3R - 275

GENERAL CORRESPONDENCE

YEAR(S):
1993

BIOTECH REMEDIATION INC.

LABORATORY ANALYSIS
CHARLIE #1 BLOW PIT

PREPARED FOR

MANANA GAS INC.
2520 TRAMWAY TERRACE CT. NE
ALBUQUERQUE, NEW MEXICO 87122

BY

BIOTECH WATER QUALITY LABORATORIES
710 EAST 20TH STREET
SUITE 400
FARMINGTON, NEW MEXICO 87401

OCTOBER 5, 1993

Thriftway Professional Building ▲ 710 East 20th Street ▲ Suite 400 ▲ Farmington, New Mexico 87401
Corporate Office (505) 326-5571 ▲ Field Office (505) 632-3365 ▲ Fax (505) 632-3365

BioTech
REMEDIATION

710 East 20th Street, Suite 400
Farmington, New Mexico 87401
Field Office: (505) 632-3365
Fax: (505) 632-0030

October 5, 1993

Don Bass
Manana Gas Inc.
2520 Tramway Terrace Ct. NE.
Albuquerque, New Mexico 87122

RE: Charlie #1 blow pit soil samples

Don,

Enclosed are the EPA Method 8015 (Mod) soil analyzes for the three soil samples taken at the Charlie #1 blow pit on September 30 and October 1, 1993. The Total Petroleum Hydrocarbon (TPH) values are listed below

Sample #	TPH (PPM)
TB1 17'	46
TB2 16'	31
TB3 15'	62

The Quality Control data is enclosed with the analyzes. Thank you for your continued business.

Sincerely,

Chris Hollandsworth
Lab Analyst

f:\files\man1

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS

CLIENT:	MANANA GAS INC.	SAMPLE MATRIX:	SOIL
CLIENT NUMBER:		PRESERVATIVE:	COOL
PROJECT NAME:	CHARLIE #1 BLOW PIT	REPORT DATE:	10/04/93
PROJECT LOCATION:	NE, SE, SECTION 7, TOWSHIP 30N, RANGE 11W,	DATE SAMPLED:	09/30/93
SAMPLE ID:	TB1 17'	DATE RECIEVED:	10/01/93
SAMPLE NUMBER:	S0109303	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	46	0.8

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

ANALYZED BY

REVIEWED BY

THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS

CLIENT:	MANANA GAS INC.	SAMPLE MATRIX:	SOIL
CLIENT NUMBER:		PRESERVATIVE:	COOL
PROJECT NAME:	CHARLIE #1 BLOW PIT	REPORT DATE:	10/04/93
PROJECT LOCATION:	NE, SE, SECTION 7, TOWSHIP 30N, RANGE 11W,	DATE SAMPLED:	09/30/93
SAMPLE ID:	TB2 16'	DATE RECIEVED:	10/01/93
SAMPLE NUMBER:	S0209303	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	31	0.8

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

ANALYZED BY

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THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
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BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS

CLIENT:	MANANA GAS INC.	SAMPLE MATRIX:	SOIL
CLIENT NUMBER:		PRESERVATIVE:	COOL
PROJECT NAME:	CHARLIE #1 BLOW PIT	REPORT DATE:	10/04/93
PROJECT LOCATION:	NE, SE, SECTION 7, TOWSHIP 30N, RANGE 11W,	DATE SAMPLED:	10/01/93
SAMPLE ID:	TB3 15'	DATE RECIEVED:	10/01/93
SAMPLE NUMBER:	S0310033	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	62	0.8

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

ANALYZED BY

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THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

QUALITY CONTROL

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS
QUALITY CONTROL

CLIENT:	NA	SAMPLE MATRIX:	HEXANE
CLIENT NUMBER:	NA	PRESERVATIVE:	NA
PROJECT NAME:	NA	REPORT DATE:	10/04/93
PROJECT LOCATION:	NA	DATE SAMPLED:	NA
SAMPLE ID:	LABORATORY BLANK	DATE RECIEVED:	NA
SAMPLE NUMBER:	B1510043	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	ND	1.0

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

BioTech REMEDIATION
WATER QUALITY LABORATORIES
710 E. 20th Street, Suite 400
Farmington, New Mexico 87401
Office: (505) 632-3365
Fax: (505) 632-0030

11011

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
Navajo Pit	Aztec, N.M.	
Sampler: (Signature) Mark Edwards	Tape No.	

Sample No./ID	Date	Time	Lab No.	Matrix	No. Cont.	8015						Remarks
TB #1 17'	9-30-93	13:30	5010930 3	SOIL	1	✓						
TB #2 16'	9-30-93	16:50	5020930 3	"	1	✓						
TB #3 15'	10-1-93	16:00	5031001 3	"	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Mark Edwards	10-1-93	17:00			
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature) Ken Wallace	10-1-93	17:[illegible]

san juan repro Form 578-97

Manana Gas, Inc.
2520 Tramway Terrace Ct. NE
Albuquerque, NM 87122
(505) 275-8817
(505) 271-2741 FAX

October 13, 1993

Mr. Denny Foust
Oil Conservation Division
1000 Rio Brazos Rd.
Aztec, NM 87410

Re: Blow Pit Cleanup on the Charlie #1, I-7-30N-11W,
San Juan County, New Mexico

Dear Mr. Foust:

Enclosed is a copy of our site assessment and laboratory analysis on the above listed blow pit for your review.

The assessment shows that the contamination has not migrated beyond the pit and that the microbial remediation is cleaning up the contamination that exists under the pit.

We would like to continue with the microbial remediation and reassess the site in approximately 6 months.

If you have any questions, please feel free to contact me at the number listed above.

Best Regards,

Don Bass
Controller

cc Bill Olson
OCD
Santa Fe

MARK E. WEIDLER
Certified Professional Geologist

Office: 505/325-9359
Residence: 505/325-3641
CPG No. 2488

3001 Northridge Drive
P. O. Box 3028
Farmington, New Mexico 87499

Hydrogeologic Studies
Site Investigations
Remediation Plans

PROGRESS REPORT
ON
SITE ASSESSMENT
FOR
MANANA GAS, INC., CHARLIE NO. 1 BLOW PIT

PREPARED FOR
MANANA GAS, INC.
ED HARTMAN, PRESIDENT

PREPARED BY
MARK E. WEIDLER
PROFESSIONAL GEOLOGIST
PG 2097 (WY)
CPG 2488

OCTOBER 5, 1993

PROGRESS REPORT
MANANA GAS, INC., CHARLIE NO. 1 BLOW PIT

BACKGROUND

Investigation of the blow pit on Charlie No. 1 was initiated April 22, 1993, and continued to May 6, 1993, by On Site Technologies, LTD. As the result of contamination revealed by testing during this investigation, Manana Gas, Inc., contracted with Applied Bioscience, Inc. (Bob Durbin), to initiate treatment and remediation, utilizing hydrocarbon consuming bacteria. Initial treatment of the pit was made May 16, 1993. A follow-up treatment was made by Applied Bioscience, Inc., on July 22, 1993. By letter dated July 27, 1993, NMOCD directed that additional investigative work be undertaken to further define the horizontal and vertical extent of hydrocarbon contamination. This report summarizes work undertaken by Manana Gas, Inc. to comply with the NMOCD directive which required completion of the work by October 15, 1993, and reporting by October 31, 1993.

HYDROGEOLOGICAL SETTING

The Charlie No. 1 well is located near the north edge of the alluviated valley of the Animas River on the west edge of the town of Aztec (Figure 1). Hydraulic gradient, based on general hydrologic setting is southward to southwestward. The Charlie No. 1 is approximately 2600 feet (0.5 mile) north of the Animas River bed. Site elevation is approximately 5610 feet MSL. River

elevation due south of the site is about 5555 feet MSL. The water table measured during this investigation is approximately 14' 8" below ground surface (grade). Water level measured in a water well approximately 800 feet northeast of the site, and closer to the edge of the alluviated valley, was at 23 feet. The farmer said the well was drilled to about 50 feet. Surface elevation at the well is 10 to 15 feet higher than the Charlie 1 site.

WORK ACCOMPLISHED

As requested by Mr. Denny Foust, NMOCD, we made 3 new test borings at the site as shown on Figure 2. Test Boring 1 was made 20 feet south of the fence surrounding the blow pit. It was hand augered to a depth of 17 feet. Details of sampling and testing are shown on Table 1. No contamination was encountered that was visible, or could be detected by headspace testing with a Thermo-Environmental 580-B PID. All headspace readings were zero (0). Top of the capillary fringe is approximately 12 feet BG as shown by sample moisture. Water level is approximately 14' 8" BG. A sample collected at 17 feet for TPH, tested 42 PPM.

Test Boring 2 was located 20 feet southwest of the pit. It was hand augered and sampled to a depth of 16 feet without encountering any observable or measurable contamination. The details of sampling and testing are shown on Table 2. Top of capillary fringe is approximately 12 feet BG. Water level is the same as that found in TB-1, 14' 8" BG. A sample collected at 16 feet for THP, tested 31 PPM.

Test Boring 3 was located 4 feet south of the pit (3' south of fence). The boring was carried to a depth of 16 feet with a hand auger. Details of sampling and testing are shown on Table 3. Hydrocarbon contamination was first encountered at 4.5 feet below grade. This was reflected first by color change from brown sand to gry-brn sand, with 25 PPM headspace measurement. Maximum reading was 1202 PPM in gray clay collected at 10 feet BG. Headspace readings decreased markedly below 10 feet. Interpretation of these data is made in the following section. The auger barrel was cleaned before each sampling to minimize the chance of carrying contamination downward. We were unable to keep the boring open long enough to allow establishing a water level in TB-3 as we had in the other two borings. This may be due to the correlative strata being mainly clay in TB-3. We collected soil samples near the water table in each test boring for laboratory TPH (8015) determination. The sample collected for TPH from TB-3 at 15 feet tested 61 PPM.

Soil removed by auger was stockpiled on plastic sheeting. All three test borings were backfilled to 12 feet with pelleted bentonite which was activated with clean water. The remaining parts of the holes were backfilled with clean fill dirt to grade. Contaminated soil recovered by augering was placed within the pit so it could be bioremediated with in situ soil.

INTERPRETATION OF DATA

We were surprised to encounter the water table at 14' 8". We

thought from sampling made in April that the water table would be below 18 feet. It is possible that the water table could vary by 3 feet, but we have no local data to document such magnitude of variation. We may need to auger a test hole next spring in March or April to assess this factor.

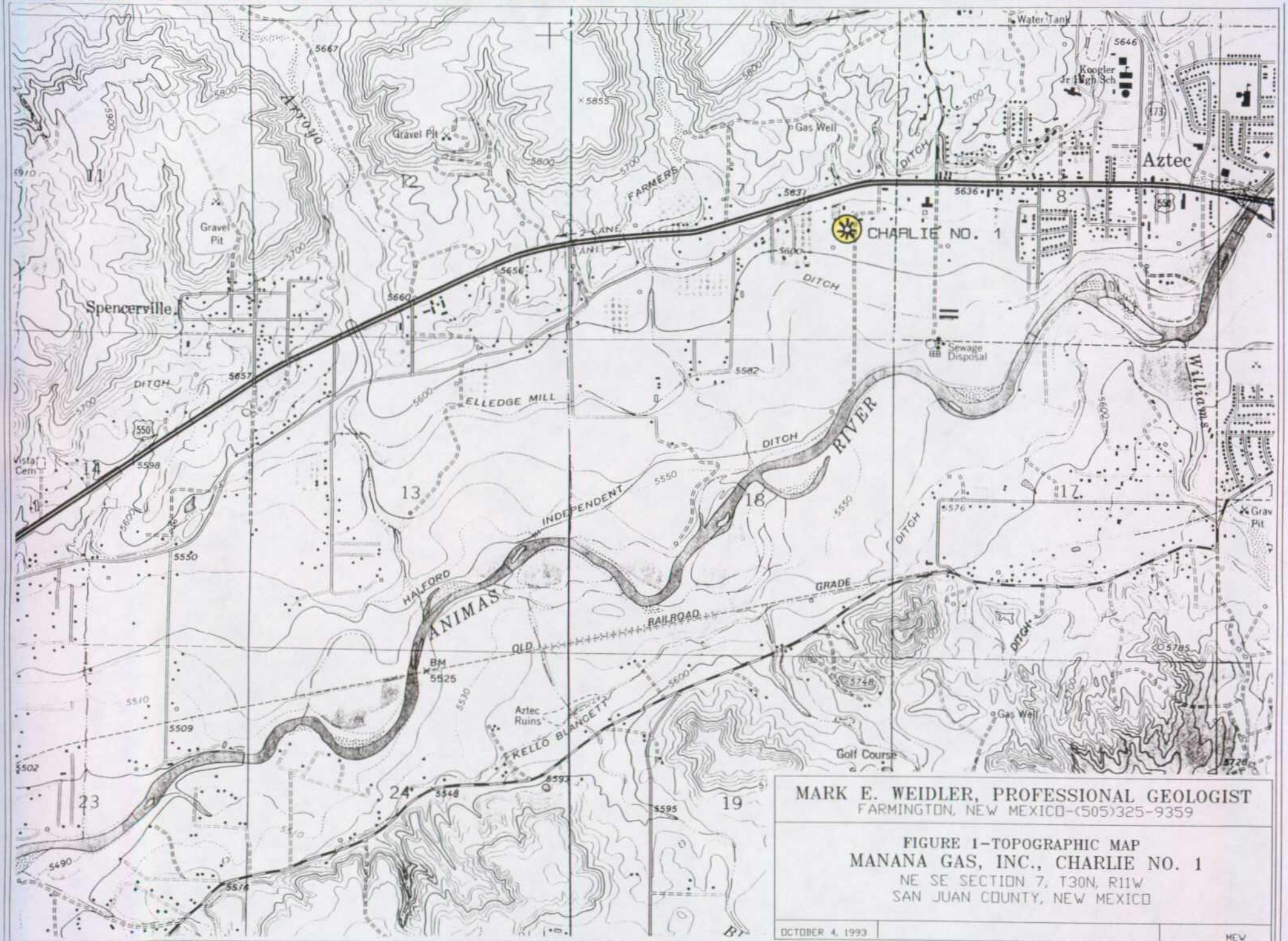
It is apparent from the results of TB-1 and TB-2, that contamination has not migrated significantly down-gradient from the pit. Test Boring 3, 4 feet from the pit, had contamination from 4.5 feet to 16 feet. Interestly, maximum contamination occurs in clay at 10 feet BG. Contamination decreases markedly below this depth. This leads us to believe that microbial remediation is working at this site. Keep in mind that the top of the capillary fringe appears to be at about 12 feet BG. Microbial activity will be highest from the top of the capillary fringe to below the water table. This is because the microbes need water to flourish. The upper 8 to 10 feet of sediments are fine to medium sands with significant permeability. Therefore, water with microbes and nutrients introduced directly to the pit, and materials introduced by microbial wanding technique, will quickly percolate downward to the capillary fringe and then to the water table. This phenomena is favorable for the minimization of impact of contamination on water and for the expeditious remediation of any contamination that has already reached water. The microbes will follow the hydrocarbon contamination and continue their remedial benefit.

SUMMARY AND RECOMMENDATIONS

Additional testing, to help define the extent of contamination, has been completed and indicates that contamination is present 4 feet south of the pit, but has not migrated 20 feet downgradient. Soils/sediments in TB-3 were contaminated down to the water table but data indicate that microbial remediation is progressing and is continuing to benefit the site. The data indicate no additional containment activities are warranted. The ongoing microbial remediation should be continued and monitored periodically, perhaps on a 6-month basis, to record progress.
I recommend that we make a new test boring next spring near TB-3 to check progress of soil and water remediation and to determine water level at that time prior to the onset of the irrigation season.

Mark E. Weidler
Professional Geologist
PG-2097 (WY) CPG-248

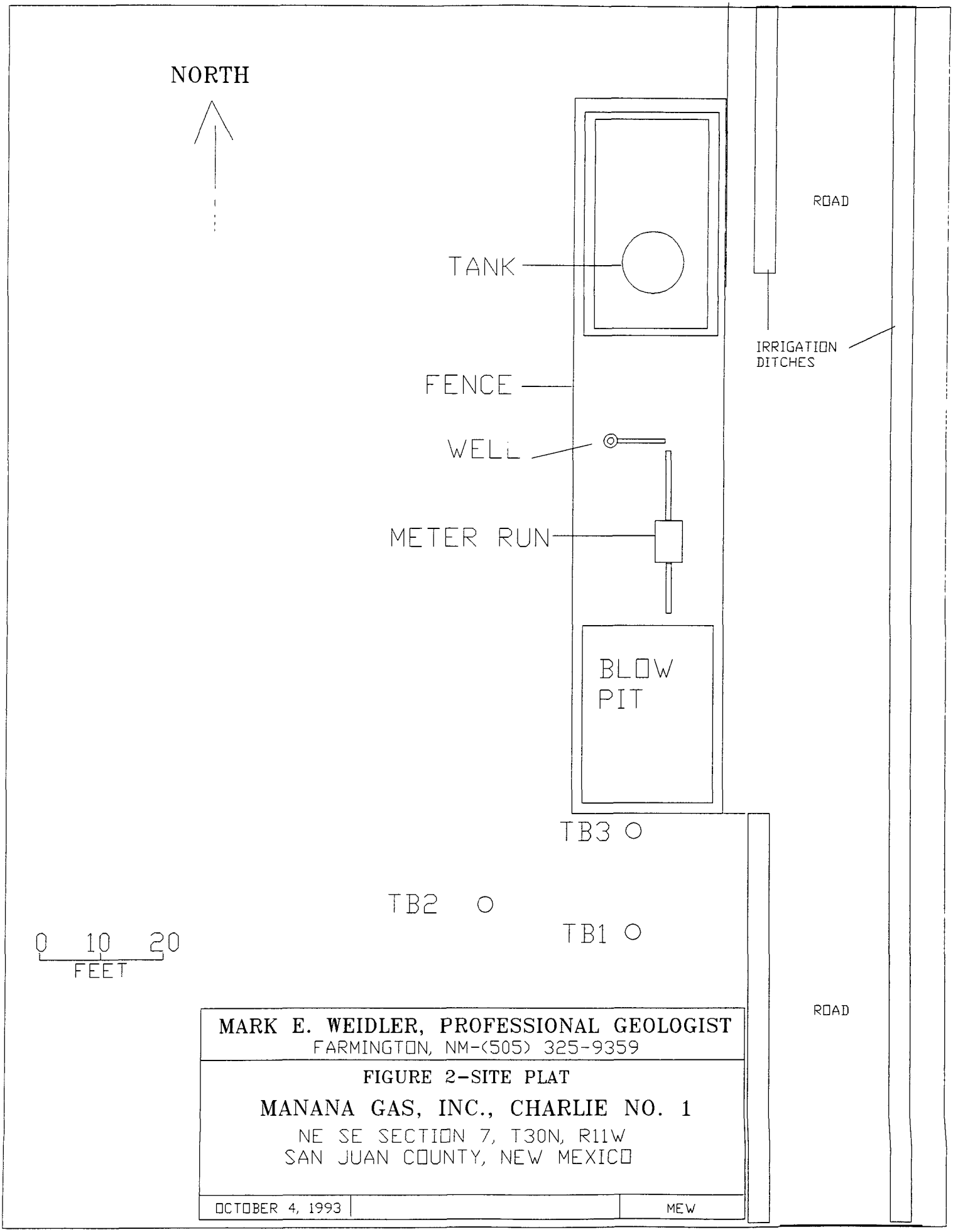
FIGURES



MARK E. WEIDLER, PROFESSIONAL GEOLOGIST
FARMINGTON, NEW MEXICO-(505)325-9359

FIGURE 1-TOPOGRAPHIC MAP
MANANA GAS, INC., CHARLIE NO. 1
NE SE SECTION 7, T30N, R11W
SAN JUAN COUNTY, NEW MEXICO

OCTOBER 4, 1993 | MEW



MARK E. WEIDLER, PROFESSIONAL GEOLOGIST
FARMINGTON, NM-(505) 325-9359

FIGURE 2-SITE PLAT

MANANA GAS, INC., CHARLIE NO. 1

NE SE SECTION 7, T30N, R11W
SAN JUAN COUNTY, NEW MEXICO

OCTOBER 4, 1993		MEW

TABLES

TABLE 1
MANANA, CHARLIE NO. 1
Test Boring No. 1

DEPTH,FT	FIELD OVM,PPM	DESCRIPTION
2	0	Sand, brown, fine, sli. silty, no odor or vis. contam.
4	0	Sand, brown, fine, sli. silty, no odor or vis. contam.
6	0	Sand, brown, fine, sli. silty, no odor or vis. contam.
8	0	Sand, brown, fine, sli. silty, no odor or vis. contam.
10	0	Sand, brown, fine, incr. silt and clay, no odor or vis. contam.
12	0	Sand, brown, fine, silty and clay, moist (cap. fringe), no odor or vis. contam.
14	0	Sand, as above, incr. in moisture, no odor or vis. cont.
16	0	Sand, as above, saturated w/water, no contam.
17	0	Sand, as above. **TPH sample 42 PPM**

TABLE 2
MANANA, CHARLIE NO. 1
Test Boring No. 2

DEPTH,FT	FIELD OVM,PPM	DESCRIPTION
2	0	Sand, brown, fine to med., no contam.
4	0	Sand, as above
6	0	Sand, as above
8	0	Sand, fine, sli. silty, no contam.
10	0	Clay, sandy and silty, no contam.
12	0	Clay, sandy, silty, moist (capillary fringe)
14	0	Sand, silty, vy moist, no contam.
16	0	Sand, silty, water saturated, no contam. **TPH sample 31 PPM**

TABLE 3
MANANA, CHARLIE NO. 1
Test Boring No. 3

DEPTH, FT.	FIELD OVM, PPM	DESCRIPTION
2	0	Sand, rust brown, fine, no contamination
4	1.1	Sand, brown, fine, silty, no contam.
4.5	25.2	Sand, gry-brn, fine, silty; gry color due to hydrocarbons.
6	624	Sand, gry-brn, fine, silty, petrol. odor
8	373	Sand, gry, fine, silty, clayey, pet. odor
10	1202	Clay, gry, silty, strong petrol. odor
12	250	Clay, gry-brn, silty, sdy, moist, sli. pet. odor
13	242	Clay, brn, sdy, silty, moist, sli. pet. odor
14	178	Clay, brn, silty, moist, vy sli. pet. odor
15	151	Sand, black, fine-med, wet, vy sli. odor, **TPH spl. 61 PPM**
16	82	Clay, brn, silty, wet, no odor or vis. contam.

TABLE 4
MANANA, CHARLIE NO. 1
Laboratory TPH Analysis (EPA 8015 Modified)

TEST BORING	DEPTH, FT	PPM
1	17'	42
2	16'	31
3	15'	61

LABORATORY ANALYSIS

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS

CLIENT:	MANANA GAS INC.	SAMPLE MATRIX:	SOIL
CLIENT NUMBER:		PRESERVATIVE:	COOL
PROJECT NAME:	CHARLIE #1 BLOW PIT	REPORT DATE:	10/04/93
PROJECT LOCATION:	NE, SE, SECTION 7, TOWSHIP 30N, RANGE 11W,	DATE SAMPLED:	09/30/93
SAMPLE ID:	TB1 17'	DATE RECIEVED:	10/01/93
SAMPLE NUMBER:	S0109303	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	46	0.8

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

ANALYZED BY

REVIEWED BY

THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS

CLIENT:	MANANA GAS INC.	SAMPLE MATRIX:	SOIL
CLIENT NUMBER:		PRESERVATIVE:	COOL
PROJECT NAME:	CHARLIE #1 BLOW PIT	REPORT DATE:	10/04/93
PROJECT LOCATION:	NE, SE, SECTION 7, TOWSHIP 30N, RANGE 11W,	DATE SAMPLED:	09/30/93
SAMPLE ID:	TB2 16'	DATE RECIEVED:	10/01/93
SAMPLE NUMBER:	S0209303	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	31	0.8

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

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LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS

CLIENT:	MANANA GAS INC.	SAMPLE MATRIX:	SOIL
CLIENT NUMBER:		PRESERVATIVE:	COOL
PROJECT NAME:	CHARLIE #1 BLOW PIT	REPORT DATE:	10/04/93
PROJECT LOCATION:	NE, SE, SECTION 7, TOWSHIP 30N, RANGE 11W,	DATE SAMPLED:	10/01/93
SAMPLE ID:	TB3 15'	DATE RECIEVED:	10/01/93
SAMPLE NUMBER:	S0310033	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	62	0.8

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

ANALYZED BY

REVIEWED BY

THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

BIOTECH LABORATORIES

EPA METHOD 8015 (MOD)
PURGABLE AROMATICS
QUALITY CONTROL

CLIENT:	NA	SAMPLE MATRIX:	HEXANE
CLIENT NUMBER:	NA	PRESERVATIVE:	NA
PROJECT NAME:	NA	REPORT DATE:	10/04/93
PROJECT LOCATION:	NA	DATE SAMPLED:	NA
SAMPLE ID:	LABORATORY BLANK	DATE RECIEVED:	NA
SAMPLE NUMBER:	B1510043	DATE ANALYZED:	10/04/93

ANALYTE	CONCENTRATION (mg/KG)	DETECTION LIMIT (mg/KG)
TOTAL PETROLEUM HYDROCARBON	ND	1.0

ND - ANALYTE NOT DETECTED AT STATED DETECTION LIMIT

REFERENCE: METHOD 8015
TEST METHOD FOR EVALUATION SOLID WASTE,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846,
VOLUME IB, NOVEMBER 1990

THRIFTWAY PROFESSIONAL BUILDING 710 EAST 20TH STREET SUITE 400 FARMINGTON, NEW MEXICO 87401
LABORATORY OFFICE (505) 632-3365 FAX (505) 632-3365

BioTech REMEDIATION
WATER QUALITY LABORATORIES
710 E. 20th Street, Suite 400
Farmington, New Mexico 87401
Office: (505) 632-3365
Fax: (505) 632-0030

11011

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
Marcia Pit	Aztec, N.M.	
Sampler: (Signature) Mark Edwards	Tape No.	No. Cont. / 8015 / Remarks

Sample No./ID	Date	Time	Lab No.	Matrix	No. Cont.	8015	Remarks
TB #1 17'	9-30-93	13:30	5010930 3	SOIL	1	V	
TB #2 16'	9-30-93	16:50	5010930 3	"	1	V	
TB #3 15'	10-1-93	16:00	5031001 3	"	1	V	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Mark Edwards	10-1-93	17:00			
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature) Jan Hollandsworth	10-1-93	17:00

san juan repro Form 578-97

Bill Olson

ONSERVATION DIVISION
RECEIVED
SEP 24 AM 9 05

Manana Gas, Inc.
2520 Tramway Terrace Ct. NE
Albuquerque, NM 87122
(505) 275 - 8817
(505) 271-2741 FAX

RECEIVED
AUG 23 1993
OIL CON. DIV.
DIST. 3

August 20, 1993

Mr. Denny Foust
NM Oil Conservation Division
1000 Rio Brazos Rd
Aztec, NM 87410

Re: Blow Pit, Charlie #1, Sec F- 7-30N-11W.

Dear Mr. Foust:

We are responding to your certified letter dated July 27, 1993, regarding the clean up of captioned pit.

We have retained Mark Weidler, a consulting Hydrogeologist, to assist us in complying with your request. We propose to utilize a rotary auger rig to collect samples under the pit below the 18 foot level previously collected and tested by On-Site Technologies, Inc., in order to define the bottom of the contamination. In addition, we will advance 2 test borings approximately 20-feet south and southwest of the pit to test for down-gradient migration of contamination. We will drill the south test first. If contamination is encountered, we will continue until the bottom of the contamination is reached. In this event, we will move the other proposed test farther southward in order to define the plume. We propose to utilize the headspace testing method, utilizing a PID Organic Vapor Meter. If you approve this proposal we will complete the work prior to October 15, 1993, as you have requested. We will Notify you 24 hours prior to commencing further operations.

As you are aware we have already initiated bioremediation of the impacted soils in the immediate area of the pit, utilizing the services of Applied Bioscience, Inc. The second application was made b Bob Durbin on July 22, 1993.

Please advise if this proposal meets with your approval.

Best Regards,

Don R Bass

Don Bass
Controller

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

OIL CONSERVATION DIVISION
RECEIVED
'93 SEP 1 AM 8 52

DRUG FREE
It's a State of Mind!

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

CERTIFIED MAIL RECEIPT #P-987-892-068

August 31, 1993

Mañana Gas, Inc.
Attn. Don Bass
2520 Tramway Terrace Ct. NE
Albuquerque, NM 87122

RE: Pit remediation, Mañana, Charlie #1, I-7-30N-11W

Dear Mr Bass:

The general procedures outlined in your letter of August 20, 1993 are acceptable and were discussed in some detail with Mark Weidler. Please note a lab sample should be taken at the bottom of contamination at the center of the pit. Additional test borings outside the pit should go to the depth of contamination-clean soil interface encountered at the center of the pit. Two initial holes outside the pit with subsequent holes as needed to define the contamination plume are acceptable with PID Organic Vapor Meter screening.

Please be advised Oil Conservation Division (OCD) approval does not relieve Mañana of responsibility for complying with other federal, state or local laws and regulations. If you have questions, please feel free to call me at 505-334-6178.

OCD would like to compliment Mañana on their effort to eliminate contamination.

Yours truly,

Denny G. Foust

Denny G. Foust
Environmental Geologist

XC: OCD Environmental Bureau
Environmental files
Well Files
Dgf Files

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

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BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOSROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

CERTIFIED MAIL RECEIPT #P-987-892-067

July 27,1993

Mañana Gas, Inc.
Attn. Don Bass
Controller
2520 Tramway Terrace Ct. NE
Albuquerque, NM 87122

RE: Blow pit cleanup on the Charlie #1, I-7-30N-11W, San Juan County, New Mexico

Dear Mr. Bass:

As the cleanup on the blow pit at the Charlie #1 nears completion, further testing will be necessary as we have discussed by telephone. The testing program should be designed to show the vertical and horizontal limits of remaining contamination, if any. Remediation of contaminates shall be in compliance with OCD"s "Unlined Surface Impoundment Closure Guidelines" (February, 1993). A proposed testing program will be submitted to the OCD Aztec office for approval by September 1, 1993. Testing will be completed by October 15, 1993 and the resulting data submitted to the OCD Aztec office by October 31, 1993. Please notify the Oil Conservation Division Aztec office at least 24 hours before the testing is to begin.

If you have any questions please feel free to contact me at 334-6178.

Yours truly,

Denny G. Foust

XC: OCD-Environmental Bureau
Environmental Files
DGF Files

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STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

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BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(500) 334-6178

Certified Mail Receipt #P 987-892-060

April 5, 1993

Manana Gas Inc.
Attn. Ed Hartman
2520 Tramway Terrace Crt. NE
Albuquerque, NM 87122

RE: Oil, drip and water in an earthen separator pit at the Manana #1 Charlie, I-7-30N-11W, San Juan County, New Mexico

Dear Mr. Hartman:

The separator pit at the Manana #1 Charlie contained a significant volume of oil, drip and produced water during inspections March 22 and 26, 1993. The Manana #1 Charlie is in a location where groundwater is close to the surface; the volume of produced fluids in the earthen separator pit does constitute a threat to contaminate groundwater. Under Oil Conservation Division Rule 3, Manana Gas Inc. is directed to remove all produced fluids from the earthen separator pit located at the Manana #1 Charlie, cease discharge to the earthen separator pit and do a site assessment to determine the produced fluids impact on groundwater. A site assessment of this type can probably be accomplished by utilizing a backhoe or hand auger and head space sampling. If contamination has reached the groundwater, an initial water sample for laboratory analysis should be obtained. The site assessment will be submitted to the Oil Conservation Division District III office by May 10, 1993. Initial pit remediation procedures will be based on the site assessment data. Hopefully remediation will be very limited if groundwater is not impacted. Groundwater remediation, when necessary, will be addressed separately and in more detail.

If you have questions please feel free to contact this office.

Yours truly,

Denny G. Foust

Denny G. Foust
Environmental Geologist

XC: Well File
Environmental File
DGF File
OCD Environmental Bureau