

AUGUST 1994

PROJECT 94103

**PIT CLOSURE PLAN
SANTA FE #1
SANTA FE PACIFIC GOLD CORP
SECTION 9 T19N., R6W., NMPM
MCKINLEY COUNTY, NEW MEXICO**

INTRODUCTION

Santa Fe Pacific Gold Corporation has retained Envirotech Inc. to develop a pit closure plan for the Santa Fe #1 well. The location of this well is the SE/4 SW/4 Section 9, T19N, R6W NMPM, McKinley County, New Mexico. This well was plugged and abandoned in November 1993. This closure plan is for the reclamation of hydrocarbon contaminated soil on the well pad area and in the previously unlined separator pit.

A limited site assessment was performed by Envirotech during January 1994 to define the extent of soil contamination. The findings of this assessment along with laboratory soil analysis are attached. Envirotech's January 20, 1994 cover letter to Mr. Gary Simpson of Santa Fe Pacific Gold presents results of that initial assessment. Additional soil borings and sampling of the separator pit have been performed by Santa Fe Pacific Gold to document the vertical extent of contamination in the separator pit area. The results of this pit investigation are attached under Envirotech's May 6, 1994 cover letter. Core sample results of the bedrock underlying the separator pit are reported under Envirotech's August 31, 1994 cover letter contained in the appendix of this closure plan.

SUMMARY OF FINDINGS

The following conclusion were drawn from the January 1994 and March 1994 site assessments:

- (1) Hydrocarbon contamination of soil above current regulatory action levels is present in the area of the unlined earthen separator pit. This hydrocarbon contamination appears to have originated from the normal operation of the separator equipment on the location.
- (2) Hydrocarbon contamination on the surface of the well pad area appears to be limited to the well pad itself, involving a surface area of approximately 750 square feet. The average depth of contamination is approximately 2 feet. The origin of the hydrocarbons appears to be numerous small spills resulting from the normal production operation of the site.

- is
- (3) In the pit area, soil contamination extends from the pit bottom to a maximum depth of 8.5 feet. Competent sandstone bedrock underlays approximately 8 feet of alluvial fill at the site.
 - (4) Groundwater has not been impacted and no free product present. The depth to groundwater at this site is estimated to be greater than 100 feet based on nearby test wells.
 - (5) The distance to the nearest ephemeral stream $\geq$ 10 feet wide is estimated to be > 100 feet.
 - (6) This site is located > 1000 feet from a water source or private domestic water source.
 - (7) The distance to the nearest surface water body is > 1000 feet.
 - (8) Based on the site ranking score, the Recommended Remediation levels are:

Benzene (ppm)	10
BTEX (ppm)	50
TPH (ppm)	5000

REMEDIAL ACTION PLAN

Based on the previously cited information Santa Fe Pacific Gold, proposes to remediate the hydrocarbon contaminated soils by excavation with off site landfarm treatment of the soils. The pit closure plan will consist of the following tasks:

- (1) Removal of Contaminated Soils: Contaminated soils in the immediate area of the pit will be excavated using a backhoe. Excavation will be continued until all visible soil discoloration is removed and the field screening by Organic Vapor Meter (OVM) is below the action level of 100 ppm.
- (2) Treatment of Contaminated Soils: Offsite landfarming by transporting the removed contaminated soils to Envirotech's Soil Remediation Facility located at Hilltop, New Mexico. This facility is permitted and regulated by the NMOCD for landfarming treatment of E&P non-hazardous wastes. A copy of the NMOCD permit is attached in the appendix.
- (3) Field Assessment: To verify the remediation effort, field assessment will be provided by qualified and experienced environmental professionals. Field assessment will

include soil sampling and field screening of volatile organic vapors by the Field Headspace Method and testing for Total Petroleum Hydrocarbons (TPH) by USEPA Method 418.1.

A minimum of five soil samples will be collected from the pit walls and floor for confirmation that soil contamination has been removed. The well site pad area will be excavated to remove all visible surface contamination. Verification will be by OVM screening and with five point composite soil samples taken for laboratory confirmation of TPH by USEPA Method 418.1. One composite sample will be obtained for each approximate 200 sq. ft. of excavation area. QA/QC for the sampling will consist of a trip blank, spike matrix analysis and a duplicate sample for every 10 samples taken or fraction thereof. Samples will be transported to the analytical laboratory on ice.

- (4) Closure: Once the excavation, field assessment and removal of contaminated soil have been completed, closure of this site would consist of the following:
- (a) Recontouring the surface of the well site to provide drainage and prevent soil erosion, followed by revegetation during the next favorable time as recommended by the BLM. *Landowner*
 - (b) No further action will be taken for the remediation of the site and the pit and site will be classified as **CLOSED**.
 - (c) A closure report detailing the remediation and closure activities will be submitted to the USEPA, NEPA and NMOCD upon completion of the work.

LIMITATIONS AND CLOSURE

This pit closure plan has been developed using the findings of prior site assessments and the guidelines of the July 1993 BLM Unlined Pit Remediation & Closure Program for the Farmington and Albuquerque Districts.

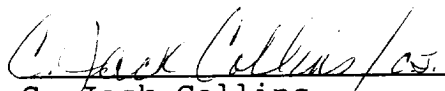
All soil contamination is believed to be E & P wastes and to have originated from the normal operation of the separator equipment on the location. No hazardous wastes are believed to be present or involved with the subject contamination as defined per RCRA (40 CFR 261).

Full implementation of this plan will need the concurrent approval of the USEPA (BIA) and the BLM.

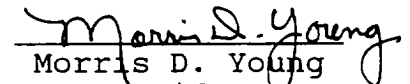
A Sundry Notice for the remediation/closure work is attached in the Appendix.

The pit closure plan has been developed for the exclusive use of Santa Fe Pacific Gold Corp. as it pertains to the Santa Fe # 1 well site located in Section 9, T19N, R6W, NMPM, McKinley County, New Mexico.

Respectfully Submitted
Envirotech Inc.


C. Jack Collins
Geologist

Review
Envirotech Inc.


Morris D. Young
President

Hospah Coal Company

6200 Uptown Blvd. N.E., Suite 400
 Albuquerque, New Mexico 87110
 Box 27019
 Albuquerque, New Mexico 87125
 505/880-5300 Fax# 505/880-5435

January 11, 1994

Sadie Hoskie
 Office of the President and Vice President
 Navajo Nation
 Highway 264/Tribal Hill Drive
 Window Rock, AZ 86515

Dear Ms. Hoskie:

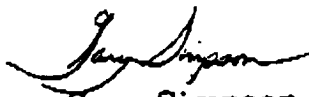
Hospah Coal Company owned the oil and gas rights to an oil well (Santa Fe #1) on Navajo surface rights in McKinley County (Section 9, T.19N., R.6W.). This well was plugged and abandoned in November 1993.

Pursuant to reclamation of the surface site, we will be conducting preliminary sampling and testing to determine the approximate areal and volumetric extent of contamination. The sampling will consist of small holes dug by a backhoe to extract samples that will be field and laboratory tested for TPH and soil OVC with spot checking for BTEX concentrations. The sample pits will be backfilled immediately after sampling.

A detailed reclamation plan will be forthcoming to your office once the approximate boundaries of the possible soil contamination has been determined.

This preliminary sampling program will begin January 18. Please contact me as soon as possible if you have any concerns of questions.

Sincerely,


 Gary Simpson
 Field Supervisor

c: P. Eby
 T. Leftwich
 G. Wagner

Post-it Fax Note 7671		Date 8/15	# of pages 1
To Jack Collins		From Gary Simpson	
Cc: Dept. Envirotech		Co. Santa Fe	
Phone #		Phone #	
Fax # (505) 632-1865		Fax #	

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

January 20, 1994

Mr. Gary Simpson
Santa Fe Pacific Gold Corporation
Box 27019
Albuquerque, NM 87125

RE: Lab Results
Santa Fe #1 Assessment

Project No: 94103

Dear Gary:

The attached Field Report and Table 1 summarize the field measurements and lab results for the January 18, 1994 site assessment at the Santa Fe #1 well site. Original copies of the lab results, QA/QC, and field reports will be forwarded to you by mail today.

Note that the remediation standards for soil are 100 ppm by OVM, 10,000 ppb for Benzene, 50,000 ppb for total BTEX, and anticipated to be 1000 ppm to 5000 ppm for total petroleum hydrocarbons (TPH).

Please contact me if you have any questions or need further information at (505) 632-0615. Thanks for your consideration on this project.

Respectfully submitted,
ENVIROTECH INC.


Michael K. Lane, P.E.
Geological Engineer

ATTACHMENTS: Table 1
Field Report (1-18-94)

MKL/mkl

4103CVR.LTR

ENVIROTECH Inc.

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

PIT NO: _____

C.O.C. NO: _____

FIELD REPORT: SITE ASSESSMENT

JOB No. 94103

PAGE No: 1 of 1

PROJECT: PIT ASSESSMENT

CLIENT: SANTA FE PACIFIC GOLD

CONTRACTOR: ENVIROTECH, INC.

EQUIPMENT USED: CUMMINS BACKHOE

DATE STARTED: 1/12/94

DATE FINISHED: "

ENVIRO. SPCLT: HKL

OPERATOR: _____

ASSISTANT: _____

LOCATION: LEASE: HOSPAN COAL CO. WELL: SANTA FE #1 QD: "N" SE-SW
SEC: 9 TWP: 19 N RNG: 6 W PM: NH CNTY: MEK. ST. NM 2-15-25EP

LAND USE: RANGE

SURFACE CONDITIONS: WELL LOCATION SOURCE VEG., PIT HAS WATER & PARASIT

PIT CENTER IS LOCATED APPROXIMATELY 35 FEET EAST OF WELLHEAD.

FIELD 418.1 CALCULATIONS

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

DEPTH TO GROUNDWATER:
NEAREST WATER SOURCE/TYPE:
NEAREST SURFACE WATER:
NMOC RANKING SCORE:
NMOC TPH CLOSURE STD:

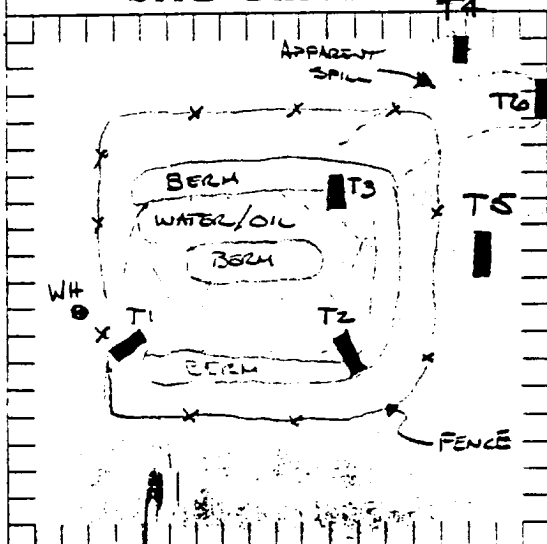
SAMPLE INVENTORY

SMPL ID	SMPL TYPE	LABORATORY ANALYSIS

SCALE

0 10 20 FEET

SITE DIAGRAM



TH# 1
SOIL SMPL OVM/
TYPE: TYPE: TPH

Pit Bottom
1 SH DK YB
2 SC
3 1.3
4 G. Yellow Brown
5 SH/CL
6 1.9
SS Bedrock
TDE 6'

TH# 2
SOIL SMPL OVM/
TYPE: TYPE: TPH

Pit Bottom
1 Liquid/CL
2 H/C DK Brown
3 1.3
4 G. YB
5 1.3
6 1.3
SS
TDE 6.5'

TH# 3
SOIL SMPL OVM/
TYPE: TYPE: TPH

Pit Bottom
1 H/C CL
2 BRW
3 1.3
4 G. YB
5 1.3
6 0.8
SS
TDE 7'

TH# 4
SOIL SMPL OVM/
TYPE: TYPE: TPH

SH/CL
1 MED. BROWN
2 0.8
3 1.3
4 TD-4'

TH# 5

1 SH/CL
2 BRN to YB
3 1.9
4 0.8
TD-4'

TH# 6

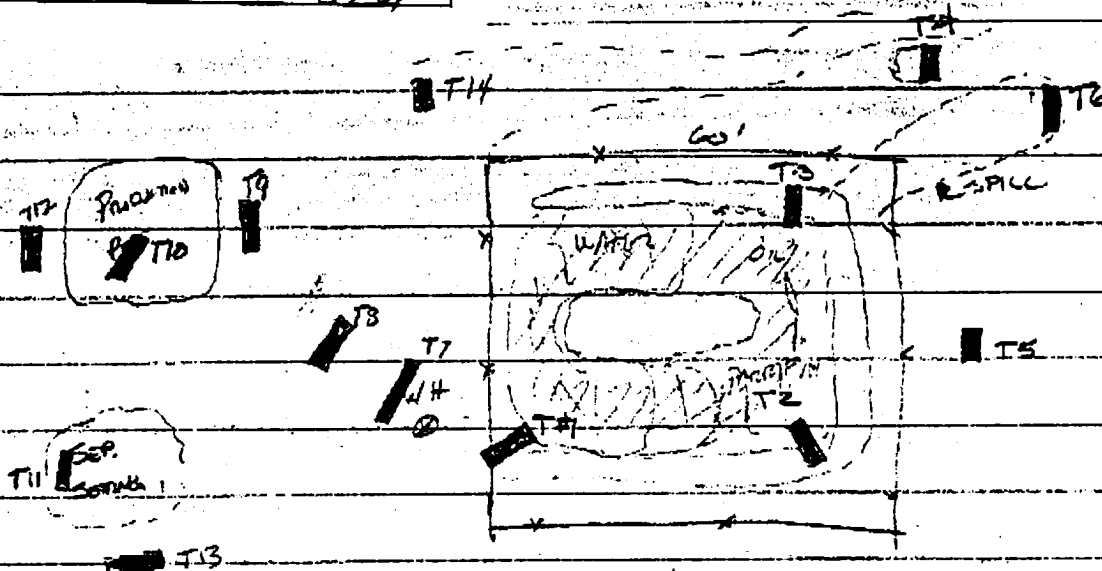
1 SH/CL DK BROWN
2 0.8
3 1.9
4 TD-3.5'

SOIL TYPE: C - Clay, M - Sil. S - Sand, G - Gravel. Plasticity: L - Liquid, N - Plastic. Grading: P - Poorly, G - Good

Scat 12

10'

Post-It Fax Note	7671	Date	8/31/94	# of pages	1
To	Envirotech, Inc	From	Larry Sigman		
Co./Dept.	Jack Collins	Co.	SFPG		
Phone #		Phone #	505-880-5389		
Fax #	505-632-1865	Fax #	505-880-5437		

300 yds
100 yds600 yds
700 yds600 yds
700 yds

HOSPAN COAL COMPANY

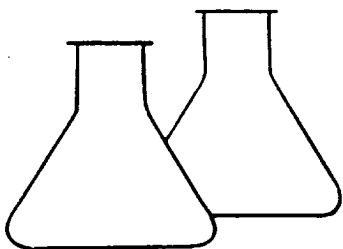
SANTA FE #1

"N" SE-SW SEC 9, T19N, R6W

MC KINLEY, New Mex. C-15-2SEP

Table 1
Assessment Summary
Hospah Coal Company Well: Santa Fe #1
January 18, 1994

SAMPLE	OVM (ppm)	BENZENE (ppb)	TOLUENE (ppb)	E-BENZ. (ppb)	XYLENES (ppb)	TPH (ppm)
T1@3'	1.3	419	215	45.1	1198	252
T1@6'	1.9	ND	ND	ND	71.3	ND
T2@4'	1.3	ND	ND	ND	69.1	ND
T3@4'	1.3	ND	179	ND	180.1	16.4
T4@3'	0.8	ND	52	ND	ND	47.9
T6@1.5'	0.8	ND	58	ND	ND	600
T6@3'	1.9	ND	59	ND	ND	23.1
T7@3'	0.8					
T7@4'	13.7	ND	88	ND	442	820
T8@2'	3.6					
T8@3'	20.4	ND	ND	ND	ND	1010
T9@3'	0.8					
T10@1'	2.8					
T10@6.5	505	ND	390	2210	16600	7500
T11@2'	2.9					
T11@4'	5.8	ND	46.5	ND	ND	80
T12@2'	3.0					
T12@5'	1.2					
T13@6"	0.2	ND	44.7	ND	ND	68
T13@3'	1.3					
T14@2'	1.2					
T14@3.5	14.8	ND	117	15.3	201.5	391



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:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 1 @ 3'	Date Reported:	01-19-94
Laboratory Number:	6743	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	419	39.3
Toluene	215	79
Ethylbenzene	45.1	39.3
p,m-Xylene	910	59
o-Xylene	288	39.3

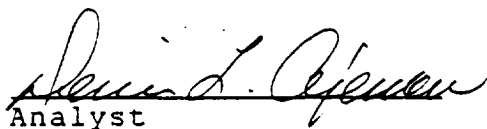
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	99 %
	Bromofluorobenzene	100 %

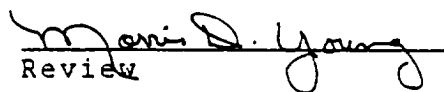
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

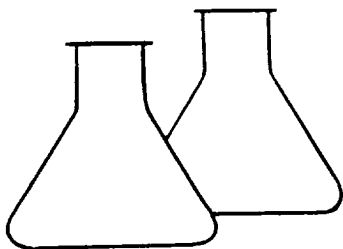
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


Analyst


Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T1 @ 3'	Date Sampled:	01-18-94
Laboratory Number:	6743	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	252	10.0

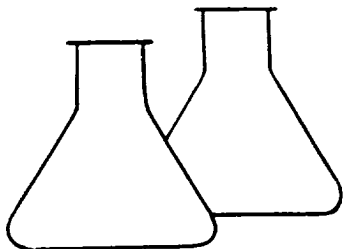
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

Tony Tustas
Analyst

Maria D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 1 @ 6'	Date Reported:	01-19-94
Laboratory Number:	6744	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.0
Toluene	ND	26.1
Ethylbenzene	ND	13.0
p,m-Xylene	58	19.6
o-Xylene	13.3	13.0

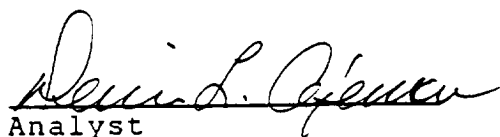
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	98 %
	Bromofluorobenzene	93 %

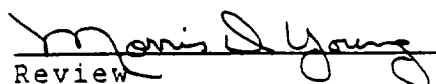
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

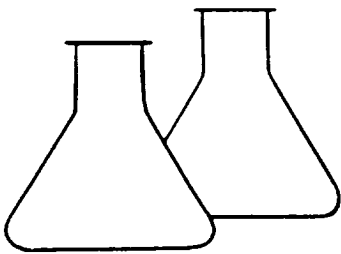
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


Analyst


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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	Tl @ 6'	Date Sampled:	01-18-94
Laboratory Number:	6744	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	ND	10.0

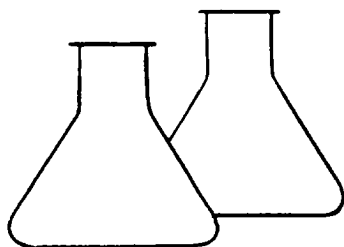
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

Tony Trestano
Analyst

Maria D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 2 @ 4'	Date Reported:	01-19-94
Laboratory Number:	6745	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.0
Toluene	ND	26.0
Ethylbenzene	ND	13.0
p,m-Xylene	55	19.5
o-Xylene	14.1	13.0

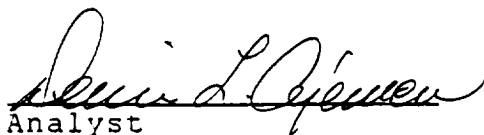
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	97 %
	Bromofluorobenzene	94 %

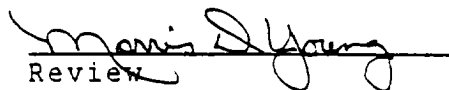
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

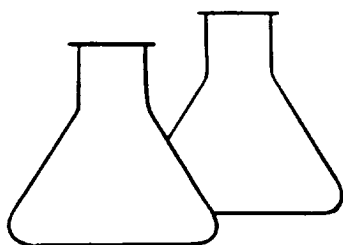
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


Analyst


Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T2 @ 4'	Date Sampled:	01-18-94
Laboratory Number:	6745	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	ND	10.0

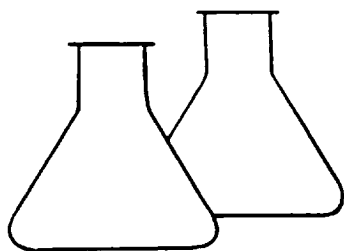
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

Tony T. Tison
Analyst

Marin 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:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 3 @ 4'	Date Reported:	01-19-94
Laboratory Number:	6746	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	13.1
Toluene	179	26.2
Ethylbenzene	ND	13.1
p,m-Xylene	155	19.6
o-Xylene	25.1	13.1

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	95 %
	Bromofluorobenzene	98 %

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

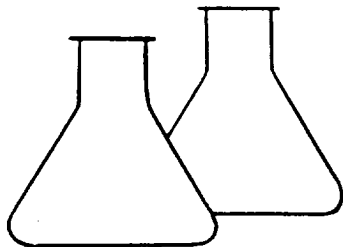
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1

Devin L. Gencer
Analyst

Marissa D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T3 @ 4'	Date Sampled:	01-18-94
Laboratory Number:	6746	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	16.4	10.0

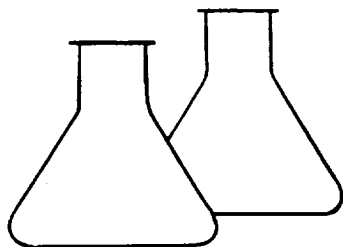
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

Tony Tristano
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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 4 @ 3'	Date Reported:	01-20-94
Laboratory Number:	6747	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.1
Toluene	52	26.3
Ethylbenzene	ND	13.1
p,m-Xylene	ND	19.7
o-Xylene	ND	13.1

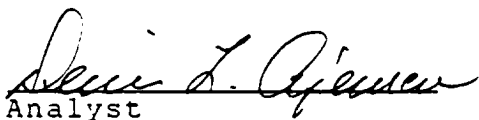
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	100 %
	Bromofluorobenzene	98 %

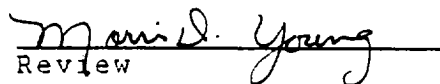
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

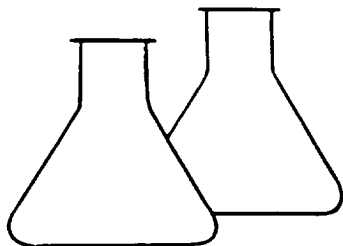
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T4 @ 3'	Date Sampled:	01-18-94
Laboratory Number:	6747	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	47.9	10.0

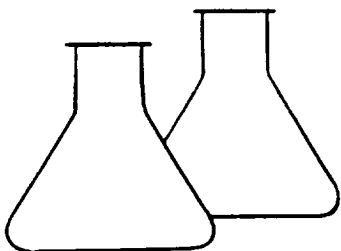
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 6 @ 1.5'	Date Reported:	01-20-94
Laboratory Number:	6748	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.1
Toluene	58	26.1
Ethylbenzene	ND	13.1
p,m-Xylene	ND	19.6
o-Xylene	ND	13.1

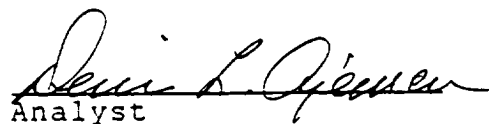
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

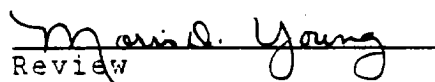
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

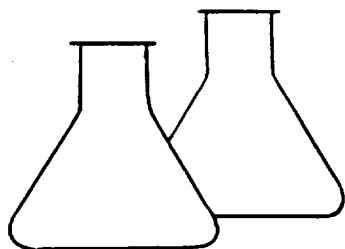
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T6 @ 1.5'	Date Sampled:	01-18-94
Laboratory Number:	6748	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	600	10.0

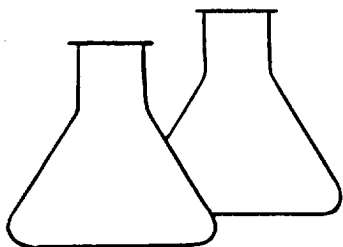
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 6 @ 3'	Date Reported:	01-20-94
Laboratory Number:	6749	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	13.2
Toluene	59	26.5
Ethylbenzene	ND	13.2
p,m-Xylene	ND	19.8
o-Xylene	ND	13.2

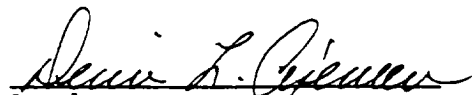
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	99 %

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

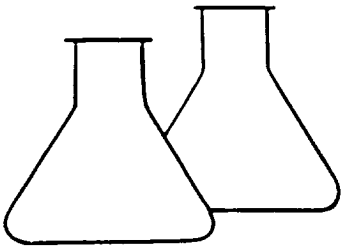
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T6 @ 3'	Date Sampled:	01-18-94
Laboratory Number:	6749	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	23.1	10.0

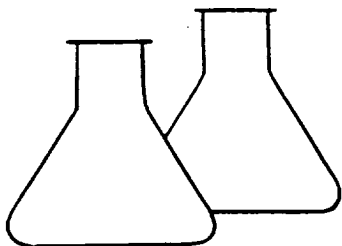
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 7 @ 4'	Date Reported:	01-20-94
Laboratory Number:	6750	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	40.0
Toluene	88	80
Ethylbenzene	ND	40.0
p,m-Xylene	264	60
o-Xylene	178	40.0

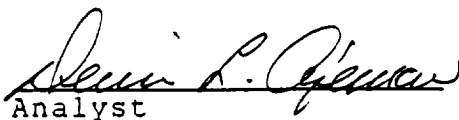
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	96 %
	Bromofluorobenzene	100 %

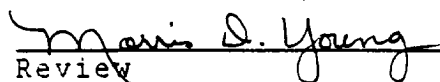
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

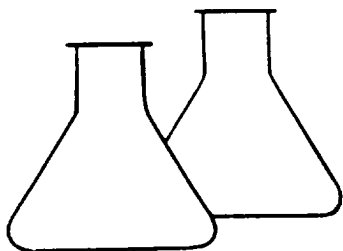
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T7 @ 4'	Date Sampled:	01-18-94
Laboratory Number:	6750	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	820	10.0

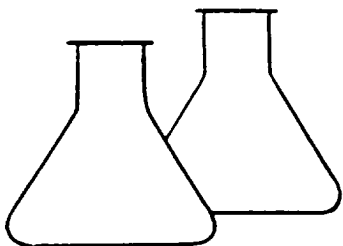
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 8 @ 3'	Date Reported:	01-20-94
Laboratory Number:	6751	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	38.8
Toluene	ND	78
Ethylbenzene	ND	38.8
p,m-Xylene	ND	58
o-Xylene	ND	38.8

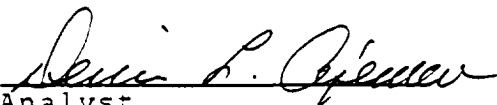
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	96 %

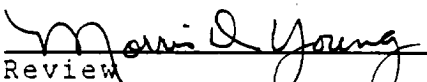
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

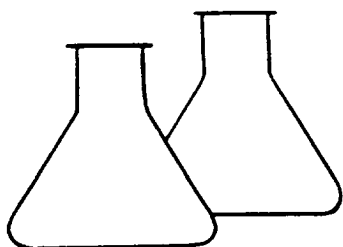
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T8 @ 3'	Date Sampled:	01-18-94
Laboratory Number:	6751	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	1,010	10.0

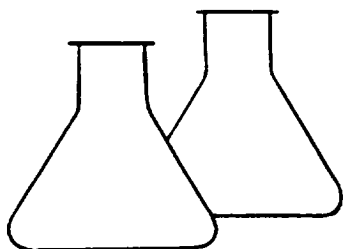
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 10 @ 6.5'	Date Reported:	01-20-94
Laboratory Number:	6752	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	39.1
Toluene	390	78
Ethylbenzene	2,210	39.1
p,m-Xylene	9,100	59
o-Xylene	7,500	39.1

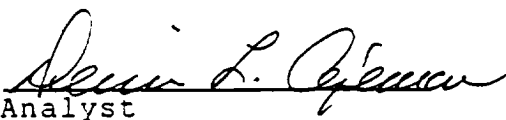
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	93 %
	Bromofluorobenzene	100 %

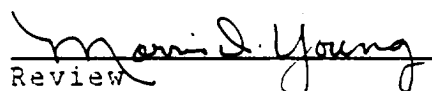
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

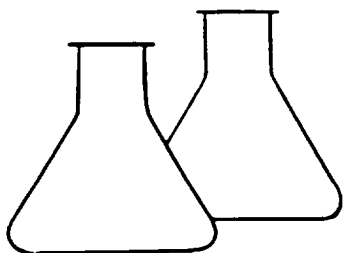
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T10 @ 6.5'	Date Sampled:	01-18-94
Laboratory Number:	6752	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	7,500	100

ND = Parameter not detected at the stated detection limit.

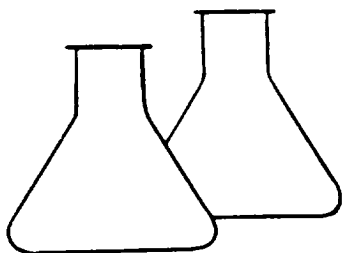
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 11 @ 4'	Date Reported:	01-20-94
Laboratory Number:	6753	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.1
Toluene	46.5	26.2
Ethylbenzene	ND	13.1
p,m-Xylene	ND	19.6
o-Xylene	ND	13.1

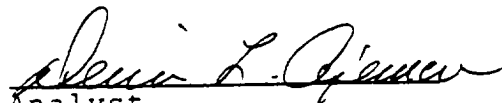
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	95 %
	Bromofluorobenzene	95 %

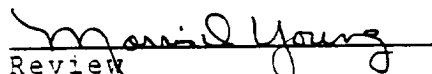
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

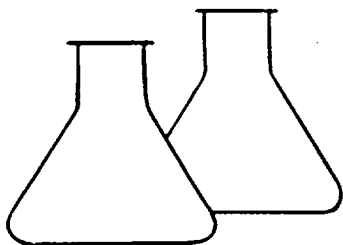
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T11 @ 4'	Date Sampled:	01-18-94
Laboratory Number:	6753	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	80	10.0

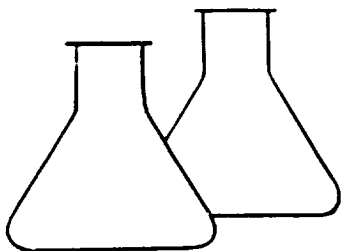
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 13 @ 6"	Date Reported:	01-20-94
Laboratory Number:	6754	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	13.2
Toluene	44.7	26.4
Ethylbenzene	ND	13.2
p,m-Xylene	ND	19.8
o-Xylene	ND	13.2

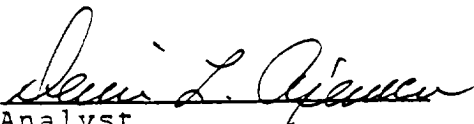
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	95 %
	Bromofluorobenzene	94 %

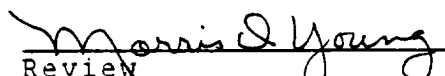
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

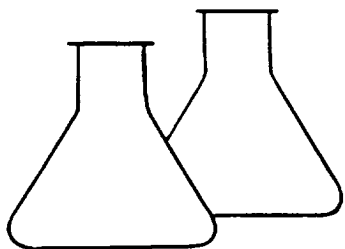
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


Analyst


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:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T13 @ 6"	Date Sampled:	01-18-94
Laboratory Number:	6754	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	68	10.0

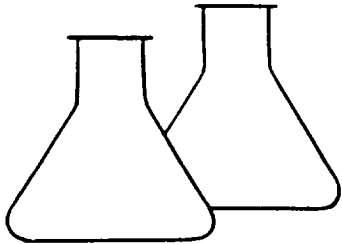
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1

Tony Tristano
Analyst

Maris D. Young
Review



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

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T 14 @ 3.5'	Date Reported:	01-20-94
Laboratory Number:	6755	Date Sampled:	01-18-94
Sample Matrix:	Soil	Date Received:	01-18-94
Preservative:	Cool	Date Extracted:	01-19-94
Condition:	Cool & Intact	Date Analyzed:	01-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	13.1
Toluene	117	26.2
Ethylbenzene	15.3	13.1
p,m-Xylene	159	19.7
o-Xylene	42.5	13.1

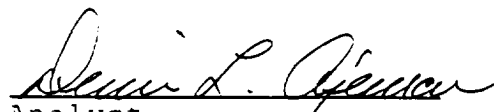
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	100 %

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

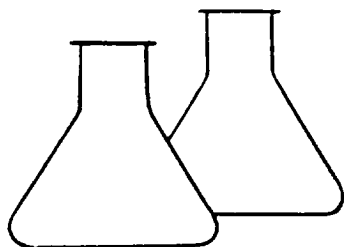
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Santa Fe #1


Analyst


Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	94103
Sample ID:	T14 @ 3.5'	Date Sampled:	01-18-94
Laboratory Number:	6755	Date Received:	01-18-94
Sample Matrix:	Soil	Date Analyzed:	01-19-94
Preservative:	Cool	Date Reported:	01-19-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	391	10.0

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: Santa Fe #1

Tony Tristano
Analyst

Meris D. Young
Review

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

May 6, 1994

Mr. Gary Simpson
Santa Fe Pacific Gold Corporation
Box 27019
Albuquerque, New Mexico 87125

Re: Laboratory Analysis
Santa Fe #1 Well Site

Project No. Q4103

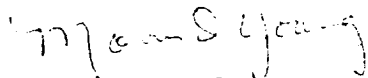
Dear Mr. Simpson,

Attached please find the Laboratory Analysis Report for the four (4) samples submitted for USEPA method 418.1 Total Petroleum Hydrocarbon Analysis on March 2, 1994 by Santa Fe Pacific Gold.

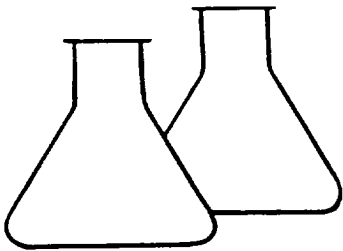
As per the Chain of Custody Record, these samples were sampled by Gary Simpson and analyzed by Tony Tristano. We apologize for the delay in providing these Analysis Certificates.

If we can provide any additional information or in any way be helpful, please contact us at 505-632-0615.

Sincerely,



Morris D. Young
President
MDY502



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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#2 6-8	Date Sampled:	Unknown
Laboratory Number:	6944	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	440	10.0

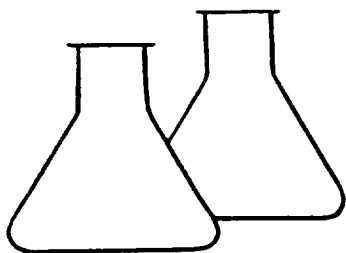
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Marvin D. Young
Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#2 8-10	Date Sampled:	Unknown
Laboratory Number:	6945	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	166	10.0

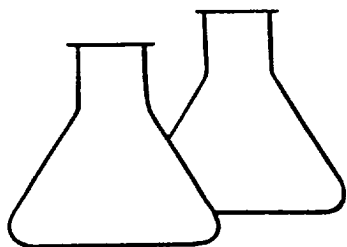
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Maris D. Young
Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#3 4-6	Date Sampled:	Unknown
Laboratory Number:	6946	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	3,110	100

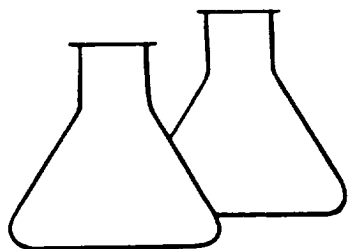
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Morris D. Young
Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#3 6-8	Date Sampled:	Unknown
Laboratory Number:	6947	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	7,500	100

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: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Maris D. Young
Review

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

May 6, 1994

Mr. Gary Simpson
Santa Fe Pacific Gold Corporation
Box 27019
Albuquerque, New Mexico 87125

Re: Laboratory Analysis
Santa Fe #1 Well Site

Project No. Q4103

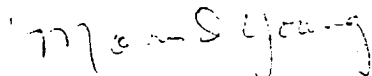
Dear Mr. Simpson,

Attached please find the Laboratory Analysis Report for the four (4) samples submitted for USEPA method 418.1 Total Petroleum Hydrocarbon Analysis on March 2, 1994 by Santa Fe Pacific Gold.

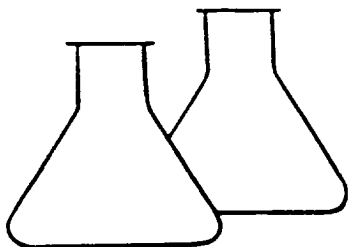
As per the Chain of Custody Record, these samples were sampled by Gary Simpson and analyzed by Tony Tristano. We apologize for the delay in providing these Analysis Certificates.

If we can provide any additional information or in any way be helpful, please contact us at 505-632-0615.

Sincerely,



Morris D. Young
President
MDY502



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#2 6-8	Date Sampled:	Unknown
Laboratory Number:	6944	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	440	10.0

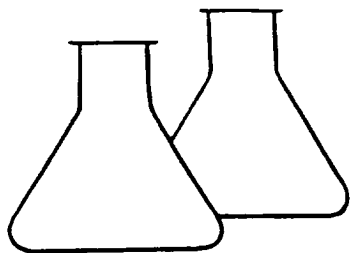
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Maris D. Young
Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#2 8-10	Date Sampled:	Unknown
Laboratory Number:	6945	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	166	10.0

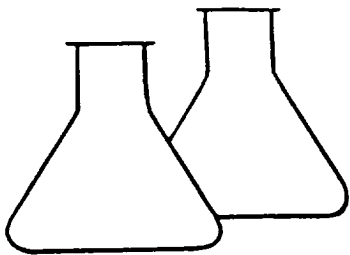
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Mavis D. Young
Review



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EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#3 4-6	Date Sampled:	Unknown
Laboratory Number:	6946	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	3,110	100

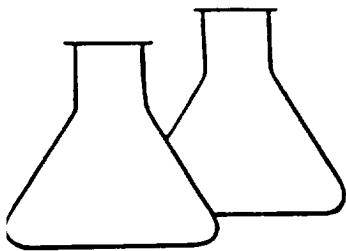
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tristano
Analyst

Marissa Young
Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Pacific Gold	Project #:	04103
Sample ID:	#3 6-8	Date Sampled:	Unknown
Laboratory Number:	6947	Date Received:	03-02-94
Sample Matrix:	Soil	Date Analyzed:	03-09-94
Preservative:	Cool	Date Reported:	03-09-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	7,500	100

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: Santa Fe #1
Samples received w/ headspace & in plastic bottles
w/ foil closures at ambient temperature.

Tony Tistano
Analyst

Marissa Young
Review

ENVIROTECH INC.

5796 U.S. Highway 64-3014
Farmington, New Mexico 87401

(505) 632-0615

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

August 31, 1994

Mr. Gary Simpson
Santa Fe Pacific Gold Corporation
P.O. Box 27019
Albuquerque, New Mexico 87125

Re: Laboratory Analysis Results
Core Samples - Separator Pit
Santa Fe # 1 well site

Dear Mr. Simpson,

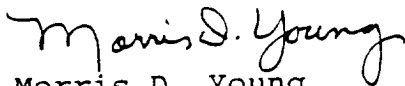
Attached please find the laboratory analysis results of the core samples that Santa Fe Pacific Gold obtained from borings in the separator pit at the Santa Fe No. 1 well site.

As per the attached analysis, at approximately 10 feet below ground surface the Total Petroleum Hydrocarbon concentration appears to be at or near non-detectable ranges in the two borings sampled.

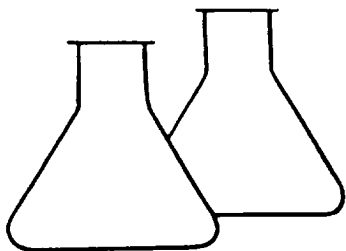
The analysis was performed by Rex Griffin, Laboratory Manager.

If we can provide any additional information please contact us at 505-632-0615.

Sincerely,



Morris D. Young
President
MDY/cj504



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:	Santa Fe Gold	Project #:	04103
Sample ID:	#2 10 - 12	Date Sampled:	03-01-94
Laboratory Number:	7852	Date Received:	08-29-94
Sample Matrix:	Soil	Date Analyzed:	08-29-94
Preservative:	Cool	Date Reported:	08-31-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	18	15.0

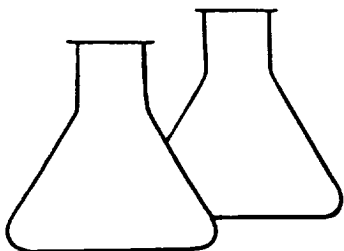
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe # 1

Rex L. Duffin
Analyst

Marissa 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:	Santa Fe Gold	Project #:	04103
Sample ID:	#2 12 - 14	Date Sampled:	03-01-94
Laboratory Number:	7853	Date Received:	08-29-94
Sample Matrix:	Soil	Date Analyzed:	08-29-94
Preservative:	Cool	Date Reported:	08-31-94
Condition:	Cool and Intact	Analysis Needed:	TPH

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

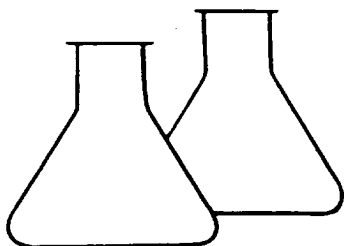
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe # 1

Rex L. Hoffman
Analyst

Marvin 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:	Santa Fe Gold	Project #:	04103
Sample ID:	#3 8 - 10	Date Sampled:	03-01-94
Laboratory Number:	7854	Date Received:	08-29-94
Sample Matrix:	Soil	Date Analyzed:	08-29-94
Preservative:	Cool	Date Reported:	08-31-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	332	15.0

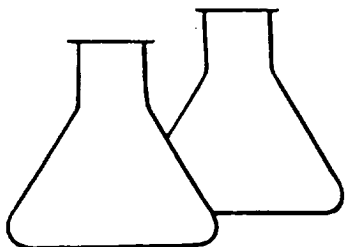
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Sante Fe # 1

Rex L. Hoffman
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 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Gold	Project #:	04103
Sample ID:	# 3 10 - 12	Date Sampled:	03-01-94
Laboratory Number:	7855	Date Received:	08-29-94
Sample Matrix:	Soil	Date Analyzed:	08-29-94
Preservative:	Cool	Date Reported:	08-31-94
Condition:	Cool and Intact	Analysis Needed:	TPH

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

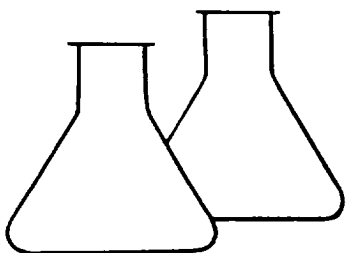
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Santa Fe # 1

Rex L. Guffin
Analyst

Maris S. Young
Review



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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Santa Fe Gold	Project #:	04103
Sample ID:	# 3 12 - 14	Date Sampled:	03-01-94
Laboratory Number:	7856	Date Received:	08-29-94
Sample Matrix:	Soil	Date Analyzed:	08-29-94
Preservative:	Cool	Date Reported:	08-31-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	ND	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: Santa Fe # 1

Rex L. Hefflin
Analyst

Marcia D. Young
Review

CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location		ANALYSIS/PARAMETERS										
Santa Fe Cold			Santa Fe #1												
Sampler: (Signature)			Chain of Custody Tape No.												
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers									Remarks	
11-2 10-12	1/2/94		7852	Soil	1	TPH									
11-2 12-14	1/2/94		7853	Soil	1	418.1									
11-3 8-10	1/3/94		7854	Soil	1										
11-3 10-12	1/3/94		7855	Soil											
11-3 12-14	1/3/94		7856	Soil											
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date			Time				
Sally Simpson			11		Roy R. Haffner			2/1/94			7:45				
Relinquished by: (Signature)					Received by: (Signature)										
Relinquished by: (Signature)					Received by: (Signature)										

ENVIROTECH INC.

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