3R - 361

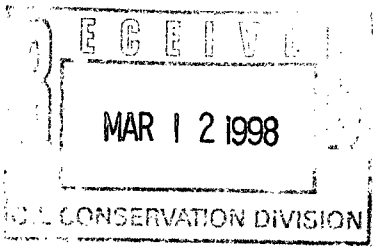
GENERAL CORRESPONDENCE

YEAR(S):
1998 - 1993

WILLIAMS ENERGY GROUP

FIELD SERVICES

March 9, 1998



Mr. Bill Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: Status of Aztec P.C. Release Site

Dear Mr. Olson:

Williams Field Services (WFS) has received the New Mexico Oil Conservation Division (OCD) letter dated February 19, 1998 regarding SOIL REMEDIATION, AZTEC PC SITE. Sampling of the site was conducted in December 1997 in the presence of Denny Foust (Aztec OCD). The sampling report prepared upon completion of the soil sampling is attached.

If you have any questions or require additional information, please call me at 801-584-6543.

Best Regards,

Ingrid Deklau
Environmental Specialist

295 Chipeta Way ● P.O. Box 58900 ● Salt Lake City, Utah 84108
(801) 583-8800

WILLIAMS FIELD SERVICES
ONE OF THE WILLIAMS COMPANIES

P.O. Box 58900
Salt Lake City, UT 84158-0900
(801) 584-7033
FAX: (801) 584-6483

January 12, 1998

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Sante Fe, NM 87505

RE:ABANDONMENT OF SOIL VAPOR EXTRACTION SYSTEM AT AZTEC PC LINE DRIP

Dear Mr. Olson:

Enclosed please find the laboratory reports for analysis of soil samples from the area of the Aztec PC line drip site near the Kutz Plant located in Section 28, T28N, R10W. Williams Field Services (WFS) completed the sampling pursuant to the Oil Conservation Division (OCD) request to confirm that the soil vapor extraction (SVE) system installed by Gas Company of New Mexico (GCNM) effectively remediated hydrocarbon contaminated soil to acceptable levels. Analytical results and sample locations are provided in the attachment.

The low concentration of total petroleum hydrocarbons (TPH) in the samples is consistent with the results of the organic vapor monitoring of the last two years. The vapor monitoring results were previously submitted. A second table (attached) provides the measurements of organic vapor from the last two monitoring events.

Based on the enclosed sample analyses as well as the historically low organic vapor readings, it appears that the soils which had been impacted by the GCNM release have been effectively remediated. WFS therefore asks for OCD approval to abandon the SVE system in place and consider the site as closed; requiring no further action.

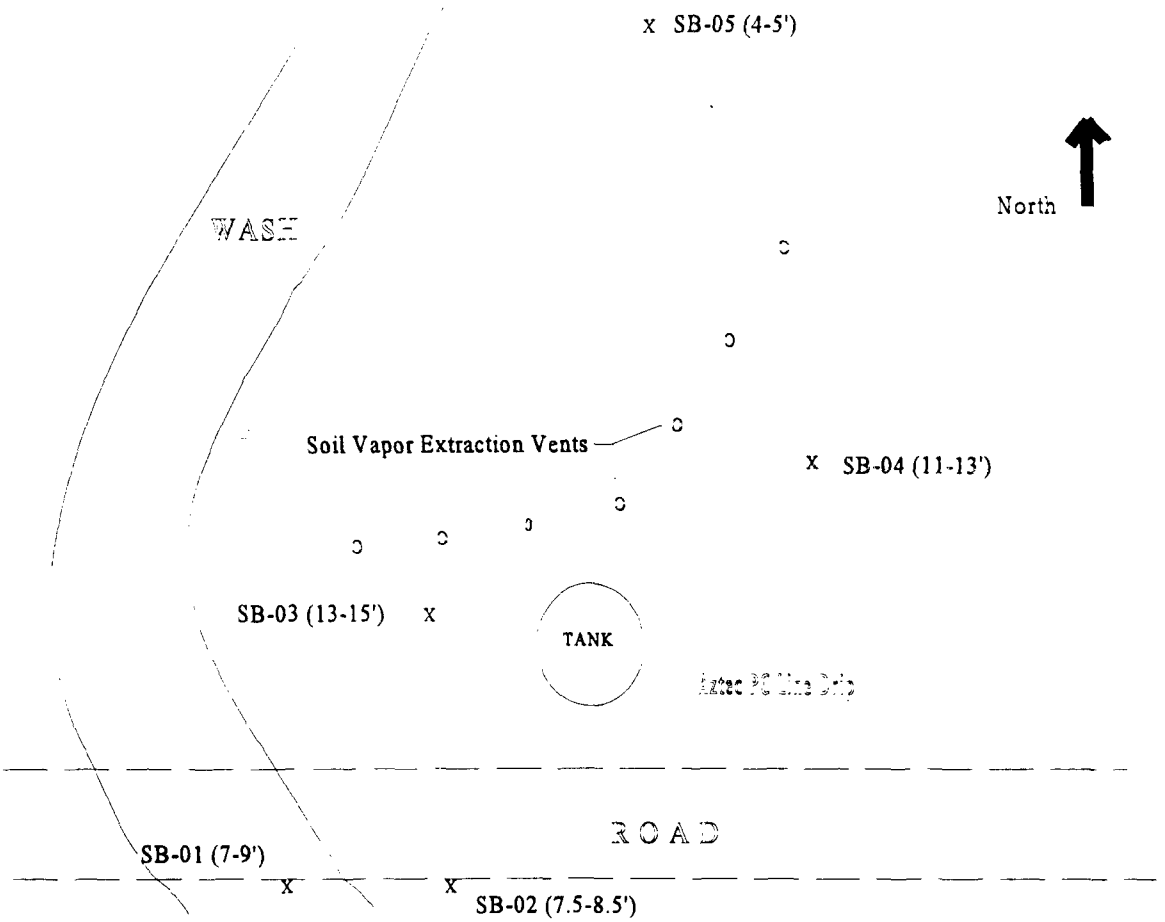
If you have any questions, please call me at 801-584-6361. Your attention to this matter is appreciated.

Respectfully,

Mark Harvey
Environmental Services

attachments

pc: Denny Foust - OCD/Aztec
Ingrid Deklau - WFS/SLC



Not to scale. Drawing depicts relative location of sample points. Site is located approximately 1 mile east of the Kutz Plant.

SAMPLE RESULTS SUMMARY

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene	TPH (mg/kg)
SB - 01 (7-9')	ND	ND	ND	ND	<2.0
SB - 02 (7.5-8.5')	ND	ND	ND	ND	5.7
SB - 03 (13-15')	ND	ND	ND	ND	7.8
SB - 04 (11-13')	ND	ND	ND	0.68	48
SB - 05 (4-5')	ND	ND	ND	ND	<2.0

Organic Vapor Monitoring - Aztec PC Line Drip

VENT#	Reading 1	Reading 2	Average (ppm)
8	0.0	0.0	0.0
7	0.0	0.0	0.0
6	0.0	0.0	0.0
5	0.0	1.0	0.5
4	0.0	0.0	0.0
3	0.0	0.0	0.0
2	0.0	0.0	0.0
1	0.0	0.0	0.0

October 17, 1997: Temperature ~ 70F. Measurements made using Thermoenvironmental 580 OVM calibrated with a benzene response factor (.51)

VENT#	Reading 1	Reading 2	Average
8	27.3	26.0	26.7
7	0.2	0.0	0.1
6	0.0	0.0	0.0
5	0.0	0.0	0.0
4	0.0	0.0	0.0
3	0.0	0.0	0.0
2	0.0	0.0	0.0
1	0.0	0.0	0.0

June 17, 1996: Temperature ~ 70F. Measurements made using Thermoenvironmental 580 OVM calibrated with a benzene response factor (.51)

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Contact: Mark Harvey

Date Analyzed: December 23, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction - Sequential GC/PID/FID)

Lab Sample ID:
L31854-Method Blank

Analytical Results — BTX/TPH-E

Units = ppm

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	<0.10
Toluene	0.10	<0.10
Ethylbenzene	0.10	<0.10
Total Xylene	0.10	<0.10
Total Petroleum Hydrocarbons	2.0	<2.0

Aztec pc

Released By: Blair Ball
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-01 (7-9')

Lab Sample ID:
L31854-1

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	< 2.0

% Moisture	**14.%**

* All compounds are reported on a dry weight basis.

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-02 (7-8')

Lab Sample ID:
L31854-2

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	**5.7**

% Moisture	**12.%**

* All compounds are reported on a dry weight basis.

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-03 (13-15')

Lab Sample ID:
L31854-3

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	**7.8**

% Moisture	**10.%**

* All compounds are reported on a dry weight basis.

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-04 (11-13')

Lab Sample ID:
L31854-4

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	**0.68**
Total Petroleum Hydrocarbons	2.0	**48.**

% Moisture	**13.%**

* All compounds are reported on a dry weight basis.

Released By: Diane Bolton
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-05 (4.5-5.5')

Lab Sample ID:
L31854-5

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	< 2.0

% Moisture	**8.0%**

* All compounds are reported on a dry weight basis.

Released By: Diane Ballen
Laboratory Supervisor

Report Date: December 29, 1997

WILLIAMS FIELD SERVICES
ONE OF THE WILLIAMS COMPANIES

P.O. Box 58900
Salt Lake City, UT 84158-0900
(801) 584-7033
FAX: (801) 584-6483

January 12, 1998

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Sante Fe, NM 87505

RE:ABANDONMENT OF SOIL VAPOR EXTRACTION SYSTEM AT AZTEC PC LINE DRIP

Dear Mr. Olson:

Enclosed please find the laboratory reports for analysis of soil samples from the area of the Aztec PC line drip site near the Kutz Plant located in Section 28, T28N, R10W. Williams Field Services (WFS) completed the sampling pursuant to the Oil Conservation Division (OCD) request to confirm that the soil vapor extraction (SVE) system installed by Gas Company of New Mexico (GCNM) effectively remediated hydrocarbon contaminated soil to acceptable levels. Analytical results and sample locations are provided in the attachment.

The low concentration of total petroleum hydrocarbons (TPH) in the samples is consistent with the results of the organic vapor monitoring of the last two years. The vapor monitoring results were previously submitted. A second table (attached) provides the measurements of organic vapor from the last two monitoring events.

Based on the enclosed sample analyses as well as the historically low organic vapor readings, it appears that the soils which had been impacted by the GCNM release have been effectively remediated. WFS therefore asks for OCD approval to abandon the SVE system in place and consider the site as closed; requiring no further action.

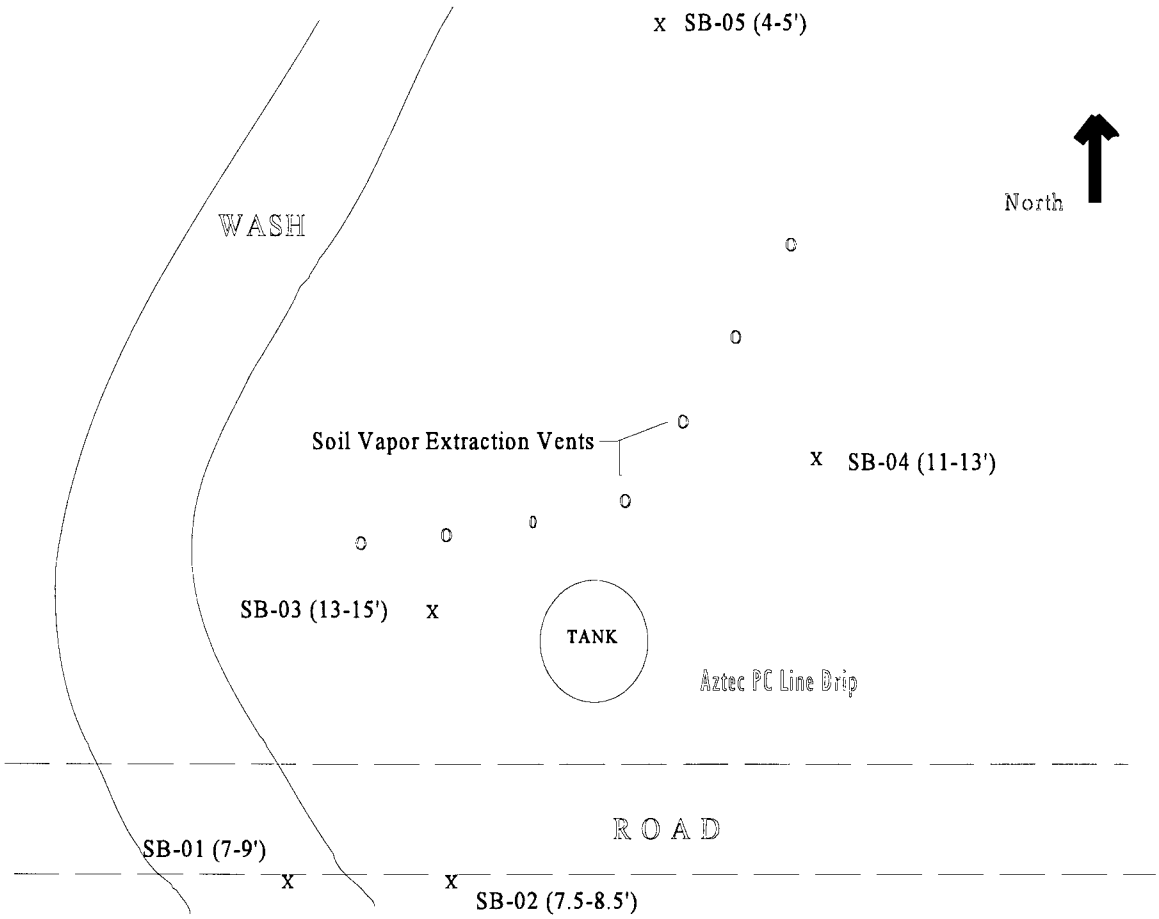
If you have any questions, please call me at 801-584-6361. Your attention to this matter is appreciated.

Respectfully,

Mark Harvey
Environmental Services

attachments

pc: Denny Foust - OCD/Aztec
Ingrid Deklau - WFS/SLC



Not to scale. Drawing depicts relative location of sample points. Site is located approximately 1 mile east of the Kutz Plant.

SAMPLE RESULTS SUMMARY

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene	TPH (mg/kg)
SB - 01 (7-9')	ND	ND	ND	ND	<2.0
SB - 02 (7.5-8.5')	ND	ND	ND	ND	5.7
SB - 03 (13-15')	ND	ND	ND	ND	7.8
SB - 04 (11-13')	ND	ND	ND	0.68	48
SB - 05 (4-5')	ND	ND	ND	ND	<2.0

Organic Vapor Monitoring - Aztec PC Line Drip

VENT#	Reading 1	Reading 2	Average (ppm)
8	0.0	0.0	0.0
7	0.0	0.0	0.0
6	0.0	0.0	0.0
5	0.0	1.0	0.5
4	0.0	0.0	0.0
3	0.0	0.0	0.0
2	0.0	0.0	0.0
1	0.0	0.0	0.0

October 17, 1997: Temperature ~ 70F. Measurements made using Thermoenvironmental 580 OVM calibrated with a benzene response factor (.51)

VENT#	Reading 1	Reading 2	Average
8	27.3	26.0	26.7
7	0.2	0.0	0.1
6	0.0	0.0	0.0
5	0.0	0.0	0.0
4	0.0	0.0	0.0
3	0.0	0.0	0.0
2	0.0	0.0	0.0
1	0.0	0.0	0.0

June 17, 1996: Temperature ~ 70F. Measurements made using Thermoenvironmental 580 OVM calibrated with a benzene response factor (.51)

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Contact: Mark Harvey

Date Analyzed: December 23, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction - Sequential GC/PID/FID)

Lab Sample ID:
L31854-Method Blank

Analytical Results — BTX/TPH-E

Units = ppm

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	<0.10
Toluene	0.10	<0.10
Ethylbenzene	0.10	<0.10
Total Xylene	0.10	<0.10
Total Petroleum Hydrocarbons	2.0	<2.0

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-01 (7-9')

Lab Sample ID:
L31854-1

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	< 2.0

% Moisture	**14.%**

* All compounds are reported on a dry weight basis.

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-02 (7-8')

Lab Sample ID:
L31854-2

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	**5.7**

% Moisture	**12.%**

* All compounds are reported on a dry weight basis.

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref. Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-03 (13-15')

Lab Sample ID:
L31854-3

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	**7.8**

% Moisture	**10.%**

* All compounds are reported on a dry weight basis.

Released By: _____
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-04 (11-13')

Lab Sample ID:
L31854-4

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	**0.68**
Total Petroleum Hydrocarbons	2.0	**48.**

% Moisture	**13.%**

* All compounds are reported on a dry weight basis.

Released By: Diane Bolton
Laboratory Supervisor

Report Date: December 29, 1997

ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

Client: Williams Field Services
Date Sampled: December 20, 1997
Date Received: December 22, 1997

Contact: Mark Harvey
Date Extracted: December 23, 1997
Date Analyzed: December 24, 1997

Analysis Requested:
Volatile Aromatics
Total Petroleum Hydrocarbons

Method Ref.Number:
SW-846 #8020/8015 modified
(Extraction-Sequential GC/PID-FID)

Field Sample ID:
AZTEC PC-LD-TAA
KTZ-SB-05 (4.5-5.5')

Lab Sample ID:
L31854-5

Analytical Results — BTX/TPH-E

Units = mg/kg(ppm)

Compound:	Reporting Limit:	Amount Detected:
Benzene	0.10	< 0.10
Toluene	0.10	< 0.10
Ethylbenzene	0.10	< 0.10
Total Xylene	0.10	< 0.10
Total Petroleum Hydrocarbons	2.0	< 2.0

% Moisture	**8.0%**

* All compounds are reported on a dry weight basis.

Released By: Diane Baller
Laboratory Supervisor

Report Date: December 29, 1997

WILLIAMS ENERGY GROUP

FIELD SERVICES

October 29, 1997

Mr. Bill Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

NOV - 3 1997

RE: Status of Aztec P.C. Release Site

Dear Mr. Olson:

GCNM discovered a leak in the Aztec P.C. line in March 1993. Soil remediation conducted by GCNM included removing 6000+ tons of hydrocarbon contaminated soil to an off-site treatment and disposal facility, and installation of a passive soil gas extraction system to remediate any residual contamination. At that time, NMOCD approved a plan that required quarterly monitoring of the passive soil gas vapor extraction system, and annual reporting to NMOCD of the monitoring results. The GCNM assets were purchased by Williams Field Services (WFS) late in 1995. Since then, WFS has been responsible for the remediation program at the Aztec P.C. site.

Results from each of the monitoring events are included in the table below. The most recent monitoring event occurred on October 17, 1997. Based on results from this event, as well as the historical data, it appears that the soil vent system has reduced soil vapors to much less than any known vapor standard for the contaminants of concern.

	May '94		Sept '94		Dec '94		Feb '95		Apr '95		Jan '96*			Jun '96*		Oct '97*	
Vent	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R3	R1	R2	R1	R2
1	?	?	1.5	1.6	0	0	0.1	0	0	NR	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	NR	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	NR	0	0	0	0	0	0	0
4	2	3	0.1	0.2	4	4.5	0	0	0	NR	0	0	0	0	0	0	0
5	16	19	0	0	15	18	14	11.8	0	NR	0	0	0	0	0	0	1
6	25	30	17.5	19.2	28	30	20.2	22.9	0	NR	0.6	1.9	1.6	0	0	0	0
7	24	30	34	35.5	22	27	60.1	78.2	0	NR	0	0	0	0.2	0	0	0
8	0	0	0	0	0	0	55.5	32.6	86	NR	0	8.7	10	27.3	26	0	0

Notes: R1 = Reading 1, R2 = Reading 2, NR = No reading taken, * = WFS data
OVM calibrated with a benzene response factor.

295 Chipeta Way ● P.O. Box 58900 ● Salt Lake City, Utah 84108
(801) 583-8800

WFS therefore proposes to discontinue the monitoring and confirm that clean-up standards have been met by taking soil samples across the lateral and vertical extent of the affected area. The number and location of soil samples to be taken will be determined based on the Site Reclamation Report prepared by Envirotech in 1993. Samples that equal or exceed a reading of 100 ppm on a PID will be analyzed for BTEX and TPH. Samples that fall below a reading of 100 ppm on the PID will be analyzed, at a minimum, for TPH. WFS will notify you at least 48 hours in advance of the sampling event, and will forward copies of the analytical results to your office.

If the analytical results are below the NMOCD cleanup standards, WFS proposes to abandon the soil vapor extraction system. This may be accomplished by cutting off the pipes at the ground surface and filling the pipe remaining in place with an expandable cement, or some similar means that would prohibit the pipe from acting as a conduit to the subsurface.

If you have any questions or require additional information, please call me at 801-584-6543.

Best Regards,

Ingrid Deklau
Environmental Specialist

xc: Denny Foust, Aztec OCD
Tom O'Keefe, WFS SJA Operations

295 Chipeta Way ● P.O. Box 58900 ● Salt Lake City, Utah 84108
(801) 583-8800

WILLIAMS FIELD SERVICES
ONE OF THE WILLIAMS COMPANIES

P.O. Box 58900
Salt Lake City, UT 84158-0900
(801) 584-7033
FAX: (801) 584-6483

January 25, 1996

Mr. Bill Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87504

Dear Mr. Olson:

Enclosed, please find the annual monitoring report for the passive soil vapor extraction system on the Aztec P.C. drip line release. If you have any questions please contact me at (801) 584-6543.

Sincerely,

Leigh E. Gooding
Sr. Environmental Specialist

cc: Denny Foust, NMOCD Aztec Office

MONITORING RESULTS FOR THE AZTEC P.C. DRIPLINE RELEASE

(All Readings reported by Denver Bearden of PNM)

FEBRUARY 1, 1995 10:00 AM

VENT #	READING 1	READING 2
8	55.5	32.6
7	60.1	78.2
6	20.2	22.9
5	14.0	11.8
4	0	0
3	0	0
2	0	0
1	0.1	0

APRIL 13, 1995 8:42 AM

VENT #	READING 1	READING 2
8	86	None
7	0	None
6	0	None
5	0	None
4	0	None
3	0	None
2	0	None
1	0	None

WILLIAMS FIELD SERVICES
ONE OF THE WILLIAMS COMPANIES

MEMORANDUM

Date: October 4, 1995 **File No.:**

To:	Leigh Gooding	**From:**	Mark Harvey
Company:	WFS	**Company:**	WFS
Dept.:	Environmental	**Dept.:**	Environmental
Mail Stop:	2G1	**Mail Stop:**	2G1
		Phone:	6361

SUBJECT: VAPOR MONITORING AT THE AZTEC PC DRIP RELEASE

On Thursday, September 28th, I traveled to the Aztec PC site behind the Kutz Plant to conduct quarterly vapor monitoring of the soil vents. The vents were installed by GCNM as agreed to by NMOCD for the purpose of enhancing contaminant (TPH) degradation.

Below is a table summarizing the sampling event.

VENT#	Reading 1	Reading 2	Reading 3
8	5.6	0.4	13.6
7	0.0	0.0	0.0
6	1.6	15.2	8.8
5	0.0	0.0	2.7
4	2.5	0.0	0.0
3	0.0	0.0	0.0
2	0.0	0.0	0.0
1	0.0	0.0	0.0

All values in parts per million (ppm)

Note: Wind velocity increased during 2nd sampling.
Turbines rotating during second reading.

Vapor monitoring was conducted using a Thermoenvironmental OVM Model 580S calibrated with a benzene response factor.

For your information, I have provided a rough sketch of the area.

If you have any questions, or need additional information, please contact me.

TO KUTZ PLANT
GRAVEL ROAD
WELL PAD
ARROYO
1
2
3
4
5
6
7
8
CONDENSATE TANK
AZTEC PC

WILLIAMS FIELD SERVICES
ONE OF THE WILLIAMS COMPANIES

MEMORANDUM

Date: January 18, 1996 **File No.:**

To: Leigh Gooding
Company: WFS
Dept.: Environmental
Mail Stop: 2G1

From: Mark Harvey
Company: WFS
Dept.: Environmental
Mail Stop: 2G1
Phone: 6361

SUBJECT: VAPOR MONITORING AT THE AZTEC PC DRIP RELEASE

On Tuesday, January 16th, I traveled to the Aztec PC site behind the Kutz Plant to conduct quarterly vapor monitoring of the soil vents. The vents were installed by GCNM as agreed to by NMOCD for the purpose of enhancing contaminant (TPH) degradation.

Below is a table summarizing the sampling event.

VENT#	Reading 1	Reading 2	Reading 3
8	0.0	8.7	10.0
7	0.0	0.0	0.0
6	0.6	1.9	1.6
5	0.0	0.0	0.0
4	0.0	0.0	0.0
3	0.0	0.0	0.0
2	0.0	0.0	0.0
1	0.0	0.0	0.0

All values in parts per million (ppm)

Note: Winds were light and variable. Temperature approximately 53° F.

Vapor monitoring was conducted using a Thermoenvironmental OVM Model 580S calibrated with a benzene response factor.

If you have any questions, or need additional information, please contact me.

GAS COMPANY OF NEW MEXICO

February 09, 1995

Mr. Bill Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87504

Dear Bill,

This is the annual report on monitoring results for the passive soil vapor extration system on the Aztec P.C. drip line release.

Attached is the monitoring results. If you have any questions, please call me at 505-632-4131.

Sincerely,

Denver Bearden

Denver Bearden
Administrator III

DB:kb
Enclosure

CC: Denny Foust - Aztec OCD
Bill Leise - Farmington BLM
Toni Ristau -

Monitoring Results for the Aztec P.C. Dripline Release

Date of Monitoring	Time	Results PPM		
May 10, 1994	11:35 AM	Vent 1 west	1st	2nd
		2	0	0
		3	0	0
		4	2	3
		5	16	19
		6	25	30
		7	24	30
		8	0	0
September 01, 1994	09:15 AM	1	1.5	1.6
		2	0	0
		3	0	0
		4	0.1	0.2
		5	0	0
		6	17.5	19.2
		7	34.0	35.5
		8	0	0
December 09, 1994	09:30 AM	1	0	0
		2	0	0
		3	0	0
		4	4	4.5
		5	15	18
		6	28	30
		7	22	27
		8	0	0
February 01, 1995	10:00 AM	1	0.1	0.0
		2	0	0
		3	0	0
		4	0	0
		5	14.0	11.8
		6	20.2	22.9
		7	60.1	78.2
		8	55.5	32.6

GAS COMPANY OF NEW MEXICO

February 22, 1994

Mr. William C. Olson
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Olson:

The Monitoring Program for the Passive Soil Vapor Extraction (SVE) System on the Aztec P.C. Drip Line release will be:

1. Four times a year (quarterly) , each of the eight pipes used in the SVE system will be tested using a Photoionization Detector (PID), Organic Vapor Meter (OVM) .

2. We will select the days of testing (Windy or Calm).

3. A yearly report will be sent to OCD, Santa Fe; OCD, Aztec; and the BLM, Farmington.

Enclosed is the results of the monitoring conducted in February 1994.

If you have any questions, please call me at 632-4131.

Denver Bearden
Administrator III

DB:rt
Enclosure

cc: Denny Foust
Michael Pool
Toni Ristau

TESTING RESULTS FOR THE AZTEC P.C. DRIP LINE RELEASE

Date of Testing--February 10, 1994

Equipment Used--Photoionization Detector (PID), Organic Vapor Meter (OVM)

Time of Testing--3 p.m.

Wind--3 -10 mph, gusting

Temperature--45 degrees fahrenheit

1/4" vent holes were drilled in each pipe for testing--each vent hole is approximately 1' from the ground

Each vent was read for two minutes

Vent 1-- 7.0 ppm
Vent 2--12.0 ppm
Vent 3-- 4.7 ppm
Vent 4 -- 3.4 ppm
Vent 5--28.8 ppm
Vent 6--26.1 ppm
Vent 7--46.0 ppm
Vent 8--61.8 ppm

Public Service Company of New Mexico

September 16, 1993

Mr. Bill Olsen
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, N.M. 87503

Dear Mr. Olsen,

In March of 1993, GCNM noticed hydrocarbon liquids next to a pipeline drip in one of our gathering systems. The specific system is called the Aztec Picture Cliffs (PC) gathering system. The OCD and BLM were subsequently notified. An initial site assessment that was performed by Envirotech, Inc. indicated a substantial amount of subsurface contamination. Due to the extent of the contamination the OCD required that a "dig and haul" method of remediation be utilized.

Envirotech was then retained to remediate the location. They performed the work as described in the attached document. The document describes the work performed, provides a description of the site and a gives a brief history. The project is discussed to a greater extent detailing the initial excavation, final excavation, and the exploratory drilling that was performed. The report then describes the Soil Vapor Extraction (SVE) system installed to halt the migration of hydrocarbons further downstream in the arroyo.

Sincerely,

Erick Seelinger
Environmental Engineer

cc: Mr. Denny Foust
Deputy Oil & Gas Inspector
N.M. Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Elysse Gold
Bureau of Land Management
Farmington District Office
1235 La Plata Highway
Farmington, New Mexico 87401

Toni Ristau, PNM

Alvarado Square
Albuquerque, New Mexico 87158
505/848-2700

Bill Olson

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

OIL CONSERVATION DIVISION
RECEIVED
'93 JU 22 AM 9 30

Mr. Denny Foust
Oil & Gas Inspector
New Mexico Oil Conservation Division
Aztec, New Mexico 87410

July 19, 1993

RE: Aztec PC Mainline Drip Cleanup
Proposed Reclamation

Project: 93124

Dear Mr. Foust:

On behalf of the Gas Company of New Mexico (GCNM), Envirotech is submitting the following proposal to install a soil vapor extraction (SVE) system for reclamation of the referenced Picture Cliffs (PC) pipeline spill incident located in Unit C, Sec 28, T28N, R10W, NMPM, San Juan County, New Mexico.

Brief History:

In March of 1993 a spill incident was reported along a product transmission line near a drip trap located adjacent to a wash. Subsequent to the spill, the GCNM retained Envirotech to abate hydrocarbon contaminated soils in the area of the spill. Initial abatement consisted of excavation of hydrocarbon contaminated soils above the current New Mexico Oil Conservation Division's (NMOCD) regulations. To date a total of over 6200 cubic yards of soil have been excavated. The abatement effort was monitored by field screening and/or laboratory testing of soils sampling for volatile hydrocarbons and total recoverable petroleum hydrocarbons (TPH).

Due to the unforseen extent of contamination, the abatement effort was halted to reevaluate the situation and limited drilling was conducted to define the total extent of soil contamination (Refer to the attached correspondence summarizing the drilling, dated June 16, 1993). Based on the findings from drilling and excavation, residual soil contamination remains south of the transmission line under the oilfield access road. A relatively minor amount of contamination remains along the north side of the transmission line where the majority of the excavation effort was completed (Refer to the attached site diagram).

Proposed Remediation:

Excavation of the remaining soil appears to be impractical, due to the location of the transmission line and roadway. Therefore, it is proposed to install a soil vapor extraction system (SVE) to abate the remaining soil contamination.

MKL/mkl

FILE: 31240CD.PRP

The SVE would be installed adjacent to and north-west (down-gradient) of the transmission line. Installation would consist of;

1) Backfill of excavation and recontour to original ground surface.

2) Construction of a porous <3" gravel filter intercept gallery with a vapor barrier along the top and down-gradient portions. Slotted piping will be plumbed through the intercept gallery for vapor extraction.

3) Wind turbines will be placed on the effluent portion of the piping to complete the passive SVE system. When operating, the turbines create a slight vacuum to enhance extraction of volatile hydrocarbon vapors from the subsurface.

The attached drawings outline the proposed SVE system.

Once installed, the effluent emissions from the SVE system would be measured utilizing an organic vapor meter (OVM). Monitoring is proposed to be on a biannual basis, with results submitted to the NMOCD by the GCNM on an annual basis.

Verification of the abatement of remaining soil contamination will be conducted by resampling in the areas presently known to have residual contamination. This resampling will be conducted by the GCNM upon permanent abandonment of the transmission line or sooner if emissions from the SVE system indicate possible completion.

Summary:

Given no future spills, the abatement effort to date, estimated extent of remaining contamination, and the proposed SVE system; it is believed this abatement of the subject spill can satisfy the New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM) requirements for the following reasons:

1) The source of contamination has been identified and the piping leak repaired.

2) A majority of the soil contamination both down-gradient and vertically from the source has been removed.

3) The intercept gallery with vapor barriers would be located down-gradient from the remaining contamination to minimize future migration down the wash toward the San Juan River. The highly porous gravel filter pack should capture and contain residual hydrocarbon vapors as they migrate from the in-situ soils.

4) In-situ soil venting is a technique recognized as a successful method for the removal and abatement of volatile hydrocarbon contamination in the soil vadose (unsaturated) zone.

Due to the extent of contamination and unknown quantity of contaminate, non-homogeneous and tight nature of the subsurface soils, and untested efficiency of the passive SVE system, the length of time to complete the abatement of the remaining soil contamination can not be accurately estimated but is anticipated to require a year or more. Once the SVE system is in operation a better estimate of soil abatement may be determined.

Please contact Envirotech if the proposed remediation is acceptable to the NMOCD. If you have any questions, please contact us at (505) 632-0615. Thank you for your assistance with this project.

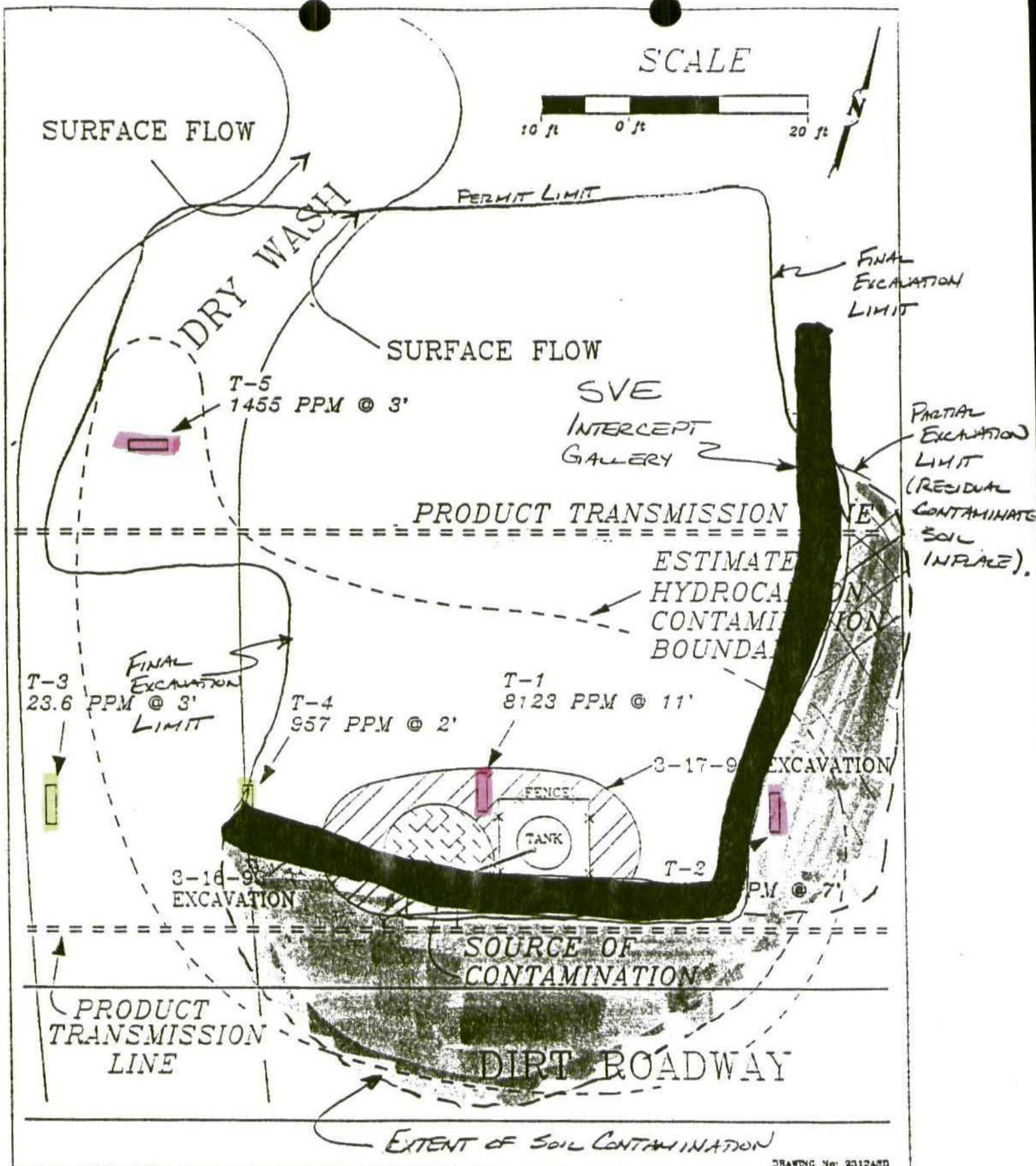
Respectfully submitted,
ENVIROTECH INC.

Michael K. Lane, P.E.
Geological Engineer

CC: Erick Seelinger
Gas Company of New Mexico

William Olsen, NMOCD Santa Fe Office

Attachments: Site Sketch
SVE Details
Envirotech Correspondence to GCNM, June 16, 1993

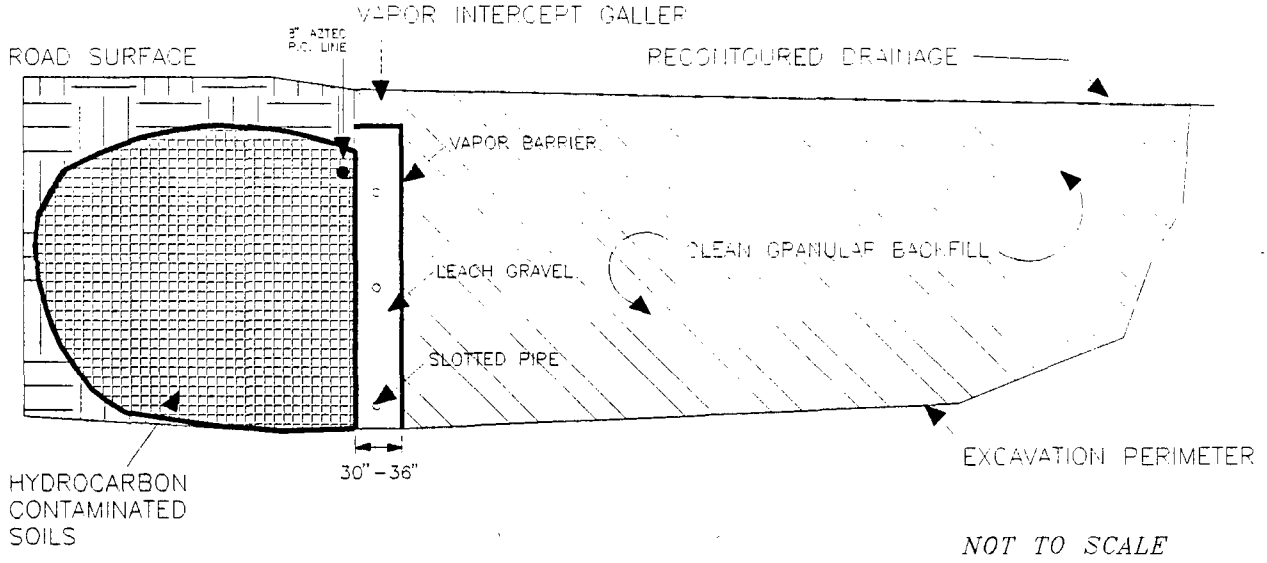


DRAWING No: 931243D

GAS COMPANY OF NEW MEXICO AZTEC P.C. DRIP LINE (C) SEC 28 T28N R10W	ENVIROTECH INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64-3014 FARMINGTON, NEW MEXICO 87401 PHONE: (505) 632-0615	SITE DIAGRAM
PROJECT NO: 93124		SHEET 1 | DRWN: 3/93 REVISED:
		DRWN BY: RMY REV BY: NAL | PROJECT MGR: RMY

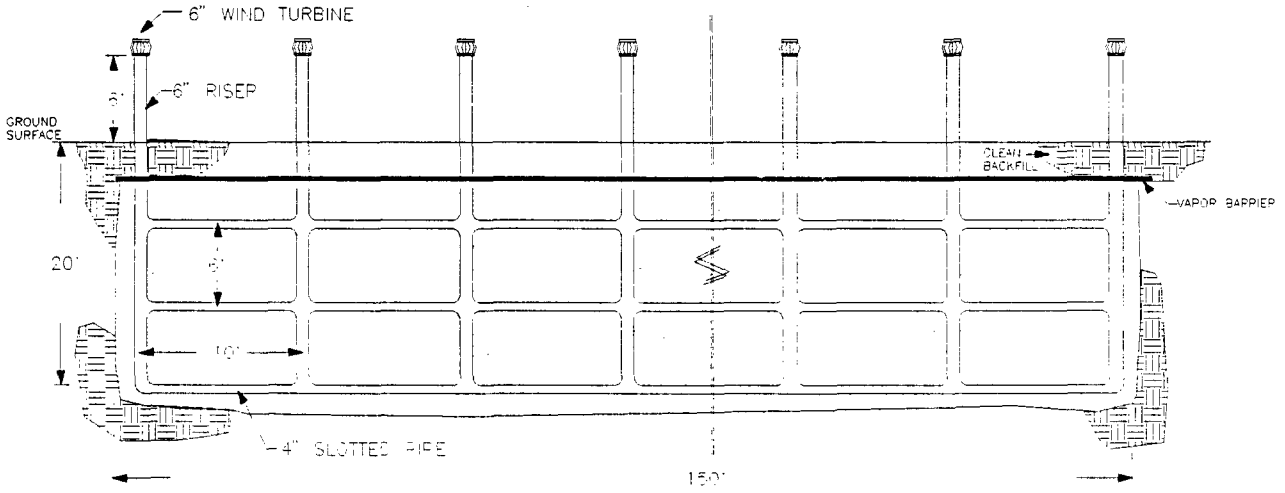
WEST ELEVATION

(AT APPROXIMATE CENTER)



NOT TO SCALE

NORTH-WEST ELEVATION



GENERAL SPECIFICATIONS

ITEM	EST. QUANTITY	DETAIL
BACKFILL	5000-7000 cy	CLEAN SILTY SAND TO POORLY GRADED SAND [15-21% PASSING 200 MESH]
INTERCEPT GALLERY	150'x15'x3' (EST. FROM SITE PLAN)	
LEACH GRAVEL	250 cy	CLEAN POORLY GRADED 3/8" GRAVEL [<20% PASSING No. 4 MESH]
4" LATERALS	42 10'x4"	160 psi (min) PVC SCH 50 (LT [6' ON CENTER, 1.5" SLOTTED Φ 3 ft]
6" RISERS	15 24'x6"	160 psi (min) PVC or EQUIVALENT [10' ON CENTER]
TURBINE	15 units	EXTERNALLY BRACED TURBINE VENTILATORS [147 CFM @ 4mi WIND]
BARRIER	2700 sf	12 mil (min) PVC LINER OR EQUIVALENT [MINIMUM OVERLAP 1 ft]

PROPOSED SOIL VAPOR EXTRACTION SYSTEM
PUBLIC SERVICE COMPANY OF NEW MEXICO
AZTEC P.C. DRIP LINE SPILL INCIDENT
(C) SEC 28, T28N, R10W NMPM

PROJECT NO: 93124 JULY 1993

ENVIROTECH INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64-3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

SVE DETAILS

SHEET 1

DRWN MKL
FILE 3124SVE
DATE: 7-15-93

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

June 16, 1993

Mr. Mark McAndrews
Environmental Coordinator
Gas Company of New Mexico
P.O. Box 1899
Bloomfield, New Mexico 87413

RE: Assessment Drilling Results
Aztec P.C. Drip Line Project

Project No: 93124

Dear Mark:

Attached please find the drilling logs and a site diagram for drilling done on June 15, 1993 to determine the hydrocarbon plume extent at the Aztec P. C. Drip Line. Eight hours of drilling was completed at the site per the written communication dated June 9, 1993 between Mr. Verl Farnsworth of Envirotech and Mr. Eric Seelinger, Environmental Engineer for Public Service Company of New Mexico (attached).

Raw data is included as per my instructions and a probable plume boundary based on the drilling results is noted on the site diagram. Additional drilling would be required for a more accurate boundary determination, but the drilling completed was sufficient for a rough estimate.

Thank you for your assistance with this project. We appreciate the opportunity to serve you.

Respectfully submitted,
ENVIROTECH, INC.

Robert E. O'Neill
Environmental Engineer

Attachments

REO/reo

93124-MM.LET

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

June 9, 1993

Eric Seelinger
Gas Company of New Mexico

Re: Proposal for area survey with drill rig

Dear Eric,

Envirotech Inc. will provide for the Gas Co. of New Mexico one (1) hollow stem drill rig with operator and helper with addition of one (1) technician to perform sampling for one (1) 8 hour day for the cost of $1200.00 plus tax.

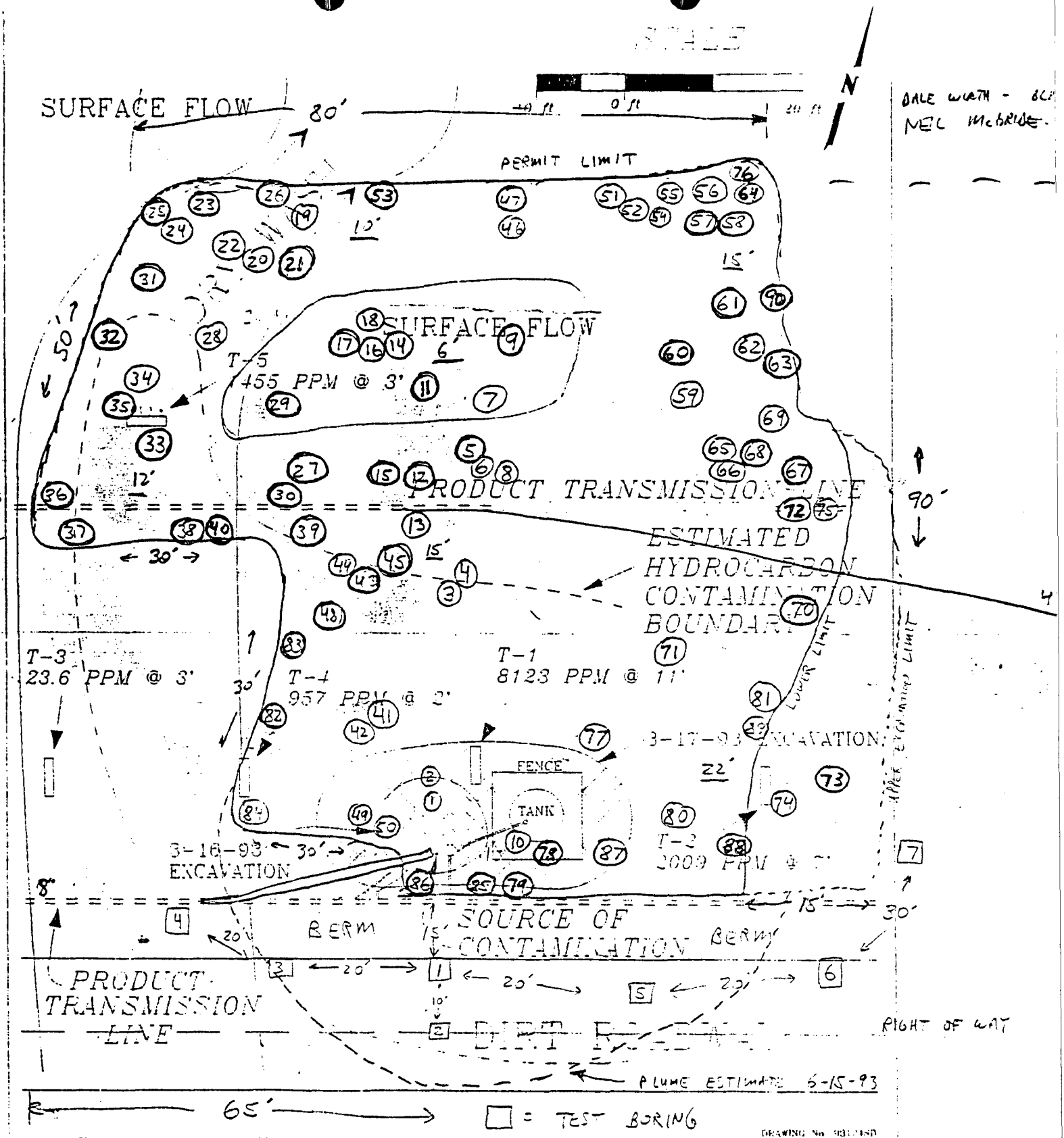
Boring will be as necessary with 20-25 anticipated. If drilling to be out side of the right-of-way, Gas Company will be responsible for permits.

Thank You,

Verl Farnsworth
Construction Superintendent

Attachments: Site Map

CVM



GAS COMPANY OF NEW MEXICO
AZTEC FC DRIP LINE
(C) SEC 28 T28N R10W

PROJECT NO. 93124

ENVIROTECH INC
ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64-3014
FARMINGTON, NEW MEXICO 87401
PHONE (505) 632-0615

SHEET

DRWN BY
REV BY

PROJECT MGR:
RMY

SURFACE GRADIENT = WEST TOWARD WASH AND NORTH DOWN WASH

ENVIROTECH INC.

FIELD BORING LOG

[redacted]

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET: / OF: /
1	—	93124	GAS CO. OF N.M.	

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0'	20'

DATE		DRILLING Co.:
STARTED:	6-15-93 8:20	ENVIROTECH
COMPLETED:	6-15-93 9:20	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-1	REO	—	—
	CREW: MD / PV	—	—

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
						DIRT ROAD
					SP	MOIST FINE SAND - MED. BROWN
1						NO ODOR
2						
3						
4					CL	GRAY/BROWN SANDY CLAY - MOIST - LOW PLASTICITY
5	CTG	1	761			ODOR BEGINS
6						
7						
8						
9						
10	CTG.	2	765			
11						
12					SC	SILTY SAND - LIGHT BROWN - M - - LOW PLASTICITY
13						
14						
15	CTG	3	477		ML	GRAY/BROWN SANDY [illegible] - MOIST - LOW PLAST.
16					SC	MED BROWN - CLAYEY SAND - MOIST - LOW PLAST.
17						ORANGE/YELLOW - CLAYEY SAND - MOIST - LOW PLAST.
18						GRAY/BROWN - SAND - SOME GRAV
19						FORMATION CUTTINGS: HARDER - YELLOWISH BROWN
20	CTG	4	392			GRAY/BROWN - CLAYEY SILTY SAND - MOIST - VERY TIGHT FORMATION
					BOTTOM	
1						
2						

ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
2	—	93124	GAS CO. OF N.M.	1 OF: 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0	5'

DATE			DRILLING Co.:
STARTED:	6-15-93	9:30	ENVIRO TECH
COMPLETED:	6-15-93	9:45	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-2	CREW: MD / PV		

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
						DIRT ROAD
					SP	MED BROWN, MOIST SAND - NO ODOR
1						
2						
3						
4						
5	CTG	1	720		SC	BROWN/GRAY CLAYEY SAND - ODOR
					Bottom	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET: / OF: /
3	—	93124	615 CO. OF N.M.	

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM	0 ~3' BELOW TH-1+2	18.5'

DATE			DRILLING Co.:
STARTED:	6-15-93	9:55	ENVIROTECH
COMPLETED:	6-15-93	11:00	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-3	CREW: MD / PV	—	—

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
						DIRT ROAD
					SP	MED BROWN, MOIST SAND - NO ODOR
1						
2						
3						
4					SC	CLAYEY SAND, MOIST BROWN / SOME GRAY - NO ODOR
5	CTG	1	164			
6						
7						
8						
9						
10	CTG	2	40.2		SC	LT BROWN / YELLOW MOIST - CLAYEY SAND - NO ODOR
11						
12					SC	BENTONITE LENSES IN BROWN CLAYEY SAND -
13					SC	
14						
15	CTG	3	32.6			MED. BROWN CLAYEY SAND MOIST - NO ODOR
16					SC	GOLD / BROWN, MOIST CLAYEY SAND - NO ODOR
17						
18	CTG	4	67			TIGHT FORMATION - BLACK, MOIST CLAYEY SAND - NO ODOR
19					Bottom	POSSIBLE COAL TYPE MATERIAL
0						
1						
2						

ENVIROTECH INC. FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET: / OF: /
4	—	93124	GAS CO. of N.M.	

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0	18.5'

DATE			DRILLING Co.:
STARTED:	6-15-93	11:15	ENVIROTECH
COMPLETED:	6-15-93	11:45	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-4	CREW: MD / AV		

SURFACE CONDITIONS: DIRT ROAD - IN WASH - SLOPE TO NORTH - GENTLE

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
					SP	DIRT ROAD MED. BROWN, MOIST SAND -
1						
2						
3					SC	MED BROWN / GRAY, MOIST CLAYEY SAND
4					SC	LIGHT BROWN, MOIST CLAYEY SAND - STIFF
5	CTG	1	13.9			
6						
7						
8						
9						
10	CTG	2	18.3			
11						
12						
13						
14						
15	CTG	3	3.0		SC	MED BROWN, MOIST CLAYEY SAND - STIFF - MOIST TO WET
16						
17					SC	LIGHT BROWN, SAA - MOIST TO WET
18	CTG	4	ND			LIGHT BROWN - MOIST TO WET
19					Bottom	
20						
21						
22						

ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
5	—	93124	GAS CO. OF N. M.	1 OF 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	~ 3' HIGHER THAN TH-1	13.5'

DATE	STARTED:	COMPLETED:	DRILLING Co.:
	6-15-93 11:55	12:50	ENVIROTECH

COMPLETION TYPE:	ENGINEER:	CREW:	GROUNDWATER DEPTH:	TIME:
TH-5	RED	MP PV	—	—

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
1					SP	MED BRN, POORLY GRADED, MOIST SAND, FIRM - NO ODOR
2						
3						
4						
5	CTG	1	10.1		SC	DUSKY YELLOW, CLAYEY SAND, STIFF, MOIST - NO ODOR
6						
7					SC	LIGHT BROWN, CLAYEY SAND STIFF MOIST
8						
9						
10	CTG	2	397			SAA - DEFINITE HYDROCARBON ODOR
11						
12						
13	CTG	3	453		SC	VERY STIFF - MOIST - CLAYEY SAND - LIGHT BROWN
14					BOTTOM	HYDROCARBON ODOR — WITH BLUE/GRAY [illegible]
15						
16						
17						
18						
19						
20						

ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
6	—	93129	GAS CO. OF NEW MEXICO	1 OF 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

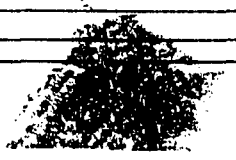
TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7¼ HOLLOW STEM AUGER	0' ~ 2' HIGHER T-5	15'

DATE	STARTED:	COMPLETED:	DRILLING Co.:
	6-15-93 1:00, 3:40	1:15, 4:40	ENVIROTECH

COMPLETION TYPE:	ENGINEER:	CREW:	GROUNDWATER DEPTH:	TIME:
TH-6	REO	MA PV	— —	— —

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
					SP	MED. BROWN SAND, MOIST, MEDIUM FIRM - NO ODOR
1						
2						
3						
4						
5						
6						
7						
					SC	LIGHT/MED BROWN CLAYEY SAND STIFF
8	CTG	1	10.1			SAA - NO ODOR
9						
10						
					CL	SILTY CLAY - LOW PLASTICITY - STIFF - MOIST
11						
12						
13	CTG	2	49		SC	LIGHT BROWN CLAYEY SAND, U STIFF - MOIST
14						
15	SPT	3	14		SC	ALLUVIAL - U. STIFF TO HARD - SHALE,
16						10" SAMPLE - PALE OLIVE - CLAYEY SANDSTONE - MOIST - U STIFF
17						
18						
19						
20						
21						
22						



ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
7	—	93124	GAS CO. OF NEW MEXICO	1 OF 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C, DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7' HOLLOW STEM AUGER	0' ~ 1' HIGHER THAN TH-6	15'

DATE	STARTED:	COMPLETED:	DRILLING Co.:
	6-15-93 4:50	6:10	ENVIROTECH

COMPLETION TYPE:	ENGINEER:	CREW:	GROUNDWATER DEPTH:	TIME:
TH-7	REO	MD PV	— — —	— — —

SURFACE CONDITIONS: DIRT - SLOPE TO WEST TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
0					CL	DUSKY YELLOW, MOIST, FIRM, SILTY CLAY. - NO ODOR
1						
2						
3						
4						
5						
6						
7						
8	CTG	1	5.2		CL	LIGHT BROWN, MOIST, V. FIRM CLAYEY SILT - NO ODOR
9						
10						
11						
12						
13	CTG	2	19.4		CL	YELLOWISH GRAY, MOIST, V. FIRM CLAYEY SILT - NO ODOR
14						
15					AUGER	REFUSAL

Public Service Company of New Mexico

Tuesday, June 29, 1993

Denny G. Foust
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division

1000 Rio Brazos Road
Aztec, New Mexico 87410

Subject: Condensate spill from a drip on the Aztec PC gathering system

Dear Mr. Foust;

The attached documentation should indicate that the extent of the spill is not that great. The highest reading on the latest assessment performed by Envirotech is 770 ppm at bore hole 1. At this point in time I propose that we construct an intercept trench to contain any remaining hydrocarbons that may migrate downhill. I also propose that a vent be installed on one end of the leaching pipe to allow ventilation of any hydrocarbons. A copy of the proposed trench is attached.

I am attaching the following letter that I am sending to Envirotech for completion of work. I am also attaching a copy of the assessment that was performed on the site which indicates the hydrocarbon levels of the soil.

Please let me know if this proposed method is acceptable to handle the remaining hydrocarbons.

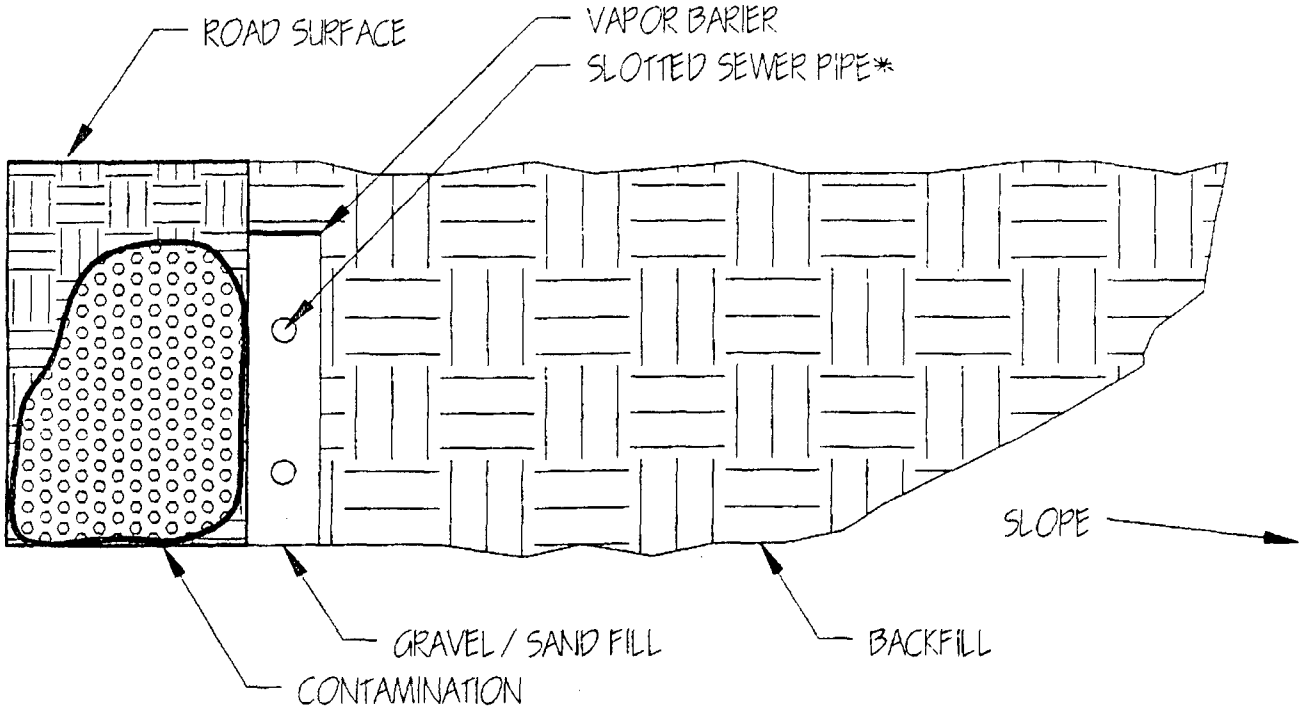
If you have any questions or if I can be of any further assistance, please give me a call at 848-2659.

Sincerely,

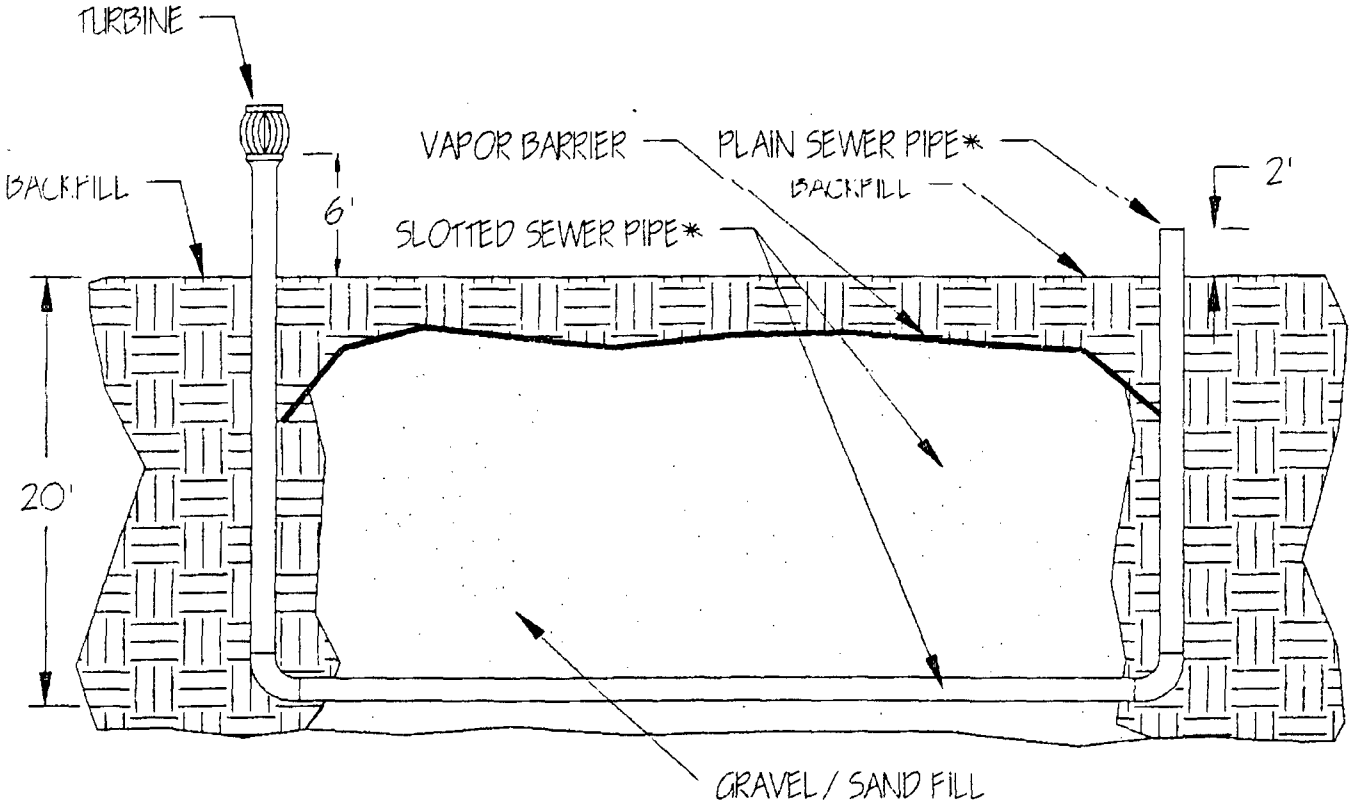
Erick Seelinger
Environmental Engineer

c:
Harry Schanning
Jerry Godwin
J.D. Barnett

Alvarado Square
Albuquerque, New Mexico 87158
505/848-2700



WEST ELEVATION



NORTH ELEVATION

* PVC OR EQUIVALENT

DRAWN BY: MARK ORONA
GAS OPERATIONS ENGINEERING
JUNE 1993

Public Service Company of New Mexico

Tuesday, June 29, 1993

Veryl Moore
ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico, 87401

Subject: Aztec PC Mainline Drip Cleanup

Dear Mr. Moore

We had spoke last Friday regarding the filing up of the hole at the Aztec PC gathering line drip. You said you were willing to fill up the hole as part of the original contract. That is fine; however, would you please submit a written estimate of the costs to do the following work:

1. Construct the intercept trench as illustrated (attached.)

2. Remove the dirt that is stacked beside the road that is still contaminated. As I recall, there were two contaminated and one clean.

3. Dig the remaining amount of dirt in the hole that is just North of the drip, and about 6 feet down. I believe that it is still in excess of the 100 ppm hydrocarbon cleanup levels.

I have attached what I have supplied to the OCD. Please give me a call if you have any further questions.

Sincerely

Erick Seelinger

Alvarado Square
Albuquerque, New Mexico 87158
505/848-2700

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

June 16, 1993

Mr. Mark McAndrews
Environmental Coordinator
Gas Company of New Mexico
P.O. Box 1899
Bloomfield, New Mexico 87413

RE: Assessment Drilling Results
Aztec P.C. Drip Line Project

Project No: 93124

Dear Mark:

Attached please find the drilling logs and a site diagram for drilling done on June 15, 1993 to determine the hydrocarbon plume extent at the Aztec P. C. Drip Line. Eight hours of drilling was completed at the site per the written communication dated June 9, 1993 between Mr. Verl Farnsworth of Envirotech and Mr. Eric Seelinger, Environmental Engineer for Public Service Company of New Mexico (attached).

Raw data is included as per my instructions and a probable plume boundary based on the drilling results is noted on the site diagram. Additional drilling would be required for a more accurate boundary determination, but the drilling completed was sufficient for a rough estimate.

Thank you for your assistance with this project. We appreciate the opportunity to serve you.

Respectfully submitted,
ENVIROTECH, INC.

Robert E. O'Neill
Environmental Engineer

Attachments

REO/reo

93124-MM.LET

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

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

June 9, 1993

Eric Seelinger
Gas Company of New Mexico

Re: Proposal for area survey with drill rig

Dear Eric,

Envirotech Inc. will provide for the Gas Co. of New Mexico one (1) hollow stem drill rig with operator and helper with addition of one (1) technician to perform sampling for one (1) 8 hour day for the cost of $1200.00 plus tax.

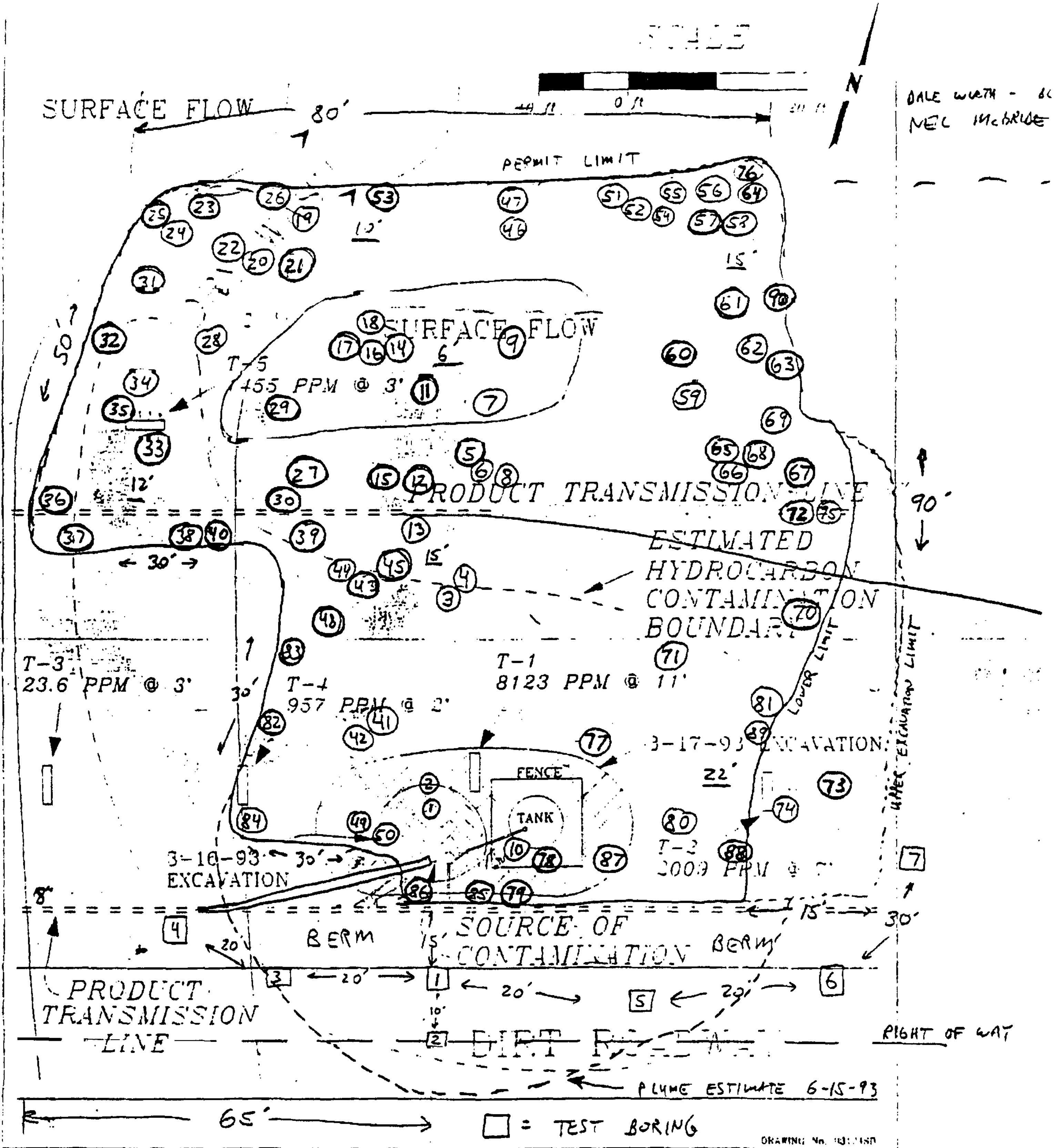
Boring will be as necessary with 20-25 anticipated. If drilling to be out side of the right-of-way, Gas Company will be responsible for permits.

Thank You,

Verl Farnsworth
Construction Superintendent

Attachments: Site Map

VF/vm



GAS COMPANY OF NEW MEXICO

AZTEC P/C DRIP LINE

(C) SEC 28 T28N R10W

PROJECT NO. 93124

ENVIROTECH INC

ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64-3014
FARMINGTON, NEW MEXICO 87401
PHONE (505) 632-0615

SITE DIAGRAM

SHEET

DRWN BY
REV BY
PROJECT MGR: RMY

SURFACE GRADIENT = WEST TOWARD WASH AND NORTH DOWN WASH

JUL 06 '93 08:03 OCD AZTEC NM

ENVIROTECH INC.

[redacted]

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
1	—	93124	GAS CO. OF N.M.	1 OF: 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0'	20'

DATE			DRILLING Co.:
STARTED:	6-15-93	8:20	ENVIROTECH
COMPLETED:	6-15-93	9:20	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-1	RED	—	—
	CREW: MB / PV	—	—

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
						DIRT ROAD
					SP	MOIST FINE SAND - MED. BROWN
1						NO ODOR
2						
3						
4					CL	GRAY/BROWN SANDY CLAY - MOIST - LOW PLASTICITY
5	CTG	1	761			ODOR BEGINS
6						
7						
8						
9						
10	CTG.	2	765			
11						
12					SC	SILTY SAND - LIGHT BROWN - MOIST - LOW PLASTICITY
13						
14						
15	CTG	3	477		ML	GRAY/BROWN SANDY CLAY - MOIST - LOW PLAST.
16					SC	MED. BROWN - CLAYEY SAND - MOIST - LOW PLAST.
17						ORANGE/YELLOW - CLAYEY SAND - MOIST - LOW PLAST.
18						GRAY/BROWN - SAND - SOME ROCK
19						FORMATION GETTING HARDER - YELLOWISH BROWN
20	CTG	4	392			GRAY/BROWN - CLAYEY/SILTY SAND - MOIST - VERY TIGHT FORMATION
					BOTTOM	
1						
2						

ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET: / OF: /
2	—	93124	GAS CO. OF N.M.	

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0	5'

DATE			DRILLING Co.:
STARTED:	6-15-93	9:30	ENVIRO TECH
COMPLETED:	6-15-93	9:45	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-2	CREW: MD / PV		

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
					SP	DIRT ROAD MED BROWN, MOIST, SAND - NO ODOR
1						
2						
3						
4						
5	CTG	1	720		SC Bottom	BROWN/GRAY CLAYEY SAND - ODOR
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

BORLOG.DOC-3/93

ENVIROTECH INC.

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET: / OF: /
3	—	93124	GAS CO. OF N.M.	

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM	0 ~3' BELOW TH-1+2	18.5'

DATE		DRILLING Co.:
STARTED: 6-15-93	9:55	ENVIROTECH
COMPLETED: 6-15-93	11:00	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-3	CREW: MD / PV	—	—

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
					SP	DIRT ROAD MED BROWN MOIST SAND - NO ODOR
4					SC	CLAYEY SAND, MOIST, BROWN / SOME GRAY - NO ODOR
5	CTG	1	164			
10	CTG	2	40.2		SC	LT. BROWN/YELLOW, MOIST - CLAYEY SAND - NO ODOR
12					SC	BLUE/GRAY LENSES IN BROWN CLAYEY SAND —
13					SC	
15	CTG	3	32.6			MED. BROWN CLAYEY SAND, MOIST — NO ODOR
16					SC	GOLD/BROWN, MOIST, CLAYEY SAND - NO ODOR
18	CTG	4	67			TIGHT FORMATION - BLACK, MOIST CLAYEY SAND - NO ODOR
19					BOTTOM	POSSIBLE COAL TYPE MATERIAL

BORLOG.DOC-3/93

ENVIROTECH INC.

FIELD BORING LOG

[redacted]

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET: / OF: /
4	—	93124	GAS CO. OF N.M.	

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. ORIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0	18.5'

DATE			DRILLING Co.:
STARTED:	6-15-93	11.15	ENVIROTECH
COMPLETED:	6-15-93	11:45	

COMPLETION TYPE:	ENGINEER:	GROUNDWATER DEPTH	TIME
TH-4	REO	—	—
	CREW: MD / AV	—	—
		—	—

SURFACE CONDITIONS: DIRT ROAD - IN WASH - SLOPE TO NORTH - GENTLE

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
					SP	DIRT ROAD MED. BROWN, MOIST SAND -
1						
2						
3					SC	MED BROWN / GRAY, MOIST, CLAYEY SAND
4					CC	LIGHT BROWN, MOIST CLAYEY SAND - STIFF
5	CTG	1	13.9			
6						
7						
8						
9						
10	CTG	2	18.3			
11						
12						
13						
14						
15	CTG	3	3.0		SC	MED. BROWN, MOIST, CLAYEY SAND - STIFF
16						
17					SC	LIGHT BROWN, SAA - MOIST TO WET
18	CTG	4	ND			LIGHT BROWN - MOIST TO WET
19					Bottom	
20						
21						
22						

BORLOG.DOC - 3/93

ENVIROTECH INC.

FIELD BORING LOG

[redacted]

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
5	—	93124	GAS CO. OF N. M.	1 OF 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. ORIP LIME

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	~ 3' HIGHER THAN TH-1	13.5'

DATE STARTED:	DATE COMPLETED:	DRILLING CO.:
6-15-93 11:55	12:50	ENVIROTECH

COMPLETION TYPE:	ENGINEER:	CREW:	GROUNDWATER DEPTH:	TIME:
TH-5	REG	MD PV	—	—

SURFACE CONDITIONS: DIRT ROAD SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
0					SP	MOD. BRN, POORLY GRADED, MOIST, SAND, FIRM - NO ODOR
5	CTG	1	10.1		SC	DUSKY YELLOW, CLAYEY SAND, STIFF, MOIST - NO ODOR
7					SC	LIGHT BROWN, CLAYEY SAND, STIFF, MOIST
10	CTG	2	397			SAA - DEFINITE HYDROCARBON ODOR
13	CTG	3	453		SC	VERY STIFF - MOIST - CLAYEY SAND - LIGHT BROWN
13.5					BOTTOM	HYDROCARBON ODOR — WITH BLUE/GRAY LENSES

ENVIROTECH INC.

[redacted]

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
6	—	93124	GAS CO. OF NEW MEXICO	1 OF 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRIP LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" Hollow STEM AUGER	0' ~ 2' HIGHER T-5	15'

DATE	STARTED:	COMPLETED:	DRILLING Co.:
	6-15-93 1:00, 3:40	1:15 4:40	ENVIROTECH

COMPLETION TYPE:	ENGINEER:	CREW:	GROUNDWATER DEPTH:	TIME:
TH-6	REO	MD PV	— —	— —

SURFACE CONDITIONS: DIRT ROAD - SLOPE TO WEST - TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
0					SP	MED. BROWN SAND, MOIST, MEDIUM FIRM - NO ODOR
1						
2						
3						
4						
5						
6						
7					SC	LIGHT/MED. BROWN CLAYEY SAND, STIFF
8	CTG	1	10.1			SAA - NO ODOR
9						
10					CL	SILTY CLAY - LOW PLASTICITY - STIFF - MOIST
11						
12						
13	CTG	2	49		SC	LIGHT BROWN CLAYEY SAND, V. STIFF - MOIST
14						
15	SPT	3	14		SC	AUGER REFUSAL - V. STIFF TO HARD - SHALE,
16						10" SAMPLE - PALE OLIVE - CLAYEY SANDSTONE - MOIST - V. STI
17						
18						
19						
20						
21						
22						

BORLOG.DOC - 1/93

ENVIROTECH INC.

[redacted]

FIELD BORING LOG

TEST BORING No.	MONITOR WELL No.	PROJECT No.	PROJECT NAME:	SHEET:
7	—	93124	GAS CO. OF NEW MEXICO	1 OF 1

MFG. DESIGNATION OF DRILL:	PROJECT LOCATION:
CME 55	AZTEC P.C. DRY LINE

TYPE OF BIT:	SURFACE ELEVATION OF TB OR MW:	TOTAL DEPTH OF HOLE:
7" HOLLOW STEM AUGER	0' ~ 1' HIGHER THAN TH-6	15'

DATE	STARTED:	COMPLETED:	DRILLING Co.:
	6-15-93 4:50	6:10	ENVIROTECH

COMPLETION TYPE:	ENGINEER:	CREW:	GROUNDWATER DEPTH:	TIME:
TH-7	REO	MD PV	— —	— —

SURFACE CONDITIONS: DIRT - SLOPE TO WEST TOWARD WASH

DIST FROM SURF.	SAMPLE TYPE	SAMPLE No.	OVM READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
					CL	DUSKY YELLOW, MOIST, FIRM, SILTY CLAY. - NO ODOR
1						
2						
3						
4						
5						
6						
7						
8	CTG	1	5.2		CL	LIGHT BROWN, MOIST, V. FIRM, CLAYEY SILT - NO ODOR
9						
10						
11						
12						
13	CTG	2	19.4		CL	YELLOWISH GRAY, MOIST. V. FIRM, CLAYEY SILT - NO ODOR
14						
15						
					Auger	REFUSAL