GW - 47

GENERAL CORRESPONDENCE

YEAR(S):
1993 - 1988

Mr. Denny Foust
New Mexico Oil Conservation
Deputy Oil and Gas Inspector
1000 Rio Brazos Road
Aztec, NM 87410

Dear Mr. Foust,

I am following up on a letter I sent on September 27 concerning the contaminated gravel that was removed from the Sunterra Processing Plant at Lybrook and placed in another location.

The test results were below the acceptable limits. We request permission to spread the gravel at its present location.

If you have any questions, please call me at 632-4131. Thank you for your help and cooperation.

Sincerely,

Denver Bearden
Administrator III

September 27, 1993

Mr. Denny Foust
New Mexico Oil Conservation
Deputy Oil and Gas Inspector
1000 Rio Brazos Road
Aztec, NM 87410

Dear Mr. Foust:

This letter is to confirm our conversation on September 27 concerning the lab results on the waste gravel that was removed from Lybrook, Sunterra Processing Plant.

The gravel will be spread and used as a road base.

Attached is a copy of the lab results. If you have any questions, contact me at 632-4131. Thank you for your help and cooperation.

Sincerely,

Denver Bearden
Administrator III

cc: J.D. Barnett
Matt Matthewman
Eric Seelinger

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
VOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Locatio Lybrook Plant
Sample ID: Oily Soil, Yard
Laboratory ID: 3369 / 0693G01993
Sample Matrix: Soil
Condition: Warm

Report Date: 09/08/93
Date Sampled: 08/10/93
Date Received: 08/11/93
Date Extracted -
TCLP: 08/16/93
Volatile: 08/30/93
Date Analyzed: 08/30/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
Benzene	**0.007**	0.005	0.5
Carbon Tetrachloride	ND	0.005	0.5
Chlorobenzene	ND	0.005	100
Chloroform	ND	0.005	6.0
1,2-Dichloroethane	ND	0.005	0.5
1,1-Dichloroethylene	ND	0.005	0.7
Methyl ethyl ketone	ND	0.010	200
Tetrachloroethylene	ND	0.005	0.7
Trichloroethylene	ND	0.005	0.5
Vinyl Chloride	ND	0.005	0.2

ND - Analyte not detected at stated limit of detection

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
1,2 - Dichloroethane - d4	100%	76 - 114%
Toluene - d8	99%	88 - 110%
Bromofluorobenzene	97%	86 - 115%

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE
VOLATILE ORGANIC COMPOUNDS
ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Oily Soil, Yard
Laboratory ID: 3369 / 0693G01993

Report Date: 09/08/93
Date Sampled: 08/10/93
Date Analyzed: 08/30/93

Analyte	Retention Time (minutes)	Concentration (mg/L)
Methylene Chloride	4.45	0.013
Toluene	13.06	0.011
1,1,2-Trichlorotrifluoroethane	3.84	0.127 *B
Unknown phthalate	15.17	0.08 *B

* - Concentration calculated using assumed relative response factor = 1
B - analyte detected in method blank

Comments: Methylene chloride and 1,1,2-Trichlorotrifluoroethane are laboratory contaminants.

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 Environmental Protection Agency, November 1992.
Method 8240A: Gas Chromatography / Mass Spectrometry for Volatile Organics Test Methods for Evaluating Solid Wastes, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Analyst

Review

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE
ORGANOCHLORINE PESTICIDES

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Oily soil, yard
Laboratory ID: 3369 / 0693G01993
Sample Matrix: Soil
Condition: Warm

Report Date: 09/13/93
Date Sampled: 08/10/93
Date Received: 08/11/93
Date Extracted -
TCLP: 09/08/93
Pesticide: 09/09/93
Date Analyzed: 09/09/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
Chlordane	ND	0.02	0.03
Endrin	ND	0.002	0.02
Heptachlor	ND	0.002	0.008
Gamma - BHC (Lindane)	ND	0.002	0.4
Methoxychlor	ND	0.002	10
Toxaphene	ND	0.02	0.5

ND - Analyte not detected at stated limit of detection

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.
Method 8080: Organochlorine Pesticides and PCBs
Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Comments: Original TCLP extraction: 08/17/93, pesticide extraction: 08/19/93

Analyst

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CASE NARRATIVE

On August 11, 1993, one sample was received by Inter-Mountain Laboratories - College Station, Texas. It was received warm and one of three containers was broken. Analyses for TCLP Volatiles, TCLP Semivolatiles, TCLP Pesticides, and TCLP Herbicides were performed according to the accompanying chain of custody form.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analyses of samples reported here are found in "Test Methods for Evaluating Solid Waste", SW-846, USEPA, 1993.

The QA//QC results were outside acceptance limits for the pesticide and herbicide extractions. The TCLP extraction, pesticide and herbicide extractions were redone. Those results are reported in this package.

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

Sincerely,

Ulonda M Rogers

Ulonda M. Rogers
Manager, IML-Longmire

IMLF1993

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - MATRIX SPIKE
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
VOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Location: Lybrook Plant
Sample ID: Oily Soil, Yard
Laboratory ID: 3369 / 0693G01993
Sample Matrix: Soil
Condition: Warm

Report Date: 09/08/93
Date Sampled: 08/10/93
Date Received: 08/11/93
Date Extracted -
TCLP: 08/16/93
Volatile: 08/30/93
Date Analyzed: 08/30/93

Analyte	Spiked Sample Concentration	Sample Concentration	Spike Recovered	Spike Added	Percent Recovery
Benzene	0.103	0.007	0.096	0.100	96%
Carbon tetrachloride	0.095	ND	0.095	0.100	95%
Chlorobenzene	0.102	ND	0.102	0.100	102%
Chloroform	0.102	ND	0.102	0.100	102%
1,2 - Dichloroethane	0.097	ND	0.097	0.100	97%
1,1 - Dichloroethylene	0.089	ND	0.089	0.100	89%
Methyl ethyl ketone	0.103	ND	0.103	0.100	103%
Tetrachloroethylene	0.100	ND	0.100	0.100	100%
Trichloroethylene	0.099	ND	0.099	0.100	99%
Vinyl chloride	0.094	ND	0.094	0.100	94%

All units in mg/L.
ND - Not detected

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
1,2 - Dichloroethane - d4	110%	76 - 114%
Toluene - d8	99%	88 - 110%
Bromofluorobenzene	100%	86 - 115%

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 Environmental Protection Agency, November 1992.
Method 8240A: Gas Chromatography / Mass Spectrometry for Volatile Organics Test Methods for Evaluating Solid Wastes, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Analyst

Review

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QUALITY CONTROL REPORT - METHOD BLANK ANALYSIS
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
VOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Location: Lybrook Plant
Sample ID: ZHE TCLP Method Blank
Laboratory ID: TMB27V
Sample Matrix: Solid
Condition: NA

Report Date: 09/08/93
Date Sampled: N/A
Date Received: N/A
Date Extracted -
TCLP: 08/16/93
Volatile: 08/30/93
Date Analyzed: 08/30/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)
Benzene	ND	0.005
Carbon tetrachloride	ND	0.005
Chlorobenzene	ND	0.005
Chloroform	ND	0.005
1,2 - Dichloroethane	ND	0.005
1,1 - Dichloroethylene	ND	0.005
Methyl ethyl ketone	ND	0.010
Tetrachloroethylene	ND	0.005
Trichloroethylene	ND	0.005
Vinyl chloride	ND	0.005

ND - Analyte not detected at stated limit of detection

Quality Control:	Surrogate	Percent Recovery	Acceptance Limits
	1,2 - Dichloroethane - d4	100%	76 - 114%
	Toluene - d8	99%	88 - 110%
	Bromofluorobenzene	100%	86 - 115%

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QUALITY CONTROL REPORT - METHOD BLANK ANALYSIS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANIC COMPOUNDS

ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Location: Lybrook Plant
Sample ID: ZHE TCLP Method Blank
Laboratory ID: TMB27V

Report Date: 09/08/93
Date Sampled: N/A
Date Analyzed: 08/30/93

Analyte	Retention Time (minutes)	Concentration (mg/L)
Methylene Chloride	4.45	0.011
1,1,2-Trichlorotrifluoroethane	3.77	0.025 *
Unknown phthalate	9.66	0.017 *
Unknown phthalate	14.18	0.009 *
Unknown phthalate	14.59	0.010 *
Unknown phthalate	15.18	0.10 *

* - Concentration calculated using an assumed relative response factor = 1

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 Environmental Protection Agency, November 1992.
Method 8240A: Gas Chromatography / Mass Spectrometry for Volatile Organics Test Methods for Evaluating Solid Waste, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Comments: Methylene chloride and 1,1,2-Trichlorotrifluoroethane are laboratory contaminants.

Analyst

Review

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QUALITY CONTROL REPORT - METHOD BLANK

EPA METHOD 8240 VOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Method Blank
Laboratory ID: MB 0830
Sample Matrix: Water

Report Date: 09/08/93
Date Extracted: 08/30/93
Date Analyzed: 08/30/93

Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Acetone	ND	20
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	5
2-Butanone (MEK)	ND	10
Carbon disulfide	ND	5
Carbon tetrachloride	ND	5
2-Chloroethyl vinyl ether	ND	50
Chlorobenzene	ND	5
Chloroethane	ND	10
Chloroform	ND	5
Chloromethane	ND	10
Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
1,2-Dichloroethene (total)	ND	5
1,2-Dichloroethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
2-Hexanone	ND	5
Methylene chloride	ND	5
4-Methyl-2-pentanone	ND	5
Styrene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Vinyl acetate	ND	5
Vinyl chloride	ND	5
Xylenes (total)	ND	5

ND - Analyte not detected at stated limit of detection

QUALITY CONTROL REPORT - METHOD BLANK

EPA METHOD 8240 VOLATILE ORGANIC COMPOUNDS

ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Method Blank
Laboratory ID MB 0830

Report Date: 09/08/93
Date Analyzed: 08/30/93

Tentative Identification	Retention Time (Minutes)	Concentration* (ug/L)
1,1,2-Trichlorotrifluoroethane	3.87	85
Unknown hydrocarbon	25.9	15

* - Concentration calculated using assumed Relative Response Factor = 1

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
1,2-Dichloroethane-d4	98%	76 - 114%
Toluene-d8	99%	88 - 110%
Bromofluorobenzene	100%	86 - 115%

Reference: Method 8240A: Gas Chromatography / Mass Spectrometry for Volatile Organics Test Methods for Evaluating Solid Waste, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993. Capillary column.

Comments: 1,1,2-Trichlorotrifluoroethane is a laboratory contaminant.

Analyst

Review

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3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - MATRIX DUPLICATE
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
VOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: TCLP Extraction Duplicate
Laboratory ID: C931915
Sample Matrix: Soil
Condition: Warm, Intact

Report Date: 09/08/93
Date Sampled: 07/29/93
Date Received: 07/30/93
Date Extracted -
TCLP: 08/10/93
Volatile: 08/20/93
Date Analyzed: 08/20/93

Analyte	Duplicate Result (mg/L)	Sample Result (mg/L)	Percent Difference
Benzene	ND	ND	NA
Carbon tetrachloride	ND	ND	NA
Chlorobenzene	ND	ND	NA
Chloroform	ND	ND	NA
1,2 - Dichloroethane	ND	ND	NA
1,1 - Dichloroethylene	ND	ND	NA
Methyl ethyl ketone	ND	ND	NA
Tetrachloroethylene	ND	ND	NA
Trichloroethylene	ND	ND	NA
Vinyl chloride	ND	ND	NA

ND - Analyte not detected at stated limit of detection

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
1,2 - Dichloroethane - d4	99%	76 - 114%
Toluene - d8	98%	88 - 110%
Bromofluorobenzene	100%	86 - 115%

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QUALITY CONTROL REPORT - MATRIX DUPLICATE
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
VOLATILE ORGANIC COMPOUNDS
ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: TCLP Extraction Duplicate
Laboratory ID: C931915

Report Date: 09/08/93
Date Sampled: 07/29/93
Date Analyzed: 08/20/93

Analyte	Retention Time (minutes)	Concentration (mg/L)
Methylene Chloride	4.52	0.019
Unknown phthalate	9.67	0.021 B*
Unknown phthalate	14.67	0.011 B*
Unknown aromatic	19.55	0.014 B*
Unknown hydrocarbon	21.43	0.014 *
Unknown hydrocarbon	22.29	0.012 *
Unknown hydrocarbon	22.96	0.014 *

* - Concentration calculated using assumed relative response factor = 1.

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 Environmental Protection Agency, November 1992.
Method 8240A: Gas Chromatography / Mass Spectrometry for Volatile Organics Test Methods for Evaluating Solid Waste, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Comments: TCLP extraction duplicate.

Wanda M Rogers
Analyst

Review

Inter-Mountain Laboratories, Inc.

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College Station, Texas 77845

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
SEMIVOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Oily Soil, Yard
Laboratory ID: 3369 / 0693G01993
Sample Matrix: Soil, Rocks
Condition: Warm, intact

Report Date: 09/09/93
Date Sampled: 08/10/93
Date Received: 08/11/93
Date Extracted -
TCLP: 08/17/93
BNA: 08/24/93
Date Analyzed: 08/31/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o - Cresol	ND	0.06	200
m,p - Cresol	ND	0.06	200
1,4 - Dichlorobenzene	ND	0.06	7.5
2,4 - Dinitrotoluene	ND	0.06	0.13
Hexachlorobenzene	ND	0.06	0.13
Hexachloro-1,3-butadiene	ND	0.06	0.5
Hexachloroethane	ND	0.06	3.0
Nitrobenzene	ND	0.06	2.0
Pentachlorophenol	ND	0.06	100
Pyridine	ND	0.06	5.0
2,4,5 - Trichlorophenol	ND	0.06	400
2,4,6 - Trichlorophenol	ND	0.06	2.0

ND - Analyte not detected at stated limit of detection

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
2 - Fluorophenol	66%	21 - 110%
Phenol - d6	77%	10 - 110%
Nitrobenzene - d5	75%	35 - 114%
2 - Fluorobiphenyl	70%	43 - 116%
2,4,6 - Tribromophenol	77%	10 - 123%
Terphenyl - d14	80%	33 - 141%

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE
SEMIVOLATILE ORGANIC COMPOUNDS
ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Oily Soil, Yard
Laboratory ID: 3369 / 0693G01993

Report Date: 09/09/93
Date Sampled: 08/10/93
Date Analyzed: 08/31/93

Analyte	Retention Time (minutes)	Concentration * (mg/L)
Unknown Organic Acid	6.30	180
Unknown Hydrocarbon	21.27	110
Hydrocarbon Envelope	10 - 33	

* - Concentration calculated using assumed Relative Response Factor = 1

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.
Method 8270: Gas Chromatography / Mass Spectrometry for Semivolatile Organics
Test Methods for Evaluating Solid Waste, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Comments:

Analyst

Review

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QUALITY CONTROL REPORT - METHOD BLANK

EPA Method 8270

SEMIVOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Method Blank
Laboratory ID: MB 597
Sample Matrix: Reagent Water

Report Date: 09/09/93
Date Extracted: 08/24/93
Date Analyzed: 08/31/93

Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Acenaphthene	ND	10
Acenaphthylene	ND	10
Anthracene	ND	10
Benzo(a)anthracene	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(g,h,i)perylene	ND	10
Benzo(a)pyrene	ND	10
Benzoic acid	ND	10
Benzyl alcohol	ND	10
Bis(2-chloroethoxy)methane	ND	10
Bis(2-chloroethyl)ether	ND	10
Bis(2-chloroisopropyl)ether	ND	10
Bis(2-ethylhexyl)phthalate	ND	25
4-Bromophenyl phenyl ether	ND	10
Butyl benzyl phthalate	ND	10
p - Chloroaniline	ND	10
p - Chloro - m - cresol	ND	10
2 - Chloronaphthalene	ND	10
2 - Chlorophenol	ND	10
4-Chlorophenyl phenyl ether	ND	10
Chrysene	ND	10
m - Cresol	ND	10
p - Cresol	ND	10
Di - n - butylphthalate	ND	25
Dibenz(a,h)anthracene	ND	10
o - Dichlorobenzene	ND	10
m - Dichlorobenzene	ND	10
p - Dichlorobenzene	ND	10
3,3 - Dichlorobenzidine	ND	10
2,4 - Dichlorophenol	ND	10
Diethyl phthalate	ND	10
2,4 - Dimethylphenol	ND	10
Dimethyl phthalate	ND	10
4,6 - Dinitro -2- methylphenol	ND	25

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EPA Method 8270
SEMIVOLATILE ORGANIC COMPOUNDS (cont)

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Method Blank
Laboratory ID: MB 597

Report Date: 09/09/93
Date Analyzed: 08/31/93

Analyte	Concentration (ug/L)	Detection Limit (ug/L)
2,4 - Dinitrophenol	ND	25
2,4 - Dinitrotoluene	ND	10
2,6 - Dinitrotoluene	ND	10
Di-n-octyl phthalate	ND	25
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorocyclopentadiene	ND	25
Hexachloroethane	ND	10
Hexachlorobutadiene	ND	10
Ideno(1,2,3-cd)pyrene	ND	10
Isophorone	ND	10
2 - Methylnaphthalene	ND	10
Naphthalene	ND	10
o - Nitroaniline	ND	10
m - Nitroaniline	ND	10
p - Nitroaniline	ND	10
Nitrobenzene	ND	10
o - Nitrophenol	ND	10
p - nitrophenol	ND	10
n - Nitrosodimethylamine	ND	10
n - Nitrosodiphenylamine	ND	10
n-Nitroso-di-n-propylamine	ND	10
Pentachlorophenol	ND	25
Phenanthrene	ND	10
Phenol	ND	10
Pyrene	ND	10
1,2,4 - Trichlorobenzene	ND	10
2,4,5 - Trichlorophenol	ND	10
2,4,6 - Trichlorophenol	ND	10

ND - Analyte not detected at stated limit of detection

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College Station, Texas 77845

EPA Method 8270

SEMIVOLATILE HYDROCARBONS

ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Method Blank
Sample Number: MB 597

Report Date: 09/09/93
Date Analyzed: 08/31/93

Tentative Identification	Retention Time (Minutes)	Concentration (ug/L)
No compounds detected at reportable levels.		

* - Concentration calculated using assumed Relative Response Factor = 1

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
2 - Fluorophenol	58%	21 - 110%
Phenol - d6	66%	10 - 110%
Nitrobenzene - d5	59%	35 - 114 %
2 - Fluorobiphenyl	52%	43 - 116 %
2,4,6 - Tribromophenol	59%	10 - 123 %
Terphenyl - d14	72%	33 - 141 %

References: Method 3510: Separatory Funnel Liquid-Liquid Extraction
Method 8270: Gas Chromatography / Mass Spectrometry for Semivolatile Organics
Test Methods for Evaluating Solid Waste, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Comments:

Analyst

Review

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QUALITY CONTROL REPORT - TCLP METHOD BLANK
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
SEMIVOLATILE ORGANIC COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: TCLP Method Blank
Laboratory ID: TMB 20 SV

Report Date: 09/09/93
Date Extracted -
TCLP: 08/17/93
BNA: 08/24/93
Date Analyzed: 08/31/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o - Cresol	ND	0.020	200
m,p - Cresol	ND	0.020	200
1,4 - Dichlorobenzene	ND	0.020	7.5
2,4 - Dinitrotoluene	ND	0.020	0.13
Hexachlorobenzene	ND	0.020	0.13
Hexachloro-1,3-butadiene	ND	0.020	0.5
Hexachloroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Pentachlorophenol	ND	0.020	100
Pyridine	ND	0.020	5.0
2,4,5 - Trichlorophenol	ND	0.020	400
2,4,6 - Trichlorophenol	ND	0.020	2.0

ND - Analyte not detected at stated limit of detection

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
2 - Fluorophenol	54%	21 - 110%
Phenol - d6	54%	10 - 110%
Nitrobenzene - d5	44%	35 - 114%
2 - Fluorobiphenyl	36%	43 - 116%
2,4,6 - Tribromophenol	48%	10 - 123%
Terphenyl - d14	67%	33 - 141%

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE
SEMIVOLATILE ORGANIC COMPOUNDS
ADDITIONAL DETECTED COMPOUNDS

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: TCLP Method Blank
Laboratory ID: TMB 20 SV

Report Date: 09/09/93
Date Sampled:
Date Analyzed:

Analyte	Retention Time (minutes)	Concentration (mg/L)
None detected at reportable levels		

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.
Method 8270: Gas Chromatography / Mass Spectrometry for Semivolatile Organics Test Methods for Evaluating Solid Waste, SW - 846, Final Update I, United States Environmental Protection Agency, July 1993.

Comments: One base/neutral surrogate outside acceptance limits.

Analyst

Review

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - MATRIX SPIKE

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
SEMIVOLATILE ORGANIC COMPOUNDS

Client:	**SUNTERRA GAS PROCESSING CO.**	
Project Name:	Lybrook Plant	Report Date: 09/09/93
Sample ID:	Oily Soil, Yard (Spike)	Date Sampled: 08/10/93
Laboratory ID:	3369 / 0693G01993 SPK	Date Received: 08/11/93
Sample Matrix:	Soil, Rocks	Date Extracted -
Condition:	Warm, intact	TCLP: 08/16/93
		BNA: 08/24/93
		Date Analyzed: 08/31/93

Analyte	Spiked Sample Concentration (mg/L)	Initial Sample Concentration (mg/L)	Spike Added (mg/L)	Percent Recovery
o - Cresol	0.140	ND	0.200	70%
m,p - Cresol	0.290	ND	0.400	73%
1,4 - Dichlorobenzene	0.114	ND	0.200	57%
2,4 - Dinitrotoluene	0.126	ND	0.200	63%
Hexachlorobenzene	0.134	ND	0.200	67%
Hexachloro-1,3-butadiene	0.112	ND	0.200	56%
Hexachloroethane	0.112	ND	0.200	56%
Nitrobenzene	0.131	ND	0.200	66%
Pentachlorophenol	0.145	ND	0.200	73%
Pyridine	0.082	ND	0.200	41%
2,4,5 - Trichlorophenol	0.138	ND	0.200	69%
2,4,6 - Trichlorophenol	0.150	ND	0.200	75%

Quality Control:

Surrogate	Percent Recovery	cceptance Limits
2 - Fluorophenol	59%	21 - 110%
Phenol - d6	70%	10 - 110%
Nitrobenzene - d5	63%	35 - 114%
2 - Fluorobiphenyl	59%	43 - 116%
2,4,6 - Tribromophe	70%	10 - 123%
Terphenyl - d14	75%	33 - 141%

Comments:

Analyst

Review

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
CHLORINATED HERBICIDES

Client: **SUNTERRA GAS PROCESSING CO.**

Project Name: Lybrook Plant
Sample ID: Oily soil, yard
Laboratory ID: 0693G01993
Sample Matrix: Soil
Condition: Warm

Report Date: 09/13/93
Date Sampled: 08/10/93
Date Received: 08/11/93
Date Extracted -
TCLP: 09/08/93
Herbicide: 09/09/93
Date Analyzed: 09/10/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
2,4 - D	ND	0.005	10
2,4,5 - TP (Silvex)	ND	0.001	1

ND - Analyte not detected at stated limit of detection

References: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.
Method 8150: Chlorinated Herbicides
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Comments: Original TCLP extraction: 08/17/93, herbicide extraction 08/24/93.

Analyst

Review

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - METHOD BLANK

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

CHLORINATED HERBICIDES

Client:	**SUNTERRA GAS PROCESSING CO.**		
Project Name:	Energy Services	Report Date:	09/13/93
Sample ID:	TCLP Method Blank	Date Extracted-	
Sample Number:	TMB 22 SV	TCLP:	09/08/93
Sample Matrix:	TCLP Leachate	BNA:	09/09/93
		Date Analyzed:	09/10/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)
2,4-D	ND	0.0005
Silvex	ND	0.0001

ND - Analyte not detected at stated detection limit

Reference: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.
Method 8150: Chlorinated Herbicides
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Analyst

Review

Inter·Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - MATRIX SPIKE
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
METHOD 8150 - CHLORINATED HERBICIDES

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample ID: Blank Spike
Sample Number: DI SPK 649
Sample Matrix: Reagent Water

Report Date: 09/13/93
Date Extracted: 09/09/93
Date Analyzed: 09/10/93

Analyte	Spiked Sample Conc. (mg/L)	Blank Conc. (ug/L)	Spike Added (mg/L)	Percent Recovery	Acceptance Limits
2,4 - D	0.0016	ND	0.0020	81%	NE
2,4,5 - TP (Silvex)	0.0015	ND	0.0020	75%	NE

ND - Analyte not detected
NE - Not established

Reference:
Method 3510: Separatory Funnel Liquid-Liquid Extraction
Method 8150: Chlorinated Herbicides
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.
Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.

Comments:

Analyst

Review

Inter·Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - METHOD BLANK
METHOD 8150
CHLORINATED HERBICIDES

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Sample Number: MB 650
Sample Matrix: Reagent Water

Report Date: 09/02/93
Date Extracted: 09/09/93
Date Analyzed: 09/10/93

Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Dicamba	ND	0.1
2,4 - D	ND	0.5
2,4,5 - TP (Silvex)	ND	0.1
2,4,5 - T	ND	0.1
2,4 - DB	ND	0.1
Dalapon	ND	0.1
MCPP	ND	200
MCPA	ND	400
Dichloroprop	ND	0.1
Dinoseb	ND	0.1

ND - Analyte not detected at stated detection limit

Reference: Method 3510: Separatory Funnel Liquid-Liquid Extraction
Method 8150: Chlorinated Herbicides
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Analyst

Review

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - METHOD BLANK
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
ORGANOCHLORINE PESTICIDES

Sample ID: TCLP Method Blank
Laboratory ID: TMB 22 SV
Sample Matrix: TCLP Leachate

Report Date: 09/13/93
Date Extracted -
TCLP: 09/08/93
Pesticide: 09/09/93
Date Analyzed: 09/09/93

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
Chlordane	ND	0.001	0.03
Endrin	ND	0.0001	0.02
Heptachlor	ND	0.0001	0.008
Gamma - BHC (Lindane)	ND	0.0001	0.4
Methoxychlor	ND	0.0001	10
Toxaphene	ND	0.001	0.5

ND - Analyte not detected at stated detection limit

Reference: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 - 302, Part V, Environmental Protection Agency, Vol. 55, No. 126, November 1992.
Method 8080: Organochlorine Pesticides and PCBs
Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Analyst

Review

Inter-Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - MATRIX SPIKE
ORGANOCHLORINE PESTICIDES and PCBs

Client: **SUNTERRA GAS PROCESSING CO.**
Project Name: Lybrook Plant
Laboratory ID: DI SPK 647
Sample Matrix: Reagent Water

Report Date: 09/13/93
Date Extracted: 09/09/93
Date Analyzed: 09/09/93

Analyte	Spike added (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	Percent Recovery	Acceptance Limits, %
gamma-BHC	0.0020	ND	0.0011	53%	32-127
Heptachlor	0.0020	ND	0.0011	55%	34-111
Heptachlor Epoxide	0.0020	ND	0.0012	59%	37-142
Endrin	0.0020	ND	0.0010	51%	30-147
Methoxychlor	0.0200	ND	0.0163	81%	NE

ND - Analyte not detected at established detection limit
NE - Not established

References: Method 3510: Separatory Funnel Liquid-Liquid Extraction
Method 8080: Organochlorine Pesticides and PCBs
Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Comments:

Analyst

Review

Inter·Mountain Laboratories, Inc.

3304 Longmire
College Station, Texas 77845

QUALITY CONTROL REPORT - METHOD BLANK
ORGANOCHLORINE PESTICIDES and PCBs

Client:	**SUNTERRA GAS PROCESSING CO.**		
Sample ID:	Method Blank	Report Date:	09/13/93
Laboratory ID:	MB648	Date Extracted:	09/09/93
Sample Matrix:	Reagent Water	Date Analyzed:	09/09/93

Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Aldrin	ND	0.05
alpha-BHC	ND	0.05
beta-BHC	ND	0.05
gamma-BHC	ND	0.05
delta-BHC	ND	0.05
Chlordane	ND	0.5
4,4'-DDD	ND	0.05
4,4'-DDE	ND	0.05
4,4'-DDT	ND	0.05
Dieldrin	ND	0.05
Endosulfan I	ND	0.05
Endosulfan II	ND	0.05
Endosulfan Sulfate	ND	0.05
Endrin	ND	0.05
Endrin Aldehyde	ND	0.05
Heptachlor	ND	0.05
Heptachlor epoxide	ND	0.05
Methoxychlor	ND	0.2
Toxaphene	ND	0.5
PCB-1016	ND	0.5
PCB-1221	ND	0.5
PCB-1232	ND	0.5
PCB-1242	ND	0.5
PCB-1248	ND	0.5
PCB-1254	ND	0.5
PCB-1260	ND	0.5

ND - Analyte not detected at stated detection limit

Reference: Method 3510: Separatory Funnel Liquid-Liquid Extraction
Method 8080: Organochlorine Pesticides and PCBs
Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July 1993.

Analyst

Review

imi
Inter- Mountain Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Post
L-446-322

Client/Project Name	Project Location	ANALYSES / PARAMETERS
Sunterra Gas Processing Co	Lybrook Plant	
Sampler: (Signature)	Chain of Custody Tape No.	

FILE COPY

Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	TCLP Vol	TCLP Semi Vol	Post Test		Remarks
			3369		3					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/10/93	11:30		8/10/93	11:30
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by laboratory: (Signature)	Date	Time

Inter-Mountain Laboratories, Inc.

10832

☐ 1633 Terra Avenue, Sheridan, Wyoming 82801, Telephone (307) 672-8945
☐ 1714 Phillips Circle, Gillette, Wyoming 82716, Telephone (307) 682-8945
☐ 2506 West Main Street, Farmington, NM 87401, Telephone (505) 326-4737
☐ 910 Technology Blvd. Suite B, Bozeman, Montana 59715, Telephone (406) 586-8450
☐ Route 3, Box 256, College Station, TX 77845, Telephone (409) 776-8945
☐ 3304 Longmire Drive, College Station, TX 77845, Telephone (409) 774-4999

Roger

July 15, 1993

Field Inspection by Denny G. Foust
Aztec District

Sunterra Lybrook Plant Water Evaporation Ponds

Gas Company of New Mexico's Sunterra Lybrook Plant is under an OCD discharge plan. The evaporation ponds are located just north of Highway 44 at the East End of the Lybrook Plant. These ponds have experienced periodic problems with H2S and overblowing in past years. Improvements were made in the sprayer system last summer to cut down on overblowing and runoff. This spring aeration was added to the ponds when H2S first appeared for the first time this year. Despite continuous aeration and periodic chemical treatment these shallow small volume ponds continue to generate H2S due to poor circulation and sporadic chemical maintenance. During my inspection on July 15, 1993 readings of 0.4 ppm H2S were obtained on H2S Monitor Model HS-82A. Overblowing also continues to be a problem due to too few inspections by plant employees especially during periods of strong westerly winds. I discussed these problems with Matt Mathewman, plant supervisor and Mr. Saunders his superior. Some obvious solutions are to lower the spraying system intake, apply more air to bottom of pond, regular chemical maintenance and instituting regular shift inspections of the ponds.

Bob. myers

GAS COMPANY OF NEW MEXICO

OIL CONSERVATION DIVISION
RECEIVED

'94 JAN 5 AM 9 15

September 18, 1992

Mr. Denny Foust
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico, 87410

Re: Sunterra Gas Processing Lybrook Water Discharge

Dear Mr. Foust:

At approximately 9:00 a.m. on Thursday, August 20, 1992, OCD Inspector, Denny Foust reported an evaporation sprinkler head was discharging water on a soil embankment north of the evaporation pond and was running into a wash, off of the plant property. The evaporation pond is at the Sunterra Gas Processing Plant located N½, NW¼ of Sec. 14, T-23-N, R-7-W, NMPM, Rio Arriba County, New Mexico. The Plant is adjacent to New Mexico Highway 44, approximately 48 miles south and east of Bloomfield, New Mexico.

Water and soil samples were analyzed, no contaminates were found in either sample in excess of regulatory limits. The sprinkler system has been replaced.

Upon notification, the evaporation sprinkler system was shut down. An earthen dam was established to prevent further run off. Captured water was redirected into the evaporation pond.

Water followed a surface wash approximately 300 feet into a major drainage wash. Water traveled approximately 600 feet in the larger wash. Soil in the larger wash, upstream of the confluence of the surface wash, was very damp due to 0.30 inches of rain on August 16, 1992. Soil in the surface wash was set to a depth of 10 inches and damp to a depth of 16 inches.

The sprinkler system had been checked at approximately 8:00 p.m. on Wednesday, August 20, 1992, and found to be operating properly. Maximum volume of water discharged based on capacity of the spray nozzle and for a time period of 13 hours is 61.3 bbl's of water.

A soil sample was collected from the surface wash and a water sample was collected from the pit for analysis.

Investigation of the evaporation sprinkler showed the head to be a bidirectional Rainbird Blue Dot sprinkler head. Head rotation is adjustable by setting metal stops. Direction of head travel is changed by a tab striking an adjustable metal stop that reverses the direction of travel. The tab on the sprinkler head involved made minimal contact with the lower stop when in the head is extended during operation. The arm appears to have jumped the lower stop allowing the head to travel 180 degrees, directing the discharge into the embankment behind the pond.

P.O. Box 1899 Bloomfield, New Mexico 87413 (505) 632-3311

The evaporation system was shut down immediately and has been replaced with an anchored floating aerator. Spray is adjusted to retain liquid discharge within the confines of the pond.

Laboratory analysis of the soil and water samples are attached. The soil contained no detectable Recoverable Petroleum Hydrocarbons under EPA Method 418.1. Detectable metals were below EPA regulatory levels using method WS-846, USEPA, 1986. The water sample detected only Selenium and that was below regulatory levels using method EPA-600/4-79-020, USEPA, 1983.

Sincerely,

William E. Matthewman
Maintenance Coordinator

WEM:sb

cc: New Mexico Oil Conservation Division District Office - w/attachments
J.D. Barnett
David Sanders
Gene Gruette - w/attachments
Nick Chavez
Tom McMillen
Paula McAfee

Inter-Mountain Laboratories,

2506 W. Main Street
Farmington, New Mexico 87401

Sunterra Gas Processing

Case Narrative

On August 20, 1992 a single soil sample was submitted to Inter-Mountain Laboratories, Farmington for analysis. The sample was received cool and intact. Analysis for Total Petroleum Hydrocarbons (TPH) was performed as per the accompanying chain of custody form.

Extraction of the sample was performed using Method 3550, "Sonication Extraction", with 1,1,2,2-trichlorotrifluoroethane (Freon) as the extraction solvent. Analysis was by Method 418.1, "Total Recoverable Petroleum Hydrocarbons", using a Beckman Acculab 10 Infrared Spectrophotometer. Petroleum hydrocarbons were detected in the samples above the stated detection limits as indicated in the enclosed report.

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

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

Sincerely,

Dr. Denise A. Bohemier,
Organic Lab Supervisor

QMI9511

Inter·Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

EPA Method 418.1
Total Recoverable Petroleum Hydrocarbons

Client:	Sunterra Gas	Report Date:	8/25/92
Project ID:	Lybrook	Date Sampled	8/20/92
Sample Matrix:	Soil	Date Received	8/20/92
Preservation:	Cool	Date Extracte	8/25/92
Condition:	Intact	Date Analyzed	8/25/92

Sample ID	Lab Number	Concentration (ppm)	Detection Limit (ppm)
Lybrook	9511	ND	8

ND - Parameter not detected at stated detection limit

Reference: Method 418.1 - Petroleum Hydrocarbons, Total Recoverable Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Extraction by Method 3550 - Sonication Extraction
Test Methods for Evaluating Solid Waste, SW-846, USEPA, November 1986.

Comments:

Analyst

Review

Inter·Mountain Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Quality Control Report
Total Recoverable Petroleum Hydrocarbons

Duplicate Analysis

Client:	Sunterra Gas Proc.	Report Date:	8/25/92
Project ID:	Lybrook	Date Sampled:	8/20/92
Sample ID:	Lybrook	Date Received:	8/20/92
Lab ID:	9511	Date Extracted:	8/25/92
Matrix:	Sludge	Date Analyzed:	8/25/92

Sample ID	Duplicate Concentration	Original Concentration	Percent Difference	Acceptance Limit
Lybrook	ND	ND	NA	<30%

ND- Analyte not detected at stated detection limit
NA- Value not calculated.

Reference:

Method 418.1 - Petroleum Hydrocarbons, Total Recoverable Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Extraction by Method 3550 - Sonication Extraction Test Methods for Evaluating Solid Waste, SW-846, USEPA, November 1986.

Comments:

Analyst

Review

Inter-Mountain Laboratories, Inc.

2506 W. Main Stree:
Farmington, New Mexico 87401

Quality Control Report
Total Recoverable Petroleum Hydrocarbons

Method Blank Analysis

Client:	Sunterra Gas Proc.	Report Date:	8/25/92
Project ID:	Lybrook	Date Analyzed:	8/25/92

Lab Number	Concentration (mg/kg)	Detection Limit (mg/kg)
MB	ND	2.50

ND- Analyte not detected at stated detection limit

Reference:

Method 418.1 - Petroleum Hydrocarbons, Total Recoverable Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Extraction by Method 3550 - Sonication Extraction Test Methods for Evaluating Solid Waste, SW-846, USEPA, November 1986.

Comments:

Analyst

Review

Inter·Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Quality Control Report
Total Recoverable Petroleum Hydrocarbons

Matrix Spike Analysis

Client:	Sunterra Gas Proc.	Report Date:	8/25/92
Project ID:	Lybrook	Date Sampled:	NA
Sample ID:		Date Received:	NA
Lab ID:	9511	Date Extracted:	8/25/92
Matrix:	Sludge	Date Analyzed:	8/25/92

Sample ID	Spiked Sample Concentration (mg/kg)	Unspiked Sample Concentration (mg/kg)	Spike Added (mg/kg)	Percent Recovery
MBSPK	10.9	ND	10.0	109%

ND- Analyte Not Detected at stated detection limit

Spike recovery acceptance limit: 42-125%

Reference:

Method 418.1 - Petroleum Hydrocarbons, Total Recoverable Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Extraction by Method 3550 - Sonication Extraction Test Methods for Evaluating Solid Waste, SW-846, USEPA, November 1986.

Comments:

Analyst

Review

Inter·Mountain Laboratories,

2506 W. Main Street
Farmington, New Mexico 87401

Quality Control Report
Total Recoverable Petroleum Hydrocarbons

Matrix Spike Duplicate Analysis

Client:	Sunterra Gas Proc.	Report Date:	8/25/92
Project ID:	Lybrook	Date Sampled:	NA
Sample ID:		Date Received:	NA
Lab ID:	9511	Date Extracted:	8/25/92
Matrix:	Sludge	Date Analyzed:	8/25/92

Spike Added (mg/kg): 10

Sample ID	Duplicate Concentration (mg/kg)	Spiked Concentration (mg/kg)	Percent Difference	Acceptance Limit
MBSPKDUP	10.0	10.9	8%	<30%

ND- Analyte Not Detected at stated detection limit
NA- Value not calculated.

Reference:

Method 418.1 - Petroleum Hydrocarbons, Total Recoverable Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Extraction by Method 3550 - Sonication Extraction Test Methods for Evaluating Solid Waste, SW-846, USEPA, November 1986.

Comments:

Analyst

Review

Inter-Mountain Laboratories,

2506 W. Main Street
Farmington, New Mexico 87401

CLIENT: Sunterra Gas
ID: Lybrook H2O
SITE: 1330
LAB NO: F9512

DATE REPORTED: 09/08/92
DATE RECEIVED: 08/20/92
DATE COLLECTED: 08/20/92

Trace Metals by AA (Total Concentration), mg/L

	Analytical Result:	Detection Limit:
Arsenic (As)	ND	<0.005
Cadmium (Cd)	ND	<0.002
Mercury (Hg)	ND	<0.001
Lead (Pb)	ND	<0.02
Selenium (Se)	0.030	<0.005

Trace Metals by ICAP (Total Concentration), mg/L

	Analytical Result:	Detection Limit:
Silver (Ag)	ND	<0.01
Barium (Ba)	ND	<0.5
Chromium (Cr)	ND	<0.02
Zinc (Zn)	0.40	<0.01

ND - Analyte "not detected" at the stated detection limit.

Wanda Orso
Water Lab Supervisor

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

CLIENT:	Sunterra Gas	DATE REPORTED:	09/08/92
ID:	Lybrook H2O		
SITE:	1330	DATE RECEIVED:	08/20/92
LAB NO:	F9512	DATE COLLECTED:	08/20/92

Lab pH (s.u.)		9.33
Lab Conductivity, umhos/cm @ 25C		12900
Lab Resistivity, ohm-m		0.777
Total Dissolved Solids (180C), mg/L		12600
Total Dissolved Solids (calc), mg/L		10300
Total Alkalinity as CaC03, mg/L		9250
Total Hardness as CaC03, mg/L		44.1
Sodium Adsorption Ratio		276
Specific Gravity @ 15.0C		1.010
	mg/L	meq/L
Bicarbonate as HC03	8050	132
Carbonate as C03	1600	53.2
Chloride	167	4.71
Sulfate	348	7.25
Calcium	14.9	0.74
Magnesium	1.70	0.14
Potassium	16.2	0.42
Sodium	4220	184
Major Cations		185
Major Anions		197
Cation/Anion Difference		3.16 %

Inter-Mountain Laboratories, Inc.

2506 West Main Street Farmington, New Mexico 87401 Tel. (505) 326-4737

SUNTERRA GAS

DATE SAMPLED: August 20, 1992
DATE REPORTED: September 10, 1992

		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Zinc
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection limits		0.25	25	0.1	1.0	1.0	0.05	0.25	0.5	0.5
Lab No.	Location									
9511	LYBROOK 082092 1330	1.5	49	<0.1	2.5	3.2	<0.05	<0.25	<0.5	22.0
9511	DUPLICATE	1.8	NA	<0.1	4.5	4.8	<0.05	<0.25	<0.5	30.0
	BLANK	ND	NA	0.1	ND	0.4	ND	ND	ND	6.0

		Moisture
		%
Lab No.	Location	
9511	LYBROOK 082092 1330	17.6

Metals calculated on "as received (wet)" basis. Moisture percent provided for your use: (Wet wt.-Dry wt.)/(Dry wt.)
METHOD 3050: Acid Digestion of Sediments, Sludges, and Soils, SW-846, Nov. 1986.

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

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

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

Certified Mail Receipt #P988786232

August 24, 1992

Sunterra, Lybrook Gas Plant
Attn. Gene Gruette
Plant Superintendent
Star Route 4
Cuba, NM 87103

RE: Evaporation Pond and Holding Pond Violations

Dear Mr. Gruette:

An inspection of your evaporation and holding facilities on August 20, 1992, indicates some recurring problems and potential for some serious violations. Sunterra's sprayer evaporation system has consistently had trouble with spray blowing outside the confines of the pit sometimes resulting in mishaps which discharge small amounts of cooling tower water into a nearby drainage. It would take constant monitoring of the current system to avoid violations and/or an automatic shut-off controlled by an anemometer. The middle pond which has no circulating capability shows surface readings of up to 1.8 ppm hydrogen sulfide. New Oil Conservation Division guidelines require water be treated once a detectable level of hydrogen sulfide, approximately 0.1 ppm, is present in the air. Immediate treatment with chemicals and air will limit or eliminate further problems. To eliminate unnecessary discharges and build up of hydrogen sulfide in the waste water stream, Sunterra may want to consider a new treatment method for waste water. If changes are to be made, corresponding changes in the current discharge plan should be approved before construction. If you have questions please do not hesitate to contact this office or the OCD Environmental Bureau in Santa Fe.

Yours truly,

Denny G. Foust
Environmental Geologist

XC: Environmental file
OCD Environmental Bureau
DGF file

GAS COMPANY OF NEW MEXICO

OIL CONSERVATION DIVISION
RECEIVED

'90 DEC 18 AM 9 01

STEVEN C. EMRICK
Chief Engineer - Gas Operations

December 12, 1990

Roger Anderson
State of New Mexico
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Dear Mr. Anderson,

This letter is in response to your conversation of approximately a week ago with Paula McAfee. As Paula is on vacation at this time, I would like to help in closing out the matter of the small spill which occurred at the Lybrook Processing Plant.

On September 27, 1990, Gene Gruette, the Plant Manager at the Lybrook Processing Plant, reported a small spill which was later determined to be less than one barrel. The spill originated at the flare tank where the overflow device had malfunctioned. The material spilled was a mixture of oil and water. In turn, the spill was reported to your office as a precaution. Darla Peskin of Environmental Services, Inc., assessed the spill and took samples. One sample was chosen to be most representative of the spill and it was analyzed. A copy of the lab results are enclosed.

Due to the size of the spill no further action was taken and our file on the subject was closed. If you have any questions or I can be of further assistance please call me. Thank you.

Sincerely,

Steven Emrick
SE:mt

Enclosure

cc: Denny G. Foust
Henry Narvaez

ASSAIOAI ANALYTICAL LABORATORIES

TO: Environmental Services
6749 Academy Ste C
Albuquerque, NM 87109
ATTN: R.C. Cudney/ Darla Peskin

DATE: 5 October 1990
WORK ORDER NO: 5860
PAGE 1 of 2

RECEIVED: 1 October 1990 @ 4:30 PM
SAMPLE SITE: Lybrook/GCNM
EPA METHOD NO: 8010 & 8020
MATRIX DETECTION LIMIT: 3 ug/g

SAMPLE ID: 900928

ANALYTE	ANALYTICAL RESULTS
Bromoform	<3 ug/g
Bromodichloromethane	<3 ug/g
Bromomethane	<3 ug/g
Carbon Tetrachloride	<3 ug/g
Chlorobenzene	<3 ug/g
Chloroethane	<3 ug/g
2-Chloroethylvinyl ether	<3 ug/g
Chloroform	<3 ug/g
Chloromethane	<3 ug/g
Dibromochloromethane	<3 ug/g
1,2-Dichlorobenzene	<3 ug/g
1,3-Dichlorobenzene	<3 ug/g
1,4-Dichlorobenzene	<3 ug/g
Dichlorodifluoromethane	<3 ug/g
1,1-Dichloroethane	<3 ug/g
1,2-Dichloroethane	<3 ug/g
1,1-Dichloroethene	<3 ug/g
Trans-1,2-dichloroethene	<3 ug/g
Dichloromethane	<3 ug/g
1,2-Dichloropropane	<3 ug/g
Cis-1,3-dichloropropene	<3 ug/g
Trans-1,3-dichloropropene	<3 ug/g
1,1,2,2-Tetrachloroethane	<3 ug/g
Tetrachloroethene	<3 ug/g
1,1,1-Trichloroethane	<3 ug/g
1,1,2-Trichloroethane	<3 ug/g
Trichloroethene	<3 ug/g
Trichlorofluoromethane	<3 ug/g
Vinyl chloride	<3 ug/g
Benzene	3.8 ug/g
Toluene	33 ug/g
Ethylbenzene	5.1 ug/g
Xylenes	51 ug/g

ASSAIGAI ANALYTICAL LABORATORIES
5 OCTOBER 1990
WORK ORDER NO: 5860

SAMPLE ID: 900928

ANALYTE	ANALYTICAL RESULTS	MATRIX DETECTION LIMIT
TPH	77 %	1 %
TCLP:		
As	<0.010 mg/L	0.010 mg/L
Ba	<0.5 mg/L	0.5 mg/L
Cd	<0.003 mg/L	0.003 mg/L
Cr	<0.02 mg/L	0.02 mg/L
Pb	<0.10 mg/L	0.10 mg/L
Hg	<0.001 mg/L	0.001 mg/L
Se	<0.005 mg/L	0.005 mg/L
Ag	<0.01 mg/L	0.01 mg/L
Benzene	33 ug/L	1 ug/L

An invoice for services will follow. Thank you for contacting Assaigai Analytical Laboratories.

Thank you,

Thomas Dye
Laboratory Director

September 28, 1990

RE; Oil Spill Lybrook Plant

Flare tank at Sunterra's Lybrook Gas Plant ran over some time September 27, 1990. The material overflowing the tank was an oil emulsion (light gravity, 10-25% oil) It is estimated one to five barrels of this fluid overflowed. It is stung out about 800ft along a "rill" until it reaches an arroyo which is currently flowing from last nights rain (3 inches deep, 1ft wide)

The "rill" is six inches to two feet in width, Oil stains are present on some grasses and possibly ½ gal of emulsion is present in various pockets along the rill.

The flare tank is located about 30 feet physically higher than the evaporation ponds and directly north of the western edge of the evaporation ponds. Burming around the flare tank was lacking.

Gene Gruette of Sunterra was present during inspection. Darla Peskin of Environmental Services was taking samples of the emulsion for Sunterra. There is no actually oil stained dirt present in the "rill".

Suggest the field people report spills directly to district offices.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time 1300	Date 5/16/90

Originating Party	Other Parties
Gene Gruette Sunterra Lybrook	Bill Olson - OCD Santa Fe

Subject

Lybrook Gas Plant

Discussion

Wanted to know berming requirements for tanks

I told him berms must contain 1/3 more than the volume of the largest tank or 1/3 more than the volume of all interconnected tanks

He expects they will finish berming by July

Conclusions or Agreements

Distribution

Roger Anderson

Signed Bill Olson

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

March 7, 1989

Mr. John C. Peterson
Field Supervisor
U.S. Fish and Wildlife Service
Suite D
3530 Pan American Highway, N.E.
Albuquerque, New Mexico 87107

Dear Mr. Peterson:

Thank you for your letter of March 1, 1989 providing comments in response to our public notice on pending ground water discharge plans. As you know, OCD has appointed an industry committee to study these issues and make recommendations for OCD rule and policy changes.

In the meantime, OCD will take the following actions regarding the information provided in your letter:

1. Notification of the companies listed in the public notice of the contents of your letter, and pending OCD rulemaking.

2. Modification of discharge plan guidelines for natural gas plants and other facilities to state that discharges to exposed surface facilities must not contain oily films, or that the facilities implement effective methods for prevention of bird contact with the water surface.

Upon completion of the rulemaking action, all companies having discharge plans will be notified of the necessity to protect migratory birds, and facilities will be monitored for compliance during the next regularly scheduled inspection.

If you have any questions regarding this matter, please contact David Boyer of my staff at (505) 827-5812.

Sincerely,

William J. LeMay
Director

WJL/DGB/sl

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Ecological Services
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

March 1, 1989

Mr. William J. Lemay, Director
Oil Conservation Division
State Land Office Building
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear ~~Mr. Lemay~~ Bill:

This responds to the public notice dated February 24, 1989, in which several proposed groundwater discharge plans were described. We have reviewed all of the plans and have identified resource issues of concern to our agency in the following:

GW-47 Sunterra Gas Processing Company, Lybrook Gas Plant. John Renner, General Manager, P.O. Box 1869, Bloom Field, NM 87143.

GW-7 El Paso Natural Gas Co., Jal #4 Gas Processing Plant, John C. Bridges Manager, Environmental Engineering Group, P.O. Box 1492 El Paso, Texas 79978.

GW-48 Davis Gas Processing Company, Donald K. Judd, Agent., 211 N. Colorado, Midland, Texas 79971.

Our concern is that any surface water discharges resulting from these operations should not have visible traces of oil or gas. If migratory birds were to come in contact with the contaminated waters and perish, violations of the Migratory Bird Treaty Act would have occurred. The Migratory Bird Treaty Act prohibits the taking, except by permit, of individual migratory birds (16 U.S.C. 703). The Migratory Bird Treaty Act prohibits unpermitted taking "by any means or in any manner" of the protected species. Case law has found that unintentional kills of migratory birds, by poisoning or other circumstances is prohibited. Fines of up to $10,000 have been levied against violators.

These comments represent the views of the Fish and Wildlife Service. If you have any questions concerning our comments, please contact Tom O'Brien or Richard Roy at (505) 883-7877 or FTS 474-7877.

Sincerely yours,

John C. Peterson
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Regional Administrator, Environmental Protection Agency, Attn: Kathy Hollar, Office of Ground Water, Dallas, Texas
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement and Law Enforcement, Albuquerque, New Mexico

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations the following discharge plans have been submitted for renewal, renewal for approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-7) El Paso Natural Gas Company, Jal #4 Gas Processing Plant, John C. Bridges, Manager, Environmental Engineering Group, P.O. Box 4492, El Paso, Texas 79978, has submitted an application for renewal of its previously approved discharge plan for its Jal #4 Gas Plant located in Sections 31 and 32, Township 23 South and Sections 5 and 6, Township 24 South, Range 37 East, (NMPM), Lea County, New Mexico. The plant is not in operation at this time and start up is not anticipated in the foreseeable future. If the plant were to begin operation approximately 65,000 gallons per day of [illegible] water would be disposed of in an OCD approved injection well located at the plant site. The total dissolved solids content of the water is approximately 1100 mg/l. Groundwater most likely to be affected by an discharge at the plant site is at a depth of approximately 105 feet with a total dissolved solids content of approximately 750 mg/l.

(GW-47) Sunterra Gas Processing Company, Lybrook Gas Plant, John Reamer, General Manager, P.O. Box 1858, Bloomfield, New Mexico 87413, has submitted for approval a groundwater discharge plan application for its Lybrook Gas Plant located in the NW/4, NW/4, Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Approximately 5200 gallons per day of process wastewater is proposed to be disposed of into existing lined ponds located on the eastern boundary of the plant property. The total dissolved solids concentration of the wastewater is approximately 8500 milligrams per liter (mg/l). Groundwater most likely to be affected by any discharge at the surface is at a depth in excess of 200 feet with a total dissolved solids concentration of 700 mg/l. The discharge plan addresses management of the solids, including monitoring, and how spills, leaks and other discharges to the ground will be handled.

(GW-48) Davis Gas Processing Company, Donald K. Judd, Agent, 211 N. Colorado, Midland, Texas 79971, has submitted for approval a groundwater discharge plan application for its Denton Gas Plant located in the SE/4, Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 750 gallons per day of process wastewater will be collected and stored on site in storage tanks prior to disposal in an OCD-approved contract injection well. The total dissolved solids concentration of the wastewater is approximately 2000 milligrams per liter (mg/l). Groundwater most likely to be affected by any discharge at the surface is at a depth of approximately 40 feet with total dissolved solids concentration from 0 to 1800 mg/l. The discharge plan addresses how spills, leaks, and other discharges to the ground will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is

RECEIVED
FEB 23 1989
OIL CONSERVATION DIVISION
SANTA FE

STATE OF NEW MEXICO } ss
County of Bernalillo

THOMAS J. SMITHSON

..... being duly sworn declares and says that he is NAT'L ADV. MGR. of the Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition,

for 1 times, the first publication being on the 22 day of Feb, 1989, and the subsequent consecutive publications on ....., 198.....

Thomas J. Smithson

OFFICIAL SEAL
ANGELA M. ARCHIBEQUE
NOTARY PUBLIC NEW MEXICO
My Commission Expires 10/30/92

Signature: Angela M. Archibeque

Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, this 22 day of Feb, 1989

PRICE $ 37.80

Statement to come at end of month.

ACCOUNT NUMBER C&D932

EDJ-15 (R-2/86)

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

August 9, 1989

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-105

Mr. John Renner
SUNTERRA GAS PROCESSING COMPANY
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Renner:

The ground water discharge plan (GW-47) for the Sunterra Lybrook Gas Plant located in the NW/4 NW/4 of Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, is hereby approved.

The approved discharge plan consists of the plan dated December 13, 1988 and materials dated May 19, 1989 and July 17, 1989 submitted as supplements to the discharge plan.

The discharge plan was submitted pursuant to Section 3-106 of the N.M. Water Quality Control Commission Regulations. It is approved pursuant to Section 3-109.F., which provides for the possible future amendments of the plan. Please be advised that the approval of this plan does not relieve you of liablity should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

There will be no routine monitoring or reporting requirements other than those contained in the plan.

Please note that Section 3-104 of the regulations requires that "when a plan has been approved, discharges must be consistent with the terms and conditions of the plan." Pursuant to Section 3-107.C., you are required to notify the Director of the Oil Conservation Division (OCD) of any facility expansion, production increase, or process modification that would result in any significant change in discharge water quality or volume.

Pursuant to Section 3-109.G.4., this plan approval is for a period of five (5) years. This approval will expire August 9, 1994 and you should submit an application for renewal in ample time before that date.

On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this dishcarge plan review.

Sincerely,

William J. LeMay
Director

WJL/RCA/sl

cc: OCD Aztec Office

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

July 17, 1989

Mr. Roger Anderson
Oil Conservation Division
New Mexico Energy, Minerals, and
Natural Resources Department
State Land Office Building
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: **LYBROOK GAS PLANT**
DISCHARGE PLAN GW-47
RIO ARRIBA COUNTY, NEW MEXICO

Dear Mr. Anderson:

Please find Sunterra's responses to the OCD request of June 29, 1989 for additional information. The response numbers correspond with requests.

1. Sunterra will designate a separate landfill site for this waste only. This location is shown on Exhibit #5. Accurate records will be kept on monitoring this waste.

2. Sunterra agrees to do no further action until notified to do so by OCD.

3. As shown on Exhibit #5, the two open drain systems will be tied together before the pond and flow into the oil/water separator. The design of the separator is shown on Exhibit #4.

   Exhibit #4A shows the design of the oil/water separator for the drainage channel. The location is noted on Exhibit #5.

   The oil from the collector boxes will be skimmed as required. The collector boxes will be in service by July 1, 1990.

4. Sunterra agrees to enlarge the perimeter of Pond #2, as shown on Exhibit #5. Also, the pond will be dredged to an average depth of 3 ft. This work will provide adequate storage and sufficient surface area for evaporation.

5. Sunterra agrees to emergency use only of Pond #3. Sunterra will notify OCD in advance of all controllable discharges, and as soon as possible of all uncontrollable discharges into Pond #3.

6. This work has been completed.

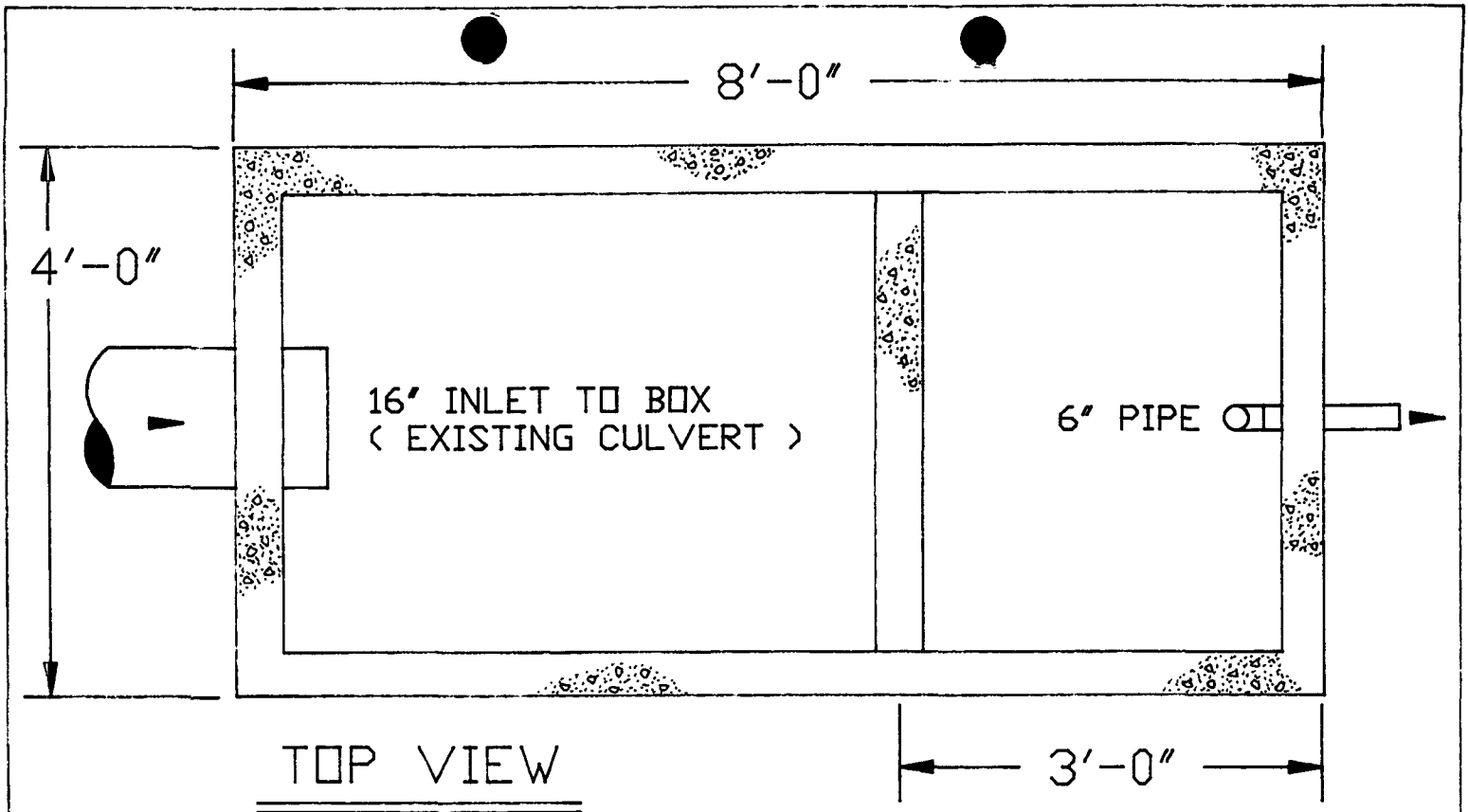
If further information is required, please advise.

Sincerely,

SUNTERRA GAS PROCESSING COMPANY

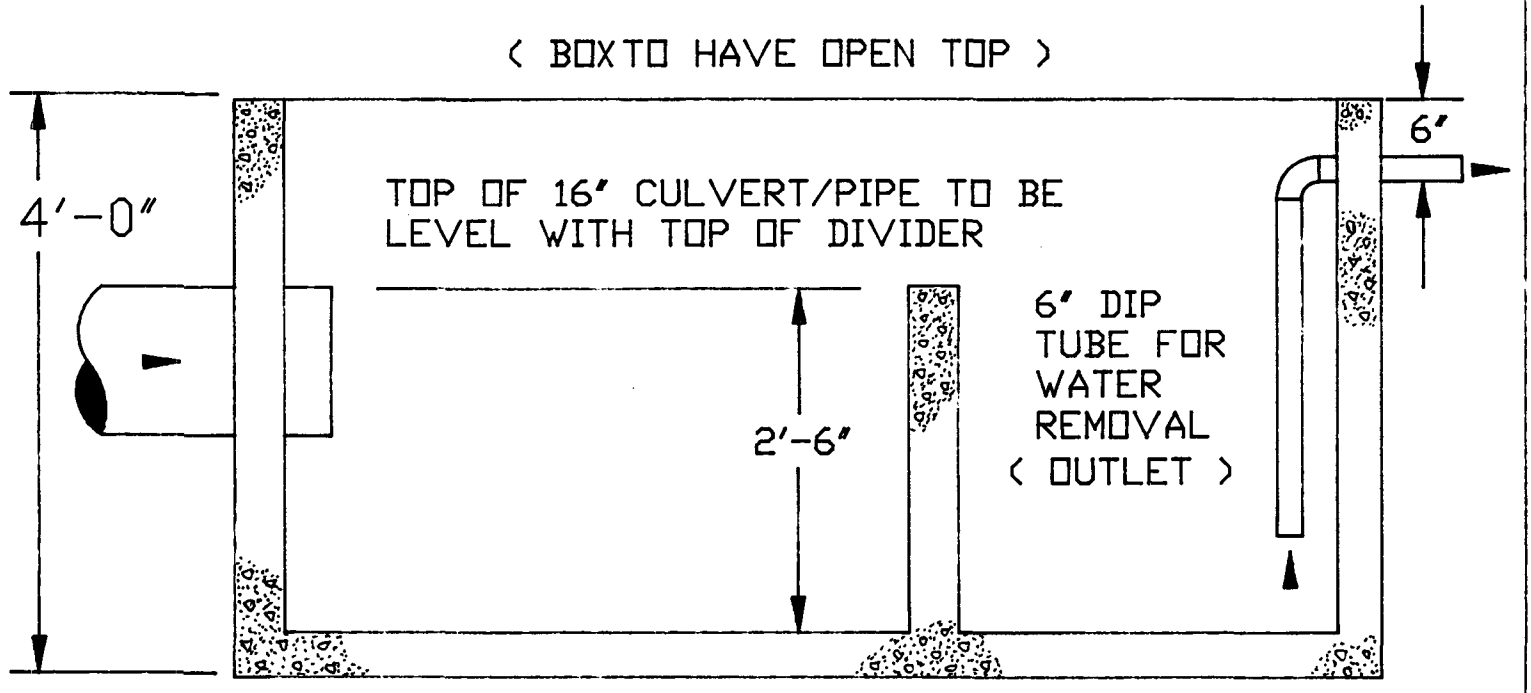
John Renner
Executive Vice President

JR:ba
Enclosures



TOP VIEW

(BOX TO HAVE OPEN TOP)



SIDE VIEW

NOTE:
WALLS, FLOOR & DIVIDER ALL TO BE
4" THICK CONCRETE CONSTRUCTION

PROPOSED WATER SEPARATOR FOR SUNTERRA GAS
PROCESSING COMPANY TO BE INSTALLED AT LYBROOK PLANT
K.E. LAWRENCE , JULY 17 ,1989 , NO SCALE , FILE NAME: EXH-4-A

EXHIBIT 4-A

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

July 20, 1989

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-531

Mr. John Renner
SUNTERRA GAS PROCESSING COMPANY
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Renner:

The Oil Conservation Division (OCD) has received your request, dated July 17, for a 30-day extension to discharge without an approved discharge plant. The extension is requested to allow for Sunterra's response to the June 29, 1989 OCD discharge plan comments to be reviewed.

The request for a 30-day extension to August 18, 1989 was submitted pursuant to Water Quality Control Commission Regulation 3-106.A. and is hereby approved pursuant to that regulation

If you have any questions, please feel free to contact Roger Anderson at (505) 827-5812.

Sincerely,

William J. LeMay
Director

WJL/RCA/sl

cc: OCD Aztec Office

COPY

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

Rec'd 7-17-89.

July 17, 1989

Mr. William J. LeMay, Director
Oil Conservation Division
Energy, Minerals, and Natural
Resources Department
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: **LYBROOK GAS PLANT**
WASTE DISCHARGE PLAN GW-47
RIO ARRIBA COUNTY, NEW MEXICO

Dear Mr. LeMay:

Sunterra requests a 30-day extension to discharge without a discharge plan.

Final comments to OCD are prepared and will be mailed later this week.

If you have questions, please call.

Sincerely,

SUNTERRA GAS PROCESSING COMPANY

John Renner
Executive Vice President

jr:ba

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

June 29, 1989

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-166

Mr. John Renner
SUNTERRA GAS PROCESSING COMPANY
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Renner:

The Oil Conservation Division (OCD) has received and reviewed your May 19, 1989 response to the OCD request of February 7, 1989 for additional information. The following requirements and requests for commitments are required before discharge plan approval can be given:

1. Under "Planned Process Changes", item 2, you state you plan to dispose of the solids from the oil/water separators in the flare pond. Disposal of this waste will reduce the capacity of the flare pond and add contaminants available for leaching, therefore an area on facility property should be set aside for a landfill for this waste. Records shall be kept as to the source, volume and date of disposal of the waste placed in this landfill. Only solids will be allowed to be disposed of in the landfill.

2. Under "Transfer and Storage of Process Fluids and Effluents" the requirement for berming of tanks, the paving and curbing of drum storage areas and the testing of underground piping will be waived at this time due to geologic conditions. This waiver may be reversed if there is evidence of leakage of the unlined pond in the future or evidence of shallow ground water in the area.

3. Sunterra has committed to install oil/water separators for the plant drain system and in the drainage channel that drains the runoff from the process area. What is the specific location of the drainage channel separator. Submit the proposed designs and completion time tables.

4. Under "Site Characteristics", item 8, Sunterra commits to increase the volume of pond 2. Submit the proposed construction details and completion time table.

5. To continue using pond 3, Sunterra must commit to discharge into the pond on an emergency basis and only with prior approval from the OCD.

6. During the site inspection of April 24, 1989, earth work and berming of the drainage area ~~North~~ South of the ponds was observed. There was an area between the ponds and the berming that would allow runoff discharge to the arroyo East of the facility. At the time of the visit, Sunterra committed to close and berm this area and install as siphon. Has this been accomplished? If not, submit a proposed completion schedule.

If you have any questions, please contact me at (505) 827-5884.

Sincerely,

Roger C. Anderson
Environmental Geologist

RCA/sl

cc: OCD Aztec Office
Gary Jordan, Sunterra, Albuquerque

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

May 19, 1989

Mr. William J. LeMay, Director
Oil Conservation Division
Energy, Minerals and Natural
Resources Department
P.O. Box 2088
Santa Fe NM, 87501

Re: Lybrook Gas Plant
Waste Discharge Plan GW-47

Dear Mr. LeMay:

Enclosed are Sunterra's responses to deficencies noted by OCD in their letter dated February 7, 1989 concerning the Lybrook Waste Discharge Plan. Since receipt of the deficiencies Sunterra has installed three additional monitoring wells and with the assistance of OCD have determined the existing ponds to be of high integrity. Please note that the deficencies are underlined and the responses are not. We look forward to continuing our discussions on the discharge plan.

If further information is required, please advise.

Sincerely,

Ron Grossarth
Vice President and General Manager

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

May 19, 1989

Mr. William J. LeMay, Director
Oil Conservation Division
Energy, Minerals and Natural
Resources Department
P.O. Box 2088
Santa Fe NM, 87501

Re: Lybrook Gas Plant
Waste Discharge Plan GW-47

Dear Mr. LeMay:

Enclosed are Sunterra's responses to deficencies noted by OCD in their letter dated February 7, 1989 concerning the Lybrook Waste Discharge Plan. Since receipt of the deficiencies Sunterra has installed three additional monitoring wells and with the assistance of OCD have determined the existing ponds to be of high integrity. Please note that the deficencies are underlined and the responses are not. We look forward to continuing our discussions on the discharge plan.

If further information is required, please advise.

Sincerely,

Ron Grossarth
Vice President and General Manager

Roger - My comments
Let's discuss Friday
John Renner
Sunterra
Bloomfield

SUNTERRA'S RESPONSE TO OCD DEFICIENCIES-LYBROOK WASTE DISCHARGE PLAN

Wastewater Characterization

On p. 3. the cooling tower blowdown is shown in the 1500 mg/l TDS range. Appendix 2 analyses indicates the TDS is in the 7500-8500 mg/l range. Please correct this discrepancy.

In our plan submitted to you on December 13, 1988, there is a typographical error, the 1500 mg/l should have read 7500 mg/l.

Planned Process Changes

1. (p.4) The OCD requests that the leak detection system at the oil/water separator be checked at least monthly and that records of the dates of inspection be maintained at the plant for at least 2 years. Additionally, both Aztec and Santa Fe OCD officies be notified in case of a suspected leak.

On completion of installation of the oil/water seperator at the Lybrook Plant the leak detection will be checked on a monthly basis. Records of the inspection will be maintained at the plant for a period of two years. If a leak is detected, Sunterra will notify both the Aztec and Santa Fe offices of OCD.

2. How and where are the separator solids to be disposed of? Although not required by OCD, it would be advantageous for Sunterra to keep records of dates cleaned and volumes removed in the event this information is required in the future by another agency (i.e. EPA).

NOT in pond - reduced volumes, adds contam. for leaching,

Any solids in the oil/water separator will be removed by vacuum truck or by hand and disposed of in the flare pond. The date and volume removed will be recorded and these records kept at the plant for a period of two years.

3. The second paragraph on page 5 mentions a "new" evaporation pond. Please identify this pond.

In our plan submitted to you on December 13, 1988, there is a typographical error, the word "new" should be deleted.

Transfer and Storage of Process Fluids and Effluents

The plant is over 25 years old (originally constructed in 1959). Please identify, by schematic, all underground piping. A procedure for positive testing of all underground piping and a testing schedule must be submitted prior to plan approval.

In discussions with OCD, if the results of monitoring the eight monitoring wells show no indications that the ponds are seeping then this requirement would be dropped. To date there have been no indications that the ponds are seeping in sampling of the monitoring wells as evidenced by the OCD.

OK for now OK - will reconsider and likely require if ponds leak

Spill/Leak Prevention and Housekeeping Procedures

1. Are all above grade tanks bermed to contain one third more than the tank volumes? If tanks that contain substances other than fresh water are not bermed, submit a schedule for completion. The bermed areas shall be large enough to hold one third more than the total volume of all interconnected tanks contained within the berm.

OK for now - Same condition as above

As stated in our plan on page 6, Sunterra will berm areas of potential hydrocarbon spills to hold at least 4.0 times the 100YR-24HR event. Also as stated in our plan, these berms will be installed within 18 months after plan approval. With 24HR surveillance by plant personnel and the ability to stop flow from leaving the plant property by damming of runoff routes, Sunterra does not see the need for such large bermed areas. Sunterra will also install a hydrocarbon/ water seperator in the drainage channel that drains the processing area downstream of the processing area.

Specific location, when to be done?

2. Do all drum storage areas have containment and pads? If not, submit a plan and a completion schedule containment of any leaks or spills from drums to prevent infiltration into the ground.

OK for now - Same condition as above

Drums are stored in a metal storage shed and the area around the shed has an earthen berm to contain any potential spills.

Site Characteristics

1. Property boundaries and monitoring well locations are needed on Exhibit 5 (Waste Flow Diagram after Proposed Process Changes). A map scale is needed on both Exhibits 3 and 5.

Enclosed with this submittal are new Exhibits 3 and 5 with scale. Exhibit 5 shows property boundries and monitoring well locations. The property boundry to the west is not shown on Exhibit 5 because of the extent of aerial photography, however the western property

boundry is shown on Exhibit 1 of our December 13, 1988 submittal to OCD.

2. Identify adjacent property owners to the east, north and west of the plant.

The Land owner to the north is the Navajo Tribe. The Land owner to the east is Mr. H. C Barry. The land owner to the west is Mr. Johnny Weise.

3. Provide the land surface and casing top elevations of the monitor wells.

Monitor well #	Surface elevation	Casing top elevation
S-1	7100.64	7101.93
S-2	7104.23	7105.00
S-3	7089.42	7092.18
S-4	7089.74	7091.88
S-5	7092.47	7094.94
S-6	7086.50	7087.70
S-7	7086.30	7087.72
S-8	7093.20	7094.99

When get logs, will plot tip of formation

4. Which specific zones on the individual well logs are used to show the "clay-rich sediments" drawn on the Exhibit 10 fence diagram?

Upon completion of the three additional wells (S-6 thru S-8) shown on Exhibit 5 (attached) a better understanding of the subsurface strata was obtained. A new Exhibit 10 is attached along with Exhibit 11 showing cross section used to develop the fence diagram (Exhibit 10). Exhibit 12 is the logs of wells S-6 thru S-8.

Not provided unless I missed them.

5. What is the likely source of the hydrocarbons shown in wells S-4 and S-5?

Source of HC in septic system

The most likely source of this hydrocarbon staining is the septic tank leach field shown on Exhibit 5.

6. Have the monitoring wells been checked for fluids since September 1988? If so were any detected, and were analyses performed?

On March 6, 1989 all five wells were sounded and only minor amounts of condensate were detected. This sampling was performed with Mr. David Boyer of OCD. Also, on April 24, 1989 all eight wells were sounded and again only minor amounts of condensate were detected. This sampling was also done jointly with OCD's

bad word for moisture condensate in bottles.

representatives.

7. Before making a decision on continued use of the ponds, the OCD will require that a monitoring well be located between S-1 and S-4 at a location shown on Exhibit 10 (attached). The well should be approximately 50 feet from both ponds 1 and 2. If fluids are detected perched on top of the anticipated clay zone (at about 7088-90 feet), the well should be dual completed. Before proceeding with drilling this well, Sunterra's consultant should meet with us to discuss specifics of this request and provide information requested in items 4-6 above.

During our meeting on February 28 and the monitoring of the existing monitoring wells at Lybrook on March 6, 1989 we discussed the need to establish the three wells (S-6 thru S-8). These wells were installed on April 4, 1989. Sampling done with OCD on April 24,1989 showed the ponds not to be seeping.

8. If continued use of the current ponds is authorized after additional geologic information is provided, the berms of the existing ponds must be repaired and/or reworked. Submit, for approval, plans and a completion timetable for improving the integrity of these berms.

During the week of March 6, 1989 the berms on the east boundary were reworked to compact and widen them. The were compacted by running a D-5 sized dozer over the entire length of the berms on the eastern boundry. Sunterra plans to increase the volume of pond 2 by pulling the western berm back to the west and to compact this berm by the use of a D-5 sized dozer in lifts not to exceed 24 inches. compaction test & h2o water content When? details?

9. If use of the current ponds is continued, monthly checking of the monitor wells, and record keeping will be required. A summary of this information will need to be reported to OCD semi-annually.

Sunterra will monitor all wells on a monthly basis. Summaries of the results of this monitoring will be supplied to OCD on a semi-annual basis.

Pretty much OK, However, I want the following in addition to above comments:

1. Date for installation of oil/water separator to ponds
2. Closure of pond 3, as at minimum no use w/o OCD approval on emergency basis
3. Commitment w/dates to block runoff discharge Barroyo (south of pond 3)

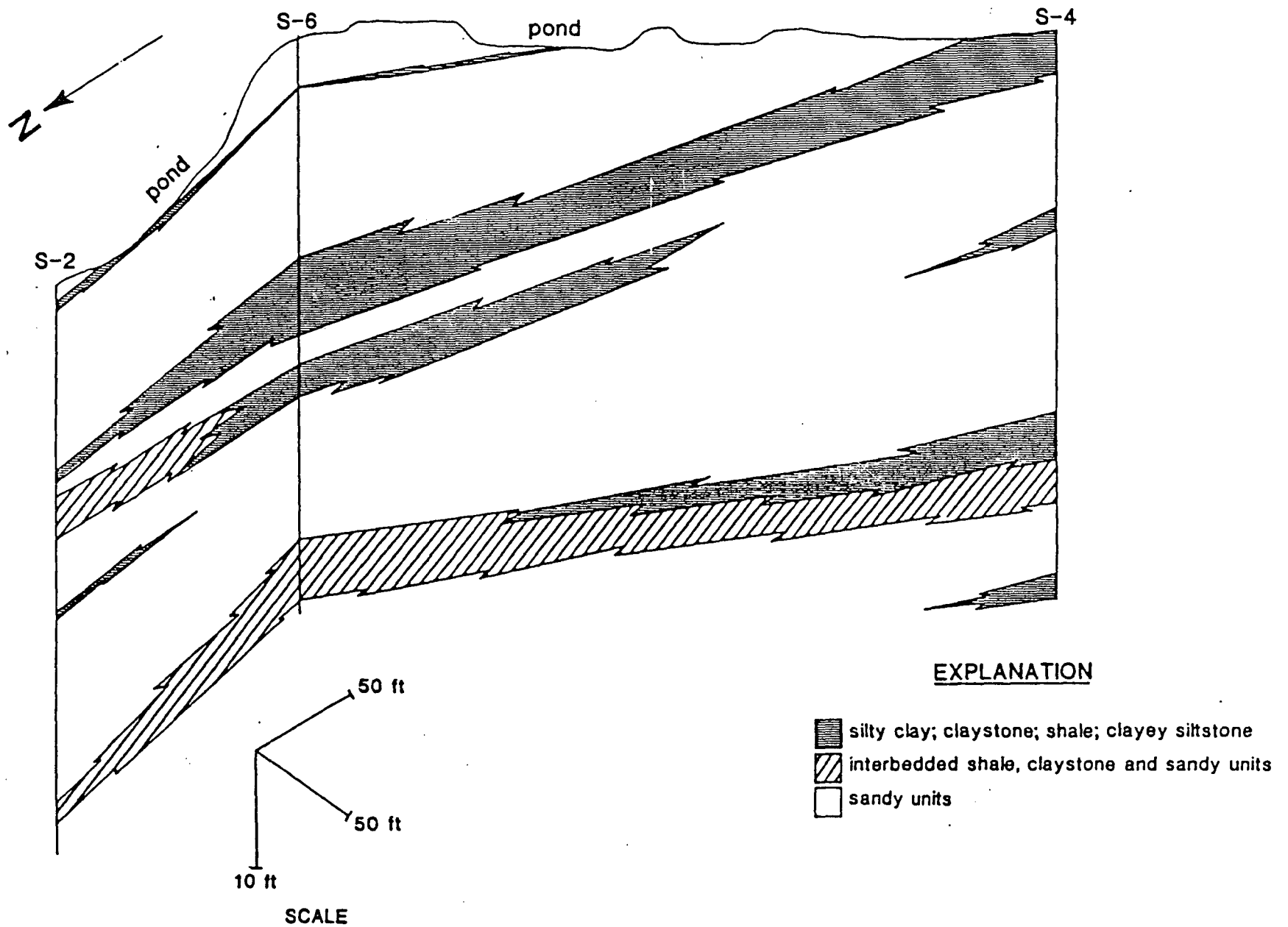


EXHIBIT 10. Fence diagram illustrating subsurface relations encountered, pond area, Lybrook Plant site.

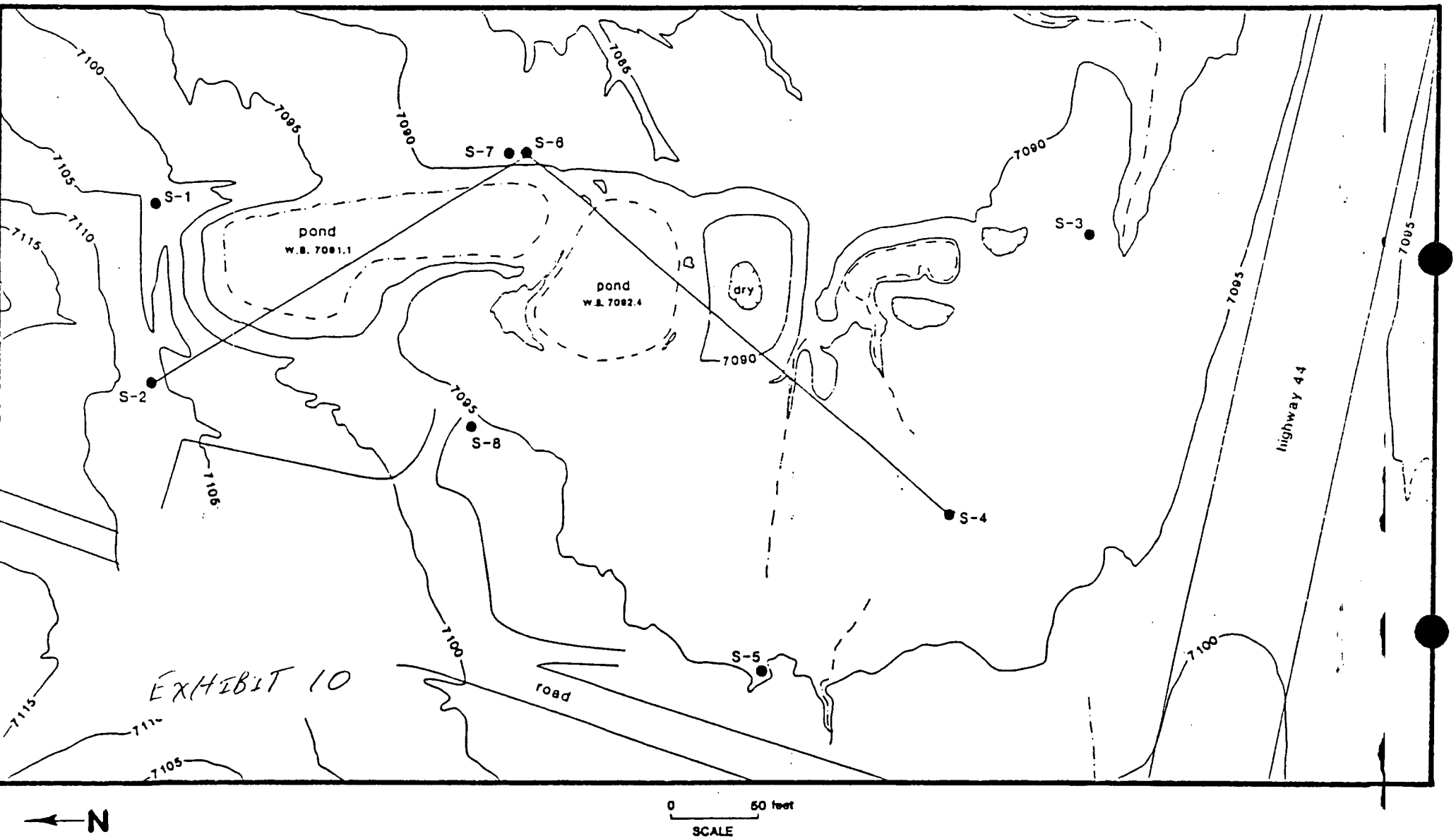


EXHIBIT 11. Topographic map of pond area, Lybrook Plant site; showing drill-hole locations and section lines **(see Exhibit 10)**

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunbelt/Lybrook
Sunterra Gas Plant, east of ponds

WELL NO. S-6
____ SEC. ____ TWP. ____ RGE. ____
ELEV.(GL) 7086.5 (KB) ____

DATE 4-4-89

5 5/8" dia bit; insert blade bit; air rotary

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
		0	2	2	silty sand, lt. brn to tan, minor cly at 1.5 ft	moisture at 1'
		2	4	2	sand, brn, fn-gr.. minor slt; mst.	
		4	5	1	sand, brn, fn-gr, intrbd cly, silty; mst	
		5	12	7	sand, brn, fn-gr, slty; mst	
		12	14.5	2.5	sand, brn, fn- to med-gr, increasing mstr.	
		14.5	19	4.5	slty sand, gry-brn; wet @ ±14'	
		19	20	1	same, increasing clay content; less mstr @ 17	
		20	27	7	clyey slt; gry-brn; mst	rig chatter; hole coming in; pulled jnt to clear hole
		27	29	2	slty sand, minor clay, gry-brn; mst	
		29	32	3	clay, gry-brn; mst	
		32	33	1	slty sand, brn; mst	
		33	33.5	.5	sand, tan-buff; fn-gr.; mst	
		33.5	41	7.5	sandstone, buff; fn-gr; mst; Fe-ox nodules, reddish brn color; wkly cemented ± 41 ft	hydr drlling, rig chtr; hole coming in; pulled jnt to clean hol
		41	44	3	sandstone; Lt. brn-tan; fn-to med. gr.; mst	
		44	49	5	same, with intrbdd shale, gry fissle; mst	
		49	50	1	shale; gry-brn, intrbdd sandstone, buff, fn-gr, Fe-ox. stain	total depth 50'
					monitor well completion:	
		depth interval				
		40	- 50		screen, cap; 2" dia; 0.010 slt, PVC;	10.20 ft
				①	casing — " " — "	10.01 "
				②	"	10.00 "
				③	"	10.00 "
		0	40	④	"	10.00 "
					sand; #10 silica sand; 3 bgs	
					bent pllts; ~ 3 gallons; 1/4-in pellets	
					cement to top	
					6" dia steel surface pipe over well	

RECEIVED
JUN 19 1989
OIL CONSERVATION DIV.
SANTA FE

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunbelt/Lybrook

Sunterra Gas Plant; east of ponds

WELL NO. S-7

____ SEC. ____ TWP. ____ RGE. ____

DATE 4-4-89

ELEV.(GL) 7086.3 (KB) ____

5 5/8" dia bit; insert blade; air rotary

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
		0	1	1	slty sand, dry, fill	
		1	5	4	sand, gry-brn, fn-gr, clyey @ 3', [illegible], mst	moisture at 1'
		5	10	5	same, less clay; mst	
		10	14	4	sand, brn; fn- to med- gr.; mstr increase 12'	
		14	15	1	clayey slt, gry-brn, mstr	total depth 15'
					monitor well cmptn:	
			interval			
			5	15	screen, cap, 2" dia; 0.010 slt, PVC	10.20 ft
			0	5	casing " " — "	9.29 " (-4.30) cut off
					2.5 bgs silica sand	
					bent. pllts, ~3 gllns; 1/4" pllts	
					cement to top	
					6" dia. steel surface pipe over well	

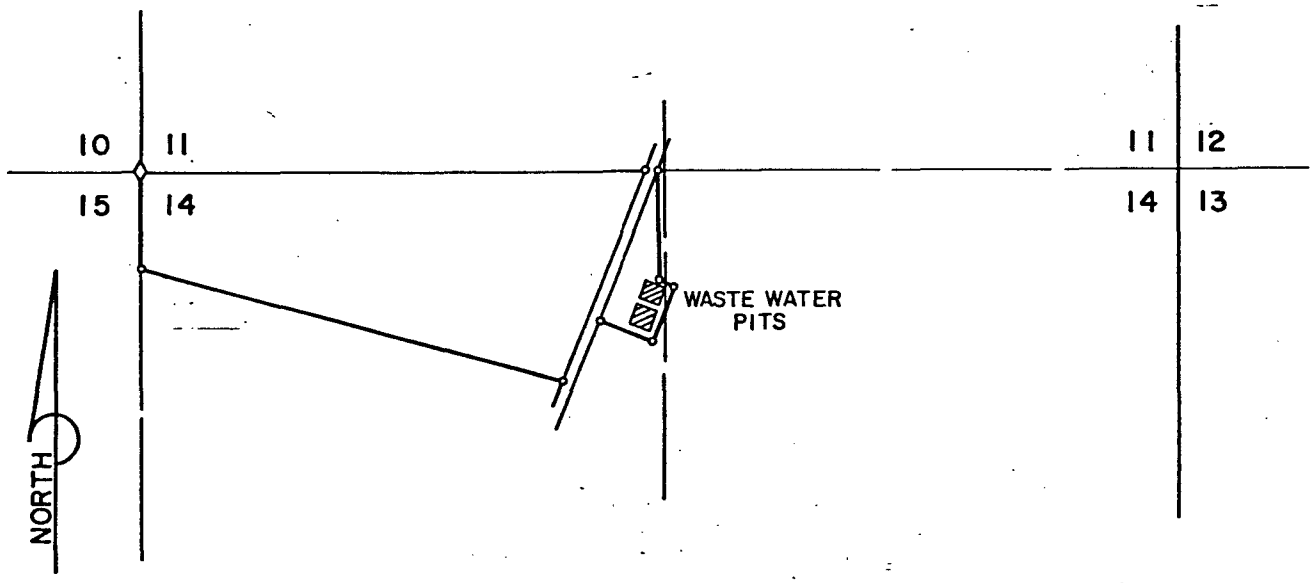
JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunbelt / Lybrook
Sunterra Gas Plant, west of ponds

WELL NO. S-8
SEC. ____ TWP. ____ RGE. ____
DATE 4-4-89
ELEV.(GL) 7093.2 (KB) ____

5 5/8" dia.; insert blade; air rotary

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
		0	3.5	3.5	silty sand, tan to lt. brn, fill; concrete fragments @ ±1 ft; minor silty clay	changed bit to tricone; 6" at 1 ft, / moisture at 1 ft
		3.5	6	2.5	sandy silt; brn, mst;	
		6			same mstr increase	
		8	9	1	sand, gry-brn; fn-med-gr; v. mst.	
		9	10	1	clayey silt, minor sand, gry-brn mst	
		10	13.5	3.5	clay, minor silt, brn, mst	put 5 5/8" dia insert blade bit back on
		13.5	14.5	1	clay, gry-brn, mst	
		14.5	15.	.5	silty clay, brn, mst	total depth 15'
					monitor well completion!	
		interval				
		5.7	15.9		screen, cap; 2" dia; 0.010 slt; PVC	10.20 ft
		0	5.7		casing — " " — "	5.66 ft
					2.5 bgs of #10 silica sand	
					3 gallons 1/4-in bent. pellets	
					cement to top	
					6" dia steel surface pipe	



T 23 N – R 7 W

LYBROOK PLANT

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

April 25, 1989

CERTIFIED MAIL
RETURN RECEIPT NO. P-106 675 523

Mr. Ron Grossarth, Vice President
SUNTERRA GAS PROCESSING COMPANY
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant

Dear Mr. Grossarth:

The Oil Conservation Division (OCD) has received your request, dated April 11, 1989, for a 90-day extension to discharge without an approved discharge plan. The extension is requested to allow sufficient time to evaluate the recently installed monitor wells and determine the integrity of the existing ponds.

The request for a 90-day extension to July 18, 1989 was submitted pursuant to Water Quality Control Commission (WQCC) Regulation 3-106.A. and is hereby approved pursuant to that regulation.

If you have any questions or comments, please feel free to contact David Boyer at (505) 827-5812.

Sincerely,

William J. LeMay
Director

WJL/RCA/sl

cc: OCD Aztec Office

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

April 11, 1989

Mr. William J. LeMay, Director
Oil Conservation Division
Energy, Minerals and Natural
Resources Department
P.O. Box 2088
Santa Fe NM, 87501

Re: Lybrook Gas Plant
Waste Discharge Plan GW-47

Dear Mr. LeMay:

Sunterra has been working with your staff on a discharge plan for our Lybrook Gas Plant. By regulation this plan must be approved by the Oil Conservation Division by April 19, 1989. In order for Sunterra to continue the use of the unlined ponds at Lybrook, your staff has requested that three additional monitoring wells be installed. These wells have been completed, and we need additional time to determine if there is any seepage into them from the ponds. Therefore Sunterra requests a ninety (90) day extension from April 19, 1989 in which it may operate the Lybrook Plant without an approved discharge plan. This will allow time in which the monitoring wells can be inspected and a determination made of the integrity of the existing ponds.

If further information is required, please advise.

Sincerely,

Ron Grossarth
Vice President and General Manager

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Ecological Services
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

March 1, 1989

Mr. William J. Lemay, Director
Oil Conservation Division
State Land Office Building
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Lemay:

This responds to the public notice dated February 24, 1989, in which several proposed groundwater discharge plans were described. We have reviewed all of the plans and have identified resource issues of concern to our agency in the following:

GW-47 Sunterra Gas Processing Company, Lybrook Gas Plant. John Renner, General Manager, P.O. Box 1869, Bloom Field, NM 87143.

GW-7 El Paso Natural Gas Co., Jal #4 Gas Processing Plant, John C. Bridges Manager, Environmental Engineering Group, P.O. Box 1492 El Paso, Texas 79978.

GW-48 Davis Gas Processing Company, Donald K. Judd, Agent., 211 N. Colorado, Midland, Texas 79971.

Our concern is that any surface water discharges resulting from these operations should not have visible traces of oil or gas. If migratory birds were to come in contact with the contaminated waters and perish, violations of the Migratory Bird Treaty Act would have occurred. The Migratory Bird Treaty Act prohibits the taking, except by permit, of individual migratory birds (16 U.S.C. 703). The Migratory Bird Treaty Act prohibits unpermitted taking "by any means or in any manner" of the protected species. Case law has found that unintentional kills of migratory birds, by poisoning or other circumstances is prohibited. Fines of up to $10,000 have been levied against violators.

These comments represent the views of the Fish and Wildlife Service. If you have any questions concerning our comments, please contact Tom O'Brien or Richard Roy at (505) 883-7877 or FTS 474-7877.

Sincerely yours,

John C. Peterson
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Regional Administrator, Environmental Protection Agency, Attn: Kathy Hollar, Office of Ground Water, Dallas, Texas
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement and Law Enforcement, Albuquerque, New Mexico

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

March 7, 1989

Mr. John C. Peterson
Field Supervisor
U.S. Fish and Wildlife Service
Suite D
3530 Pan American Highway, N.E.
Albuquerque, New Mexico 87107

Dear Mr. Peterson:

Thank you for your letter of March 1, 1989 providing comments in response to our public notice on pending ground water discharge plans. As you know, OCD has appointed an industry committee to study these issues and make recommendations for OCD rule and policy changes.

In the meantime, OCD will take the following actions regarding the information provided in your letter:

1. Notification of the companies listed in the public notice of the contents of your letter, and pending OCD rulemaking.

2. Modification of discharge plan guidelines for natural gas plants and other facilities to state that discharges to exposed surface facilities must not contain oily films, or that the facilities implement effective methods for prevention of bird contact with the water surface.

Upon completion of the rulemaking action, all companies having discharge plans will be notified of the necessity to protect migratory birds, and facilities will be monitored for compliance during the next regularly scheduled inspection.

If you have any questions regarding this matter, please contact David Boyer of my staff at (505) 827-5812.

Sincerely,

William J. LeMay
Director

WJL/DGB/sl

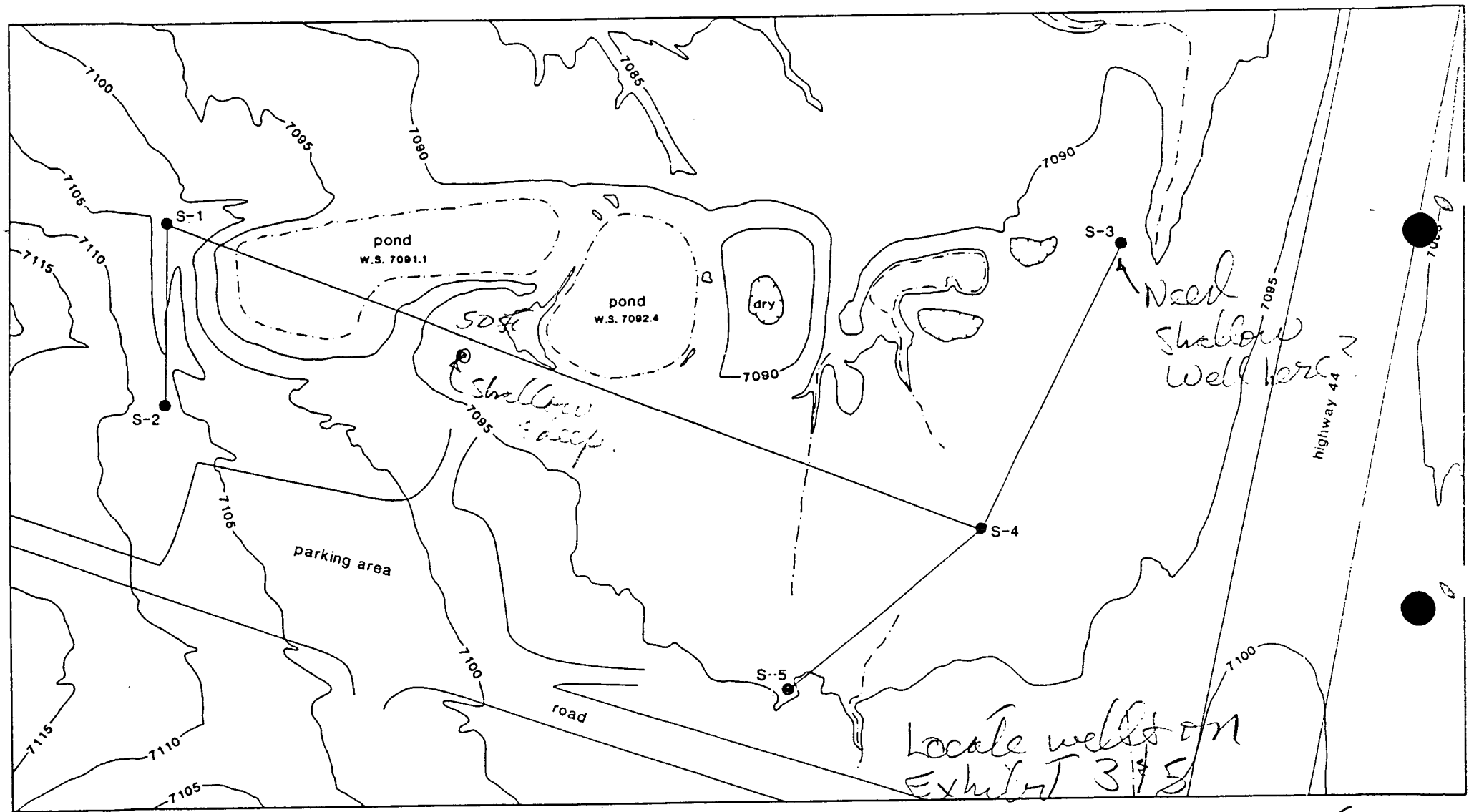


Figure 3. Topographic map of pond area, Lybrook Plant site; showing drill-hole locations and section lines (see Figure 4).

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Ecological Services
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

March 1, 1989

Mr. William J. Lemay, Director
Oil Conservation Division
State Land Office Building
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. ~~Lemay~~ Bill:

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GW-48 Davis Gas Processing Company, Donald K. Judd, Agent., 211 N. Colorado, Midland, Texas 79971.

Our concern is that any surface water discharges resulting from these operations should not have visible traces of oil or gas. If migratory birds were to come in contact with the contaminated waters and perish, violations of the Migratory Bird Treaty Act would have occurred. The Migratory Bird Treaty Act prohibits the taking, except by permit, of individual migratory birds (16 U.S.C. 703). The Migratory Bird Treaty Act prohibits unpermitted taking "by any means or in any manner" of the protected species. Case law has found that unintentional kills of migratory birds, by poisoning or other circumstances is prohibited. Fines of up to $10,000 have been levied against violators.

These comments represent the views of the Fish and Wildlife Service. If you have any questions concerning our comments, please contact Tom O'Brien or Richard Roy at (505) 883-7877 or FTS 474-7877.

Sincerely yours,

John C. Peterson
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Regional Administrator, Environmental Protection Agency, Attn: Kathy Hollar, Office of Ground Water, Dallas, Texas
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement and Law Enforcement, Albuquerque, New Mexico

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

March 7, 1989

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Mr. John C. Peterson
Field Supervisor
U.S. Fish and Wildlife Service
Suite D
3530 Pan American Highway, N.E.
Albuquerque, New Mexico 87107

Dear Mr. Peterson:

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Upon completion of the rulemaking action, all companies having discharge plans will be notified of the necessity to protect migratory birds, and facilities will be monitored for compliance during the next regularly scheduled inspection.

If you have any questions regarding this matter, please contact David Boyer of my staff at (505) 827-5812.

Sincerely,

William J. LeMay
Director

WJL/DGB/sl

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I George W. Moore

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of

One weeks.
Beginning with the issue dated

February 19, 1989
and ending with the issue dated

February 19, 1989

George W. Moore
Publisher.

Sworn and subscribed to before me this 21 day of February, 1989

Vera Murphy
Notary Public.

My Commission expires

November 14, 1992
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
February 19, 1989
NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plans have been submitted for renewal or approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-7) El Paso Natural Gas Company, Jal #4 Gas Processing Plant, John C. Bridges, Manager, Environmental Engineering Group, P.O. Box 1492, El Paso, Texas 79978, has submitted an application for renewal of its previously approved discharge plan for its Jal #4 Gas Plant located in Section 31 and 32, Township 23 South and Sections 5 and 6, Township 24 South, Range 37 East (NMPM), Lea County, New Mexico. The plant is not in operation at this time and start up is not anticipated in the foreseeable future. If the plant were to begin operation, approximately 98,000 gallons per day of process waste water would be disposed on in an OCD-approved injection well located at the plant site. The total dissolved solids content of the waste water is approximately 1100 mg/1. Groundwater most likely to be affected by an discharge at the surface is at a depth of approximately 105 feet with a total dissolved solids content of approximately 750 mg/1.

(GW-47) Sunterra Gas Processing Company, Lybrook Gas Plant, John Renner, General Manager, P.O. Box 1869, Bloomfield, New Mexico 87413, has submitted for approval a groundwater discharge plan application for its Lybrook Gas Plant located in the NW/4, NW/4, Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Approximately 3200 gallons per day of process wastewater is proposed to be disposed of into existing unlined ponds located on the eastern boundary of the plant property. The total dissolved solids concentration of the wastewater is approximately 8500 milligrams per liter (mg/1). Groundwater most likely to be affected by any discharge at the surface is at a depth in excess to 200 feet with a total dissolved solids concentration of 700 mg/1. The discharge plan addresses management of the ponds, including monitoring and how spills, leaks and other discharges to the ground will be handled.

(GW-48) Davis Gas Processing Company, Donald K. Judd, Agent, 211 N. Colorado, Midland, Texas 79971, has submitted for approval a groundwater discharge plan application for its Denton Gas Plant located in the SE/4, Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 750 gallons per day of process wastewater will be collected and stored on site in storage tanks prior to disposal in an OCD-approved contract injection well. The total dissolved solids concentration of the wastewater is approximately 2000 milligrams per liter (mg/1). Groundwater most likely to be affected by any discharge at the surface is at a depth of approximately 40 feet with total dissolved solids concentration from 610 to 1600 mg/1. The discharge plan addresses how spills, leaks and other discharges to the ground will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 9th day of February. To be published on or before February 24, 1989.

STATE OF
NEW MEXICO
OIL CONSERVATION
DIVISION
WILLIAM J. LEMAY,
Director
(Seal)

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS
AND NATURAL
RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plans have been submitted for renewal renewal or approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800.

(GW-7) El Paso Natural Gas Company, Jal #4 Gas Processing Plant, John C. Bridges, Manager, Environmental Engineering Group, P.O. Box 1492, El Paso, Texas 79978, has sumbitted an application for renewal of its previously approved discharge plan for its Jal #4 Gas Plant located in Sections 31 and 32, Township 23 South and Sections 5 and 6, Township 24 South, Range 37 East (NMPM), Lea County, New Mexico. The plant is not in operation at this time and start up is not anticipated in the foreseeable future. If the plant were to begin operation, approximately 98,000 gallons per day of process waste water would be disposed on in an OCD-approved injection well located at the plant site. The total dissolved solids content of the waste water is approximately 1100 mg.l. Groundwater most likely to be affected by an discharge at the surface is at a depth of approximately 105 feet with a total dissolved solids content of approximately 750 mg.l.

(GW-47) Sunterra Gas Processing Company, Lybrook Gas Plant, John Renner, General Manager, P.O. Box 1869, Bloomfield, New Mexico 87413, has submitted for approval a groundwater discharge plan application for its Lybrook Gas Plant located in the NW 4, NW 4, Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Approximately 3200 gallons per day of process wastewater is proposed to be disposed of into existing unlined ponds located on the eastern boundary of the plant property. The total dissolved solids concentration of the wastewater is approximately 8500 milligrams per liter (mg.l). Groundwater most likely to be affected by any discharge at the surface is at a depth in excess of 200 feet with a total dissolved solids concentration of 700 mg.l. The discharge plan addresses management of the ponds, including monitoring, and how spills, leaks and other discharges to the ground will be handled.

(GW-48) Davis Gas Processing Company, Donald K. Judd, Agent, 211 N. Colorado, Midland, Texas 79971, has submitted for approval a groundwater discharge plan application for its Denton Gas Plant located in the SE 4, Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 750 gallons per day of process wastewater will be collected and stored on site in storage tanks prior to disposal in an OCD-approved contract injection well. The total dissolved solids concentration of the wastewater is approximately 2000 milligrams per liter (mg.l). Groundwater most likely to be affected by any discharge at the surface is at a depth of approximately 40 feet with total dissolved solids concentration from 610 to 1800 mg.l. The discharge plan addresses how spills, leaks, and other discharges to the ground will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is

STATE OF NEW MEXICO } ss
County of Bernalillo

THOMAS J. SMITHSON

being duly sworn declares and says that he is NAT'L ADV. MGR. of the **Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition,

for 1 times, the first publication being on the 22 day of Feb, 1989, and the subsequent consecutive publications on ....., 198....

Thomas J Smithson

OFFICIAL SEAL
ANGELA M. ARCHIBEQUE
NOTARY PUBLIC NEW MEXICO
Filed with Secretary of State
My Commission Expires 10/30/92

Signature: Angela M Archibeque

Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, this 22 day of Feb, 1989

PRICE $ 37.80

Statement to come at end of month.

ACCOUNT NUMBER C8D932

EDJ-15 (R-2/86)

RECEIVED
FEB 23 1989
OIL CONSERVATION DIVISION
SANTA FE

AFFIDAVIT OF PUBLICATION

No. 23012

STATE OF NEW MEXICO,
County of San Juan:

Betty Shipp being duly sworn, says: That he is the Nat'l. Adv. Manager of THE FARMINGTON DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached legal notice

was published in a regular and entire issue of the said FARMINGTON DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for one consecutive (days) (weeks) on the same day as follows:

First Publication Thursday, February 16, 1989

Second Publication

Third Publication

Fourth Publication

and that payment therefor in the amount of $ 45.47 has been made.

Betty Shipp

Subscribed and sworn to before me this 16th day of February, 19 89.

NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO

My Commission expires: June 23, 1990

Copy of Publication

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plans have been submitted for renewal or approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505)827-5800:

(GW-7) El Paso Natural Gas Company, Jal #4 Gas Processing Plant, John C. Bridges, Manager, Environmental Engineering Group, P.O. Box 1492, El Paso, Texas 79978, has submitted an application for renewal of its previously approved discharge plan for its Jal #4 Gas Plant located in Sections 31 and 32, Township 23 South and Sections 5 and 6, Township 24 South, Range 37 East (NMPM), Lea County, New Mexico. The plant is not in operation at this time and start up is not anticipated in the foreseeable future. If the plant were to begin operation, approximately 98,000 gallons per day of process waste water would be disposed on in an OCD-approved injection well located at the plant site. The total dissolved solids content of the waste water is approximately 1100 mg/l. Groundwater most likely to be affected by an discharge at the surface is at a depth of approximately 105 feet with a total dissolved solids content of approximately 750 mg/l.

(GW-47) Sunterra Gas Processing Company, Lybrook Gas Plant, John Renner, General Manager, P.O. Box 1869, Bloomfield, New Mexico 87413, has submitted for approval a groundwater discharge plan application for its Lybrook Gas Plant located in the NW/4, NW/4, Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Approximately 3200 gallons per day of process wastewater is proposed to be disposed of into existing unlined ponds located on the eastern boundary of the plant property. The total dissolved solids concentration of the wastewater is approximately 8500 milligrams per liter (mg/l). Groundwater most likely to be affected by any discharge at the surface is at a depth in excess of 200 feet with a total dissolved solids concentration of 700 mg/l. The discharge plan addresses management of the ponds, including monitoring, and how spills, leaks and other dischages to the ground will be handled.

(GW-48) Davis Gas Processing Company, Donald K. Judd, Agent, 211 N. Colorado, Midland, Texas 79971, has submitted for approval a groundwater discharge plan application for its Denton Gas Plant located in the SE/4, Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 750 gallons per day of process wastewater will be collected and stored on site in storage tanks prior to disposal in an OCD-approved contract injection well. The total dissolved solids concentration of the wastewater is approximately 2000 milligrams per liter (mg/l). Groundwater most likely to be affected by any discharge at the surface is at a depth of approximately 40 feet with total dissolved solids concentration from 610 to 1600 mg/l. The discharge plan addresses how spills, leaks and other discharges to the ground will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Consevation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservtion Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 9th day of February. To be published on or before February 24, 1989.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
WILLIAM J. LEMAY, Director

SEAL

Legal No. 23012 published in the Farmington Daily Times, Farmington, New Mexico on Thursday, February 16, 1989.

43.20 *
43.20
2.27 *
45.47

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX
STATE LAND OFFICE
SANTA FE, NEW MEXICO
(505) 827-5

February 7, 1989

CERTIFIED MAIL NO. P-106 675 551
RETURN RECEIPT REQUESTED

Mr. Ron Grossarth, Vice President
SUNTERRA GAS PROCESSING COMPANY
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Grossarth:

The Oil Conservation Division (OCD) has received and is in the process of reviewing the above referenced discharge plan application. The application, dated December 13, 1988, was received by the OCD on December 13, 1988. The following comments and requests for additional information are based on our review of the data submitted in the application and the OCD site visit of June 9, 1988.

Wastewater Characterization

On p. 3. the cooling tower blowdown is shown in the 1500 mg/l TDS range. Appendix 2 analyses indicates the TDS is in the 7500-8500 mg/l range. Please correct this discrepancy.

Planned Process Changes

1. (p.4) The OCD requests that the leak detection system at the oil/water separator be checked at least monthly and that records of the dates of inspection be maintained at the plant for at least 2 years. Additionally, both Aztec and Santa Fe OCD offices should be notified in case of a suspected leak.

2. How and where are the separator solids to be disposed of? Although not required by OCD, it would be advantageous for Sunterra to keep records of dates cleaned and volumes removed in the event this information is required in the future by another agency (i.e. EPA).

3. The second paragraph on page 5 mentions a "new" evaporation pond. Please identify this pond.

Transfer and Storage of Process Fluids and Effluents

The plant is over 25 years old (originally constructed in 1959). Please identify, by schematic, all underground piping. A procedure for positive testing of all underground piping and a testing schedule must be submitted prior to plan approved.

Spill/Leak Prevention and Housekeeping Procedures

1. Are all above grade tanks bermed to contain one third more than the tank volumes? If tanks that contain substances other than fresh water are not bermed, submit a schedule for completion. The bermed areas shall be large enough to hold one third more than the largest vessel or one third more than the total volume of all interconnected tanks contained within the berm.

2. Do all drum storage areas have containment and pads? If not, submit a plan and a completion schedule containment of any leaks or spills from drums to prevent infiltration into the grouond.

Site Characteristics

1. Property boundaries and monitoring well locations are needed on Exhibit 5 (Waste Flow Diagram after Proposed Process Changes). A map scale is needed on both Exhibits 3 and 5.

2. Identify adjacent property owners to the east, north and west of the plant.

3. Provide the land surface and casing top elevations of the monitor wells.

4. Which specific zones on the individual well logs are used to show the "clay-rich sediments" drawn on the Exhibit 10 fence diagram?

5. What is the likely source of the hydrocarbons shown in wells S-4 and S-5?

6. Have the monitoring wells been checked for fluids since September 1988? If so were any detected, and were analyses performed?

7. Before making a decision on continued use of the ponds, the OCD will require that a monitoring well be located between S-1 and S-4 at a location shown on Exhibit 10 (attached). The well should be approximately 50 feet from both ponds 1 and 2. If fluids are detected perched on top of the anticipated clay zone (at about 7088-90 feet), the well should be dual completed. Before proceeding with the drilling of this well, SunTerra's consultant should meet with us to discuss specifics of this request and provide the information requested in items 4-6 above.

8. If continued use of the current ponds is authorized after additional geologic information is provided, the berms of the existing ponds must be repaired and/or reworked. Submit, for approval, plans and a completion timetable for improving the integrity of these berms.

9. If use of the current ponds is continued, monthly checking of the monitor wells, and record keeping will be required. A summary of this information will need to be reported to OCD semi-annually.

The submission of the information requested will allow the review of your application to continue. If you have any questions, please contact me at (505) 827-5884.

Sincerely,

David G. Boyer, Hydrogeologist
Environmental Bureau Chief

DGB/sl

Attachment

cc: OCD Aztec Office
Gary Jordan - Sunbelt Mining

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

GAS PLANT WASTE DISPOSAL QUESTIONNAIRE

PLEASE TYPE OR PRINT	
1. Operator's Name and Address Sunterra Lybrook	2. OCD DP No. GW-47 3. OCD District No. 4. County R.A
5. Plant Name: No.	6. Type of Plant Gas
7. Field Name Where Plant is Located if Plant serves various fields. Provide location from nearest town.	

WASTE - SOURCES, VOLUMES AND DISPOSAL METHODS

- In the list under item 8 check the box for every waste that is generated Add any other unlisted wastes.
- Report under item 9 the waste volumes disposed of. Estimates are acceptable if waste volumes are not measured. Office trash is not included in this survey.
- Indicate the disposal method for each waste by placing the appropriate number from the list of disposal methods in the boxes under item 10. If other means of disposal are used, specify in the available space.
- If a waste is moved from the plant by contract hauler, check the box under item 11.

1. Disposal Well
2. Injection (waterflood project)
3. Evaporation pit
4. Plant-site burial
5. Discharge to watercourse
6. Discharge to land surface
7. State-approved disposal site
8. Plant-site landfarming
9. Applied to lease roads
10. Other (specify)

8. WASTE	9. VOLUME DISPOSED OF		10. DISPOSAL METHOD	11. CONTRACT HAULER
SEPARATION				
A. Waste Water.....	720	GPD ~~bbls.~~	Pond	☐
B. Sludge.....		bbls.		☐
SWEETENING				
C. Iron Sponge.....		bushels		☐
D. Amine Waste/ Reclaim Bottoms..		bbls.		☐
E. Other.....				☐
DEHYDRATION				
F. Spent Glycol.....		bbls.		☐
G. Dry Desicants...		cu. ft.		☐
H. Waste Water.....		bbls.		☐
I. Other				☐

SULFUR RECOVERY

J.	~~Sulfur Spillage.~~		lbs.		☐
K.	~~Catalyst........~~		lbs.		☐
L.	~~Quench Water....~~		bbls.		☐
M.	~~Other...........~~				☐

LIQUIDS EXTRACTION/FRACTION ACTION

N.	~~Waste Water.....~~		bbls.		☐
O.	~~Other...........~~				☐

LIQUID TREATING

P.	Amine Waste....	recycled	bbls.		☐
Q.	Spent Caustic....		bbls.		☐
R.	Other...........				☐

COMPRESSION

S.	Waste Water......		bbls.		☐
T.	Other...........				☐

UTILITIES

U.	Cooling Tower....	3600	GPD ~~bbls.~~	Pond	☐
	Blowdown.........		bbls.		☐
V.	Boiler Blowdown..		bbls.		☐
W.	Water Treatment Backwash.........	46	GPD ~~bbls.~~	Pond	☐
X.	Ion Exchange Resin.		cu. ft.		☐
Y.	Other.............				☐

GENERAL

Z.	Waste Lube Oil....		bbls.		☐
AA.	Filter Elements...		lbs.		☐
BB.	~~Refractory~~........		lbs.		☐

OTHER

CC.	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	☐
DD.	Drains	330	GPD	Pond	☐
EE.	Fire fighting	65	GPD	Pond	☐
FF.	....				☐

12. Is the cooling tower water treated with chromate? ______ yes __X__ no

13. If Item 12 is yes, report the average chromium content as CrO_4 in the recirculating water. ______________ ppm.

14. If waste fluids are either piped or hauled to a disposal or injection well, identify the wells: NO

15. Are fluids mixed with oil field produced water prior to injection _____ yes N/A no

16. If Item 15 is yes, report the volume of plant waste injected: _____ barrels
volume of produced water injected: _____ barrels

17. Briefly describe how sanitary wastes are disposed of at this plant: _____
Septic Tank System

18. Comments and explanations: _____

DISPOSAL AUTHORITY

Identify any active permits or other authorizations you currently hold that regulate waste disposal methods described above.

19. Type of Permit	21. Permit Order No.	22. Date Issued
Disposal well permit	N/A	
Fluid injection permit	N/A	
discharge permit	None	
pit permit	None	
EPA/NPDES permit	None	
Other (specify)	N/A	

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

88-0855-C

WPU 754

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR
DATE REC. 6/10/88
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Lybrook ; COUNTY: Rio Arriba

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|0|9|1|2|2|5|

LOCATION CODE: (Township-Range-Section-Tracts) | | | + | | + | + | | |(10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ ____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [X] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH= 9 ; Conductivity= 8800 umho/cm at 31 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ ____/____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Sun Terra Lybrook Flare Pit at Gas Plant, dipped from clearance Oil on surface, sample from east side of pond

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. Boyer Method of Shipment to the Lab: State Car

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD use: Date owner notified: 8/19/88 Phone or (Letter)? Initials MR

ANALYSES PERFORMED

LAB. No.: OR- 855

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
Aromatic purgeables	see remarks		
benzene	755		
toluene	326		
ethylbenzene	T.R.		
p+m-xylene	15		
o-xylene	16		
halogenated purgeables	N.D.		
* DETECTION LIMIT *	5 ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: three early eluting unsaturated compounds at 10 - 30 ppb and two late eluting compounds in the c3 substituted benzene regions at 10-30 ppb detected by the photoionization detector but not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☑ No ☐. Seal(s) broken by: Mary Ellen date: 6/14/88

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 6/14/88. Analyst's signature: Mary C. Ellen

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhofer

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

88-0864-B

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR-
DATE REC. 6/10/88
PRIORITY 3
PHONE(S): 827-5812

WDW WEX 767

COLLECTION CITY: Lybrook ; **COUNTY:** Rio Arriba

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 8 8 0 6 0 9 1 2 1 5

LOCATION CODE: (Township-Range-Section-Tracts) ___ + ___ + ___ (10N06E24342)

USER CODE: 8 2 2 3 5 **SUBMITTER:** David Boyer **CODE:** 2 6 0

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: ___

JUN 10 1988
OIL CONSERVATION DIVISION
SANTA FE

This form accompanies ___ Septum Vials, 1 Glass Jugs, and/or ___
Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
- ☒ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☐ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ ___
- ☐ ___

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
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- ☐ (761) Organophosphate Pesticides
- ☒ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: ___

FIELD DATA:

pH= 9 ; Conductivity= 8800 umho/cm at 31 °C; Chlorine Residual= ___ mg/l

Dissolved Oxygen= ___ mg/l; Alkalinity= ___ mg/l; Flow Rate ___ ___/___

Depth to water ___ ft.; Depth of well ___ ft.; Perforation Interval ___ - ___ ft.; Casing: ___

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Sunterra Lybrook Flare ~~Plant~~ Pit at Gas Plant
oil on surface of pond; sample dipped from clear area

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D Boyer Method of Shipment to the Lab: State car

CHAIN OF CUSTODY

I certify that this sample was transferred from ___ to ___

at (location) ___ on ___/___/___ - ___:___ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ OR Seals Intact: Yes ☐ No ☐

Signatures ___ ___

For OCD use: Date owner notified: 8/19/88 Phone or Letter? Initials: JRB

ANALYSES PERFORMED

LAB. #: OR- 88 - 864

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☐ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
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- ☐ (760) Organochlorine Pesticides
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- ☑ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
PCBs (Polychlorinated Biphenyls)	ND		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 7/25/88. Analyst's signature: K. Shaswell

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

88-0865-B

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR-
DATE REC. 6/10/88
PRIORITY 3
PHONE(S): 827-5812

WELL 764

COLLECTION CITY: Lybrook ; COUNTY: Rio Arriba

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|0|9|1|2|2|5|

LOCATION CODE: (Township-Range-Section-Tracts) | | | + | | + | + | | | (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies ____ Septum Vials, 1 Glass Jugs, and/or ____ ____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [ ] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [ ] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [X] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH= 9 ; Conductivity= 2800 umho/cm at 31 °C; Chlorine Residual= ____ mg/l

Dissolved Oxygen= ____ mg/l; Alkalinity= ____ mg/l; Flow Rate ____ ____/____

Depth to water ____ ft.; Depth of well ____ ft.; Perforation Interval ____-____ ft.; Casing: ____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Sun Terra Lybrook Flare pit at Gas Plant
oil on pond surface, dipped from clear area

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D J Boyer Method of Shipment to the Lab: State Car

CHAIN OF CUSTODY

I certify that this sample was transferred from ____ to ____

at (location) ____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures ____ ____

For OCD use: Date owner notified: 8/19/88 Phone or (Letter)? Initials DJB

ANALYSES PERFORMED

LAB. NO.: OR- 865

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☐ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☑ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
ALIPHATIC HYDROCARBONS			
PVAO MDL = 5			
GASOLINE MDL = 250			
KEROSENE MDL = 250 > See Remarks			
Diesel MDL = 250			
LUBOIL MDL = 2500			
* DETECTION LIMIT * ✱		+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

925 ml

LABORATORY REMARKS: LOST EXTRACT WHEN COOLING WATER WENT OFF DURING THE NIGHT. PLEASE RESAMPLE.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☑ Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 6/14/88. Analyst's signature: CR Burney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

859
WNN

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 6/10/88 | LAB NO. WC-2099 | USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 880609
Collection TIME 1225
Collected by — Person/Agency Boyer/Anderson/OCD

SITE INFORMATION ►
Sample location Sunterra Lybrook Flare Pit/Pond
Collection site description

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED AUG - 8 1988 OIL CONSERVATION DIVISION SANTA FE

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water level —	Discharge —	Sample type GRab
pH (00400) 9	Conductivity (Uncorrected) 8800 µmho	Water Temp. (00010) 31 °C	Conductivity at 25°C (00094) µmho

Field comments oil on pond surface, sample dipped from clear area.

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1 | ☒ NF: Whole sample (Non-filtered) | ☐ F: Filtered in field with 0.45 µmembrane filter | ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify*: ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	7944	µmho	7/11
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	8.72		7/26
☐ Other:			
☐ Other:			

A-H_2SO_4		Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

From NF, NA Sample:

			Date Analyzed
☒ Calcium	8	mg/l	7/19
☒ Potassium	28	mg/l	7/25
☒ Magnesium	18.3	mg/l	7/19
☒ Sodium	2310	mg/l	7/25
☒ Bicarbonate	4773	mg/l	7/26
☒ Chloride	34.7	mg/l	6/29
☒ Sulfate	673	mg/l	6/29
☒ Total Solids	6668	mg/l	7/7
☐			
☐			
☒ Cation/Anion Balance			

Analyst | Date Reported 7/29/88 | Reviewed by [signature]

Laboratory remarks

FOR OCD USE -- Date Owner Notified 8/19/88 Phone or Letter? Initals [initials]

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CATIONS				ANIONS			
ANALYTE	MEQ.	PPM	DET. LIMIT	ANALYTE	MEQ.	PPM	DET. LIMIT
Ca	0.40	8.00	<3.0	HC03	78.22	4773.00	<1.0
Mg	1.50	18.30	<0.3	SO4	14.02	673.00	<10.0
Na	100.48	2310.00	<10.0	CL	0.98	34.70	<5.0
K	0.72	28.00	<0.3				
Mn	0.00	0.00		NO3	0.00	0.00	< 0.
Fe	0.00	0.00		C03	7.87	472.00	< 1.
				NH3	0.00	0.00	< 0.
				PO4	0.00	0.00	< 0.
SUMS	103.10	2364.30			101.09	5952.70	

Total Dissolved Solids= 6668

Ion Balance = 101.99%

WC No. = 8802099

Date out/By 8-7/89/83

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106

HEAVY METAL ANALYSIS FORM

Telephone: (505)841-2553

Date Received	6/10/88	Lab No.	ICP-271	User Code	☒ 82235	☐ Other:

COLLECTION DATE & TIME: yy 88 | mm 06 | dd 09 | hh 12 | mm 25

COLLECTION SITE DESCRIPTION: Lybrook Flare Pit/Pond

COLLECTED BY:

TO:

OWNER: Sunterra Gas Plant

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg., PO Box 2088
SANTA FE, NM 87504-2088

ATTN: D. Boyer
TELEPHONE: 827-5812

SITE LOCATION:
County: Rio Arriba

Township, Range, Section, Tract: (10N06E24342)

STATION/ WELL CODE:

LATITUDE, LONGITUDE:

SAMPLING CONDITIONS:

☐ Bailed ☒ Dipped	☐ Pump ☐ Tap	Water Level:	Discharge:	Sample Type: Grab
pH(00400) 9	Conductivity(Uncorr.) 8800 µmho	Water Temp.(00010) 31 °C	Conductivity at 25°C (00094) µmho	

FIELD COMMENTS: Oil on pond surface, sample dipped from clear area

SAMPLE FIELD TREATMENT Check proper boxes:		LAB ANALYSIS REQUESTED:
☒ WPN: Water Preserved w/HNO_3 Non-Filtered	☐ WPF: Water Preserved w/HNO_3 Filtered	☒ ICAP Scan Mark box next to metal if AA is required.

ANALYTICAL RESULTS (MG/L)

ELEMENT	ICAP VALUE		AA VALUE	ELEMENT	ICAP VALUE		AA VALUE
Aluminum	5.8			Silicon	44.		
Barium	0.1			Silver	<0.1	☐	
Beryllium	<0.1			Strontium	0.2		
Boron	1.9			Tin	<0.1		
Cadmium	<0.1	☐		Vanadium	<0.1		
Calcium	11.			Zinc	0.2		
Chromium	<0.1	☒	<0.005	Arsenic		☐	
Cobalt	<0.05			Selenium		☐	
Copper	0.2			Mercury		☐	
Iron	3.7					☐	
Lead	<0.1	☒	0.01			☐	
Magnesium	2.0					☐	
Manganese	0.16					☐	
Molybdenum	<0.1					☐	
Nickel	<0.1					☐	

LAB COMMENTS: 5.0 ml HNO_3 added @ SLD. AA 7/5/88 DIGESTED

For OCD Use:
Date Owner Notified: 8/10/88
Phone or Letter?
Initials:

ICAP Analyst QB
Date Analyzed 7/15/88

Reviewer
Date Received 7/25/88

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

88-0849-C

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR- WPU 754
DATE REC. 6/10/88
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Lybrook ; COUNTY: Rio Arriba

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|0|9|1|2|4|5|

LOCATION CODE: (Township-Range-Section-Tracts) | | | + | | + | + | | | |(10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ ____
Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [X] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH= 11 ; Conductivity= 9000 umho/cm at 20 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ ____/____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval ____ - ____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Sun Terra Lybrook Secondary Pond. Pink color (Algae?), septic odor. Receives overflow from Clare pond

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. Boyer Method of Shipment to the Lab: State Car

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD use: Date owner notified: 8/19/88 Phone or (Letter)? Initials KJS

ANALYSES PERFORMED

LAB. [redacted]: OR- 849

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables			
benzene	T.R.		
toluene	~~5~~		
p+m-xylene	T.R.		
ethylbenzene	N.D.		
o-xylene	N.D.		
halogenated purgeables	N.D.		
* DETECTION LIMIT * ✱	5 ppb	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☑ No ☐. Seal(s) broken by: Mary C. Ellen date: 6/14/88

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 6/14/88. Analyst's signature: Mary C. Ellen

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhein

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

859
WNN

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 6/10/88 LAB NO. WC-2100	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235
Collection DATE 88/06/09	Sample location Sun Terra Lybrook Secondary Pond
Collection TIME 1245	SITE INFORMATION ►
Collected by — Person/Agency Boyd Anderson/OCD	Collection site description

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED
AUG - 8 1988
OIL CONSERVATION DIVISION
SANTA FE

Station/well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water level —	Discharge —	Sample type GRAB
pH (00400) 11	Conductivity (Uncorrected) 9000 µmho	Water Temp. (00010) 20 °C	Conductivity at 25°C (00094) µmho

Field comments: Pink color (Algae), septic color, overflow from flare pond

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☒ NF: Whole sample (Non-filtered) ☐ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	10478	µmho	7/11
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	9.19		7/26
☐ Other:			
☐ Other:			

A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

From WF, NA Sample:

			Date Analyzed
☒ Calcium	8	mg/l	7/19
☒ Potassium	28	mg/l	7/25
☒ Magnesium	11	mg/l	7/19
☒ Sodium	3070	mg/l	7/25
☒ Bicarbonate	4704	mg/l	7/26
☒ Chloride	92	mg/l	7/21
☒ Sulfate	1370	mg/l	7/21
☒ Total Solids	8452	mg/l	7/7
☐			
☐			
☒ Cation/Anion Balance			

Analyst	Date Reported	Reviewed by
	7/29/88	

Laboratory remarks

FOR OCD USE -- Date Owner Notified 8/9/88 Phone or (Letter)? _____ Initals WB

158

CATIONS				ANIONS			
ANALYTE	MEQ.	PPM	DET. LIMIT	ANALYTE	MEQ.	PPM	DET. LIMIT
Ca	0.40	8.00	<3.0	HC03	77.09	4704.00	<1.0
Mg	0.90	11.00	<0.3	SO4	28.54	1370.00	<10.0
Na	133.54	3070.00	<10.0	CL	2.60	92.00	<5.0
K	0.72	28.00	<0.3				
Mn	0.00	0.00		NO3	0.00	0.00	< 0.
Fe	0.00	0.00		C03	16.47	988.00	< 1.
				NH3	0.00	0.00	< 0.
				PO4	0.00	0.00	< 0.
SUMS	135.56	3117.00			124.69	7154.00	

Total Dissolved Solids= 8452

Ion Balance = 108.71%

WC No. = 8802100

Date out/By 7/29/88

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106

HEAVY METAL ANALYSIS FORM

Telephone: (505)841-2553

Date Received	6/10/88	Lab No.	ICP-272	User Code	☒ 82235	☐ Other:

COLLECTION DATE & TIME: yy 88 mm 06 dd 08 hh 12 mm 45

COLLECTION SITE DESCRIPTION: Secondary pond

COLLECTED BY: Boyer/Anderson, OCD

TO:

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg., PO Box 2088
SANTA FE, NM 87504-2088

ATTN: D. Boyer
TELEPHONE: 827-5812

RECEIVED NOV -3 1988

OWNER: Sunterra Lybrook

SITE LOCATION:
County: Rio Arriba
Township, Range, Section, Tract: (10N06E24342)

STATION/ WELL CODE:

LATITUDE, LONGITUDE:

SAMPLING CONDITIONS:

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water Level: —	Discharge: —	Sample Type: Grab

pH(00400)	Conductivity(Uncorr.)	Water Temp.(00010)	Conductivity at 25°C (00094)
11	9000 µmho	20 °C	µmho

FIELD COMMENTS: Pink color (Algae?) septic odor, receives overflow from flare pond

SAMPLE FIELD TREATMENT
Check proper boxes:

☒ WPN: Water Preserved w/HNO_3 Non-Filtered
☐ WPF: Water Preserved w/HNO_3 Filtered

LAB ANALYSIS REQUESTED:
☒ ICAP Scan
Mark box next to metal if AA is required.

ANALYTICAL RESULTS (MG/L)

ELEMENT	ICAP VALUE	AA VALUE	ELEMENT	ICAP VALUE	AA VALUE
Aluminum	0.6		Silicon	40.	
Barium	<0.1		Silver	<0.1	☐
Beryllium	<0.1		Strontium	0.2	
Boron	2.4		Tin	<0.1	
Cadmium	<0.1	☐	Vanadium	<0.1	
Calcium	6.4		Zinc	<0.1	
Chromium	<0.1	☒ 0.005	Arsenic		☐
Cobalt	<0.05		Selenium		☐
Copper	<0.1		Mercury		☐
Iron	0.5				☐
Lead	<0.1	☒ <0.01			☐
Magnesium	0.9				☐
Manganese	<0.05				☐
Molybdenum	<0.1				☐
Nickel	<0.1				☐

LAB COMMENTS: 5.0 ml HNO_3 added @ SLD. JA DIGESTED.

For OCD Use:
Date Owner Notified:
Phone or Letter?
Initials:

ICAP Analyst JB
Date Analyzed 7/5/88
Reviewer J. Ashby
Date Received 11/1/88

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

88-0860-C

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR-
DATE REC. 6/10/88
PRIORITY 3
PHONE(S): 827-5812

RECEIVED
AUG 19 1988
OIL CONSERVATION DIVISION
SANTA FE

COLLECTION CITY: Lybrook ; COUNTY: Rio Arriba

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|0|9|1|1|5|0|

LOCATION CODE: (Township-Range-Section-Tracts) | | | + | | + | + | | | (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [X] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH= 10 ; Conductivity= 8000 umho/cm at 17 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ _____/_____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Sunterra Lybrook Cooling tower
Sample Yellowish, cloudy

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): [signature] Method of Shipment to the Lab: State Car

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD use: Date owner notified: 8/19/88 Phone or Letter? Initials DRB

ANALYSES PERFORMED

LAB. #.: OR- 860

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	see remarks		
halogenated purgeables	see remarks		
* DETECTION LIMIT * ✱	2.5 ug/L	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: One compound detected with the photoionization and Hall detectors and identified by mass spectrometry as isothiocyanatomethane at approx 50-100 ppb

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☐ No ☒. Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 6/15/88. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyer Lee

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

859 WNW

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 6/10/88	LAB NO. WC-2097	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 06/06/09	SITE INFORM-ATION	Sample location Sunterra Lybrook Cooling Tower	
Collection TIME 1150		Collection site description	
Collected by — Person/Agency Boyd Anderson /OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED
AUG - 8 1988
OIL CONSERVATION DIVISION

Station/well code SANTA FE
Owner

SAMPLING CONDITIONS

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level —	Discharge —	Sample type GRAB
pH (00400) 10	Conductivity (Uncorrected) 8000 µmho	Water Temp. (00010) 17 °C	Conductivity at 25°C (00094) µmho
Field comments Cloudy, yellowish sample			

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1	☒ NF: Whole sample (Non-filtered)	☐ F: Filtered in field with 0.45 µmembrane filter	☐ A: 2 ml H_2SO_4/L added
☒ NA: No acid added	☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	10510	µmho	7/11
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	9.46		7/21
☐ Other:			
☐ Other:			

A-H_2SO_4			
☐ Nitrate-N + , Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

From WF, NA Sample:

			Date Analyzed
☒ Calcium	24	mg/l	7/19
☒ Potassium	38	mg/l	7/25
☒ Magnesium	8.5	mg/l	7/19
☒ Sodium	2808	mg/l	7/25
☒ Bicarbonate	2706	mg/l	7/26
☒ Chloride	101	mg/l	7/21
☒ Sulfate	2410	mg/l	7/26
☒ Total Solids	8492	mg/l	7/7
☐			
☐			
☒ Cation/Anion Balance			

Analyst	Date Reported	Reviewed by
	7/29/88	

Laboratory remarks

FOR OCD USE -- Date Owner Notified 8/19/88 Phone or (Letter)? _____ Initals

154

CATIONS				ANIONS			
ANALYTE	MEQ.	PPM	DET. LIMIT	ANALYTE	MEQ.	PPM	DET. LIMIT
Ca	1.20	24.00	<3.0	HC03	44.35	2706.00	<1.0
Mg	0.70	8.50	<0.3	SO4	50.21	2410.00	<10.0
Na	122.14	2808.00	<10.0	CL	2.85	101.00	<5.0
K	0.97	38.00	<0.3				
Mn	0.00	0.00		NO3	0.00	0.00	< 0.
Fe	0.00	0.00		C03	16.72	1003.00	< 1.
				NH3	0.00	0.00	< 0.
				PO4	0.00	0.00	< 0.
SUMS	125.01	2878.50			114.12	6220.00	

Total Dissolved Solids= 8492

Ion Balance = 109.54%

WC No. = 8802097

Date out/By 1/29/88

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106

HEAVY METAL ANALYSIS FORM

Telephone: (505)841-2553

Date Received	6/10/88	Lab No.	ICP-270	User Code	☒ 82235	☐ Other:

COLLECTION DATE & TIME: yy 88 | mm 06 | dd 09 | hh 11 | mm 30

COLLECTED BY: Boyer/Anderson OCB

COLLECTION SITE DESCRIPTION: Cooling Tower

TO:

OWNER: Sunterra Lybrook

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg., PO Box 2088
SANTA FE, NM 87504-2088

ATTN: D. Boyer
TELEPHONE: 827-5812

SITE LOCATION:
County: Rio Arriba

Township, Range, Section, Tract: (10N06E24342)

STATION/ WELL CODE:

LATITUDE, LONGITUDE:

SAMPLING CONDITIONS:

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water Level: –	Discharge: –	Sample Type: GRAB

pH(00400)	Conductivity(Uncorr.)	Water Temp.(00010)	Conductivity at 25°C (00094)
10	8000 µmho	17 °C	µmho

FIELD COMMENTS:

SAMPLE FIELD TREATMENT Check proper boxes:		LAB ANALYSIS REQUESTED:
☒ WPN: Water Preserved w/HNO_3 Non-Filtered	☐ WPF: Water Preserved w/HNO_3 Filtered	☒ ICAP Scan Mark box next to metal if AA is required.

ANALYTICAL RESULTS (MG/L)

ELEMENT	ICAP VALUE		AA VALUE	ELEMENT	ICAP VALUE		AA VALUE
Aluminum	<0.1			Silicon	.36		
Barium	<0.1			Silver	<0.1	☐	
Beryllium	<0.1			Strontium	0.2		
Boron	2.2			Tin	<0.1		
Cadmium	<0.1	☐		Vanadium	<0.1		
Calcium	5.4			Zinc	<0.1		
Chromium	<0.1	☒	0.031	Arsenic		☐	
Cobalt	<0.05			Selenium		☐	
Copper	0.7			Mercury		☐	
Iron	0.3					☐	
Lead	<0.1	☒	<0.01			☐	
Magnesium	0.3					☐	
Manganese	<0.05					☐	
Molybdenum	<0.1					☐	
Nickel	<0.1					☐	

LAB COMMENTS: 5.0 mL HNO_3 added @ SLD JAA 7/5/88 DIGESTED.

For OCD Use:
Date Owner Notified: 8/19/88
Phone or Letter?
Initials: BJB

ICAP Analyst QB Reviewer

Date Analyzed 7/15/88 Date Received 7/25/88

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

RECEIVED
APR 14 1988
OIL CONSERVATION DIVISION
SANTA FE

WPM 754

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR- 88-0863-C 6/10/88
DATE REC.
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Lybrook ; **COUNTY:** Rio Arriba

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|0|9|1|2|1|0|

LOCATION CODE: (Township-Range-Section-Tracts) | | | + | | | + | | + | | | | (10N06E24342)

USER CODE: |8|2|2|3|5| **SUBMITTER:** David Boyer **CODE:** |2|6|0|

SAMPLE TYPE: WATER [X], **SOIL** [ ], **FOOD** [ ], **OTHER:**

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____
Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [X] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH= 8.0 ; Conductivity= 1000 umho/cm at 22 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ ____/____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____-_____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Sunterra Lybrook Domestic Water Supply
Sample from valve at tank bottom; Clear, No odor

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D J Boyer Method of Shipment to the Lab: State Car

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD use: Date owner notified: 8/19/88 Phone or (Letter) Initials VB

ANALYSES PERFORMED

LAB. #: OR- 863

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	N.D.		
halogenated purgeables	N.D.		
* DETECTION LIMIT *	.5 ug/L	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☐ No ☒. Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 6/15/88. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyer

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

859 WNN

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 6/10/88	LAB NO. WC-2098	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 06/09	SITE INFORMATION ►	Sample location Sunterra Lybrook Domestic Water Supply	
Collection TIME 12?		Collection site description	
Collected by — Person/Agency Boyer/Anderson /OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED AUG - 8 1988 OIL CONSERVATION DIVISION SANTA FE

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☐ Dipped ☒ Tap	Water level ~	Discharge ~	Sample type GRAB
pH (00400) 8	Conductivity (Uncorrected) 1600 µmho	Water Temp. (00010) 22 °C	Conductivity at 25°C (00094) µmho

Field comments: Sample from outlet at bottom of Storage Tank
Clear, no odor

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☒ **NF:** Whole sample (Non-filtered) ☐ **F:** Filtered in field with 0.45 µmembrane filter ☐ **A:** 2 ml H_2SO_4/L added

☒ **NA:** No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	1101	µmho	7/11
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	9.04		7/21
☐ Other:			
☐ Other:			

A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

From NF, NA Sample:

			Date Analyzed
☒ Calcium	8.0	mg/l	7/19
☒ Potassium	21	mg/l	7/25
☒ Magnesium	13.4	mg/l	7/19
☒ Sodium	251	mg/l	7/25
☒ Bicarbonate	351	mg/l	7/21
☒ Chloride	<5	mg/l	6/29
☒ Sulfate	210	mg/l	6/29
☒ Total Solids	683	mg/l	7/7
☐			
☐			
☒ Cation/Anion Balance			

Analyst	Date Reported	Reviewed by
	7/29/88	

Laboratory remarks

FOR OCD USE -- Date Owner Notified 8/10/88 Phone or (Letter)? _____ Initals

14

CATIONS				ANIONS			
ANALYTE	MEQ.	PPM	DET. LIMIT	ANALYTE	MEQ.	PPM	DET. LIMIT
Ca	0.40	8.00	<3.0	HC03	5.75	351.00	<1.0
Mg	1.10	13.40	<0.3	SO4	4.38	210.00	<10.0
Na	10.92	251.00	<10.0	CL	0.14	5.00	<5.0
K	0.03	1.00	<0.3				
Mn	0.00	0.00		NO3	0.00	0.00	< 0.
Fe	0.00	0.00		C03	0.42	25.40	< 1.
				NH3	0.00	0.00	< 0.
				PO4	0.00	0.00	< 0.
SUMS	12.44	273.40			10.69	591.40	

Total Dissolved Solids= 683

Ion Balance = 116.38%

WC No. = 8802098

Date out/By (S) 7/29/86

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106

HEAVY METAL ANALYSIS FORM

Telephone: (505)841-2553

Date Received	6/10/88	Lab No.	ICP-265	User Code	☒ 82235	☐ Other:

COLLECTION DATE & TIME: yy: 88 | mm: 06 | dd: 09 | hh: 12 | mm: 10

COLLECTED BY:

COLLECTION SITE DESCRIPTION: Water Supply Tank

TO:

OWNER: Sunterra Lybrook

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg., PO Box 2088
SANTA FE, NM 87504-2088

SITE LOCATION:
County: Rio Arriba

Township, Range, Section, Tract: (10N06E24342)

ATTN: D. Boyer
TELEPHONE: 827-5812

STATION/ WELL CODE:

LATITUDE, LONGITUDE:

SAMPLING CONDITIONS:

☐ Bailed ☐ Dipped	☐ Pump ☒ Tap	Water Level:	Discharge:	Sample Type: Grab

pH(00400)	Conductivity(Uncorr.)	Water Temp.(00010)	Conductivity at 25°C (00094)
8	1000 µmho	22 °C	µmho

FIELD COMMENTS: Sample from valve at bottom of storage tank

SAMPLE FIELD TREATMENT Check proper boxes:		LAB ANALYSIS REQUESTED:
☒ **WPN:** Water Preserved w/HNO_3 Non-Filtered	☐ **WPF:** Water Preserved w/HNO_3 Filtered	☒ **ICAP Scan** Mark box next to metal if AA is required.

ANALYTICAL RESULTS (MG/L)

ELEMENT	ICAP VALUE	AA VALUE	ELEMENT	ICAP VALUE	AA VALUE
Aluminum	<0.1		Silicon	5.1	
Barium	<0.1		Silver	<0.1	☐
Beryllium	<0.1		Strontium	<0.1	
Boron	0.2		Tin	<0.1	
Cadmium	<0.1	☐	Vanadium	<0.1	
Calcium	1.1		Zinc	<0.1	
Chromium	<0.1	☒ <0.005	Arsenic		☐
Cobalt	<0.05		Selenium		☐
Copper	<0.1		Mercury		☐
Iron	1.1				☐
Lead	<0.1	☒ <0.01			☐
Magnesium	<0.1				☐
Manganese	<0.05				☐
Molybdenum	<0.1				☐
Nickel	<0.1				☐

LAB COMMENTS: ~~Sent intact. Broke by JA 6/14/88~~ No seal JA. 7/5/88 DIGESTED.

For OCD Use:
Date Owner Notified: 8/5/88
Phone or Letter?
Initials: RT

ICAP Analyst JB
Date Analyzed 7/15/88

Reviewer
Date Revejved 7/25/88

NOTICE OF PUBLICATION

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plans have been submitted for renewal or approval to the Director of the Oil Conservation Division, State Land Office Building, P. O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-7) El Paso Natural Gas Company, Jal #4 Gas Processing Plant, John C. Bridges, Manager, Environmental Engineering Group, P.O. Box 1492, El Paso, Texas 79978, has submitted an application for renewal of its previously approved discharge plan for its Jal #4 Gas Plant located in Sections 31 and 32, Township 23 South and Sections 5 and 6, Township 24 South, Range 37 East (NMPM), Lea County, New Mexico. The plant is not in operation at this time and start up is not anticipated in the foreseeable future. If the plant were to begin operation, approximately 98,000 gallons per day of process waste water would be disposed on in an OCD-approved injection well located at the plant site. The total dissolved solids content of the waste water is approximately 1100 mg/l. Groundwater most likely to be affected by an discharge at the surface is at a depth of approximately 105 feet with a total dissolved solids content of approximately 750 mg/l.

(GW-47) Sunterra Gas Processing Company, Lybrook Gas Plant, John Renner, General Manager, P.O. Box 1869, Bloomfield, New Mexico 87413, has submitted for approval a groundwater discharge plan application for its Lybrook Gas Plant located in the NW/4, NW/4, Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Approximately 3200 gallons per day of process wastewater is proposed to be disposed of into existing unlined ponds located on the eastern boundary of the plant property. The total dissolved solids concentration of the wastewater is approximately 8500 milligrams per liter (mg/l). Groundwater most likely to be affected by any discharge at the surface is at a depth in excess of 200 feet with a total dissolved solids concentration of 700 mg/l. The discharge plan addresses management of the ponds, including monitoring, and how spills, leaks and other discharges to the ground will be handled.

(GW-48) Davis Gas Processing Company, Donald K. Judd, Agent, 211 N. Colorado, Midland, Texas 79971, has submitted for approval a groundwater discharge plan application for its Denton Gas Plant located in the SE/4, Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 750 gallons per day of process wastewater will be collected and stored on site in storage tanks prior to disposal in an OCD-approved contract injection well. The total dissolved solids concentration of the wastewater is approximately 2000 milligrams per liter (mg/l). Groundwater most likely to be affected by any discharge at the surface is at a depth of approximately 40 feet with total dissolved solids concentration from 610 to 1600 mg/l. The discharge plan addresses how spills, leaks and other discharges to the ground will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 9th day of February. To be published on or before February 24, 1989.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY, Director

S E A L

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

December 13, 1988

Mr. William J. LeMay, Director
Oil Conservation Division (OCD)
Energy, Minerals and Natural
Resources Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lybrook Gas Plant
Waste Water Discharge Plan GW-47

Dear Mr. LeMay:

Enclosed are four (4) copies of the Waste Water Discharge Plan for application for Sunterra's Lybrook Gas Plant.

I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate and complete to the best of my knowledge and belief.

I look forward to working with OCD as you review our discharge application.

Sincerely,

Ron Grossarth

Ron Grossarth
Vice President and General Manager

RG/jb

Enclosures

cc: Mr. David Boyer, OCD

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

November 17, 1988

Mr. Roger Anderson
Environmental Engineer
Oil Conservation Division
New Mexico Energy, Minerals and
Natural Resources Dept.
P.O. Box 2088
State Land Office Building
Santa Fe, NM 87501

Re: Lybrook Gas Plant Discharge Plan - GW-47

Dear Mr. Anderson:

As I related to you in our phone conversation on November 14, 1988, Sunterra has revised the geohydrologic report per our meeting on September 1, 1988. Attached is a new draft reflecting our responses to your concerns. I would appreciate your review so that any necessary changes can be incorporated for our submittal of the referenced discharge plan to your office by December 14, 1988.

If further information is required, please advise.

Sincerely,

Gary L. Jordan

GLJ/ko

Attachment

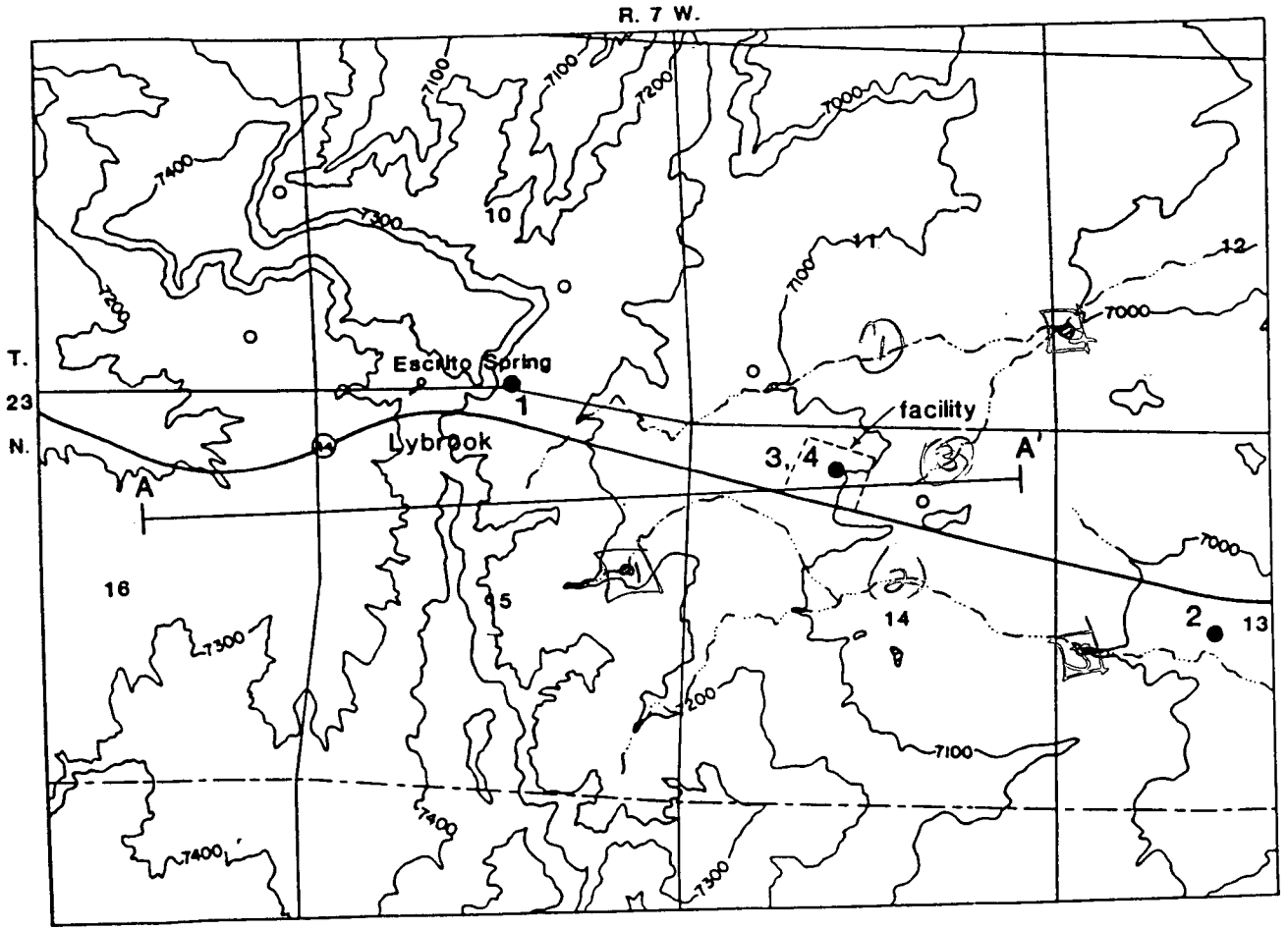
IV. Site Characteristics

A. Hydrologic Features

1. The facility is located east of Lybrook, near the southwest end of Crow Mesa, a north-south drainage divide. The facility sits on a gentle eastward-dipping slope in the Escrito Canyon drainage. The arroyo in Escrito Canyon drains to the north-northeast and is located approximately two miles east of the facility. Three arroyos are near the facility; one channel is about 1200 feet north; another is about 300 feet south; and the third originates about 100 feet east. All the drainages are normally dry. The facility and surroundings are shown on Figure 1.

Within the area defined by a boundary one mile outside the perimeter of the facility, there are no perennial streams and no permanent bodies of water (apart from the artificial ponds which are part of the facility itself). Two ponds, located northeast of the facility, receive discharge from the plant. Three sewage lagoons are present north of the plant site. These ponds receive sewage from the campsite at the plant. The USGS 7-1/2-minute Lybrook Quadrangle shows three ephemeral ponds within the one-mile radius of the site; one, about 2500 feet southwest of the site, is about 0.3 acre; a second, about 3500 feet northeast of the site, is about 0.5 acre; and a third, about 2200 feet south east of the site, is about 0.2 acre. The pond northeast of the site lies in the same drainage as the plant facility. Impact to the drainage and the ephemeral pond could result if the berms of the ponds at the facility were eroded and breached during a storm event. Berms around the ponds are over four feet higher than the drainage, south of the pond (Figure 2). The ponds are situated north of the drainage, on a south facing slope. Additionally, a third 'dry' pond, is situated between the drainage and the other ponds. Therefore, it is unlikely the ponds would be affected by flow in the drainage.

Several water wells are present in the vicinity of the facility in addition to a number of oil wells (Figure 1). Water well information was obtained from State Engineer records, Stone and others (1983), Lybrook Gas Plant records, and Lybrook Water Users Association and is summarized in Table 1. Wells are completed at depths between 1600 and 1700 feet, in the Ojo Alamo aquifer, and are unlikely to be impacted by any seepage from the ponds.



EXPLANATION

- water well listed in Table 1.
- oil well
- ephemeral pond
- A — A' line of cross-section shown on Fig. 2.

0 2000 4000 feet

SCALE

(1) Arroyo
(2) Stockpond

Exhibit 7

Figure 1. Map showing well locations and features mentioned in text.

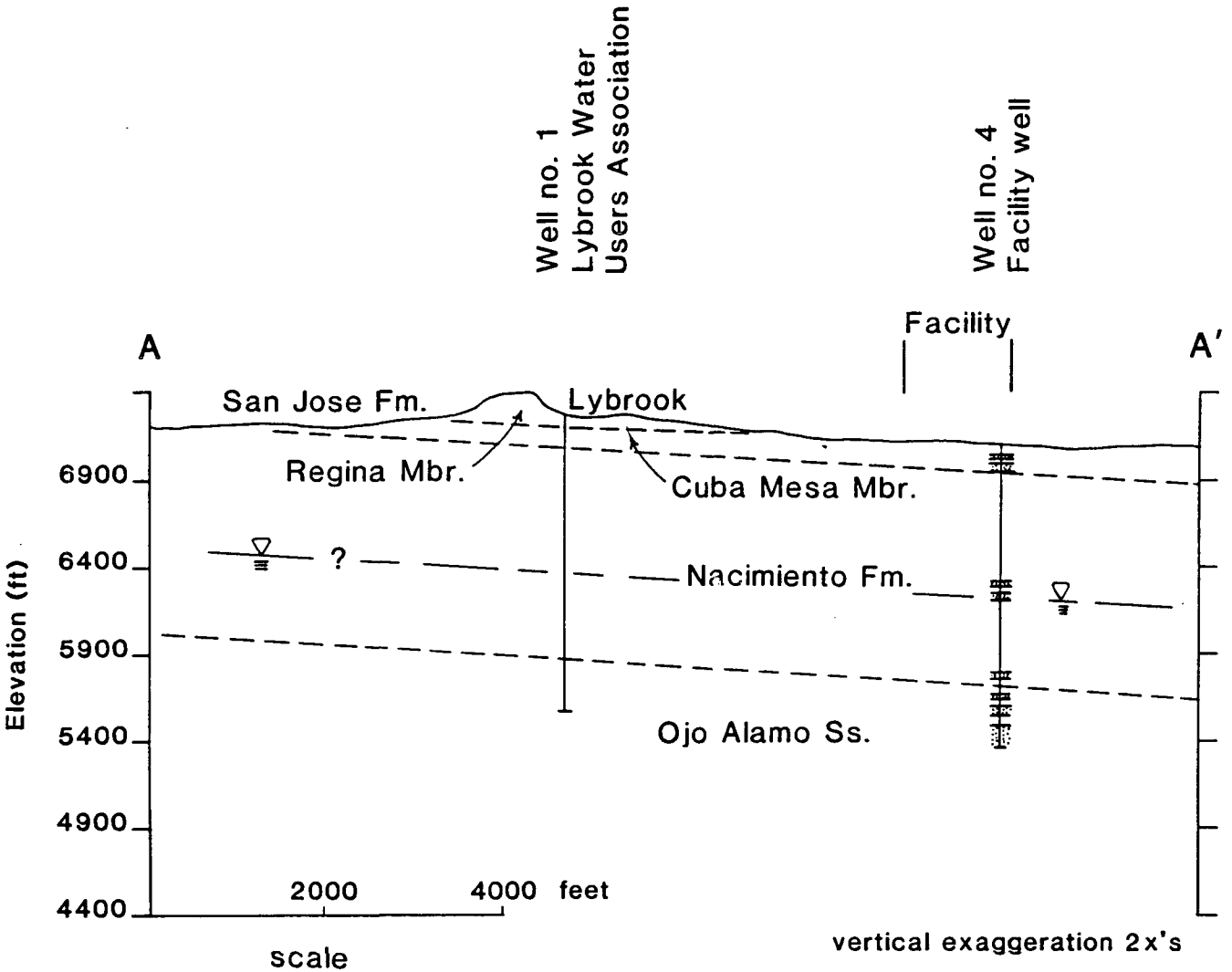


Exhibit 8

Figure 2. Cross section A–A', illustrating stratigraphy and sandstone beds beneath the facilty.

Table 1. Well records from facility and local area.

Location	Owner	Date drilled	Well depth, ft.	Depth to water, ft.	Date measured	Use	Aquifer	location number shown on Figure 1.
23.7.10.4331	Lybrook Water Users Assoc	1/ 9/71	1704	900	12/ 4/81	public supply	Ojo Alamo Ss	1.
23.7.13.3221	Berry, Homer	n/a	n/a	n/a	n/a	stk	Ojo Alamo Ss	2.
23.7.14.1	Lybrook Inn	n/a	1700	180	/ /56	abandoned (?)	Ojo Alamo Ss(?)	
23.7.14.1232	Sunterra Gas Plant	n/a	1650	816	10/16/57	abandoned	Ojo Alamo Ss	3.
23.7.14.1232	Sunterra Gas Plant	n/a	1700	899	7/24/75	dom/ind	Ojo Alamo Ss	4.
23.7.15.	El Paso Station	n/a	n/a	200	8/ /56	n/a	Nacimiento Fm	

Ground water discharges from Escrito Spring, located about one-mile west of the facility, on the west side of the drainage divide. Discharge is probably from perched bodies of ground water in the San Jose Formation which are recharged by precipitation on the mesa top. Geologic and hydrogeologic conditions are described in greater detail in a following section.

2. The facility rests on, or in close proximity to, the contact between the Regina Member and basal Cuba Mesa Member, both of the San Jose Formation (Eocene). The Regina Member consists of variegated shales and tan to white sandstones. One of the sandstone beds forms the mesa west of the facility. In the vicinity of the facility, the Cuba Mesa Member appears to consist predominantly of slope-forming shales. The San Jose Formation sits disconformably on the shales and sands of the Nacimiento Formation (Paleocene) (Manley and others, 1987). Lithologies of the Nacimiento Formation and Ojo Alamo Sandstone beneath the facility were interpreted from gamma-ray and neutron logs of the Lybrook Water well no. 2 (no other logs were run and lithologic data, if collected, was not located). Interpreted subsurface relationships are shown on cross section A-A' (Figure 2).

Ground water, in closest proximity to the ponds into which water from the facility is placed, is the shallow perched water in the San Jose Formation and/or underlying Nacimiento Formation beneath the site. From test borings at the site, perched water, if present, must be greater than 50 feet below land surface. The El Paso Station well (see Table 1), which is thought to be located west of the facility, is reportedly completed in the Nacimiento Formation and the depth to water was 200 feet in August of 1956 (Stone and others, 1983). This may represent the top of the potentiometric surface in the Nacimiento Formation.

The aquifer utilized as a water supply for the facility, Lybrook Water Users Association and nearby ranchers, is in the Ojo Alamo Sandstone. Depth to water, measured in the well at the facility, was 899 feet July 24, 1975.

Available data indicates sandstone transmissivities in the Regina and Cuba Mesa Members of the San Jose Formation and in the Nacimiento Formation, might range from 40 to 120 ft^2/day (Stone and others, 1983). Vertical hydraulic conductivities in and between sandstone beds are expected to be orders of magnitude less than in the horizontal direction.

Ground-water quality data, in the area of the facility, are limited. Stone and others (1983) report specific conductance values ranging from 950 to 1500 micromhos/cm for

ground waters in the Nacimiento Formation. An analysis of ground water from a Lybrook well completed in the Ojo Alamo aquifer is as follows;

well location	23.7.14.1	
date sampled	10/24/74	
spec. cond.	1130	micromhos/cm
pH	9.1	stnd. units
Ca	1.7	mg/l
Mg	0.0	"
Na	250.	"
K	0.9	"
HCO3	318.	"
CO3	31.	"
SO4	230.	"
Cl	7.5	"
F	1.3	"
SiO2	13.	"
NO3	-	
PO4	2.1	"
Fe	.02	"
Mn	.01	"
TDS	695	

Soils at the facility are poorly developed and appear to be relatively thin. Several small holes were dug with a shovel, immediately east of the eastern property line and the ponds to examine the nature, thickness and moisture content of the soils. The soil profile is generally less than a few feet thick and consists of light brownish-gray or light brown fine-grained sandy loam. Dark reddish-brown clay with white calcareous (?) streaks was encountered in one hole. Soils were relatively dry. A small amount of seepage was noted at the base of the embankment, between two of the ponds, approximately two feet above the natural ground level. Small draws and channels between and east of the ponds were dry.

Five, five-inch diameter holes, S-1, S-2, S-3, S-4 and S-5 were drilled to depths of 50 feet to obtain information concerning; lithologies of subsurface sediments; stratigraphic relations; ground-water conditions; and evidence of subsurface contamination (locations shown in Figure 3). An attempt to collect core samples from bore hole S-1 proved unsuccessful, due to the unconsolidated nature of the samples. Therefore, the other holes were drilled using air-rotary methods. Water was injected in some instances, to aid in lifting cuttings from the bore holes.

Subsurface sediments consisted principally of fine-grained sands, with some interbedded medium- to coarse-grained sands and gravels. Also present in the borings were intervals of clay (or shale), silty clay, and clayey silt.

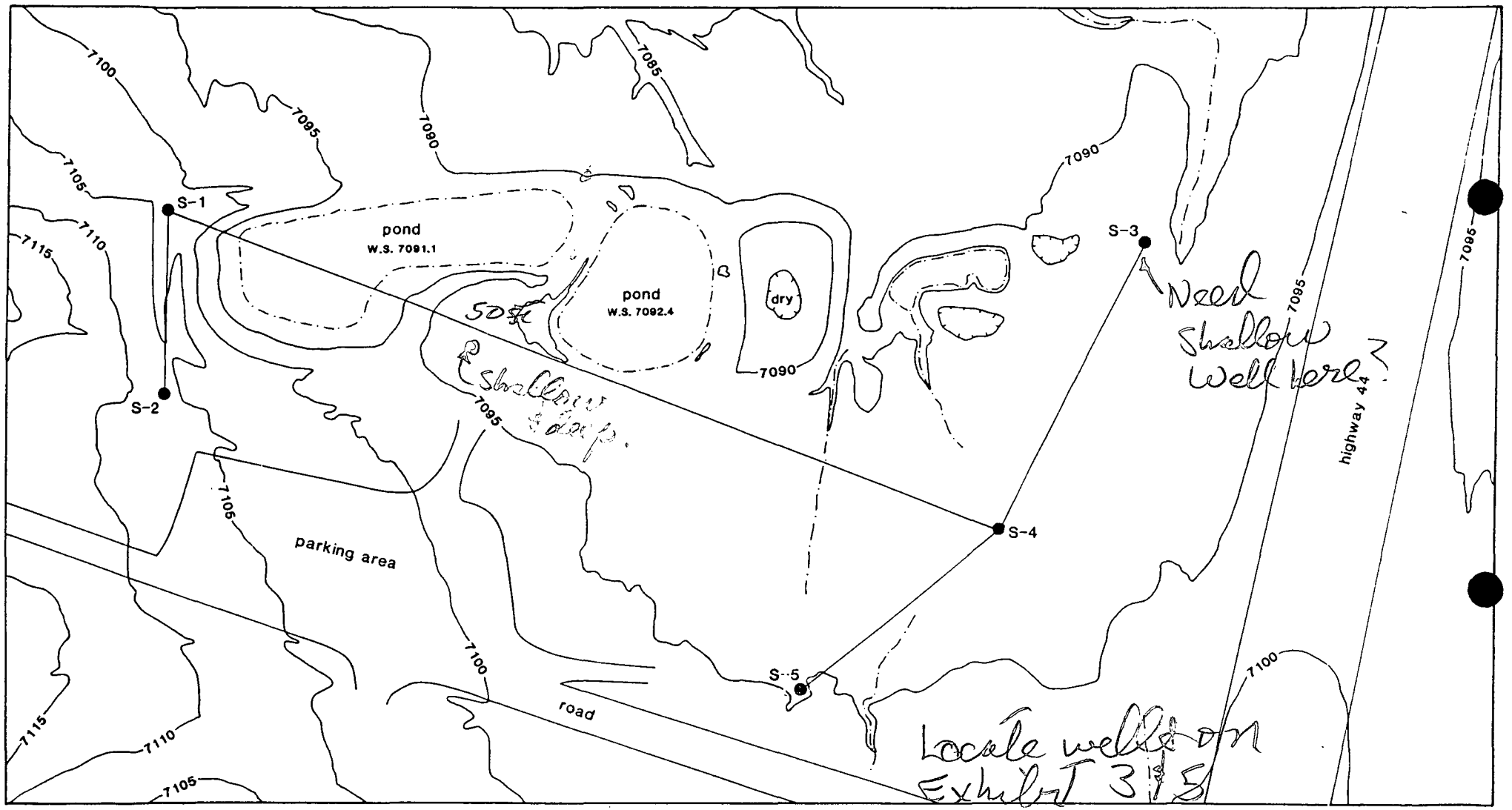


Figure 3. Topographic map of pond area, Lybrook Plant site; showing drill-hole locations and section lines (see Figure 4).

In general, three thin, clay-rich intervals were encountered in the bore holes. These intervals are believed to extend beneath the pond areas (Figure 4). Clay-rich intervals ranged in thickness from a few inches to nearly five feet. Logs of the borings are included in Appendix.

Unsaturated conditions were encountered in the five borings. Moisture content of the sediments, upon visual inspection, seemed higher near the surface, and in zones immediately above and at the top of clayey intervals.

Black, hydrocarbon-stained sediments were encountered in an interval from three- to eight- feet below ground surface in bore hole S-5. Bore hole S-5 is located in the drainage area, east of the plant. Exact source and extent of this contamination is not known. A clay interval at eight-foot depth, appears to have inhibited downward migration of the contamination. Some hydrocarbon contamination was also noted in bore hole S-4; from 2 to 3.5 ft; and from 15 to 16 ft. Contamination was not observed in any of the other bore holes.

Monitor wells were constructed in the holes and consisted of; a ten-foot section of two-inch diameter, machine-slotted (0.010-inch), PVC screen, placed near the bottom of the hole (except for S-2; screened from 20 to 30 feet); two-inch diameter PVC casing to the top of the hole; Colorado Silica Sand, no. 20, placed as gravel pack in the annulus, around the screen section; powdered bentonite placed in the annulus, above the gravel pack; backfilled the annulus with cuttings to within about eight feet of the surface; cemented the annulus to the top of the hole above the cuttings; and placed a six-inch diameter steel pipe over the well head.

It appears pond water has not and probably will not migrate significant distances, in the subsurface, from the ponds. Nearness and apparent fine-grained, clay-bearing sedimentary intervals beneath the area, should inhibit vertical migration of fluids. It is proposed the monitor wells, installed at the site, be maintained and monitored on a quarterly basis. Monitoring would involve determining whether or not a fluid is present in the wells. If a fluid is present, fluid levels would be determined and samples would be collected and analyzed for major-ions and volatile-aromatic hydrocarbons.

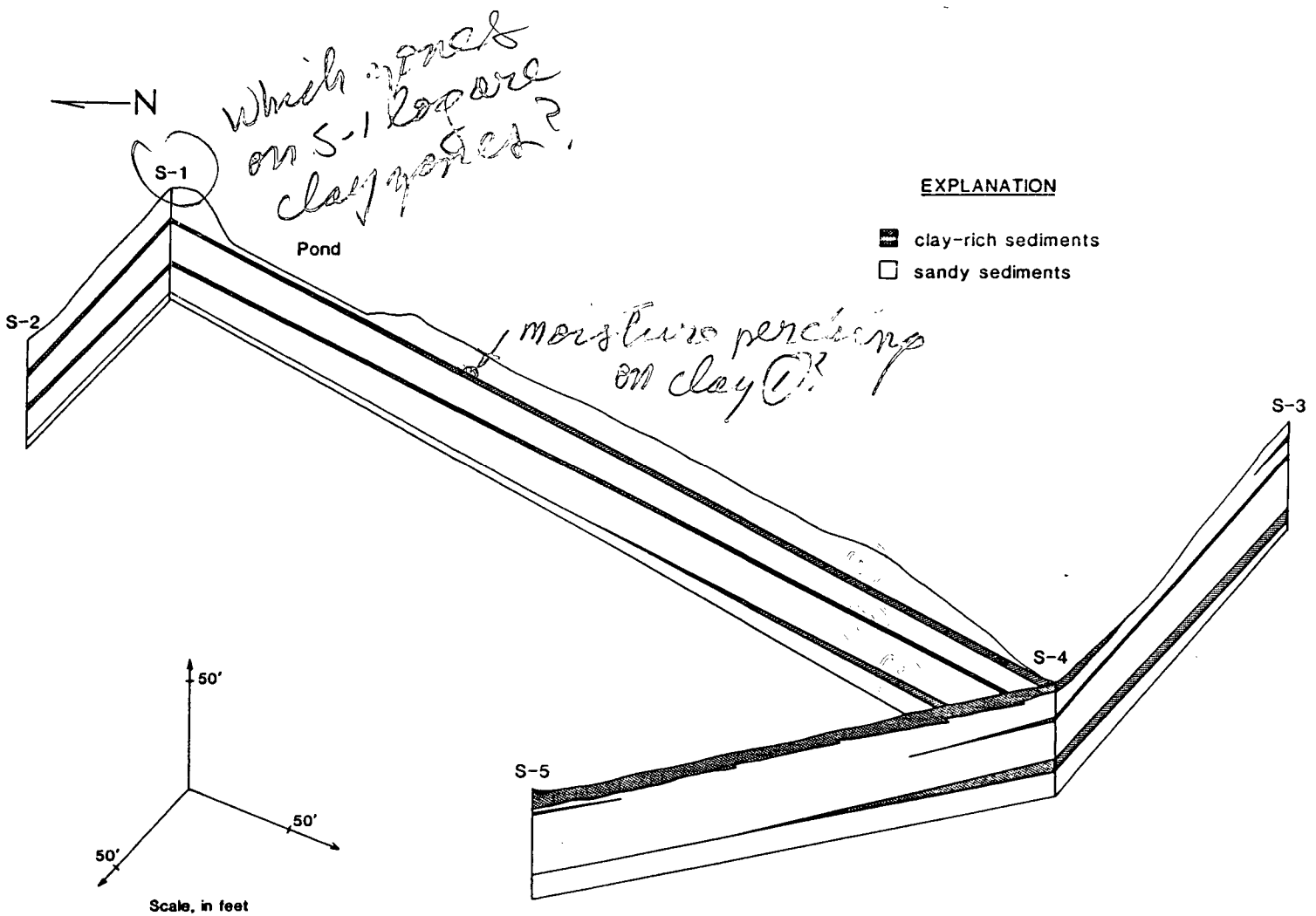


Exhibit 10

Figure 4. Fence diagram illustrating subsurface relations encountered, pond area, Lybrook Plant site.

APPENDIX

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunterra Plant; NE corner of property; NE of ponds

WELL NO. S-1
____ SEC. ____ TWP. ____ RGE. ____
ELEV.(GL) ____ (KB) ____

DATE 9-20-88

4 7/8-in dia. bit and 3-in dia core

Top 7104

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
7101-7104		0	3	3	sand, fn-gr., brn, moisture at ±1'	air rotary
7096-7099		3	8	5	sand, fn-gr, tan, dry	no recovery in 5' core barrel
7091-7096		8	13	5	sand, fn- to med- gr., lt. brn, dry	no recovery
7086.5-7091		13	14.5	1.5	sand, fn-gr., silt, dry to sltly. mst.,	~60% recovery in core barrel
7085-7086.5		14.5	16	1.5	sand, fn-gr., buff, clay, gry-brn, interbedded, clay increases from 14.5'-16'; dry	
[illegible]		16	17	1	clay, gry, some silt	injected water to hold hole; ±1' of fill in hole blew to clean hole; went in with 15' core barrel
7073-7087		17	31	14	sand, fn-gr, lt brn, silt, purple sand fragments at 29-31	40% recovery
7058-7073		31	46	15	silty sand, fn-gr., lt brn, dry	0.5% recovery
7054-7058		46	50	4	sandstone, fn-med-gr., lt. brn, dry	drilled with air

well completion:
4.9' - 39'; 2" dia PVC screen; 0.010 slt
39 - top; " " " casing; glued
2 sks; #20 Colorado silica sand in annulus
1 sk.; powdered bentonite
back filled to ±8'
cement to top
placed 4"-dia steel pipe over casing; padlock on 2" cap.

9-21-88; 08:25; casing dry
9-23-88 " "

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunterra Plant; NW of ponds

top 7106

4 1/8"

~~5 5/8" dia bit~~

DATE 9-20-88

WELL NO. S-2

SEC. ____ TWP. ____ RGE. ____

ELEV.(GL) ____ (KB) ____

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
7105-7106		0	1	1	sand, fn-gr, brn; dry	drilled with air
7104-7105		1	2	1	clay, brn, silty	
7099-7104		2	7	5	sand, fn-gr., brn, dry	
7096-7099		7	10	3	sand, fn-gr, tan-buff; interbedded sand, fn-gr., brn, dry	
7090-7096		10	16	6	sand, fn-to crse-gr., lt. brn, moistvre at 13';	
7089-7090		16	17	1	clay, gry-brn, silty, moist	
7084-7089		17	22	5	sand, fn-gr, tan; interbedded clay, gry-brn, dry	
7082-7084		22	24	2	sand, fn-gr, gry-brn, dry	
7081-7082		24	25	1	sand, fn-gr, lt. brn, dry	
7080-7081		25	26	1	sand, fn-to med-gr., gry, dry	
7077-7080		26	29	3	sand, fn-crs-gr, buff to white, dry	
7076-7077		29	30	1	sand, fn-gr, buff to white, interbedded shale, dk gry, dry	
7061-7026		30	45	15	sandstone, fn- to crs- gr., buff-wht., dry	drill chatter
7058-7061		45	48	3	same, interbedded shale, dk gry-brn, fissle, dry	
7056-7058		48	50	2	sandstone, fn-gr, white-buff, dry	
					well completion	
					30'-20'; 2"-dia PVC screen; 0.010 slt	
					20'-top; " " " casing; glued	
					backfilled hole to ± 30'	
					2 sks; #20 Colorado Silica Sand	
					1 sk; powdered bentonite	
					backfilled to ±8' depth	
					cement to top	
					set 6"-dia steel casing over well; padlock on cap.	
					9-21-88; 08:30; casing dry	
					9-23-88 " "	

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunterra Plant; S. side of ponds, SE corner.
WELL NO. S-3
SEC. ____ TWP. ____ RGE. ____
DATE 9-21-88
ELEV.(GL) ____ (KB) ____

7091 Top

11 7/8"-dia bit

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
7085-7091		0	5.5	5.5	silty sand, fn-gr., buff, dry with moisture increasing at 1' to 5.5'; moist	air rotary
7084-7085.5		5.5	7	1.5	clayey silt, gry-brn, moist	slow drlng
7081-7084		7	10	3	claystone, gry brn, dry to slitly moist	
7076-7081		10	15	5	sand, fn-gr., tan, moist, interbedded clay, gry-brn	
7074-7076		15	17	2	claystone, gry-brn, dry	
7066-7074		17	25	8	sand, fn-gr., tan, dry	
7059-7066		25	37	12	sand, fn- to crs-gr., tan, dry	
7050-7054		37	41	4	sand, ± gravel (1/4"-1/2" dia.), crs- to med-gr.; lt brn,	injected water after loss of circulation; material very dry.
7047-7050		41	44	3	shale, gry-brn	
7045-7047		44	46	2	sandstone, med- to crse-gr, tan	
7044-7045		46	47	1	shale, gry-brn	
7042-7044		47	49	2	sandstone; crs- to fn-gr., poorly sorted	
7041-7042		49	50	1	sandstone, fn-gr, buff, dry	

well completion:
48' to 38'; set 2"-dia PVC screen; 0.010 slt
38' to top; " " " " casing; glued
2 sks, #20 Colorado silica sand
1 sk; powdered bentonite
backfilled to ±8'
cement to top
set 6"-dia steel pipe over well; padlock on cap.

9-21-88; 12:15 dry casing
9-23-88 " "

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunterra Plant; S-side of ponds

WELL NO. S-4
SEC. TWP. RGE.
ELEV.(GL) (KB)

Top 7093

DATE 9-21-88

4 7/8"-dia bit

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
7091.5-7093		0	1.5	1.5	silty clay, brn, moist	drilled with air
7091-7091.5		1.5	2	0.5	clay, gry, wet	
7089.5-7091		2	3.5	1.5	silty clay, gry, stained with hydrocarbons, odor; very moist	
7078-7089.5		3.5	15	11.5	sand, fn- to med-gr., brn, moist	
7077-7078		15	16	1	sand; fn- to crs-gr., gry-brn, minor hydrocarbon odor; moist	
7076-7077		16	17	1	clay, gry-brn, moist	
7072-7076		17	21	4	sand, fn-gr., brn, moist	
7071-7072		21	22	1	sand, fn-gr., tan to buff, dry	
7066-7071		22	27	5	same, fn- to med-gr., dry	
7062-7066		27	31	4	sand, med- to crs-gr, (gravel; 1/4"-1/2" dia), tan, dry	
7061-7062		31	32	1	sand, fn- to med-gr., tan dry	
7059-7061		32	34	2	sandstone, ± gravel (1/4"-1/2" dia), med- to crs-gr, buff, slt moist.	drill chatter
7056-7059		34	37	3	shale, gry-brn, fissle, dry	
7055-7056		37	38	1	silty claystone; gry-grn, dry	
7051-7055		38	42	4	sandstone, fn-gr., buff, interbedded claystone, dk gry-brn, dry	
7047-7051		42	46	4	sandstone, fn-gr., buff-tan, dry	
7046-7047		46	47	1	sandstone, fn- to med-gr., buff, dry	
7045-7046		47	48	1	sandstone, med- to crs-gr., gry-brn, slt. moisture	
7043-7045		48	50	2	clayey siltstone, brn, dry	

well completion:
50'-40'; 2"-dia PVC screen; 0.010 slot
40'-top; 2" " " casing; glued
2 sks; #20 Colorado Silica Sand
1 sk; powdered bentonite
backfilled to ±8'
cement to top
set 6"-dia steel pipe over well; padlock cap

9-21-88; 13:00 casing dry
9-23-88 " "

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

Sunterra Plant; S.-side of ponds, SW corner

WELL NO. S-5

____ SEC. ____ TWP. ____ RGE. ____

ELEV.(GL) ____ (KB) ____

Top 7095

DATE 9-21-88

4 7/8"-dia bit

Core No	Sample	DEPTH FROM	DEPTH TO	THICKNESS	LITHOLOGY	REMARKS
7094.5-7095		0	0.5	0.5	sand, fn-gr, buff, dry	drilled with air
7094-7094.5		0.5	1	0.5	silty clay, gry-brn, moist	
7092-94		1	3	2	clay, gry-brn, dry	
7091-92		3	4	1	silty clay, black, moist; hydrocarbon stained; strong odor	
7090-91		4	5	1	sand, fn-gr, black, hyd. stain, odor, moist	
7087-90		5	8	3	clay, black, moist, hyd. stain, odor, silty	
7085-87		8	10	2	clay, gry-brn, moist	
7083-85		10	12	2	silty sand, fn-gr., gry, moist	
7082-83		12	13	1	silty clay, gry, moist	
7081.5-82		13	13.5	0.5	silty clay, brn, dry	
7079.5-81.5		13.5	15.5	2	sand, fn-gr, tan, dry	
7068-79.5		15.5	27	11.5	sand, fn-gr, brn, dry	
7063-68		27	32	5	sand, fn. to med-gr., buff, dry	
7054-63		32	41	9	sandstone, med- to crs-gr, buff to tan, dry	
7053-54		41	42	1	silty claystone, gry-grn, dry	
7051-53		42	44	2	sandstone, fn-gr., buff, dry	
7050-51		44	45	1	same, med- to crse-gr., gravel (1/4"), buff, dry	
7045-50		45	50	5	same, fn-gr, dry	

well completion:
48'-38'; 2" dia PVC screen; 0.010 sl.
38' to top; " " " casing; glued
2 sks, #20 Silica sand
1 " pwdrd. bentonite
backfilled to ± 8'
cement to top
set 6"-dia steel casing over well; padlock on cap.

9-21-88 casing dry
9-23-88 " "

Memo

From
DAVID G. BOYER
Hydrogeologist

To

I need to have some specific information on the bedrock on which the ponds sit. Is it a sandstone bed, or slope forming shales? Some coring (maybe up to 50 feet) may be required near the ponds to determine near surface bedrock composition, and presence of perched water.

Oil Conservation Division
P.O. Box 2088 Santa Fe, N.M. 87501

IV. Site Characteristics

A. Hydrologic Features

1. Within the area defined by a boundary one mile outside the perimeter of the facility, there are no permanent bodies of water (apart from the artificial ponds which are part of the facility itself), and no perennial streams. The USGS 7-1/2-minute Lybrook Quadrangle shows three ephemeral ponds within the one-mile radius of the site; one, about 2500 feet southwest of the site, is about 0.3 acre; a second, about 3500 feet northeast of the site, is about 0.5 acre; and a third, about 2200 feet south east of the site, is about 0.2 acre.

Are any of these likely to be impacted by any surface release?

The facility is located east of Lybrook, near the southwest end of Crow Mesa, a north-south drainage divide. The facility sits on a gentle eastward-dipping slope in the Escrito Canyon drainage. The arroyo in Escrito Canyon drains to the north-northeast and is located approximately two miles east of the facility. Three arroyos are near the facility; one channel is about 1200 feet north; another is about 300 feet south; and the third originates about 100 feet east. All the drainages are normally dry. The facility and surroundings are shown on Figure 1.

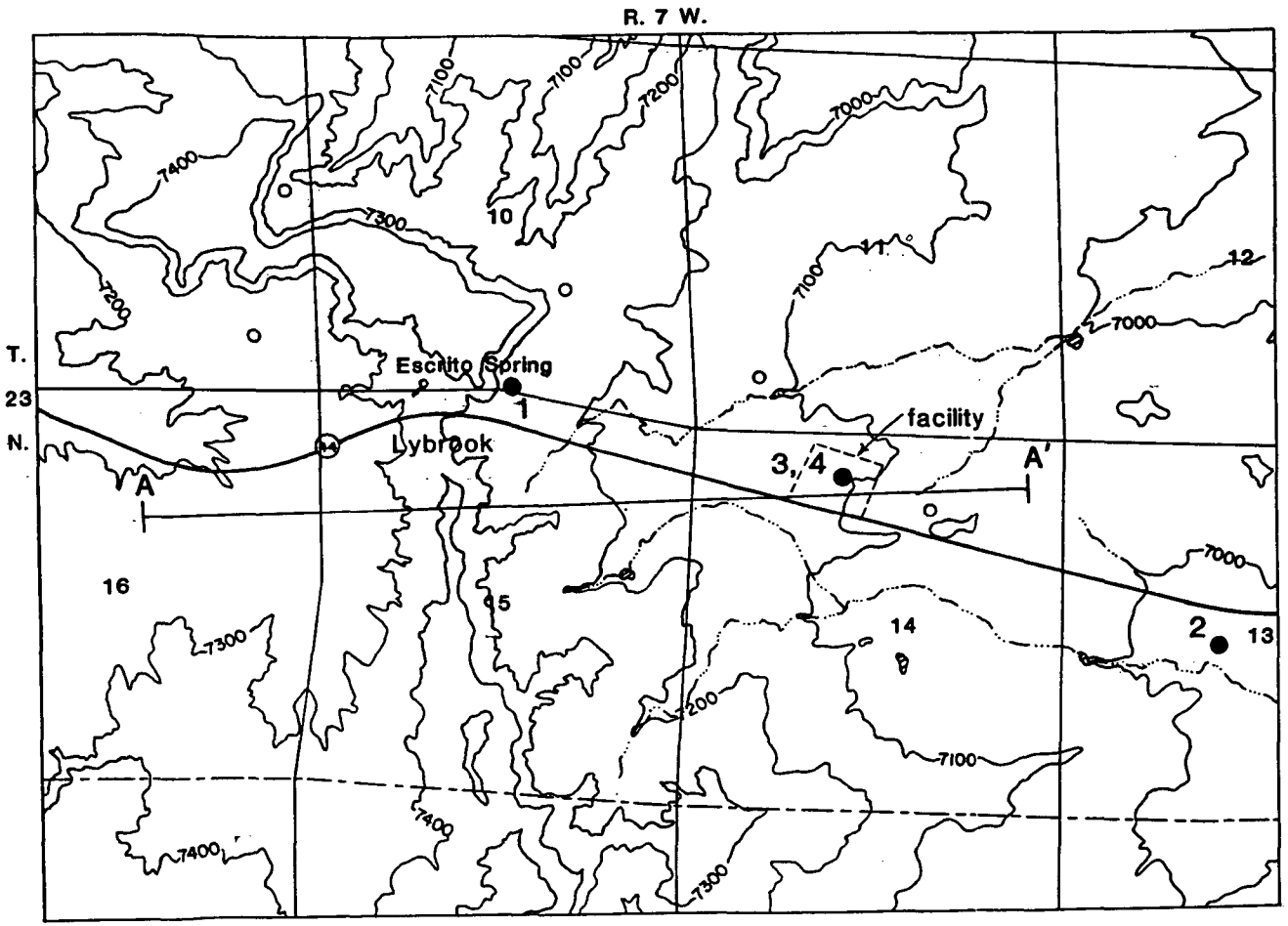
Several water wells are present in the vicinity of the facility in addition to a number of oil wells (Figure 1). Water well information was obtained from State Engineer records, Stone and others (1983), Lybrook Gas Plant records, and Lybrook Water Users Association and is summarized in Table 1.

Table 1. Well records from facility and local area.

Location	Owner	Date drilled	Well depth, ft.	Depth to water, ft.	Date measured	Use	Aquifer	location number shown on Figure 1.
23.7.10.4331	Lybrook Water Users Assoc	1/ 9/71	1704	900	12/ 4/81	public supply	Ojo Alamo Ss	1.
23.7.13.3221	Berry, Homer	n/a	n/a	n/a	n/a	stk	Ojo Alamo Ss	2.
23.7.14.1	Lybrook Inn	n/a	1700	180	/ /56	abandoned (?)	Ojo Alamo Ss(?)	
23.7.14.1232	Sunterra Gas Plant	n/a	1650	816	10/16/57	abandoned	Ojo Alamo Ss	3.
23.7.14.1232	Sunterra Gas Plant	n/a	1700	899	7/24/75	dom/ind	Ojo Alamo Ss	4.
23.7.15.	El Paso Station	n/a	n/a	200	8/ /56	n/a	Nacimiento Fm	

Need well logs, if available, for lithologic

Artesian or water table? If artesian, depth to top of confining layer



EXPLANATION

- water well listed in Table 1.
- oil well
- ephemeral pond
- A — A' line of cross-section shown on Fig. 2.

0 2000 4000 fee

SCALE

Figure 1. Map showing well locations and features mentioned in text.

Ground water discharges from Escrito Spring, located about one-mile west of the facility, on the west side of the drainage divide. Discharge is probably from perched bodies of ground water in the San Jose Formation which are recharged by precipitation on the mesa top. Geologic and hydrogeologic conditions are described in greater detail in a following section.

2. The facility rests on, or in close proximity to, the contact between the Regina Member and basal Cuba Mesa Member, both of the San Jose Formation (Eocene). The Regina Member consists of variegated shales and tan to white sandstones. One of the sandstone beds forms the mesa west of the facility. In the vicinity of the facility, the Cuba Mesa Member appears to consist predominantly of slope-forming shales. The San Jose Formation sits disconformably on the shales and sands of the Nacimiento Formation (Paleocene) (Manley and others, 1987). Lithologies of the Nacimiento Formation and Ojo Alamo Sandstone beneath the facility were interpreted from gamma-ray and neutron logs of the Lybrook Water well no. 2 (no other logs were run and lithologic data, if collected, was not located). Interpreted subsurface relationships are shown on cross section A-A'(Figure 2).

Provide a copy

No data for this well or all more for all wells?

Ground water, in closest proximity to the ponds into which water from the facility is placed, is the shallow perched water in the San Jose Formation and/or underlying Nacimiento Formation beneath the site. It is expected there is perched water in the sandstone lenses and beds from very close to the surface, down to the water table. The El Paso Station well (see Table 1), which is thought to be located west of the facility, is reportedly completed in the Nacimiento Formation and the depth to water was 200 feet in August of 1956 (Stone and others, 1983). This may represent the water table in the Nacimiento Formation.

If so, must have info on whether it is protected. Can this water be recovered by a well.

Artesian or WT

The aquifer utilized as a water supply for the facility, Lybrook Water Users Association and nearby ranchers, is in the Ojo Alamo Sandstone. Depth to water, measured in the well at the facility, was 899 feet July 24, 1975.

Available data indicates sandstone transmissivities in the Regina and Cuba Mesa Members of the San Jose Formation and in the Nacimiento Formation, might range from 40 to 120 ft^2/day (Stone and others, 1983). Vertical hydraulic conductivities in and between sandstone beds are expected to be orders of magnitude less than in the horizontal direction.

Ground-water quality data, in the area of the facility, are limited. Stone and others (1983) report specific conductance values ranging from 950 to 1500 micromhos/cm for

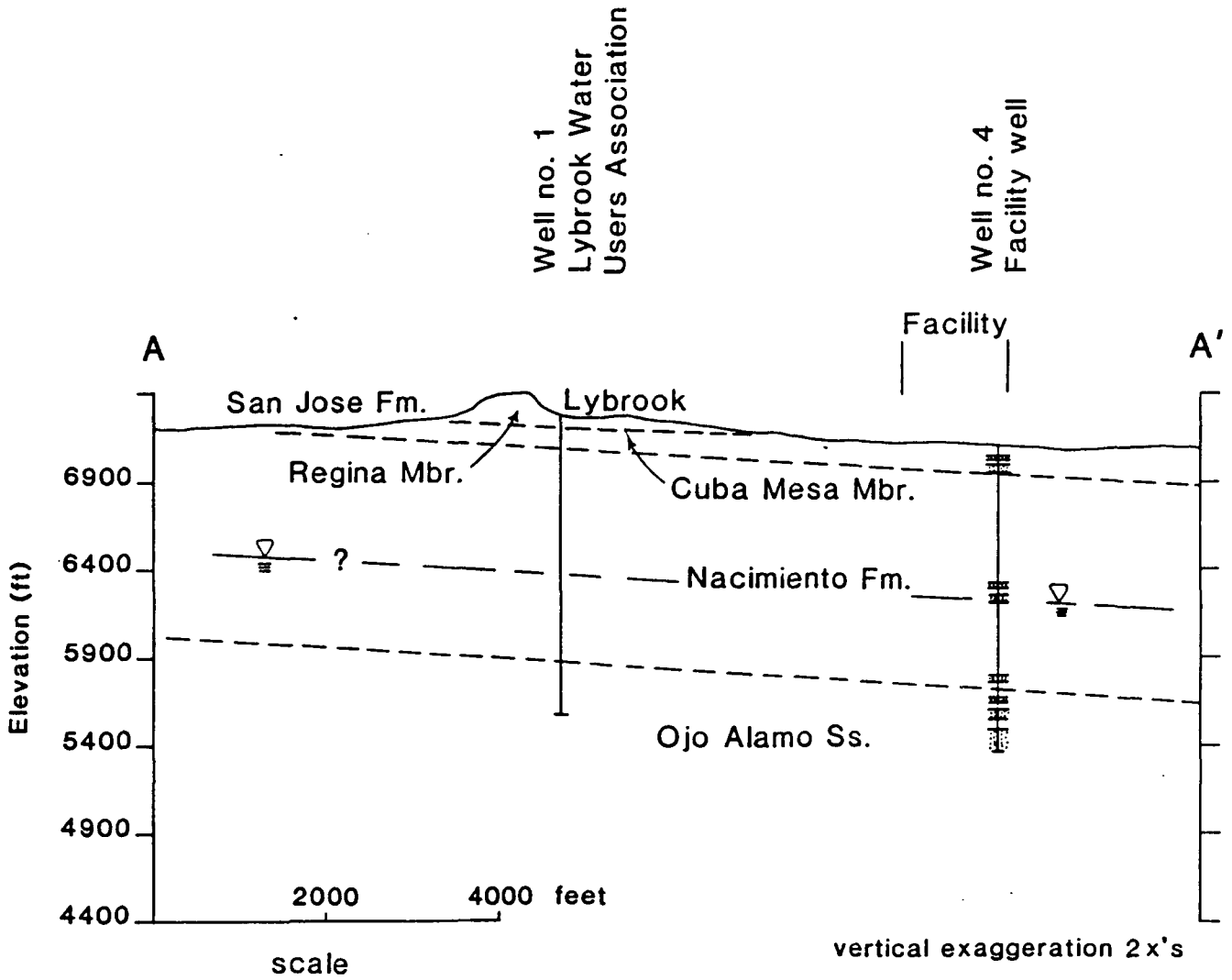


Figure 2. Cross section A–A', illustrating stratigraphy and sandstone beds beneath the facilty.

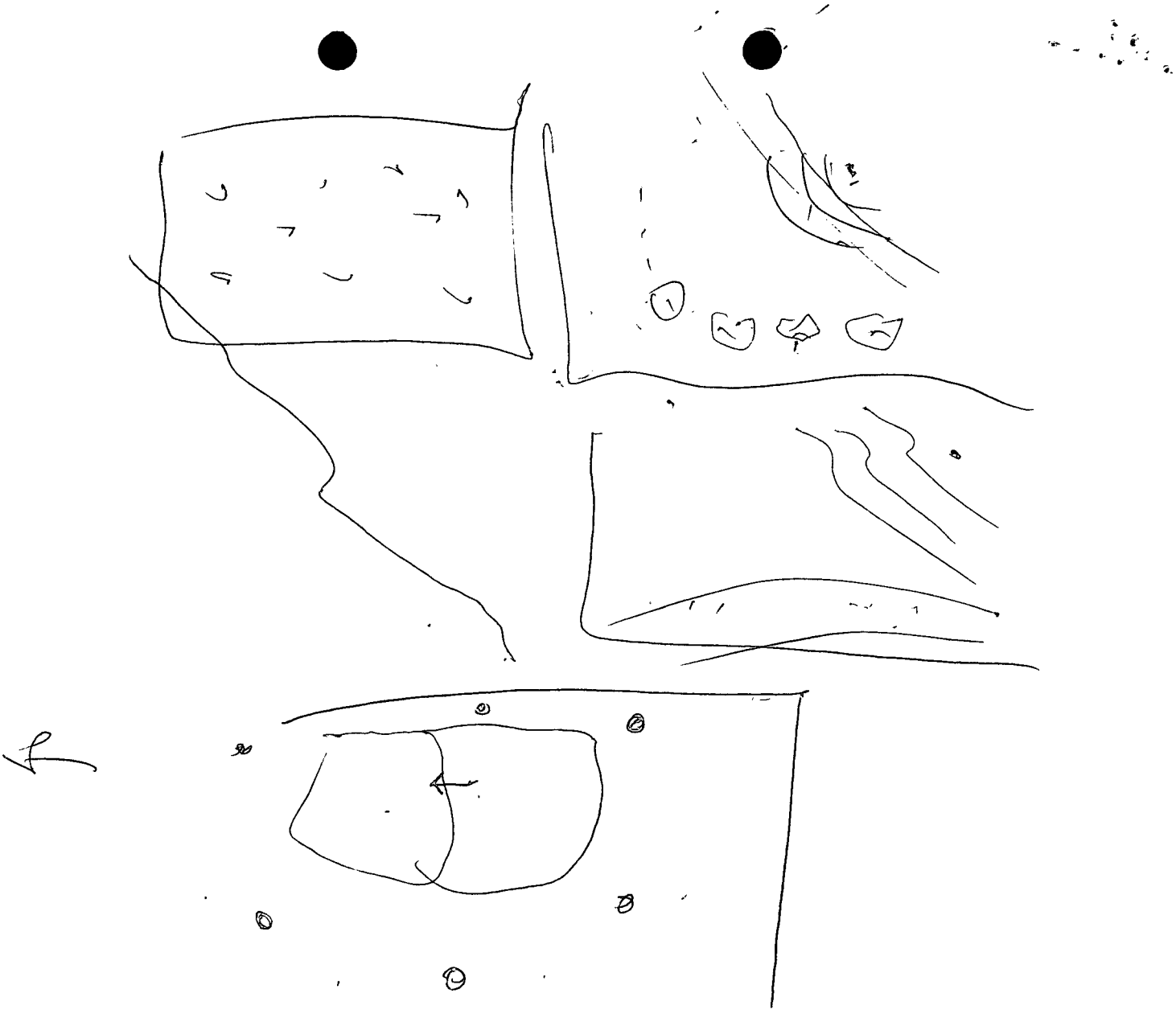
ground waters in the Nacimiento Formation. An analysis of ground water from a Lybrook well completed in the Ojo Alamo Sandstone is as follows;

well location	23.7.14.1	
date sampled	10/24/74	
spec. cond.	1130	micromhos/cm
pH	9.1	stnd. units
Ca	1.7	mg/l
Mg	0.0	"
Na	250.	"
K	0.9	"
HCO3	318.	"
CO3	31.	"
SO4	230.	"
Cl	7.5	"
F	1.3	"
SiO2	13.	"
NO3	-	
PO4	2.1	"
Fe	.02	"
Mn	.01	"
TDS	695	"

Soils at the facility are poorly developed and appear to be relatively thin. Several small holes were dug with a shovel, immediately east of the eastern property line and the ponds to examine the nature, thickness and moisture content of the soils. The soil profile is generally less than a few feet thick and consists of light brownish-gray or light brown fine-grained sandy loam. Dark reddish-brown clay with white calcareous (?) streaks was encountered in one hole. The soils were relatively dry. A small amount of seepage was noted at the base of the embankment, between two of the ponds, approximately two feet above the natural ground level. Small draws and channels between and east of the ponds were dry.

It seems unlikely pond water could migrate significant distances in the subsurface at the facility. The nearness and apparent fine-grained, clay-bearing soils and shallow bedrock, would prohibit vertical and lateral flow. If some degree of seepage were to develop, clay minerals in the soils and shale beds underlying the facility, would sorb, to some degree, many of the possible organic, metal and trace element contaminants.

May need to bore about 50 ft to determine subsurface content and determine existence of perched water.



Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

August 22, 1988

Mr. Roger Anderson
Oil Conservation Division
New Mexico Energy, Minerals and
Natural Resources Dept.
P.O. Box 2088
State Land Office Building
Santa Fe, NM 87501

Re: Lybrook Gas Plant Discharge Plan - GW-47

Dear Mr. Anderson:

As we discussed previously by phone, attached is a draft of the geohydrologic section of the Lybrook Waste Discharge Plan. We would appreciate your review and would like to meet with you to discuss what revisions are required.

Please call me at (505) 768-6700 when you have completed your review.

Sincerely,

Gary Jordan

GJ/scg
Attachment

cc: J. Renner

IV. Site Characteristics

A. Hydrologic Features

1. Within the area defined by a boundary one mile outside the perimeter of the facility, there are no permanent bodies of water (apart from the artificial ponds which are part of the facility itself), and no perennial streams. The USGS 7-1/2-minute Lybrook Quadrangle shows three ephemeral ponds within the one-mile radius of the site; one, about 2500 feet southwest of the site, is about 0.3 acre; a second, about 3500 feet northeast of the site, is about 0.5 acre; and a third, about 2200 feet south east of the site, is about 0.2 acre.

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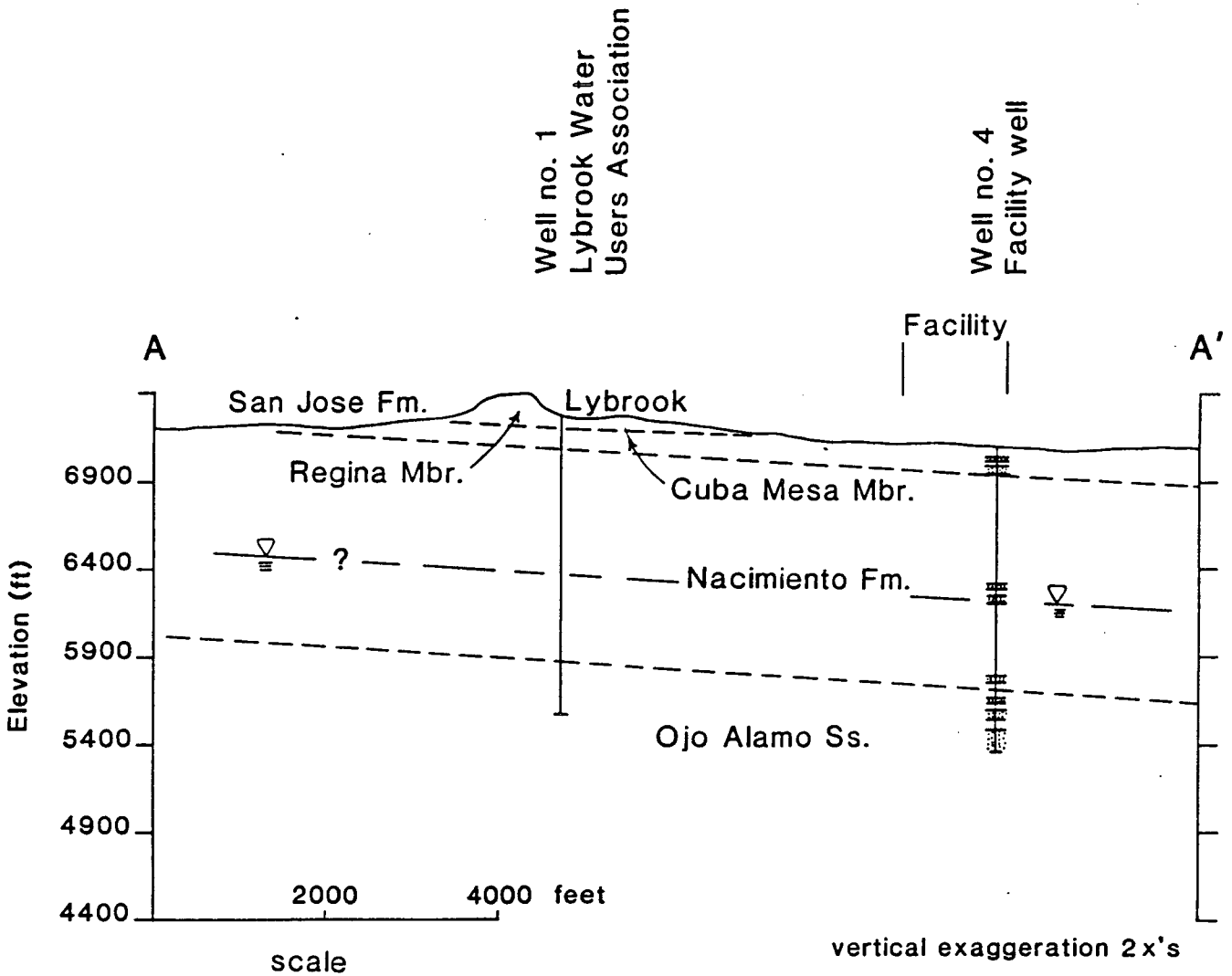

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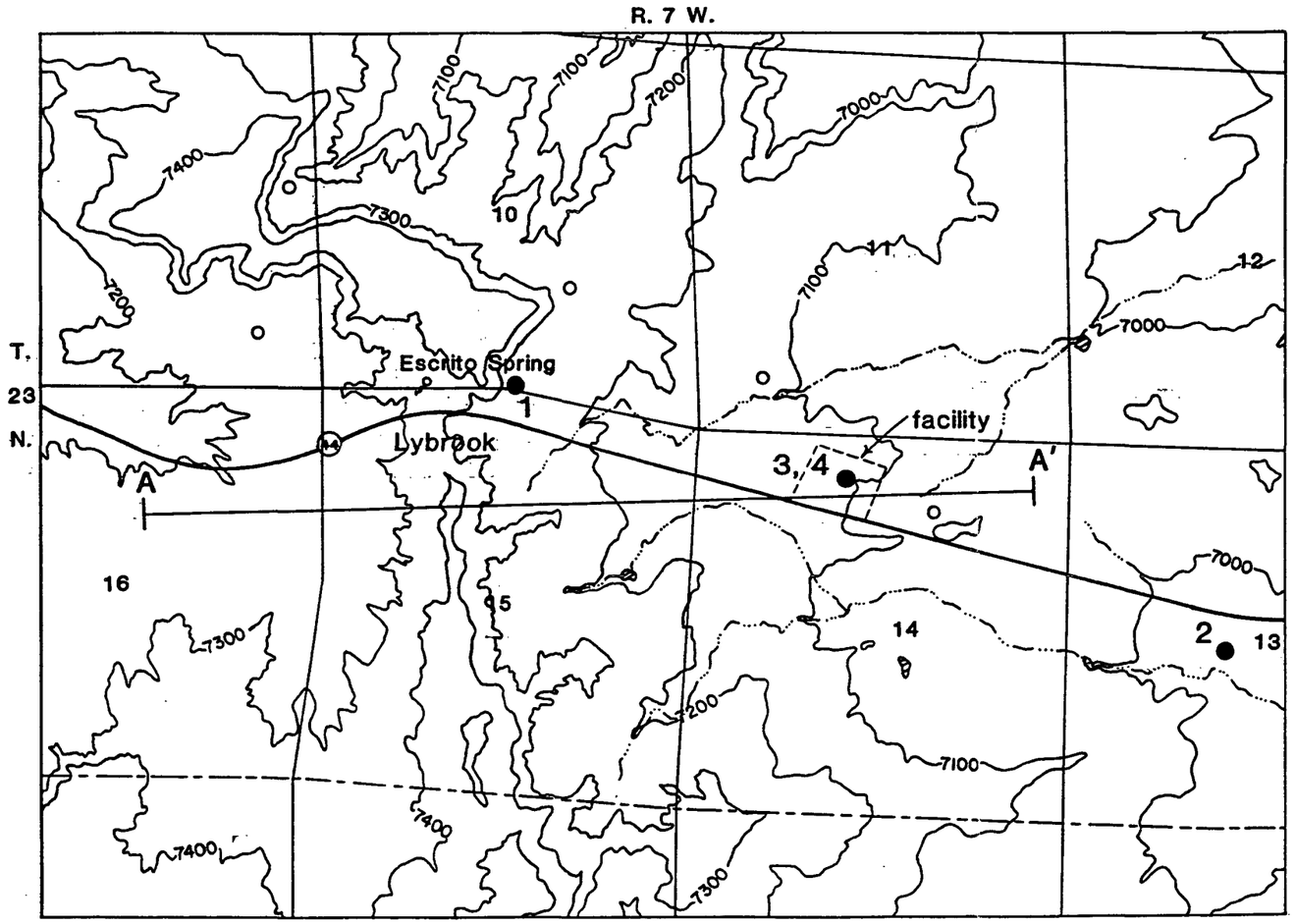

EXPLANATION

- water well listed in Table 1.
- oil well
- ephemeral pond
- A — A' line of cross-section shown on Fig. 2.

0 2000 4000 feet

SCALE

Figure 1. Map showing well locations and features mentioned in text.

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

July 22, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Gary Jordan
SUNTERRA GAS PROCESSING COMPANY
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Jordan:

The Oil Conservation Division (OCD) has received your request, dated July 14, 1988, for an extension for the submission of a discharge plan for the above referenced facility. The notification requiring the filing of a discharge plan was dated April 18, 1988.

Pursuant to Water Quality Control Commission Regulation 3-106.A. and for good cause shown, Sunterra Gas Processing Company is hereby granted an extension to December 18, 1988 for the submission of a discharge plan for your Lybrook Gas Plant. This extension is granted to allow for engineering and safety evaluation of process changes that will conserve water and reduce waste water volumes.

Pursuant to Water Quality Control Commission Regulation 3-106.A. and for good cause shown, you are further granted an extension to April 18, 1988, to discharge without an approved discharge plant.

This extension is granted to allow for receipt and review of the required discharge plan.

If you have any questions or comments. please feel free to contact Dave Boyer at (505) 827-5812 or Roger Anderson at (505) 827-5885.

Sincerely,

William J. LeMay
Director

WJL:RA:sl

cc: OCD - Aztec
John Renner, Sunterra

Sunterra GAS PROCESSING COMPANY
P.O. BOX 1869 • BLOOMFIELD, NM 87413 • (505) 632-8033

July 14, 1988

Mr. William J. Lemay, Director
Oil Conservation Division
New Mexico Energy, Minerals and
Natural Resources Dept.
P.O. Box 2088
State Land Office Building
Santa Fe, NM 87501

Re: Lybrook Gas Plant Discharge Plan - GW-47

Dear Mr. Lemay:

Your letter dated April 18, 1988, required Sunterra to prepare and submit to your office a Waste Discharge Plan for the Lybrook Gas Plant. Since receipt of your letter, Sunterra has worked diligently on defining the plant waste water discharges. We have also looked at several process changes to conserve water and reduce the volume(s) discharged. We are presently evaluating these process changes from an engineering and safety standpoint.

We request, pursuant to Section 3-106(A) of the New Mexico Water Quality Control Commission, an extension of 120 days from the due date of August 16, 1988, in order to properly evaluate the above-mentioned process changes, to submit the Waste Discharge Plan. If you approve our request, this plan will be in your office prior to December 14, 1988. We also request that we be permitted to operate without an approved discharge plan in accordance with Section 3-106(B) for 120 days after December 14, 1988 for the reasons outlined above.

If further information is required, please advise.

Sincerely,

Gary Jordan

GJ/scg

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

April 18, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. John Renner, General Manager
Sunterra Gas Processing Company
P. O. Box 1869
Bloomfield, New Mexico 87413

RE: Discharge Plan GW-47
Lybrook Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Renner:

Under the provisions of the Water Quality Control Commission (WQCC) Regulations, you are hereby notified that the filing of a discharge plan is required for your existing Lybrook Gas Plant located in Section 14, Township 23 North, Range 7 West, (NMPM), Rio Arriba County, New Mexico.

This notification of discharge plan requirement is pursuant to Sections 3-104 and 3-106 of the WQCC Regulations. The discharge plan, defined in Section 1-101.P. of the WQCC Regulations, should cover all discharges of effluent or leachate at the plant site or adjacent to the plant site. Included in the application should be plans for controlling spills and accidental discharges at the facility (including detection of leaks in buried underground tanks and/or piping), and closure plans for any ponds whose use will be discontinued.

A copy of the regulations is enclosed for your convenience. Also enclosed is a copy of an OCD guide to the preparation of discharge plans for gas processing plants. Three copies of your discharge plan should be submitted for review purposes.

Section 3-106-A. of the regulations requires a submittal of the discharge plan within 120 days of receipt of this notice unless an extension of this time period is sought and approved for good cause. Section 3-106.A. also allows the discharge to continue without an approved discharge plan until 240 days after written notification by the Director of the OCD that a discharge plan is required. An extension of this time may be sought and approved for good cause.

If there are any questions on this matter, please feel free to call David Boyer at 827-5812 or Roger Anderson at 827-5885 as they have the assigned responsibility for review of all discharge plans.

Sincerely,

William J. LeMay
Director

WJL:RA:sl

cc: OCD - Aztec
Gary Jordan, Sunbelt Mining