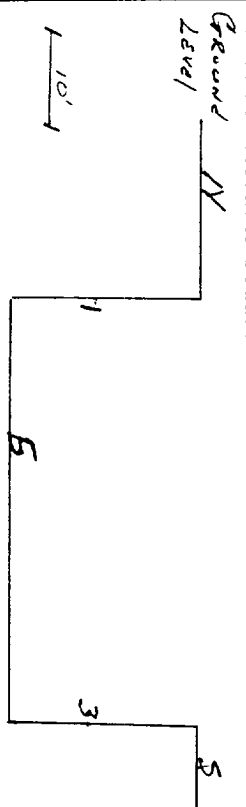
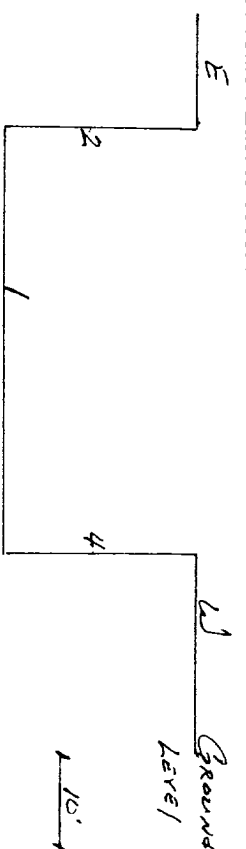
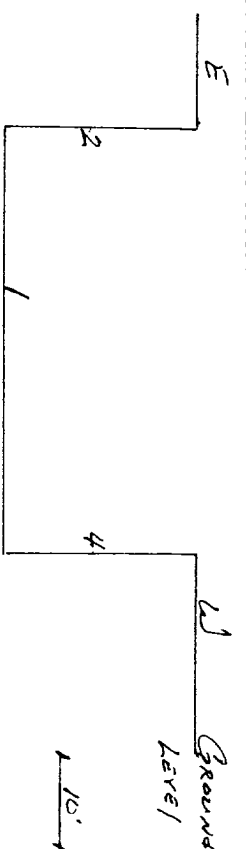
*Administrative Acceptance limits set at 30%.

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

Comments: Separator Pit PA239

C. Jack Collins
Analyst

As Shabbar
Review

Location : San Juan 29 - 5 # 87		Overview of Location and Sampling : 																																								
Quad : "C" Section <u>25</u>																																										
Township: 29 N Range : 5W																																										
Pit : Separator		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sample #</th> <th style="width: 40%;">Location</th> <th style="width: 10%;">OVM</th> </tr> </thead> <tbody> <tr><td>1</td><td>N. Wall @ 11'</td><td>0</td></tr> <tr><td>2</td><td>E. Wall @ 11'</td><td>2</td></tr> <tr><td>3</td><td>S. Wall @ 11'</td><td>0</td></tr> <tr><td>4</td><td>W. Wall @ 11'</td><td>0</td></tr> <tr><td>5</td><td>Bottom @ 20'</td><td>0</td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> </tbody> </table>		Sample #	Location	OVM	1	N. Wall @ 11'	0	2	E. Wall @ 11'	2	3	S. Wall @ 11'	0	4	W. Wall @ 11'	0	5	Bottom @ 20'	0	6			7			8			9			10			11			12		
Sample #	Location	OVM																																								
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6																																										
7																																										
8																																										
9																																										
10																																										
11																																										
12																																										
Reference : 90 ft East of wellhead Initial Size :		Final Size : 45' x 45' x 20' deep Yds. Excavated :																																								
Comments : Soil is yellow to brown, moist, clayey sand. Some rocks (18 inches plus in diameter) are present. No odor or staining present. Excavated soil added to landfarm on location. Sample # 5 (bottom @ 20') sent to IML Labs for TPH (8015) analysis.																																										
Pit Profile : North to South :																																										
		Pit Profile : East to West :																																								
																																										

GASOLINE RANGE ORGANICS - GRO

1160 Research Drive
Bozeman, Montana 59718

Client: PHILLIPS PETROLEUM COMPANY
Sample ID: Center Bottom @ 20'
Project ID: None Given
Lab ID: B971015 0397G00275
Matrix: Soil

Date Reported: 03/04/97
Date Sampled: 02/26/97
Date Received: 02/28/97
Date Extracted: 02/28/97
Date Analyzed: 02/28/97

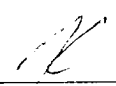
Parameter	Result	PQL	Units
Gasoline Range Organics	12	5.0	mg/kg
Gasoline Range Organics as Gasoline	12	5.0	mg/kg
Total Purgeable Hydrocarbons	19	5.0	mg/kg

QUALITY CONTROL - Surrogate Recovery	%	QC Limits
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Bromofluorobenzene	117	40 - 163
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ND - Not Detected at Practical Quantitation Level (PQL)

Reference: GRO - USEPA Method for Determination of Gasoline Range Organics, Rev. 5, February 1992.
WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 6, 08/18/93.

Analyst SDReviewed 

DIESEL RANGE ORGANICS - DRO1160 Research Drive
Bozeman, Montana 59718

Client: **PHILLIPS PETROLEUM COMPANY**
Sample ID: Center Bottom @ 20'
Project ID: None Given
Lab ID: B971015 0397G00275
Matrix: Soil

Date Reported: 03/04/97
Date Sampled: 02/26/97
Date Received: 02/28/97
Date Extracted: 03/03/97
Date Analyzed: 03/03/97

Parameter	Result	PQL	Units
Diesel Range Organics	60	5.0	mg/kg
Diesel Range Organics as Diesel	60	5.0	mg/kg
Total Extractable Hydrocarbons	71	5.0	mg/kg

ND - Not Detected at Practical Quantitation Level (PQL)

Reference: DRO - USEPA Method for Determination of Diesel Range Organics. Revision 3, 05/08/92.
WTPH-D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Analyst WJA

Reviewed 12



CHAIN OF CUSTODY RECORD

[illegible]

Date Completed : 23 June 1897

Page 1 of 1

PHILLIPS PETROLEUM

Case Narrative

On June 24, 1997, one soil sample was submitted to Inter-Mountain Laboratories - Farmington for analysis, by Frank McDonald of Cimarron Oilfield Services. The sample was received cool and intact and was identified as project "SJ 29-5 #87 Landfarm". The sample was analyzed for the parameters indicated on the accompanying Chain of Custody document #47437.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analyses of the sample reported herein are found in Test Methods For Evaluation of Solid Waste, SW-846, USEPA, 1986, and Methods For Chemical Analysis of Water and Wastes, EPA-600/4-79-020, USEPA, 1983.

Quality control reports appear at the end of the analytical package and may be identified by title. If there are any questions regarding the information presented in this package, please feel free to call at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon Williams", written over the word "Sincerely,".

Sharon Williams
Organic Analyst

DIESEL RANGE ORGANICS - DRO1160 Research Drive
Bozeman, Montana 59718

Client: **PHILLIPS PETROLEUM COMPANY**
Sample ID: Sample Points 11-16
Project ID: S.J. 29-5 #87 Landfarm
Lab ID: B973306 0397G01178
Matrix: Soil

Date Reported: 07/10/97
Date Sampled: 06/23/97
Date Received: 06/26/97
Date Extracted: 07/02/97
Date Analyzed: 07/07/97

Parameter	Result	PQL	Units
Diesel Range Organics	7.6	5.0	mg/kg
Diesel Range Organics as Diesel	7.6	5.0	mg/kg
Total Extractable Hydrocarbons	7.6	5.0	mg/kg

ND - Not Detected at Practical Quantitation Level (PQL)

Reference: DRO - USEPA Method for Determination of Diesel Range Organics. Revision 3, 05/08/92.
WTPH-D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Analyst Reviewed E.D.

GASOLINE RANGE ORGANICS - GRO

1160 Research Drive
Bozeman, Montana 59718

Client: PHILLIPS PETROLEUM COMPANY
Sample ID: Sample Points 11-16
Project ID: S.J. 29-5 #87 Landfarm
Lab ID: B973306 0397G01178
Matrix: Soil

Date Reported: 06/30/97
Date Sampled: 06/23/97
Date Received: 06/26/97
Date Extracted: 06/27/97
Date Analyzed: 06/27/97

Parameter	Result	PQL	Units
Gasoline Range Organics	ND	5.0	mg/kg
Gasoline Range Organics as Gasoline	ND	5.0	mg/kg
Total Purgeable Hydrocarbons	ND	5.0	mg/kg

QUALITY CONTROL - Surrogate Recovery

%

QC Limits

Bromofluorobenzene

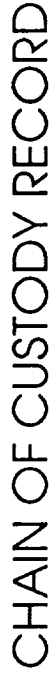
98

40 - 163

ND - Not Detected at Practical Quantitation Level (PQL)

Reference: GRO - USEPA Method for Determination of Gasoline Range Organics, Rev. 5, February 1992.
WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 6, 08/18/93.

Analyst SPReviewed E.D.



CHAIN OF CUSTODY RECORD

Inter-Mountain Laboratories, Inc.