

NM1 - 9

MONITORING REPORTS

YEAR(S):

1999-1994

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Martynne Kiehl

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NOV 04 1999

Environmental Bureau
Oil Conservation Division

September 30, 1999

Mr. Mike Talovich
Key Energy Services, Inc.
P.O. Box 900
Farmington, New Mexico 87499

(505) 327-0416

Client No.: 98065-01
Job No.: 806501

Dear Mr. Talovich,

Enclosed are the analytical results for the sample collected from the location designated as "Disposal Water Filters". One filter media sample was collected by Key Energy Services personnel on 09/17/99, and delivered to the Envirotech laboratory on 09/20/99 for Hazardous Waste Characterization analysis (Volatile and Semi-volatile Organics, Trace Metals, Reactivity, Corrosivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 7402 and assigned Laboratory No. G099 for tracking purposes.

The sample was analyzed 09/20/99 through 09/28/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Stacy W. Sandler
Stacy W. Sandler
Environmental Scientist/Laboratory Manager

enclosure

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Key Energy Services	Project #:	806501
Sample ID:	Filter Media	Date Reported:	09-22-99
Lab ID#:	G099	Date Sampled:	09-17-99
Sample Matrix:	Filter Media	Date Received:	09-20-99
Preservative:	Cool	Date Analyzed:	09-22-99
Condition:	Cool and Intact	Chain of Custody:	7402

Parameter	Result
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IGNITABILITY: Negative

CORROSIVITY: Negative pH = 8.55

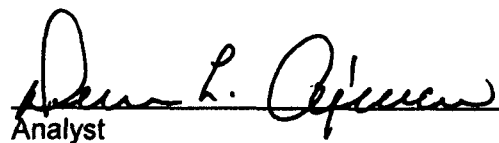
REACTIVITY: Negative

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. (i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. (i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. (i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: Disposal Water Filters.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	Key Energy Services	Project #:	806501
Sample ID:	Filter Media	Date Reported:	09-28-99
Laboratory Number:	G099	Date Sampled:	09-17-99
Chain of Custody:	7402	Date Received:	09-20-99
Sample Matrix:	TCLP Extract	Date Extracted:	09-22-99
Preservative:	Cool	Date Analyzed:	09-23-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	0.0065	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0205	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	ND	0.0003	0.5
Tetrachloroethene	ND	0.0005	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

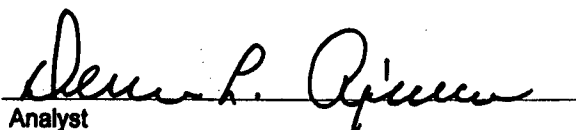
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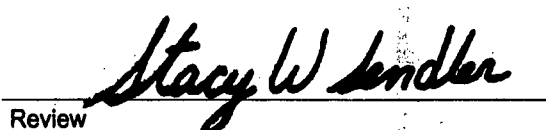
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	98%
	Bromofluorobenzene	99%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: Disposal Water Filters.


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040 PHENOLS

Client:	Key Energy Services	Project #:	806501
Sample ID:	Filter Media	Date Reported:	09-28-99
Laboratory Number:	G099	Date Sampled:	09-17-99
Chain of Custody:	7402	Date Received:	09-20-99
Sample Matrix:	TCLP Extract	Date Extracted:	09-22-99
Preservative:	Cool	Date Analyzed:	09-28-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	ND	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichlorophenol	ND	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

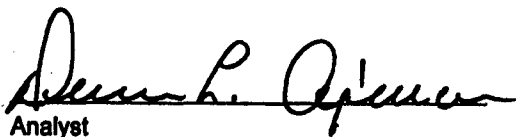
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: Disposal Water Filters.


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Key Energy Services	Project #:	806501
Sample ID:	Filter Media	Date Reported:	09-28-99
Laboratory Number:	G099	Date Sampled:	09-17-99
Chain of Custody:	7402	Date Received:	09-20-99
Sample Matrix:	TCLP Extract	Date Extracted:	09-22-99
Preservative:	Cool	Date Analyzed:	09-28-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachloroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

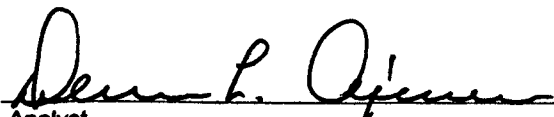
ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	96%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: Disposal Water Filters.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	Key Energy Services	Project #:	806501
Sample ID:	Filter Media	Date Reported:	09-29-99
Laboratory Number:	G099	Date Sampled:	09-17-99
Chain of Custody:	7402	Date Received:	09-20-99
Sample Matrix:	TCLP Extract	Date Analyzed:	09-28-99
Preservative:	Cool	Date Extracted:	09-22-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	ND	0.001	5.0
Barium	0.72	0.01	21
Cadmium	ND	0.001	0.11
Chromium	ND	0.01	0.60
Lead	ND	0.05	0.75
Mercury	ND	0.0001	0.025
Selenium	ND	0.001	5.7
Silver	ND	0.01	0.14

ND - Parameter not detected at the stated detection limit.

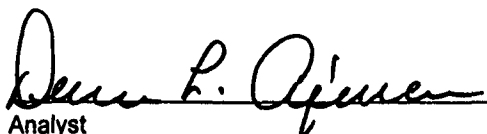
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

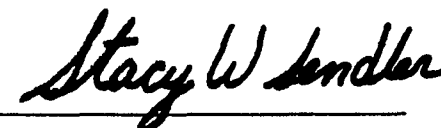
Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: Disposal Water Filters.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-28-99
Laboratory Number:	09-23-TCLP Vol	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-23-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	ND	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	ND	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	ND	0.0003	0.5
Tetrachloroethene	ND	0.0005	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

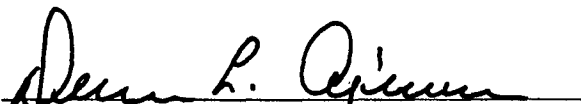
ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	100%
	Bromofluorobenzene	100%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-28-99
Laboratory Number:	09-22-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-23-99
Condition:	N/A	Date Extracted:	09-22-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	ND	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	ND	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	ND	0.0003	0.5
Tetrachloroethene	ND	0.0005	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

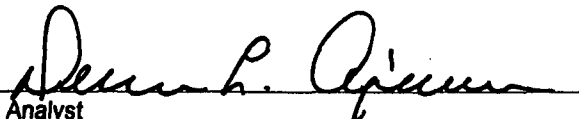
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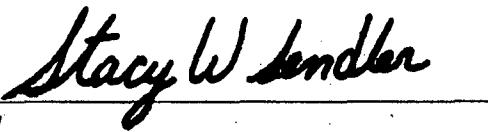
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	99%
	Bromofluorobenzene	98%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

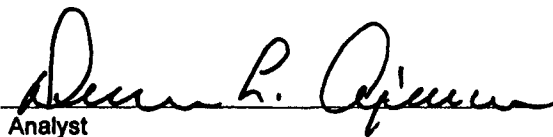
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-28-99
Laboratory Number:	G099	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	09-23-99
Condition:	N/A	Date Extracted:	09-22-99

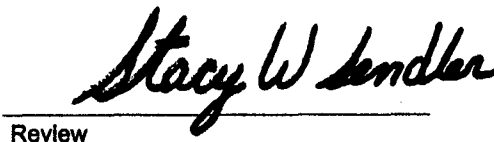
Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	0.0065	0.0065	0.0001	0.0%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0205	0.0205	0.0001	0.0%
1,2-Dichloroethane	ND	ND	0.0001	0.0%
Trichloroethene	ND	ND	0.0003	0.0%
Tetrachloroethene	ND	ND	0.0005	0.0%
Chlorobenzene	ND	ND	0.0003	0.0%
1,4-Dichlorobenzene	ND	ND	0.0002	0.0%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments: QA/QC for sample G099.


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Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client: QA/QC
Sample ID: Matrix Spike
Laboratory Number: G099
Sample Matrix: TCLP Extract
Analysis Requested: TCLP
Condition: N/A

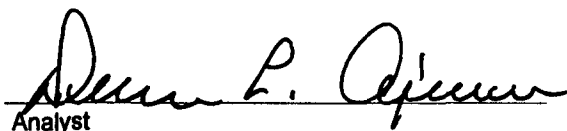
Project #: N/A
Date Reported: 09-28-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 09-23-99
Date Extracted: 09-22-99

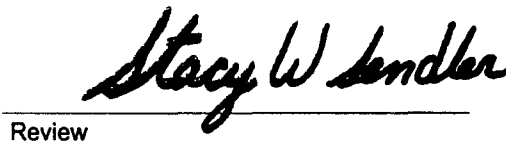
Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	0.0065	0.050	0.0560	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0205	0.050	0.0703	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	42-143

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments: QA/QC for sample G099.


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040

PHENOLS

Quality Assurance Report

Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-28-99
Laboratory Number:	09-28-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-28-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results		Detection	Regulatory
Parameter	Concentration (mg/L)	Limit (mg/L)	Limit (mg/L)
o-Cresol	ND	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichlorophenol	ND	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

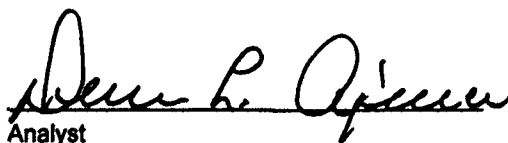
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

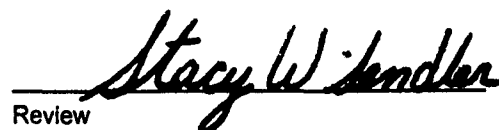
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040

PHENOLS

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-28-99
Laboratory Number:	09-22-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-22-99
Condition:	Cool & Intact	Date Analyzed:	09-28-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	ND	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichlorophenol	ND	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040

PHENOLS

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-28-99
Laboratory Number:	G099	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	09-28-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	ND	ND	0.020	0.0%
p,m-Cresol	ND	ND	0.040	0.0%
2,4,6-Trichlorophenol	ND	ND	0.020	0.0%
2,4,5-Trichlorophenol	ND	ND	0.020	0.0%
Pentachlorophenol	ND	ND	0.020	0.0%

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8040 Compounds	30.0%

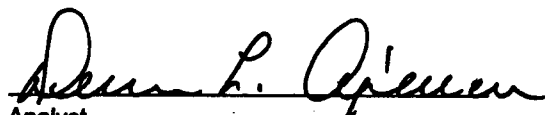
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

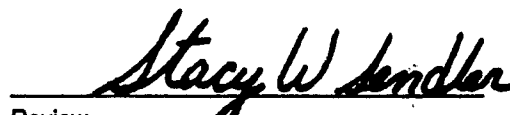
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-28-99
Laboratory Number:	09-28-TBN-Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	09-28-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachloroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

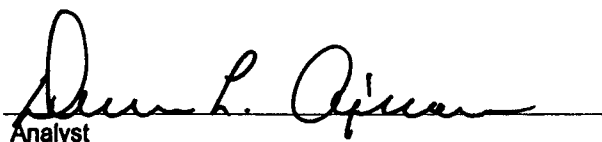
ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	100%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-28-99
Laboratory Number:	09-22-BN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-22-99
Condition:	Cool and Intact	Date Analyzed:	09-28-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachloroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

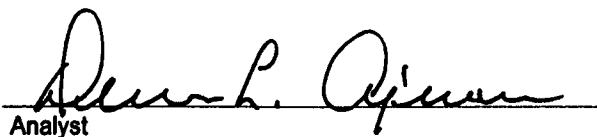
ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	100%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


Analyst


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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client: QA/QC
Sample ID: Matrix Duplicate
Laboratory Number: G099
Sample Matrix: TCLP Extract
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 09-28-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: 09-22-99
Date Analyzed: 09-28-99
Analysis Requested: TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	ND	ND	0.0%	0.020
Hexachloroethane	ND	ND	0.0%	0.020
Nitrobenzene	ND	ND	0.0%	0.020
Hexachlorobutadiene	ND	ND	0.0%	0.020
2,4-Dinitrotoluene	ND	ND	0.0%	0.020
HexachloroBenzene	ND	ND	0.0%	0.020

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference
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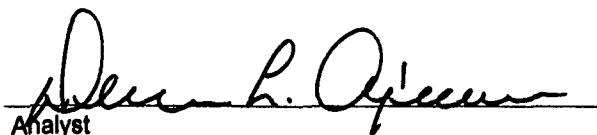
8090 Compounds

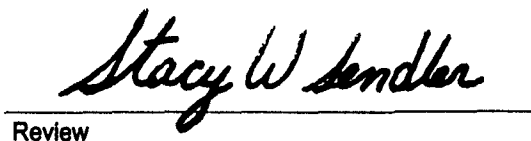
30%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for sample G099.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	09-28-TCM QA/QC	Date Reported:	09-29-99
Laboratory Number:	G099	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	09-28-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.01	0.72	0.72	0.0%	0% - 30%
Cadmium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Chromium	ND	ND	0.01	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.05	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.01	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.100	ND	0.099	99.0%	80% - 120%
Barium	1.00	0.72	1.71	99.4%	80% - 120%
Cadmium	0.500	ND	0.498	99.6%	80% - 120%
Chromium	0.50	ND	0.50	100.0%	80% - 120%
Lead	0.50	ND	0.49	98.0%	80% - 120%
Mercury	0.0250	ND	0.0248	99.2%	80% - 120%
Selenium	0.100	ND	0.099	99.0%	80% - 120%
Silver	0.50	ND	0.50	100.0%	80% - 120%

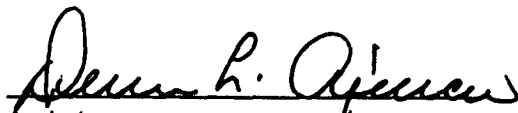
ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: QA/QC for sample G099.


Analyst


Review

Tierra Environmental Company, Inc.
P.O. Drawer 15250
Farmington, NM 87401
Phone 505-334-8894 Fax 505-334-9024
e-mail teci@cyberport.com

NORM Field Testing Report

Description of Equipment or Property: Disposable Cartridge Filters

Location: Key Energy SWD Disposal Facility – Crouch Mesa

Owner or Agent: Key Energy Services
P.O. Box 900
Farmington, NM 87499

Source: SWD Activity

Contact: Mike Talovich

Instrument: Wm. B. Johnson an Associates GSM-110

Calibration: July 1999

Background: 0.4 microrentgens per hour

Equipment Tested: 0.0 above background

NOTES: Filters generated as a result of filtering water brought to the site for disposal produced from oil and gas exploration and production operations.

Examiner: David H. Bonawitz Date 10-28-99
David H. Bonawitz

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DIST. 3

WATER ANALYSIS REPORT
SUNCO DISPOSAL POND

DATE: 2-14-96

LAST REPORT: 2-9-96

TIME: 9:12 AM

SAMPLE POINT: Pond Bottom

ANALYSIS (PPM)

TEMPERATURE: 37

SPECIFIC GRAVITY: 1.010

PH: 8.40

DISSOLVED OXYGEN: 0.2

H2S: 2.70

SULFIDES: 0

CARBONATE : 720

CHLORIDES: 10,000

BICARBONATE: 2440

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

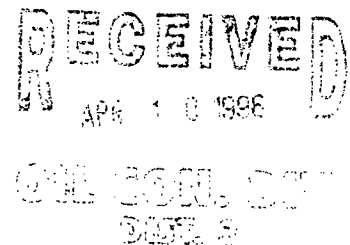
ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

SINCERELY,
RICHARD D. STEPH (SALES ENGINEER)



WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 2-09-96

LAST REPORT: 2-2-96

TIME: 12:20 PM

SAMPLE POINT: Pond Bottom

ANALYSIS (PPM)

TEMPERATURE: 40

SPECIFIC GRAVITY: 1.010

PH: 8.55

DISSOLVED OXYGEN: 1.0

H2S: 3.76

SULFIDES: 0

CARBONATE : 540

CHLORIDES: 10,000

BICARBONATE: 1,830

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

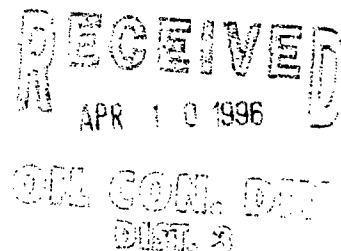
ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

SINCERELY,
RICHARD D. STEPH (SALES ENGINEER)



O DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
29-Feb-96	' 1/8 "	1 ' 7 1/2 "
01-Mar-96	' 1/8 "	1 ' 7 1/2 "
02-Mar-96	' 1/8 "	1 ' 7 1/2 "
03-Mar-96	' 1/8 "	1 ' 7 1/2 "
04-Mar-96	' 1/8 "	1 ' 7 1/2 "
05-Mar-96	' 1/8 "	1 ' 7 1/2 "
06-Mar-96	' 1/8 "	1 ' 7 1/2 "
07-Mar-96	' 1/8 "	1 ' 7 "
08-Mar-96	' 1/8 "	1 ' 7 "
09-Mar-96	' 1/8 "	1 ' 7 "
10-Mar-96	' 1/8 "	1 ' 7 "
11-Mar-96	' 1/8 "	1 ' 7 "
12-Mar-96	' 1/8 "	1 ' 7 "
13-Mar-96	' 1/8 "	1 ' 7 "
14-Mar-96	' 1/8 "	1 ' 7 "
15-Mar-96	' 1/8 "	1 ' 7 "
16-Mar-96	' 1/8 "	1 ' 7 "
17-Mar-96	' 1/8 "	1 ' 7 "
18-Mar-96	' 1/8 "	1 ' 7 "
19-Mar-96	' 1/8 "	1 ' 7 "
20-Mar-96	' 1/8 "	1 ' 7 "
21-Mar-96	' 1/8 "	1 ' 7 "
22-Mar-96	' 1/8 "	1 ' 7 "
23-Mar-96	' 1/8 "	1 ' 7 "
24-Mar-96	' 1/8 "	1 ' 7 "
25-Mar-96	' 1/8 "	1 ' 7 "
26-Mar-96	' 1/8 "	1 ' 6 1/2 "
27-Mar-96	' 1/8 "	1 ' 6 1/2 "
28-Mar-96	' 1/8 "	1 ' 6 "
29-Mar-96	1/8	1 ' 6 "
30-Mar-96	' 1/8 "	1 ' 6 "
31-Mar-96	' 1/8 "	1 ' 6 "

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Jan-96	' 1/8 "	1 ' 6 1/2 "
01-Feb-96	' 1/8 "	1 ' 6 1/2 "
02-Feb-96	' 1/8 "	1 ' 6 1/2 "
03-Feb-96	' 1/8 "	1 ' 6 1/2 "
04-Feb-96	' 1/8 "	1 ' 6 1/2 "
05-Feb-96	' 1/8 "	1 ' 6 1/2 "
06-Feb-96	' 1/8 "	1 ' 7 "
07-Feb-96	' 1/8 "	1 ' 7 "
08-Feb-96	' 1/8 "	1 ' 7 "
09-Feb-96	' 1/8 "	1 ' 7 "
10-Feb-96	' 1/8 "	1 ' 7 "
11-Feb-96	' 1/8 "	1 ' 7 "
12-Feb-96	' 1/8 "	1 ' 7 "
13-Feb-96	' 1/8 "	1 ' 7 "
14-Feb-96	' 1/8 "	1 ' 7 "
15-Feb-96	' 1/8 "	1 ' 7 "
16-Feb-96	' 1/8 "	1 ' 7 1/2 "
17-Feb-96	' 1/8 "	1 ' 7 1/2 "
18-Feb-96	' 1/8 "	1 ' 7 1/2 "
19-Feb-96	' 1/8 "	1 ' 7 1/2 "
20-Feb-96	' 1/8 "	1 ' 7 1/2 "
21-Feb-96	' 1/8 "	1 ' 7 1/2 "
22-Feb-96	' 1/8 "	1 ' 7 1/2 "
23-Feb-96	' 1/8 "	1 ' 7 1/2 "
24-Feb-96	' 1/8 "	1 ' 7 1/2 "
25-Feb-96	' 1/8 "	1 ' 7 1/2 "
26-Feb-96	' 1/8 "	1 ' 7 1/2 "
27-Feb-96	' 1/8 "	1 ' 7 1/2 "
28-Feb-96	' 1/8 "	1 ' 7 1/2 "
29-Feb-96	' 1/8 "	1 ' 7 1/2 "

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 DESK 2

DEC 17 1995

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Dec-95	' $\frac{1}{8}$ "	1 ' 6 "
01-Jan-96	' "	' "
02-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
03-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
04-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
05-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
06-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
07-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
08-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
09-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
10-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
11-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
12-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
13-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
14-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
15-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
16-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
17-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
18-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
19-Jan-96	' "	' "
20-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
21-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
22-Jan-96	' $\frac{1}{3}$ "	1 ' 6 "
23-Jan-96	' $\frac{1}{8}$ "	1 ' 6 "
24-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
25-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
26-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
27-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
28-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
29-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
30-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
31-Jan-96	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Nov-95	' 1/8 "	1 ' 5 1/2 "
01-Dec-95	' 1/8 "	1 ' 5 1/2 "
02-Dec-95	' 1/8 "	1 ' 5 1/2 "
03-Dec-95	' 1/8 "	1 ' 5 1/2 "
04-Dec-95	' 1/8 "	1 ' 5 1/2 "
05-Dec-95	' 1/8 "	1 ' 5 1/2 "
06-Dec-95	' 1/8 "	1 ' 5 1/2 "
07-Dec-95	' 1/8 "	1 ' 5 1/2 "
08-Dec-95	' 1/8 "	1 ' 5 1/2 "
09-Dec-95	' 1/8 "	1 ' 5 1/2 "
10-Dec-95	' 1/8 "	1 ' 5 1/2 "
11-Dec-95	' 1/8 "	1 ' 5 1/2 "
12-Dec-95	' 1/8 "	1 ' 5 1/2 "
13-Dec-95	' 1/8 "	1 ' 5 1/2 "
14-Dec-95	' 1/8 "	1 ' 5 1/2 "
15-Dec-95	' 1/8 "	1 ' 5 1/2 "
16-Dec-95	' 1/8 "	1 ' 5 1/2 "
17-Dec-95	' 1/8 "	1 ' 5 1/2 "
18-Dec-95	' 1/8 "	1 ' 5 1/2 "
19-Dec-95	' 1/8 "	1 ' 5 1/2 "
20-Dec-95	' 1/8 "	1 ' 5 1/2 "
21-Dec-95	' 1/8 "	1 ' 5 1/2 "
22-Dec-95	' 1/8 "	1 ' 5 1/2 "
23-Dec-95	' 1/8 "	1 ' 5 1/2 "
24-Dec-95	' 1/8 "	1 ' 5 1/2 "
25-Dec-95	' 1/8 "	1 ' 5 1/2 "
26-Dec-95	' 1/8 "	1 ' 5 1/2 "
27-Dec-95	' 1/8 "	1 ' 5 1/2 "
28-Dec-95	' 1/8 "	1 ' 5 1/2 "
29-Dec-95	' 1/8 "	1 ' 6 1/2 "
30-Dec-95	' 1/8 "	1 ' 6 "
31-Dec-95	' 1/8 "	1 ' 6 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Oct-95	' 1/8 "	1 ' 5 "
01-Nov-95	' 1/8 "	1 ' 5 "
02-Nov-95	' 1/8 "	1 ' 5 "
03-Nov-95	' 1/8 "	1 ' 5 "
04-Nov-95	' 1/8 "	1 ' 5 "
05-Nov-95	' 1/8 "	1 ' 5 "
06-Nov-95	' 1/8 "	1 ' 5 "
07-Nov-95	' 1/8 "	1 ' 5 "
08-Nov-95	' 1/8 "	1 ' 5 "
09-Nov-95	' 1/8 "	1 ' 5 "
10-Nov-95	' 1/8 "	1 ' 5 "
11-Nov-95	' 1/8 "	1 ' 5 "
12-Nov-95	' 1/8 "	1 ' 5 "
13-Nov-95	' 1/8 "	1 ' 5 "
14-Nov-95	' 1/8 "	1 ' 5 "
15-Nov-95	' 1/8 "	1 ' 5 "
16-Nov-95	' 1/8 "	1 ' 5 "
17-Nov-95	' 1/8 "	1 ' 5 "
18-Nov-95	' 1/8 "	1 ' 5 "
19-Nov-95	' 1/8 "	1 ' 5 "
20-Nov-95	' 1/8 "	1 ' 5 "
21-Nov-95	' 1/8 "	1 ' 5 "
22-Nov-95	' 1/8 "	1 ' 5 "
23-Nov-95	' 1/8 "	1 ' 5 "
24-Nov-95	' 1/8 "	1 ' 5 "
25-Nov-95	' 1/8 "	1 ' 5 "
26-Nov-95	' 1/8 "	1 ' 5 "
27-Nov-95	' 1/8 "	1 ' 5 "
28-Nov-95	' 1/8 "	1 ' 5 "
29-Nov-95	' 1/8 "	1 ' 5 "
30-Nov-95	' 1/8 "	1 ' 5 1/2 "

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Sep-95	' 4/8 "	1 ' 5 "
01-Oct-95	' 1/8 "	1 ' 5 "
02-Oct-95	' 1/8 "	1 ' 5 "
03-Oct-95	' 1/8 "	1 ' 5 "
04-Oct-95	' 1/8 "	1 ' 5 "
05-Oct-95	' 1/8 "	1 ' 5 "
06-Oct-95	' 1/8 "	1 ' 5 "
07-Oct-95	' 1/8 "	1 ' 5 "
08-Oct-95	' 1/8 "	1 ' 5 "
09-Oct-95	' 1/8 "	1 ' 5 "
10-Oct-95	' 1/8 "	1 ' 5 "
11-Oct-95	' 1/8 "	1 ' 5 "
12-Oct-95	' 1/8 "	1 ' 5 "
13-Oct-95	' 1/8 "	1 ' 5 "
14-Oct-95	' 1/8 "	1 ' 5 "
15-Oct-95	' 1/8 "	1 ' 5 "
16-Oct-95	' 1/8 "	1 ' 5 "
17-Oct-95	' 1/8 "	1 ' 5 "
18-Oct-95	' 1/8 "	1 ' 5 "
19-Oct-95	' 1/8 "	1 ' 5 "
20-Oct-95	' 1/8 "	1 ' 5 "
21-Oct-95	' 1/8 "	1 ' 5 "
22-Oct-95	' 1/8 "	1 ' 5 "
23-Oct-95	' 1/8 "	1 ' 5 "
24-Oct-95	' 1/8 "	1 ' 5 "
25-Oct-95	' 1/8 "	1 ' 5 "
26-Oct-95	' 1/8 "	1 ' 5 "
27-Oct-95	' 1/8 "	1 ' 5 "
28-Oct-95	' 1/8 "	1 ' 5 "
29-Oct-95	' 1/8 "	1 ' 5 "
30-Oct-95	' 1/8 "	1 ' 5 "
31-Oct-95	' 1/8 "	1 ' 5 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Aug-95	' 1/8 "	1 ' 5 "
01-Sep-95	' 1/8 "	1 ' 5 "
02-Sep-95	' 1/8 "	1 ' 6 "
03-Sep-95	' 1/8 "	1 ' 6 "
04-Sep-95	' 1/8 "	1 ' 6 "
05-Sep-95	' 1/8 "	1 ' 5 "
06-Sep-95	' 1/8 "	1 ' 5 "
07-Sep-95	' 1/8 "	1 ' 5 "
08-Sep-95	' 1/8 "	1 ' 5 "
09-Sep-95	' 1/8 "	1 ' 5 "
10-Sep-95	' 1/8 "	1 ' 5 "
11-Sep-95	' 1/8 "	1 ' 5 "
12-Sep-95	' 1/8 "	1 ' 6 "
13-Sep-95	' 1/8 "	1 ' 4 3/4 "
14-Sep-95	' 1/8 "	1 ' 5 "
15-Sep-95	' 1/8 "	1 ' 5 "
16-Sep-95	' 1/8 "	1 ' 5 "
17-Sep-95	' 1/8 "	1 ' 5 "
18-Sep-95	' 1/8 "	1 ' 5 "
19-Sep-95	' 1/8 "	1 ' 5 "
20-Sep-95	' 1/8 "	1 ' 5 "
21-Sep-95	' 1/8 "	1 ' 5 "
22-Sep-95	' 1/8 "	1 ' 5 "
23-Sep-95	' 1/8 "	1 ' 5 "
24-Sep-95	' 1/8 "	1 ' 5 "
25-Sep-95	' 1/8 "	1 ' 5 "
26-Sep-95	' 1/8 "	1 ' 5 "
27-Sep-95	' 1/8 "	1 ' 5 "
28-Sep-95	' 1/8 "	1 ' 5 "
29-Sep-95	' 1/8 "	1 ' 5 "
30-Sep-95	' 1/8 "	1 ' 5 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Jul-95	' 1/8 "	1 ' 6 1/2 "
01-Aug-95	' 1/8 "	1 ' 6 1/2 "
02-Aug-95	' 1/8 "	1 ' 6 1/2 "
03-Aug-95	' 1/8 "	1 ' 6 1/2 "
04-Aug-95	' 1/8 "	1 ' 6 1/2 "
05-Aug-95	' 1/8 "	' 1/2 "
06-Aug-95	' 1/8 "	1 ' 6 1/2 "
07-Aug-95	' 1/8 "	1 ' 6 1/2 "
08-Aug-95	' 1/8 "	1 ' 6 "
09-Aug-95	' 1/8 "	1 ' 6 "
10-Aug-95	' 1/8 "	1 ' 6 "
11-Aug-95	' 1/8 "	1 ' 6 "
12-Aug-95	' 1/8 "	1 ' 6 "
13-Aug-95	' 1/8 "	1 ' 6 "
14-Aug-95	' 1/8 "	1 ' 6 "
15-Aug-95	' 1/8 "	1 ' 6 "
16-Aug-95	' 1/8 "	1 ' 6 "
17-Aug-95	' "	' "
18-Aug-95	' 1/8 "	1 ' 6 "
19-Aug-95	' 1/8 "	1 ' 6 "
20-Aug-95	' 1/8 "	1 ' 6 "
21-Aug-95	' "	' "
22-Aug-95	' 1/8 "	1 ' 6 "
23-Aug-95	' 1/8 "	1 ' 6 "
24-Aug-95	' 1/8 "	1 ' 5 1/2 "
25-Aug-95	' 1/8 "	1 ' 5 1/2 "
26-Aug-95	' 1/8 "	1 ' 6 "
27-Aug-95	' 1/8 "	1 ' 6 "
28-Aug-95	' 1/8 "	1 ' 5 "
29-Aug-95	' 1/8 "	1 ' 5 "
30-Aug-95	' 1/8 "	1 ' 5 "
31-Aug-95	' 1/8 "	1 ' 5 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Jun-95	' 1/8 "	1 ' 6 "
01-Jul-95	' 1/8 "	1 ' 6 "
02-Jul-95	' 1/8 "	1 ' 6 "
03-Jul-95	' 1/8 "	1 ' 6 "
04-Jul-95	' 1/8 "	1 ' 6 "
05-Jul-95	' 1/8 "	1 ' 6 "
06-Jul-95	' 1/4 "	1 ' 6 "
07-Jul-95	' 1/8 "	1 ' 6 "
08-Jul-95	' 1/8 "	1 ' 6 "
09-Jul-95	' 1/8 "	1 ' 6 "
10-Jul-95	' 1/8 "	1 ' 6 "
11-Jul-95	' 1/8 "	1 ' 6 "
12-Jul-95	' 1/8 "	1 ' 6 "
13-Jul-95	' 1/8 "	1 ' 6 "
14-Jul-95	' 1/8 "	1 ' 6 "
15-Jul-95	' 1/8 "	1 ' 6 "
16-Jul-95	' 1/8 "	1 ' 6 "
17-Jul-95	' 1/8 "	1 ' 6 "
18-Jul-95	' 1/8 "	1 ' 6 "
19-Jul-95	' 1/8 "	1 ' 6 1/2 "
20-Jul-95	' 1/8 "	1 ' 6 1/2 "
21-Jul-95	' 1/8 "	1 ' 6 1/2 "
22-Jul-95	' 1/8 "	1 ' 6 1/2 "
23-Jul-95	' 1/8 "	1 ' 6 1/2 "
24-Jul-95	' 1/8 "	1 ' 6 1/2 "
25-Jul-95	' 1/8 "	1 ' 6 1/2 "
26-Jul-95	' 1/8 "	1 ' 6 1/2 "
27-Jul-95	' 1/8 "	1 ' 6 1/2 "
28-Jul-95	' 1/8 "	1 ' 6 1/2 "
29-Jul-95	' 1/8 "	1 ' 6 1/2 "
30-Jul-95	' 1/8 "	1 ' 6 1/2 "
31-Jul-95	' 1/8 "	1 ' 6 1/2 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-May-95	' 1/8 "	1 ' 6 "
01-Jun-95	' 1/8 "	1 ' 6 "
02-Jun-95	' 1/8 "	1 ' 6 "
03-Jun-95	' 1/8 "	1 ' 6 "
04-Jun-95	' 1/8 "	1 ' 6 "
05-Jun-95	' 1/8 "	1 ' 6 "
06-Jun-95	' 1/8 "	1 ' 7 "
07-Jun-95	' 1/8 "	1 ' 6 3/4 "
08-Jun-95	' 1/8 "	1 ' 6 "
09-Jun-95	' 1/8 "	1 ' 6 "
10-Jun-95	' 1/8 "	1 ' 6 "
11-Jun-95	' 1/8 "	1 ' 6 "
12-Jun-95	' 1/8 "	1 ' 6 1/2 "
13-Jun-95	' 1/8 "	1 ' 6 1/2 "
14-Jun-95	' 1/8 "	1 ' 6 1/4 "
15-Jun-95	' 1/8 "	1 ' 6 "
16-Jun-95	' 1/8 "	1 ' 6 "
17-Jun-95	' 1/8 "	1 ' 6 "
18-Jun-95	' 1/8 "	1 ' 6 "
19-Jun-95	' 1/8 "	1 ' 6 "
20-Jun-95	' 1/8 "	1 ' 6 "
21-Jun-95	' 1/8 "	1 ' 6 "
22-Jun-95	' 1/8 "	' "
23-Jun-95	' 1/8 "	1 ' 6 "
24-Jun-95	' 1/8 "	1 ' 6 "
25-Jun-95	' 1/8 "	1 ' 6 "
26-Jun-95	' 1/8 "	1 ' 6 "
27-Jun-95	' 1/8 "	1 ' 6 "
28-Jun-95	' 1/8 "	1 ' 6 "
29-Jun-95	' 1/8 "	1 ' 6 "
30-Jun-95	' 1/8 "	1 ' 6 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Apr-95	' 1/8 "	1 ' 7" "
01-May-95	' 1/8 "	1 ' 6 1/2 "
02-May-95	' 1/8 "	1 ' 6 1/2 "
03-May-95	' 1/8 "	1 ' 6 "
04-May-95	' 1/8 "	1 ' 6 "
05-May-95	' 1/8 "	1 ' 6 "
06-May-95	' 1/8 "	1 ' 6 "
07-May-95	' 1/8 "	1 ' 6 "
08-May-95	' 1/8 "	1 ' 6 "
09-May-95	' 1/8 "	1 ' 6 "
10-May-95	' 1/8 "	1 ' 6 "
11-May-95	' 1/8 "	1 ' 6 "
12-May-95	' 1/8 "	1 ' 6 "
13-May-95	' 1/8 "	1 ' 6 "
14-May-95	' 1/8 "	1 ' 6 "
15-May-95	' 1/8 "	1 ' 6 "
16-May-95	' 1/8 "	1 ' 6 "
17-May-95	' 1/8 "	1 ' 6 "
18-May-95	' 1/8 "	1 ' 6 "
19-May-95	' 1/8 "	1 ' 6 "
20-May-95	' 1/8 "	1 ' 6 "
21-May-95	' 1/8 "	1 ' 6 "
22-May-95	' 1/8 "	1 ' 6 "
23-May-95	' 1/8 "	1 ' 6 "
24-May-95	' 1/8 "	1 ' 6 "
25-May-95	' 1/8 "	1 ' 6 "
26-May-95	' 1/8 "	1 ' 6 "
27-May-95	' 1/8 "	1 ' 6 "
28-May-95	' 1/8 "	1 ' 6 "
29-May-95	' 1/8 "	1 ' 6 "
30-May-95	' 1/8 "	1 ' 6 "
31-May-95	' 1/8 "	1 ' 6 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
01-Apr-95	' $\frac{1}{8}$ "	1 ' 8 "
02-Apr-95	' $\frac{1}{8}$ "	1 ' 8 "
03-Apr-95	' $\frac{1}{8}$ "	1 ' 8 "
04-Apr-95	' $\frac{1}{8}$ "	1 ' 8 "
05-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
06-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
07-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
08-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
09-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
10-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
11-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
12-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
13-Apr-95	' "	' "
14-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
15-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
16-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
17-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
18-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
19-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
20-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
21-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
22-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
23-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
24-Apr-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
25-Apr-95	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
26-Apr-95	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{2}$ "
27-Apr-95	' $\frac{1}{8}$ "	1 ' 6 "
28-Apr-95	' $\frac{1}{8}$ "	1 ' 6 "
29-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "
30-Apr-95	' $\frac{1}{8}$ "	1 ' 7 "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
28-Feb-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
01-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
02-Mar-95	' $\frac{1}{8}$ "	' "
03-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
04-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
05-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
06-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
07-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
08-Mar-95	' $\frac{1}{8}$ "	1 ' $9\frac{1}{2}$ "
09-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
10-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
11-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
12-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
13-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
14-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
15-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
16-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
17-Mar-95	' "	' "
18-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
19-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
20-Mar-95	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
21-Mar-95	' $\frac{1}{8}$ "	1 ' $8\frac{1}{4}$ "
22-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
23-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
24-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
25-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
26-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
27-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
28-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
29-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
30-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "
31-Mar-95	' $\frac{1}{8}$ "	1 ' 8 "

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OIL CON. DIV.
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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Jan-95	' $\frac{1}{8}$ "	1 ' 8 "
01-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
02-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
03-Feb-95	' $\frac{1}{8}$ "	1 ' 9 "
04-Feb-95	' $\frac{1}{8}$ "	1 ' 9 "
05-Feb-95	' $\frac{1}{8}$ "	1 ' 9 "
06-Feb-95	' $\frac{1}{8}$ "	1 ' 8 $\frac{1}{2}$ "
07-Feb-95	' $\frac{1}{8}$ "	1 ' 8 $\frac{1}{2}$ "
08-Feb-95	' $\frac{1}{8}$ "	1 ' 8 $\frac{1}{2}$ "
09-Feb-95	' $\frac{1}{8}$ "	1 ' 8 $\frac{1}{2}$ "
10-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
11-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
12-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
13-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
14-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
15-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
16-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
17-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
18-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
19-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "
20-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
21-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
22-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
23-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
24-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
25-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
26-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
27-Feb-95	' $\frac{1}{8}$ "	1 ' 8 "
28-Feb-95	' $\frac{1}{8}$ "	1 ' 7 $\frac{1}{2}$ "

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OIL COR. DIV.
DIST. 3

SUNCO DISPOSAL - 1

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Dec-94	1/8 ' 1/8 "	1 ' 8 "
01-Jan-95	0 f f "	1 ' 8 "
02-Jan-95	' 1/8 "	1 ' 7 3/4 "
03-Jan-95	' 1/8 "	1 ' 7 3/4 "
04-Jan-95	' 1/8 "	1 ' 8 1/4 "
05-Jan-95	' 1/8 "	1 ' 8 1/2 "
06-Jan-95	' 1/8 "	1 ' 8 1/2 "
07-Jan-95	' 1/8 "	1 ' 8 1/2 "
08-Jan-95	' 1/8 "	1 ' 8 1/2 "
09-Jan-95	' 1/8 "	1 ' 8 1/2 "
10-Jan-95	' 1/8 "	1 ' 8 1/2 "
11-Jan-95	' 0 "	1 ' 8 1/2 "
12-Jan-95	' 0 "	1 ' 8 1/2 "
13-Jan-95	' 0 "	1 ' 8 1/4 "
14-Jan-95	' 1/8 "	1 ' 8 1/4 "
15-Jan-95	' 1/8 "	1 ' 8 1/4 "
16-Jan-95	' 1/8 "	1 ' 8 "
17-Jan-95	' 1/8 "	1 ' 7 1/2 "
18-Jan-95	' 1/8 "	1 ' 8 "
19-Jan-95	' 1/8 "	1 ' 8 "
20-Jan-95	' 1/8 "	1 ' 8 "
21-Jan-95	' 1/8 "	1 ' 8 "
22-Jan-95	' 1/8 "	1 ' 8 "
23-Jan-95	' 1/8 "	1 ' 8 "
24-Jan-95	' 1/8 "	1 ' 7 1/2 "
25-Jan-95	' 1/8 "	1 ' 7 3/4 "
26-Jan-95	' 1/8 "	1 ' 8 "
27-Jan-95	' 1/8 "	1 ' 8 "
28-Jan-95	' 1/8 "	1 ' 8 "
29-Jan-95	' 1/8 "	1 ' 8 "
30-Jan-95	' 1/8 "	1 ' 8 "
31-Jan-95	' 1/8 "	1 ' 8 "

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UNCO DISPOSAL - C

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
01-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
02-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
03-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
04-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
05-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
06-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
07-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
08-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
09-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
10-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
11-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
12-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
13-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
14-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{8}$ "
15-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
16-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
17-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
18-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
19-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
20-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
21-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
22-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
23-Dec-94	' $\frac{1}{8}$ "	1 ' $8\frac{1}{8}$ "
24-Dec-94	' "	' "
25-Dec-94	' "	' "
26-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
27-Dec-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
28-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
29-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
30-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "
31-Dec-94	' $\frac{1}{8}$ "	1 ' 8 "

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SUNCO DISPOSAL - C

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
01-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
02-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
03-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
04-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
05-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
06-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
07-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
08-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
09-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
10-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
11-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
12-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
13-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
14-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
15-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
16-Nov-94	' $\frac{1}{8}$ "	7 ' $\frac{1}{4}$ "
17-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
18-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
19-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
20-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
21-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
22-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
23-Nov-94	' $\frac{1}{8}$ "	1 ' 8 "
24-Nov-94	' $\frac{1}{8}$ "	1 ' 8 "
25-Nov-94	' $\frac{1}{8}$ "	1 ' 8 "
26-Nov-94	' $\frac{1}{8}$ "	1 ' 8 "
27-Nov-94	' $\frac{1}{8}$ "	1 ' 8 "
28-Nov-94	' $\frac{1}{8}$ "	1 ' 8 "
29-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{3}{4}$ "
30-Nov-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
01-Dec-94	' "	' "

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SUNCO DISPOSAL - C

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Sep-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
01-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
02-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
03-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
04-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
05-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
06-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
07-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
08-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
09-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
10-Oct-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
11-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
12-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
13-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
14-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
15-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
16-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
17-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
18-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
19-Oct-94	' $\frac{1}{8}$ "	1 ' 7 "
20-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{4}$ "
21-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
22-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
23-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
24-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
25-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
26-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
27-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
28-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
29-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
30-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "
31-Oct-94	' $\frac{1}{8}$ "	1 ' $7\frac{1}{2}$ "

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SUNCO DISPOSAL - C1

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Aug-94	' 1/8 "	1 ' 6 "
01-Sep-94	' 1/8 "	1 ' 6 "
02-Sep-94	' 1/8 "	1 ' 6 "
03-Sep-94	' 1/8 "	1 ' 6 "
04-Sep-94	' 1/8 "	1 ' 6 "
05-Sep-94	' 1/8 "	1 ' 6 "
06-Sep-94	' 1/8 "	1 ' 6 "
07-Sep-94	' 1/8 "	1 ' 6 "
08-Sep-94	' 1/8 "	1 ' 6 "
09-Sep-94	' 1/8 "	1 ' 6 "
10-Sep-94	' 1/8 "	1 ' 6 "
11-Sep-94	' 1/8 "	1 ' 6 "
12-Sep-94	' 1/8 "	1 ' 6 "
13-Sep-94	' 1/8 "	1 ' 6 "
14-Sep-94	' 1/8 "	1 ' 6 "
15-Sep-94	' 1/8 "	1 ' 6 "
16-Sep-94	' 1/8 "	1 ' 6 "
17-Sep-94	' 1/8 "	1 ' 6 "
18-Sep-94	' 1/8 "	1 ' 6 "
19-Sep-94	' 1/8 "	1 ' 6 "
20-Sep-94	' 1/8 "	1 ' 6 "
21-Sep-94	' 1/8 "	1 ' 6 "
22-Sep-94	' 1/8 "	1 ' 6 "
23-Sep-94	' 1/8 "	1 ' 6 "
24-Sep-94	' 1/8 "	1 ' 6 "
25-Sep-94	' 1/8 "	1 ' 6 "
26-Sep-94	' 1/8 "	1 ' 6 "
27-Sep-94	' 1/8 "	1 ' 6 1/2 "
28-Sep-94	' 1/8 "	1 ' 6 1/2 "
29-Sep-94	' 1/8 "	1 ' 6 1/2 "
30-Sep-94	' 1/8 "	1 ' 6 1/2 "
01-Oct-94	' "	' "

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OIL CON. DIV.
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SUNCO DISPOSAL - CI

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Jul-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
01-Aug-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
02-Aug-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
03-Aug-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
04-Aug-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
05-Aug-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
06-Aug-94	' $\frac{1}{6}$ "	1 ' $4\frac{1}{2}$ "
07-Aug-94	' $\frac{1}{8}$ "	1 ' $4\frac{1}{2}$ "
08-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
09-Aug-94	' $\frac{1}{8}$ "	1 ' $5\frac{1}{2}$ "
10-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
11-Aug-94	' $\frac{1}{8}$ "	1 ' $5\frac{1}{2}$ "
12-Aug-94	' $\frac{1}{8}$ "	1 ' $5\frac{1}{2}$ "
13-Aug-94	' $\frac{1}{4}$ "	1 ' $5\frac{1}{2}$ "
' 1-Aug-94	' $\frac{1}{8}$ "	1 ' $5\frac{1}{2}$ "
15-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
16-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
17-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
18-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
19-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
20-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
21-Aug-94	' $\frac{1}{8}$ "	1 ' 5 "
22-Aug-94	' $\frac{1}{8}$ "	1 ' $6\frac{1}{2}$ "
23-Aug-94	' $\frac{1}{4}$ "	1 ' 6 "
24-Aug-94	' $\frac{1}{4}$ "	1 ' 6 "
25-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
26-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
27-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
28-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
29-Aug-94	' $\frac{1}{3}$ "	1 ' $6\frac{1}{2}$ "
30-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "
31-Aug-94	' $\frac{1}{8}$ "	1 ' 6 "

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SUNCO DISPOSAL - C

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Jun-94	' 1/8 "	1 ' 4 "
01-Jul-94	' 1/8 "	1 ' 5 "
02-Jul-94	' 1/8 "	1 ' 5 "
03-Jul-94	' 1/8 "	1 ' 5 "
04-Jul-94	' 1/8 "	1 ' 5 1/4 "
05-Jul-94	' 1/8 "	1 ' 5 "
06-Jul-94	' 1/8 "	1 ' 5 "
07-Jul-94	' 1/8 "	1 ' 5 "
08-Jul-94	' 1/8 "	1 ' 5 "
09-Jul-94	' 1/8 "	1 ' 5 "
10-Jul-94	' 1/8 "	1 ' 5 "
11-Jul-94	' 1/8 "	1 ' 4 1/2 "
12-Jul-94	' 1/8 "	1 ' 4 1/2 "
13-Jul-94	' 1/8 "	1 ' 4 1/2 "
14-Jul-94	' 1/8 "	1 ' 4 1/2 "
15-Jul-94	' 1/8 "	1 ' 4 1/2 "
16-Jul-94	' 1/8 "	1 ' 4 1/2 "
17-Jul-94	' 1/8 "	1 ' 4 1/2 "
18-Jul-94	' 1/8 "	1 ' 4 1/2 "
19-Jul-94	' 1/8 "	1 ' 4 1/2 "
20-Jul-94	' 1/8 "	1 ' 4 1/2 "
21-Jul-94	' 1/8 "	1 ' 4 1/2 "
22-Jul-94	' 1/8 "	1 ' 4 1/2 "
23-Jul-94	' 1/8 "	1 ' 4 1/2 "
24-Jul-94	' 1/8 "	1 ' 4 1/2 "
25-Jul-94	' 1/8 "	1 ' 4 1/2 "
26-Jul-94	' 1/8 "	1 ' 4 1/2 "
27-Jul-94	' 1/8 "	1 ' 4 1/2 "
28-Jul-94	' 1/8 "	1 ' 4 1/2 "
29-Jul-94	' 1/8 "	1 ' 4 1/2 "
30-Jul-94	' 1/8 "	1 ' 4 1/2 "
31-Jul-94	' 1/8 "	1 ' 4 1/2 "

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OIL CON. DIV.
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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-May-94	' 1/4 "	1 ' 5 1/4 "
01-Jun-94	' 1/4 "	1 ' 5 1/4 "
02-Jun-94	' 1/4 "	1 ' 5 1/4 "
03-Jun-94	' 1/4 "	1 ' 5 "
04-Jun-94	' 1/4 "	1 ' 5 "
05-Jun-94	' 1/4 "	1 ' 5 "
06-Jun-94	' 1/4 "	1 ' 5 "
07-Jun-94	' 1/4 "	1 ' 5 "
08-Jun-94	' 1/4 "	1 ' 5 1/2 "
09-Jun-94	' 1/4 "	1 ' 5 1/2 "
10-Jun-94	' 1/4 "	1 ' 5 1/2 "
11-Jun-94	' 1/4 "	1 ' 5 1/2 "
12-Jun-94	' 1/4 "	1 ' 5 1/2 "
13-Jun-94	' 1/4 "	1 ' 5 1/2 "
14-Jun-94	' 1/4 "	1 ' 5 1/2 "
15-Jun-94	' 1/4 "	1 ' 4 3/4 "
16-Jun-94	' 1/4 "	1 ' 5 "
17-Jun-94	' 1/8 "	1 ' 5 "
18-Jun-94	' 1/8 "	1 ' 5 "
19-Jun-94	' 1/8 "	1 ' 5 "
20-Jun-94	' 1/8 "	1 ' 5 "
21-Jun-94	' 1/8 "	1 ' 5 "
22-Jun-94	' 1/8 "	1 ' 5 "
23-Jun-94	' 1/8 "	1 ' 5 "
24-Jun-94	' 1/8 "	1 ' 5 "
25-Jun-94	' 1/8 "	1 ' 5 "
26-Jun-94	' 1/8 "	1 ' 5 "
27-Jun-94	' 1/8 "	1 ' 4 1/8 "
28-Jun-94	' 1/8 "	1 ' 4 "
29-Jun-94	' 1/8 "	1 ' 4 "
30-Jun-94	' 1/8 "	1 ' 4 "

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Apr-94	' 1/4 "	1' 5 1/2 "
01-May-94	' 1/4 "	1' 5 1/2 "
02-May-94	' 1/4 "	1' 6 "
03-May-94	' 1/4 "	1' 6 "
04-May-94	' 1/4 "	1' 6 "
05-May-94	' 1/4 "	1' 6 "
06-May-94	' 1/4 "	1' 5 1/2 "
07-May-94	' 1/4 "	1' 5 1/2 "
08-May-94	' 1/4 "	1' 5 1/4 "
09-May-94	' 1/4 "	1' 5 1/2 "
10-May-94	' 1/4 "	1' 5 1/2 "
11-May-94	' 1/4 "	1' 5 1/2 "
12-May-94	' 1/4 "	1' 5 1/2 "
13-May-94	' 1/4 "	1' 5 1/2 "
14-May-94	' 1/4 "	1' 6 1/2 "
15-May-94	' 1/4 "	1' 6 1/2 "
16-May-94	' 1/4 "	1' 6 "
17-May-94	' 1/4 "	1' 6 "
18-May-94	' 1/4 "	1' 4 1/2 "
19-May-94	' 1/4 "	1' 5 "
20-May-94	' 1/4 "	1' 5 "
21-May-94	' 1/4 "	1' 5 "
22-May-94	' 1/4 "	1' 5 1/2 "
23-May-94	' 1/4 "	1' 5 1/2 "
24-May-94	' 1/4 "	1' 5 1/2 "
25-May-94	' 1/4 "	1' 6 "
26-May-94	' 1/4 "	1' 6 "
27-May-94	' 1/4 "	1' 6 "
28-May-94	' 1/4 "	1' 6 "
29-May-94	' 1/4 "	1' 6 1/2 "
30-May-94	' 1/4 "	1' 5 3/8 "
31-May-94	' 1/4 "	1' 5 1/4 "

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OIL CON. DIV.
DATE 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Mar-94	' $\frac{1}{8}$ "	1' $5\frac{1}{8}$ "
01-Apr-94	' $\frac{1}{8}$ "	1' $5\frac{1}{8}$ "
02-Apr-94	' $\frac{1}{8}$ "	1' $5\frac{1}{4}$ "
03-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
04-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
05-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
06-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
07-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
08-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
09-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
10-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
11-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
12-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
13-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
14-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{4}$ "
15-Apr-94	' $\frac{1}{8}$ "	1' 5 "
16-Apr-94	' $\frac{1}{8}$ "	1' 5 "
17-Apr-94	' $\frac{1}{8}$ "	1' 5 "
18-Apr-94	' $\frac{1}{4}$ "	1' 5 "
19-Apr-94	' $\frac{1}{4}$ "	1' 5 "
20-Apr-94	' $\frac{1}{4}$ "	1' 5 "
21-Apr-94	' $\frac{1}{4}$ "	1' 5 "
22-Apr-94	' $\frac{1}{4}$ "	1' 5 "
23-Apr-94	' $\frac{1}{4}$ "	1' 5 "
24-Apr-94	' $\frac{1}{4}$ "	1' 5 "
25-Apr-94	' $\frac{1}{4}$ "	1' 5 "
26-Apr-94	' $\frac{1}{4}$ "	1' 7 "
27-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{2}$ "
28-Apr-94	' $\frac{1}{4}$ "	1' 6 "
29-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{2}$ "
30-Apr-94	' $\frac{1}{4}$ "	1' $5\frac{1}{2}$ "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
28-Feb-94	' 1/8 "	1 ' 5 1/2 "
01-Mar-94	' 1/8 "	1 ' 5 1/2 "
02-Mar-94	' 1/8 "	1 ' 5 1/4 "
03-Mar-94	' 1/8 "	1 ' 5 1/4 "
04-Mar-94	' 1/8 "	1 ' 5 1/4 "
05-Mar-94	' 1/8 "	1 ' 5 1/4 "
06-Mar-94	' 1/8 "	1 ' 5 1/4 "
07-Mar-94	' 1/8 "	1 ' 5 1/4 "
08-Mar-94	' 1/8 "	1 ' 5 1/4 "
09-Mar-94	' 1/8 "	1 ' 5 1/4 "
10-Mar-94	' 1/8 "	1 ' 5 1/4 "
11-Mar-94	' 1/8 "	1 ' 5 1/4 "
12-Mar-94	' 2/8 "	1 ' 5 1/4 "
13-Mar-94	' 1/8 "	1 ' 5 1/4 "
14-Mar-94	' 1/8 "	1 ' 5 1/4 "
15-Mar-94	' 1/8 "	1 ' 5 1/4 "
16-Mar-94	' 1/8 "	1 ' 5 1/4 "
17-Mar-94	' 1/8 "	1 ' 5 1/4 "
18-Mar-94	' 1/8 "	1 ' 5 1/4 "
19-Mar-94	' 1/8 "	1 ' 5 1/4 "
20-Mar-94	' 1/8 "	1 ' 5 1/4 "
21-Mar-94	' 1/8 "	1 ' 5 1/4 "
22-Mar-94	' 1/8 "	1 ' 5 1/4 "
23-Mar-94	' 1/8 "	1 ' 5 1/8 "
24-Mar-94	' 1/8 "	1 ' 5 1/8 "
25-Mar-94	' 1/4 "	1 ' 5 1/4 "
26-Mar-94	' 1/4 "	1 ' 5 1/4 "
27-Mar-94	' 1/8 "	1 ' 5 1/4 "
28-Mar-94	' 1/8 "	1 ' 5 1/4 "
29-Mar-94	' 1/8 "	1 ' 5 1/8 "
30-Mar-94	' 1/8 "	1 ' 5 1/8 "
31-Mar-94	' 1/4 "	1 ' 5 1/4 "

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 OIL CON. DIV.
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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Jan-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
01-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
02-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
03-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
04-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
05-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
06-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
07-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
08-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
09-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
10-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
11-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
12-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
13-Feb-94	' $\frac{1}{8}$ "	1 ' 6 $\frac{1}{4}$ "
14-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
15-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
16-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
17-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
18-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
19-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
20-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
21-Feb-94	' $\frac{1}{8}$ "	1 ' 6 "
22-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "
23-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "
24-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "
25-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "
26-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "
27-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "
28-Feb-94	' $\frac{1}{8}$ "	1 ' 5 $\frac{1}{2}$ "

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SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Dec-93	' 1/4 "	1 ' 6 3/4 "
01-Jan-94	' 1/4 "	1 ' 6 3/4 "
02-Jan-94	' 1/4 "	1 ' 6 3/4 "
03-Jan-94	' 1/4 "	1 ' 6 1/2 "
04-Jan-94	' 1/4 "	1 ' 6 1/2 "
05-Jan-94	' 1/4 "	1 ' 6 1/2 "
06-Jan-94	' 1/4 "	1 ' 6 1/2 "
07-Jan-94	' 1/8 "	1 ' 6 1/2 "
08-Jan-94	' 1/8 "	1 ' 6 1/2 "
09-Jan-94	' 1/8 "	1 ' 6 1/2 "
10-Jan-94	' 1/8 "	1 ' 6 1/2 "
11-Jan-94	' 1/8 "	1 ' 6 1/2 "
12-Jan-94	' 1/8 "	1 ' 6 3/8 "
13-Jan-94	' 1/8 "	1 ' 6 3/4 "
14-Jan-94	' 1/8 "	1 ' 6 3/4 "
15-Jan-94	' 1/8 "	1 ' 6 3/4 "
16-Jan-94	' 1/8 "	1 ' 6 3/4 "
17-Jan-94	' 1/8 "	1 ' 6 3/8 "
18-Jan-94	' 1/8 "	1 ' 6 1/4 "
19-Jan-94	' 1/8 "	1 ' 6 1/4 "
20-Jan-94	' 1/8 "	1 ' 6 1/4 "
21-Jan-94	' 1/8 "	1 ' 6 1/4 "
22-Jan-94	' 1/8 "	1 ' 6 1/4 "
23-Jan-94	' 1/8 "	1 ' 6 1/4 "
24-Jan-94	' 1/8 "	1 ' 6 1/4 "
25-Jan-94	' 1/8 "	1 ' 6 1/4 "
26-Jan-94	' 1/8 "	1 ' 6 1/4 "
27-Jan-94	' 1/8 "	1 ' 6 1/4 "
28-Jan-94	' 1/4 "	1 ' 6 1/4 "
29-Jan-94	' 1/4 "	1 ' 6 1/4 "
30-Jan-94	' 1/8 "	1 ' 6 1/4 "
31-Jan-94	' 1/8 "	1 ' 6 1/4 "

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SUNCO DISPOSAL -

LEAK DETECTOR LO

DATE	EAST GU'AGE	WEST GU'AGE
30-Nov-93	' 3/4 "	1 ' 7 3/8
01-Dec-93	' 5/8 "	1 ' 7 1/4
02-Dec-93	' 5/8 "	1 ' 7
03-Dec-93	' 5/8 "	1 ' 7 1/4
04-Dec-93	' 5/8 "	1 ' 7 1/4
05-Dec-93	' 5/8 "	1 ' 7 1/4
06-Dec-93	' 5/8 "	1 ' 7
07-Dec-93	' 5/8 "	1 ' 6 7/8
08-Dec-93	' 5/8 "	1 ' 7
09-Dec-93	' 5/8 "	1 ' 7
10-Dec-93	' 5/8 "	1 ' 7
11-Dec-93	' 5/8 "	1 ' 7
12-Dec-93	' 5/8 "	1 ' 7
13-Dec-93	' 1/2 "	1 ' 7
14-Dec-93	' 5/8 "	1 ' 7
15-Dec-93	' 5/8 "	1 ' 7
16-Dec-93	' 5/8 "	1 ' 7
17-Dec-93	' 5/8 "	1 ' 7
18-Dec-93	' 5/8 "	1 ' 7
19-Dec-93	' 5/8 "	1 ' 7
20-Dec-93	' 5/8 "	1 ' 7
21-Dec-93	' 1/2 "	1 ' 6 7/8
22-Dec-93	' 1/2 "	1 ' 6 7/8
23-Dec-93	' 1/2 "	1 ' 6 7/8
24-Dec-93	' 1/2 "	1 ' 6 3/4
25-Dec-93	' 1/2 "	1 ' 6 3/4
26-Dec-93	' 1/2 "	1 ' 6 3/4
27-Dec-93	' 1/4 "	1 ' 6 3/4
28-Dec-93	' 3/8 "	1 ' 6 3/4
29-Dec-93	' 3/8 "	1 ' 6 3/4
30-Dec-93	' 3/8 "	1 ' 6 3/4
31-Dec-93	' 1/4 "	1 ' 6 3/4

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SEL COM. DIV.
P. 111

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Oct-93	' 1 "	1 ' 6 ⁵ / ₈
01-Nov-93	' 1 "	1 ' 6 ⁷ / ₈
02-Nov-93	' 1 "	1 ' 6 ³ / ₄
03-Nov-93	' 1 "	1 ' 7
04-Nov-93	' 1 "	1 ' 7
05-Nov-93	' 1 ¹ / ₄ "	1 ' 7 ¹ / ₈
06-Nov-93	' 1 ¹ / ₂ "	1 ' 7 ¹ / ₄
07-Nov-93	' 1 ¹ / ₂ "	1 ' 7 ¹ / ₂
08-Nov-93	' 1 ¹ / ₄ "	1 ' 7 ¹ / ₈
09-Nov-93	' 1 ¹ / ₂ "	1 ' 7 ¹ / ₄
10-Nov-93	' 1 ¹ / ₄ "	1 ' 7 ¹ / ₂
11-Nov-93	' 7 ¹ / ₈ "	1 ' 7 ¹ / ₂
12-Nov-93	' 7 ¹ / ₂ "	1 ' 7 ¹ / ₂
13-Nov-93	' 7 ¹ / ₈ "	1 ' 7 ¹ / ₂
14-Nov-93	' 7 ¹ / ₈ "	1 ' 7 ¹ / ₂
15-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
16-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
17-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
18-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
19-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
20-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
21-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₄
22-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
23-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
24-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
25-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
26-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
27-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
28-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ¹ / ₂
29-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ³ / ₈
30-Nov-93	' 3 ¹ / ₄ "	1 ' 7 ³ / ₈

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OIL CON. DIV
DNL 8

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Sep-93	' 1 1/8 "	1 ' 9 1/4 "
01-Oct-93	' 1 1/8 "	1 ' 9 1/4 "
02-Oct-93	' 1 1/4 "	1 ' 9 1/4 "
03-Oct-93	' 1 1/4 "	1 ' 9 1/2 "
04-Oct-93	' 1 1/8 "	1 ' 9 1/4 "
05-Oct-93	' 1 1/8 "	1 ' 9 1/2 "
06-Oct-93	' 1 1/8 "	1 ' 9 1/2 "
07-Oct-93	' 1 1/2 "	1 ' 9 1/4 "
08-Oct-93	' 1 1/3 "	1 ' 9 1/2 "
09-Oct-93	' 1 1/4 "	1 ' 9 1/2 "
10-Oct-93	' 1 1/4 "	1 ' 9 1/2 "
11-Oct-93	' 1 1/8 "	1 ' 10 1/2 "
12-Oct-93	' 1 1/8 "	1 ' 10 3/8 "
13-Oct-93	' 1 1/3 "	1 ' 10 3/8 "
14-Oct-93	' 1 1/4 "	1 ' 10 3/4 "
15-Oct-93	' 1 1/4 "	1 ' 10 "
16-Oct-93	' 1 1/4 "	1 ' 10 "
17-Oct-93	' 1 1/4 "	1 ' 10 "
18-Oct-93	' 1 "	1 ' 11 " D.
19-Oct-93	' 1 "	1 ' 10 1/2 "
20-Oct-93	' 1 "	1 ' 10 1/2 "
21-Oct-93	' 1 "	1 ' 10 1/2 "
22-Oct-93	' . "	1 ' 10 1/2 "
23-Oct-93	' 1 "	1 ' 6 "
24-Oct-93	' 1 "	1 ' 6 "
25-Oct-93	' 1 "	1 ' 5 3/4 "
26-Oct-93	' 1 "	1 ' 6 1/8 "
27-Oct-93	' 1 "	1 ' 6 1/8 "
28-Oct-93	' 1 "	1 ' 6 3/4 "
29-Oct-93	' 1 "	1 ' 6 5/8 "
30-Oct-93	' 1 "	1 ' 6 5/8 "
31-Oct-93	' 1 "	1 ' 6 5/8 "

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OIL CON. DIV
DIST. 2

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Aug-93	' 1 1/2 "	1 ' 9 1/2 "
01-Sep-93	' 1 1/2 "	1 ' 9 1/2 "
02-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
03-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
04-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
05-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
06-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
07-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
08-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
09-Sep-93	' 1 1/2 "	1 ' 9 1/2 "
10-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
11-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
12-Sep-93	' 1 1/4 "	1 ' 9 1/2 "
13-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
14-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
15-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
16-Sep-93	' 1 1/4 "	1 ' 9 1/2 "
17-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
18-Sep-93	' 1 1/2 "	1 ' 9 1/4 "
19-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
20-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
21-Sep-93	' 1 1/4 "	1 ' 9 1/8 "
22-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
23-Sep-93	' 1 1/4 "	1 ' 9 1/8 "
24-Sep-93	' 1 1/4 "	1 ' 9 1/8 "
25-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
26-Sep-93	' 1 1/4 "	1 ' 9 1/2 "
27-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
28-Sep-93	' 1 1/4 "	1 ' 9 3/8 "
29-Sep-93	' 1 1/4 "	1 ' 9 1/4 "
30-Sep-93	' 1 1/8 "	1 ' 9 1/4 "

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OIL CONL. DIV
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Jul-93	' 1 "	1 ' 9 1/2 "
01-Aug-93	' 1 "	1 ' 9 1/2 "
02-Aug-93	' 1 1/4 "	1 ' 9 1/2 "
03-Aug-93	' 1 1/2 "	1 ' 10 1/2 "
04-Aug-93	' 2 "	1 ' 10 3/4 "
05-Aug-93	' 1 "	1 ' 10 3/4 "
06-Aug-93	' 1 "	1 ' 10 "
07-Aug-93	' 1 "	1 ' 10 "
08-Aug-93	' 1 "	1 ' 10 "
09-Aug-93	' 1 "	1 ' 10 "
10-Aug-93	' 1 "	1 ' 10 1/2 "
11-Aug-93	' 1 1/2 "	1 ' 10 1/4 "
12-Aug-93	' 1 "	1 ' 9 3/4 "
13-Aug-93	' 1 "	1 ' 9 7/8 "
14-Aug-93	' 1 "	1 ' 10 "
15-Aug-93	' 1 "	1 ' 9 3/4 " <i>SL</i>
16-Aug-93	' 1 "	1 ' 10 "
17-Aug-93	' 1 "	1 ' 9 1/2 "
18-Aug-93	' 1 "	1 ' 10 1/2 "
19-Aug-93	' 1 "	1 ' 9 1/2 "
20-Aug-93	' 1 "	1 ' 9 1/2 "
21-Aug-93	' 1 1/8 "	1 ' 9 5/8 "
22-Aug-93	' 1 1/8 "	1 ' 9 3/8 "
23-Aug-93	' 1 1/2 "	1 ' 10 "
24-Aug-93	' 1 1/2 "	1 ' 9 1/2 "
25-Aug-93	' 1 "	1 ' 9 3/4 "
26-Aug-93	' 1 1/8 "	1 ' 9 1/4 "
27-Aug-93	' 1 1/4 "	1 ' 9 1/8 "
28-Aug-93	' 1 1/4 "	1 ' 9 1/8 "
29-Aug-93	' 1 1/4 "	1 ' 9 1/8 "
30-Aug-93	' 1 1/2 "	1 ' 9 1/2 "
31-Aug-93	' 1 1/2 "	1 ' 9 1/2 "

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Jun-93	'5/8"	1 '11"
01-Jul-93	'1/2"	1 '9 5/8"
02-Jul-93	'1/2"	1 '9 5/8"
03-Jul-93	'1/2"	1 '9 1/2"
04-Jul-93	'5/8"	1 '9 5/8"
05-Jul-93	'5/8"	1 '11 1/2"
06-Jul-93	'5/8"	1 '11 1/2"
07-Jul-93	'3/4"	1 '10"
08-Jul-93	'1/2"	1 '9 3/8"
09-Jul-93	'1/2"	1 '9 3/8"
10-Jul-93	'1/2"	1 '9 3/8"
11-Jul-93	'5/8"	1 '9 3/8"
12-Jul-93	'1 1/4"	1 '10 3/4"
13-Jul-93	'1 1/4"	1 '11"
14-Jul-93	MT. '1 1/4"	1 '11"
15-Jul-93	S.F. '5/8"	1 '9 3/4"
16-Jul-93	'5/8"	1 '9 5/8"
17-Jul-93	'5/8"	1 '9 5/8"
18-Jul-93	'3/4"	1 '9 1/2"
19-Jul-93	'3/4"	1 '10 3/4"
20-Jul-93	'3/4"	1 '10 1/2"
21-Jul-93	'1"	1 '10 1/2"
22-Jul-93	'5/8"	1 '9 3/8"
23-Jul-93	'3/4"	1 '9 3/8"
24-Jul-93	'3/4"	1 '9 1/8"
25-Jul-93	'3/4"	1 '9 1/8"
26-Jul-93	'3/4"	1 '9 1/2"
27-Jul-93	'3/4"	1 '9 1/2"
28-Jul-93	'7/8"	1 '10 1/2"
29-Jul-93	'7/8"	1 '9 1/4"
30-Jul-93	'7/8"	1 '9 3/8"
31-Jul-93	'1"	1 '9 1/2"

5 ft. 4 in. - 7 ft. 4 in.

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DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-May-93	0' 0"	1' 9 1/2"
01-Jun-93	' 0"	1' 9 1/2"
02-Jun-93	' 1/2"	1' 10 1/2"
03-Jun-93	' 0"	1' 9 3/8"
04-Jun-93	' 1/8"	1' 9 3/4"
05-Jun-93	' 1/8"	1' 10 1/2"
06-Jun-93	' 1/8"	1' 9 1/2"
07-Jun-93	' 1/8"	1' 10 1/4"
08-Jun-93	' 3/4"	1' 10"
09-Jun-93	' 3/4"	1' 10"
10-Jun-93	' 1/4"	1' 9 1/8"
11-Jun-93	' 1/4"	1' 9"
12-Jun-93	' 1/4"	1' 9"
13-Jun-93	' 1/4"	1' 9"
14-Jun-93	' 1/2"	1' 10"
15-Jun-93	' 3/8"	1' 11"
16-Jun-93	' 3/8"	1' 10"
17-Jun-93	' 3/8"	1' 10 1/2"
18-Jun-93	' 1/4"	1' 9 1/2"
19-Jun-93	' 3/8"	1' 9 1/8"
20-Jun-93	' 3/8"	1' 9"
21-Jun-93	' 3/8"	1' 9"
22-Jun-93	' 3/8"	1' 10"
23-Jun-93	' 3/8"	1' 10 1/2"
24-Jun-93	' 3/8"	1' 10 1/2"
25-Jun-93	' 3/8"	1' 10 5/8"
26-Jun-93	' 3/8"	1' 9 3/4"
27-Jun-93	' 3/8"	1' 9 1/2"
28-Jun-93	' 3/8"	1' 10"
29-Jun-93	' 5/8"	1' 10 3/4"
30-Jun-93	' 5/8"	1' 11"

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Apr-93	' 7 "	2 ' 3/4 "
01-May-93	' 7 1/2 "	2 ' 1 "
02-May-93	' 8 "	2 ' 1 "
03-May-93	' 8 1/4 "	2 ' 2 1/2 "
04-May-93	' 8 1/2 "	2 ' 2 1/2 "
05-May-93	' 8 3/4 "	2 ' 3 1/2 "
06-May-93	' 9 "	2 ' 3 1/2 "
07-May-93	' 9 "	2 ' 2 "
08-May-93	' 9 "	2 ' 2 "
09-May-93	' 9 "	2 ' 2 "
10-May-93	' 9 "	2 ' 3 1/2 "
11-May-93	' 9 1/4 "	2 ' 3 "
12-May-93	' 9 1/2 "	2 ' 3 1/2 "
13-May-93	' 9 1/2 "	2 ' 2 1/4 "
14-May-93	' 6 "	2 ' 2 1/2 "
15-May-93	' 6 "	2 ' 2 1/2 "
16-May-93	' 6 "	2 ' 2 1/2 "
17-May-93	' 6 1/4 "	2 ' 3 1/4 "
18-May-93	' 6 1/4 "	2 ' 3 1/2 "
19-May-93	' 7 "	2 ' 4 1/4 "
20-May-93	' 6 "	2 ' 2 3/4 "
21-May-93	' 6 1/2 "	2 ' 2 5/8 "
22-May-93	' 6 1/2 "	2 ' 2 5/8 "
23-May-93	' 6 1/2 "	2 ' 2 1/2 "
24-May-93	' 6 1/2 "	2 ' 2 3/4 "
25-May-93	' 6 1/2 "	2 ' 2 3/4 "
26-May-93	' 6 1/2 "	2 ' 2 1/4 "
27-May-93	0 ' 0 "	1 ' 6 "
28-May-93	0 ' 0 "	1 ' 8 3/8 "
29-May-93	0 ' 0 "	1 ' 9 "
30-May-93	0 ' 0 "	1 ' 9 3/8 "
31-May-93	0 ' 0 "	1 ' 9 1/2 "

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OIL CON. DIV.
DIST. 3

SUNCO DISPOSAL -

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Mar-93	' "	' "
01-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 3 "
02-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 1 "
03-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 1 "
04-Apr-93	1 ' 3 $\frac{1}{8}$ "	2 ' 1 $\frac{1}{2}$ "
05-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 2 "
06-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 3 $\frac{1}{4}$ "
07-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 3 $\frac{1}{2}$ "
08-Apr-93	1 ' 3 $\frac{1}{8}$ "	2 2 ' 2 $\frac{3}{8}$ "
09-Apr-93	1 ' 3 $\frac{1}{8}$ "	2 ' 2 $\frac{5}{8}$ "
10-Apr-93	1 ' 3 $\frac{1}{8}$ "	2 ' 2 $\frac{3}{4}$ "
11-Apr-93	0 ' f f "	off " E
12-Apr-93	1 ' 3 $\frac{1}{8}$ "	2 ' 3 $\frac{1}{4}$ "
13-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 3 $\frac{1}{2}$ "
14-Apr-93	1 ' 3 $\frac{1}{4}$ "	2 ' 4 $\frac{1}{4}$ "
15-Apr-93	1 ' 3 $\frac{3}{8}$ "	2 ' 3 $\frac{1}{2}$ " S
16-Apr-93	0 ' 0 "	1 ' 5 $\frac{1}{4}$ "
17-Apr-93	' 1 $\frac{1}{2}$ "	1 ' 8 $\frac{1}{2}$ "
18-Apr-93	' 3 $\frac{1}{4}$ "	1 ' 10 $\frac{1}{4}$ "
19-Apr-93	' 7 $\frac{1}{8}$ "	2 ' 1 "
20-Apr-93	' 3 "	2 ' 1 $\frac{1}{4}$ "
21-Apr-93	' 3 $\frac{1}{4}$ "	2 ' 2 "
22-Apr-93	' 4 "	2 ' 0 "
23-Apr-93	' 4 $\frac{3}{4}$ "	2 ' 3 $\frac{1}{8}$ "
24-Apr-93	' 5 "	2 2 ' 1 $\frac{1}{4}$ "
25-Apr-93	' 6 "	2 ' 1 $\frac{1}{2}$ "
26-Apr-93	' 6 $\frac{1}{4}$ "	2 ' 1 $\frac{7}{8}$ "
27-Apr-93	' 7 "	2 ' 2 $\frac{1}{2}$ "
28-Apr-93	' 7 $\frac{1}{4}$ "	2 ' 2 $\frac{1}{2}$ "
29-Apr-93	' 7 "	2 ' 5 $\frac{1}{8}$ "
30-Apr-93	' 7 "	2 ' 3 $\frac{1}{4}$ "

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 OIL CON. DIV.
 DIST. 3

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
28-Feb-93	4 1/4 "	1 3/2 "
01-Mar-93	4 1/4 "	1 1 1/2 "
02-Mar-93	4 1/4 "	1 1 1/2 "
03-Mar-93	4 1/4 "	1 1 "
04-Mar-93	4 1/4 "	1 3/4 "
05-Mar-93	4 1/4 "	1 7/8 "
06-Mar-93	4 1/4 "	1 7/8 "
07-Mar-93	4 1/2 "	1 1 1/8 "
08-Mar-93	4 1/2 "	1 1 3/4 "
09-Mar-93	4 1/2 "	1 1 1/2 "
10-Mar-93	4 1/2 "	1 1 1/2 "
11-Mar-93	5 "	1 1 "
12-Mar-93	5 "	1 3 1/2 "
13-Mar-93	5 "	1 4 1/4 "
14-Mar-93	5 "	1 5 "
15-Mar-93	5 "	1 5 1/2 "
16-Mar-93	5 "	1 6 "
17-Mar-93	5 1/4 "	1 6 1/2 "
18-Mar-93	5 1/4 "	1 6 7/8 "
19-Mar-93	5 1/4 "	1 6 7/8 "
20-Mar-93	5 1/4 "	1 3 1/4 "
21-Mar-93	4 1/2 "	1 4 "
22-Mar-93	4 1/2 "	1 5 1/2 "
23-Mar-93	4 1/2 "	1 6 3/8 "
24-Mar-93	4 1/2 "	1 8 "
25-Mar-93	5 "	1 8 1/2 "
26-Mar-93	5 "	1 9 "
27-Mar-93	5 "	1 9 3/4 "
28-Mar-93	5 "	1 11 1/2 "
29-Mar-93	5 "	2 1/2 "
30-Mar-93	1 3 "	2 1/4 "
31-Mar-93	1 3 "	2 1/4 "

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 OIL CON. DIV
 DIST. 3

LEAK DETECTOR LOG

DATE
31-Jan-93
01-Feb-93
02-Feb-93
03-Feb-93
04-Feb-93
05-Feb-93
06-Feb-93
07-Feb-93
08-Feb-93
09-Feb-93
10-Feb-93
11-Feb-93
12-Feb-93
13-Feb-93
14-Feb-93
15-Feb-93
16-Feb-93
17-Feb-93
18-Feb-93
19-Feb-93
20-Feb-93
21-Feb-93
22-Feb-93
23-Feb-93
24-Feb-93
25-Feb-93
26-Feb-93
27-Feb-93
28-Feb-93

EAST GUAGE
' "
1 '3 1/4"
1 '3 1/4"
1 '3 1/8"
1 '3 1/8"
1 '3 1/4"
1 '3 1/4"
' 5 "
' 5 "
' 5 "
' 5 "
' 5 "
' 4 1/4"
' 4 1/4"
' 4 1/4"
' 4 1/4"
' 4 1/4"
' 4 1/4"
' 4 1/4"
' 4 1/4"
' 6 "
' 4 1/4"
' 4 1/4"
' 4 1/2"
' 5 "
' 5 "
' 5 "
' 5 "
' 5 "
' 4 1/4"

WEST GUAGE
' "
3 ' 9 "
3 ' 9 "
3 ' 9 1/8"
3 ' 9 "
3 ' 8 1/2"
2 ' 3 1/8"
2 ' 6 "
2 ' 6 1/2"
1 ' 9 1/2"
1 ' 9 1/2"
1 ' 7 5/8"
' 9 1/8"
1 ' 3 3/4"
1 ' 7 1/4"
1 ' 9 "
1 ' 4 1/4"
1 ' 4 "
1 ' 1 7/8"
1 ' 4 "
1 ' 3 3/4"
1 ' 2 3/8"
1 ' 4 "
1 ' 2 1/2"
1 ' 2 1/4"
1 ' 2 1/2"
1 ' 2 1/4"
1 ' 1 1/4"
1 ' 3 1/2"

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OIL CON. DIV.
DIST. 3

LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
31-Dec-92	1 '2 $\frac{3}{4}$ "	4 '5 $\frac{1}{8}$ "
01-Jan-93	1 '2 $\frac{3}{4}$ "	4 '3 $\frac{1}{4}$ "
02-Jan-93	1 '2 $\frac{3}{4}$ "	4 '3 $\frac{1}{4}$ "
03-Jan-93	1 '3 $\frac{1}{8}$ "	4 '5 $\frac{1}{8}$ "
04-Jan-93	1 '3 $\frac{1}{2}$ "	4 '1 $\frac{7}{8}$ "
05-Jan-93	1 '3 $\frac{3}{8}$ "	4 '2"
06-Jan-93	1 '3"	4 '2"
07-Jan-93	1 '3"	4 '1 $\frac{1}{4}$ "
08-Jan-93	1 '3 $\frac{7}{8}$ "	4 '0"
09-Jan-93	1 '3 $\frac{1}{4}$ "	3 '11"
10-Jan-93	1 '3 $\frac{1}{2}$ "	3 '10 $\frac{1}{2}$ "
11-Jan-93	1 '3 $\frac{5}{8}$ "	3 '10 $\frac{1}{4}$ "
12-Jan-93	1 '3 $\frac{1}{8}$ "	3 '10 $\frac{3}{8}$ "
13-Jan-93	1 '3 $\frac{1}{2}$ "	3 '10 $\frac{3}{8}$ "
14-Jan-93	1 '3 $\frac{1}{8}$ "	3 '10 $\frac{3}{8}$ "
15-Jan-93	1 '3 $\frac{1}{2}$ "	3 '10 $\frac{3}{8}$ "
16-Jan-93	1 '3"	3 '10 $\frac{1}{4}$ "
17-Jan-93	1 '3 $\frac{1}{4}$ "	3 '10 $\frac{1}{2}$ "
18-Jan-93	1 '3"	3 '9 $\frac{3}{4}$ "
19-Jan-93	1 '3"	3 '9 $\frac{7}{8}$ "
20-Jan-93	1 '3 $\frac{1}{4}$ "	3 '9 $\frac{3}{4}$ "
21-Jan-93	1 '3 $\frac{1}{4}$ "	3 '9 $\frac{1}{2}$ "
22-Jan-93	1 '3 $\frac{1}{4}$ "	3 '9 $\frac{3}{4}$ "
23-Jan-93	1 '3"	3 '9 $\frac{1}{4}$ "
24-Jan-93	1 '3"	3 '9 $\frac{1}{8}$ "
25-Jan-93	1 '3"	3 '9 $\frac{1}{4}$ "
26-Jan-93	1 '3 $\frac{1}{4}$ "	3 '8 $\frac{7}{8}$ "
27-Jan-93	1 '3"	3 '9"
28-Jan-93	1 '3"	3 '8 $\frac{3}{4}$ "
29-Jan-93	1 '3 $\frac{1}{8}$ "	3 '8 $\frac{3}{4}$ "
30-Jan-93	1 '3 $\frac{1}{4}$ "	3 '8 $\frac{3}{4}$ "
31-Jan-93	1 '3 $\frac{1}{4}$ "	3 '9"

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LEAK DETECTOR LOG

DATE	EAST GUAGE	WEST GUAGE
30-Nov-92	1 ' 3 "	3 ' 4 1/2 "
01-Dec-92	1 ' 3 1/4 "	3 ' 4 1/2 "
02-Dec-92	1 ' 3 "	3 ' 4 3/4 "
03-Dec-92	1 ' 3 "	3 ' 4 7/8 "
04-Dec-92	1 ' 3 "	3 ' 5 "
05-Dec-92	1 ' 3 "	3 ' 5 1/8 "
06-Dec-92	1 ' 3 1/8 "	3 ' 5 1/8 "
07-Dec-92	1 ' 3 "	3 ' 5 1/4 "
08-Dec-92	1 ' 2 7/8 "	3 ' 5 1/4 "
09-Dec-92	1 ' 2 7/8 "	3 ' 5 3/8 "
10-Dec-92	1 ' 2 7/8 "	3 ' 5 3/8 "
11-Dec-92	1 ' 3 1/4 "	3 ' 5 1/2 "
12-Dec-92	1 ' 2 7/8 "	3 ' 5 3/8 "
13-Dec-92	1 ' 3 1/2 "	3 ' 5 5/8 "
14-Dec-92	1 ' 3 "	3 ' 5 3/4 "
15-Dec-92	1 ' 3 "	3 ' 5 3/4 "
16-Dec-92	1 ' 3 "	3 ' 5 3/4 "
17-Dec-92	1 ' 3 1/2 "	3 ' 6 "
18-Dec-92	1 ' 3 "	3 ' 7 1/8 "
19-Dec-92	1 ' 3 "	3 ' 7 3/8 "
20-Dec-92	1 ' 3 "	3 ' 8 1/4 "
21-Dec-92	1 ' 3 "	3 ' 8 1/2 "
22-Dec-92	1 ' 3 "	3 ' 9 1/4 "
23-Dec-92	1 ' 4 "	3 ' 9 1/4 "
24-Dec-92	1 ' 3 "	3 ' 9 1/4 "
25-Dec-92	1 ' 2 7/8 "	3 ' 10 1/2 "
26-Dec-92	1 ' 2 7/8 "	3 ' 10 3/8 "
27-Dec-92	1 ' 2 7/8 "	3 ' 10 3/4 "
28-Dec-92	1 ' 2 7/8 "	3 ' 11 3/4 "
29-Dec-92	1 ' 2 7/8 "	4 ' 1/2 "
30-Dec-92	1 ' 2 7/8 "	4 ' 1/2 "
31-Dec-92	1 ' 2 3/4 "	4 ' 5/8 "

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P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT SUNCO DISPOSAL POND

DATE: 2-1-96

LAST REPORT: 1-26-96

TIME: 8:30 PM

SAMPLE POINT: Pond Bottom

ANALYSIS (PPM)

TEMPERATURE: 31.0

SPECIFIC GRAVITY: 1.010

PH: 8.80

DISSOLVED OXYGEN: 0.8

H₂S: 3.9

SULFIDES: 0

CARBONATE : 488

CHLORIDES: 9,000

BICARBONATE: 1,920

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab .

CIRCULATION SYSTEM: Op

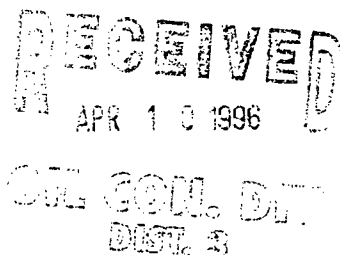
ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

SINCERELY,
RICHARD D. STEPH (SALES ENGINEER)





P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 1-26-96

LAST REPORT: 1-12-96

TIME: 2:20 PM

SAMPLE POINT: Pond Bottom

ANALYSIS (PPM)

TEMPERATURE: 45.1

SPECIFIC GRAVITY: 1.010

PH: 8.75

DISSOLVED OXYGEN: 1.0

H₂S: 0.68

SULFIDES: 0

CARBONATE : 840

CHLORIDES: 9,500

BICARBONATE: 2,196

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 1-12-96

LAST REPORT: 1-4-96

TIME: 10:20 AM

ANALYSIS (PPM)

TEMPERATURE: 38.6

SPECIFIC GRAVITY: 1.025

PH: 8.90

DISSOLVED OXYGEN: 1.0

H₂S: 0.88

SULFIDES: 0

CARBONATE : 1,732

CHLORIDES: 12,000

BICARBONATE: 2,220

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 1-4-96

LAST REPORT: 12-28-95

TIME: 8:30 AM

ANALYSIS (PPM)

TEMPERATURE: 34

SPECIFIC GRAVITY: 1.030

PH: 8.85

DISSOLVED OXYGEN: 1.0

H₂S: 0.68

SULFIDES: 0

CARBONATE : 1,830

CHLORIDES: 11,000

BICARBONATE: 2,318

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

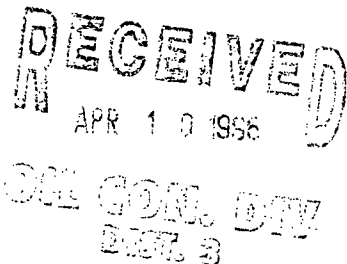
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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 12-28-95

LAST REPORT: 12-18-95

TIME: 11:00 AM

ANALYSIS (PPM)

TEMPERATURE: 40.6

SPECIFIC GRAVITY: 1.025

PH: 8.90

DISSOLVED OXYGEN: 1.0

H₂S: 1.0

SULFIDES: 0

CARBONATE : 1,865

CHLORIDES: 14,000

BICARBONATE: 3,668

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 12-18-95

LAST REPORT: 12-11-95

TIME: 9:30 AM

ANALYSIS (PPM)

TEMPERATURE: 39.0

SPECIFIC GRAVITY: 1.025

PH: 8.95

DISSOLVED OXYGEN: 1.0

H₂S: 1.7

SULFIDES: 0

CARBONATE : 1,920

CHLORIDES: 15,000

BICARBONATE: 3,782

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 12-11-95

LAST REPORT: 12-04-95

TIME: 7:45 AM

ANALYSIS (PPM)

TEMPERATURE: 40.3

SPECIFIC GRAVITY: 1.025

PH: 9.05

DISSOLVED OXYGEN: .1

H₂S: 1.0

SULFIDES: 0

CARBONATE : 2,352

CHLORIDES: 15,000

BICARBONATE: 3,064

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 12-04-95

LAST REPORT: 11-27-95

TIME: 8:15 AM

ANALYSIS (PPM)

TEMPERATURE: 41.7

SPECIFIC GRAVITY: 1.025

PH: 8.95

DISSOLVED OXYGEN: .2

H₂S: 1.1

SULFIDES: 0

CARBONATE : 2,160

CHLORIDES: 14,000

BICARBONATE: 2,928

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr/Med

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

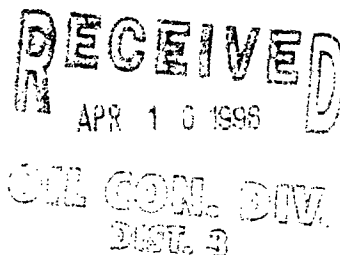
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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 11-27-95

LAST REPORT: 11-20-95

TIME: 8:10 AM

ANALYSIS (PPM)

TEMPERATURE: 40.0

SPECIFIC GRAVITY: 1.025

PH: 9.10

DISSOLVED OXYGEN: .1

H₂S: 1.1

SULFIDES: 0

CARBONATE : 3,740

CHLORIDES: 15,000

BICARBONATE: 4,536

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 11-20-95

LAST REPORT: 11-15-95

TIME: 10:45 AM

ANALYSIS (PPM)

TEMPERATURE: 42.6

SPECIFIC GRAVITY: 1.025

PH: 9.05

DISSOLVED OXYGEN: .2

H₂S: 1.0

SULFIDES: 0

CARBONATE : 3,640

CHLORIDES: 15,000

BICARBONATE: 4,436

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab .

CIRCULATION SYSTEM: Op

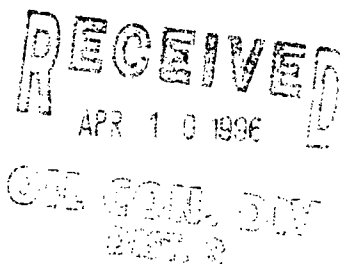
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Water Analysis Report

Customer: SUNCO

11/30/95

Address:

City:

State:

Zip:

Attention: Mike Talovich

Date Sampled: 11/15/95

CC1: Mike Leonard

Date Recieved: 11/21/95

CC2:

SALESMAN NAME: Rick Steph

LEASE: Disposal

SAMPLE POINT: Disposal Pond

WELL: Disposal Pond

REMARKS: CO3-3840 O2-2ppb

CHLORIDE: 16000
SULFATE: 633
BICARBONATE: 8540
CALCIUM: 20
MAGNESIUM: 114
IRON: 1
BARIUM:
STRONTIUM:
MEASURED pH: 9.15
TEMPERATURE: 46
DISSOLVED CO2: 1
MOLE PERCENT CO2 IN GAS:
DISSOLVED H2S: 0.0
PRESSURE (PSIA): 100

SODIUM (PPM): 13658

IONIC STRENGTH: 0.60

CALCITE (CaCO3) SI:	1.85	CALCITE PTB:	17.2
GYPSUM (CaSO4) SI:	-2.67	GYPSUM PTB:	N/A
BARITE (BaSO4) SI:	N/A	BARITE PTB:	N/A
CELESTITE (SrSO4) SI:	N/A	CELESTITE PTB:	N/A

SI calculations based on Tomson-Oddo

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J. J. Duncan



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HOBBS, NEW MEXICO 88240

WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 11-15-95

LAST REPORT: 11-10-95

TIME: 10:45 AM

ANALYSIS (PPM)

TEMPERATURE: 46.9

SPECIFIC GRAVITY: 1.025

PH: 9.15

DISSOLVED OXYGEN: .2

H₂S: 1.0

SULFIDES: 0

CARBONATE : 3,840

CHLORIDES: 16,000

BICARBONATE: 4,636

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab .

CIRCULATION SYSTEM: Op

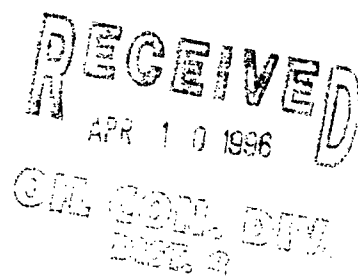
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HOBBS, NEW MEXICO 88240

WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 11-10-95

LAST REPORT: 11-06-95

TIME: 9:00 AM

ANALYSIS (PPM)

TEMPERATURE: 41.0

SPECIFIC GRAVITY: 1.025

PH: 9.05

DISSOLVED OXYGEN: 1.0

H₂S: 1.5

SULFIDES: 0

CARBONATE : 10,290

CHLORIDES: 14,000

BICARBONATE: 10,860

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 11-06-95

LAST REPORT: 10-30-95

TIME: 8:30 AM

ANALYSIS (PPM)

TEMPERATURE: 43.0

SPECIFIC GRAVITY: 1.030

PH: 9.10

DISSOLVED OXYGEN: 1.0

H₂S: 1.3

SULFIDES: 0

CARBONATE : 10,330

CHLORIDES: 15,000

BICARBONATE: 10,990

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 10-30-95

LAST REPORT: 10-23-95

TIME: 7:40 AM

ANALYSIS (PPM)

TEMPERATURE: 49.6

SPECIFIC GRAVITY: 1.050

PH: 9.25

DISSOLVED OXYGEN: 1.0

H₂S: 2.3

SULFIDES: 0

CARBONATE : 10,440

CHLORIDES: 20,000

BICARBONATE: 11,102

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

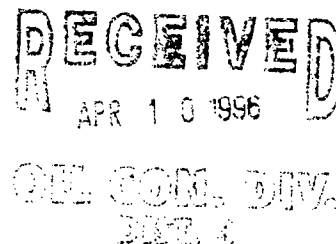
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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 10-23-95

LAST REPORT: 10-19-95

TIME: 8:00 AM

ANALYSIS (PPM)

TEMPERATURE: 40.0

SPECIFIC GRAVITY: 1.050

PH: 9.25

DISSOLVED OXYGEN: .3

H₂S: 3.5

SULFIDES: 0

CARBONATE : 10,320

CHLORIDES: 22,000

BICARBONATE: 10,248

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

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WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 10-19-95

LAST REPORT: 10-16-95

TIME: 11:40 AM

ANALYSIS (PPM)

TEMPERATURE: 52.7

SPECIFIC GRAVITY: 1.045

PH: 9.25

DISSOLVED OXYGEN: .6

H₂S: 3.4

SULFIDES: 0

CARBONATE : 9,240

CHLORIDES: 21,000

BICARBONATE: 10,126

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

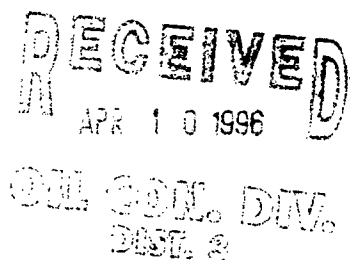
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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 10-16-95

LAST REPORT: 10-12-95

TIME: 1:45 PM

ANALYSIS (PPM)

TEMPERATURE: 55.4

SPECIFIC GRAVITY: 1.030

PH: 9.10

DISSOLVED OXYGEN: .2

H₂S: 1.1

SULFIDES: 0

CARBONATE : 4,220

CHLORIDES: 15,000

BICARBONATE: 4,025

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

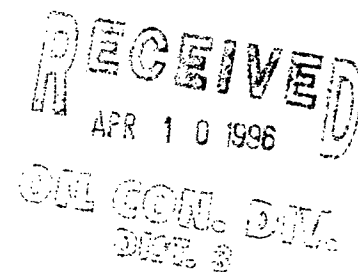
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WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 10-12-95

LAST REPORT: 10-9-95

TIME: 10:00 AM

ANALYSIS (PPM)

TEMPERATURE: 52.2

SPECIFIC GRAVITY: 1.025

PH: 9.05

DISSOLVED OXYGEN: .2

H₂S: 1.2

SULFIDES: 0

CARBONATE : 4,180

CHLORIDES: 14,000

BICARBONATE: 4,130

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

SINCERELY,
RICHARD D. STEPH (SALES ENGINEER)

RECEIVED
APR 10 1996

ALL FIELD DATA
1996



P.O. BOX 2187
HOBBS, NEW MEXICO 88240

WATER ANALYSIS REPORT

Telephone (505) 393-7726

SUNCO DISPOSAL POND

DATE: 10-9-95

LAST REPORT: 10-6-95

TIME: 8:00 AM

ANALYSIS (PPM)

TEMPERATURE: 48.0

SPECIFIC GRAVITY: 1.025

PH: 9.10

DISSOLVED OXYGEN: .4

H₂S: 2.0

SULFIDES: 0

CARBONATE : 4,080

CHLORIDES: 15,000

BICARBONATE: 4,026

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Op

ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
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FARMINGTON, NM. 87499

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CLF. 3



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Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 10-6-95

LAST REPORT: 10-2-95

TIME: 8:00 AM

ANALYSIS (PPM)

TEMPERATURE: 40.0

SPECIFIC GRAVITY: 1.025

PH: 9.10

DISSOLVED OXYGEN: .2

H₂S: 9.5

SULFIDES: 0

CARBONATE : 2,880

CHLORIDES: 14,000

BICARBONATE: 6,222

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Med Gray

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: Off

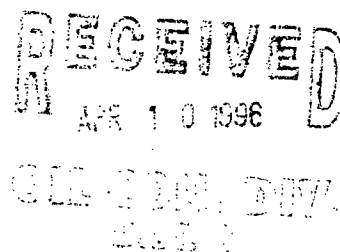
ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

RICHARD D. STEPH (SALES ENGINEER)





P.O. BOX 2187
HOBBS, NEW MEXICO 88248

2

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 10-2-95

LAST REPORT: 9-28-95

TIME: 8:35 AM

ANALYSIS (PPM)

TEMPERATURE: 51.2

SPECIFIC GRAVITY: 1.035

PH: 9.45

DISSOLVED OXYGEN: .4

H₂S: 1.3

SULFIDES: 0

CARBONATE : 5,520

CHLORIDES: 15,000

BICARBONATE: 7,564

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: OP

ANALYSIS CONDUCTED BY:

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P.O. BOX 2936
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W. B. SMITH, JR.
LAB



P.O. BOX 2187
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Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-28-95

LAST REPORT: 9-25-95

TIME: 7:45 AM

ANALYSIS (PPM)

TEMPERATURE: 55.0

SPECIFIC GRAVITY: 1.035

PH: 9.20

DISSOLVED OXYGEN: .6

H₂S: 1.8

SULFIDES: 0

CARBONATE : 6,360

CHLORIDES: 16,000

BICARBONATE: 9,028

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: OP

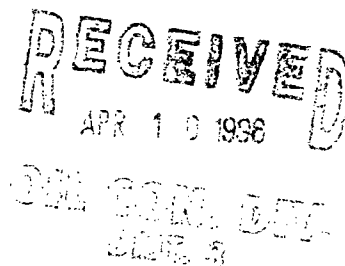
ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505)-324-0040

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SINCERELY,
RICHARD D. STEPH (SALES ENGINEER)





P.O. BOX 2187
HOBBS, NEW MEXICO 88340

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-25-95

LAST REPORT: 9-22-95

TIME: 7:20 AM

ANALYSIS (PPM)

TEMPERATURE: 48.2

SPECIFIC GRAVITY: 1.025

PH: 9.00

DISSOLVED OXYGEN: .2

H₂S: 2.3

SULFIDES: 0

CARBONATE : 6,125

CHLORIDES: 15,000

BICARBONATE: 7,452

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Clr.

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: OP

ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

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RICHARD D. STEPH (SALES ENGINEER)

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OIL CON. DIV.
DIST. 3



P.O. BOX 2187
HOBBS, NEW MEXICO 88248

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-22-95

LAST REPORT: 9-18-95

TIME: 2:30 PM

ANALYSIS (PPM)

TEMPERATURE: 68.4

SPECIFIC GRAVITY: 1.030

PH: 9.15

DISSOLVED OXYGEN: .2

H₂S: 2.0

SULFIDES: 0

CARBONATE : 5,860

CHLORIDES: 14,000

BICARBONATE: 8,250

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Cloudy

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: OP

ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

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OIL CORL DIV
DIST. 3



Champion
Technologies, Inc.

Committed To Improvement

Water Analysis Report

Customer: SUNCO

9/27/95

Address:

City:

State:

Zip:

Attention: Mike Talovich

Date Sampled: 9/18/95

CC1: Mike Leonard

Date Recieved: 9/22/95

CC2:

SALESMAN NAME: Rick Steph

LEASE: Disposal

SAMPLE POINT: Disposal Pond

WELL: Disposal Pond

REMARKS: CO3-7200; O2- 400 PPB

CHLORIDE:	19000
SULFATE:	781
BICARBONATE:	244
CALCIUM:	20
MAGNESIUM:	140
IRON:	1
BARIUM:	
STRONTIUM:	
MEASURED pH:	9.15
TEMPERATURE:	62
DISSOLVED CO2:	1
MOLE PERCENT CO2 IN GAS:	
DISSOLVED H2S:	3.0
PRESSURE (PSIA):	100
SODIUM (PPM):	12500
IONIC STRENGTH:	0.56

CALCITE (CaCO3) SI:	-1.05	CALCITE PTB:	N/A
GYPSUM (CaSO4) SI:	-2.56	GYPSUM PTB:	N/A
BARITE (BaSO4) SI:	N/A	BARITE PTB:	N/A
CELESTITE (SrSO4) SI:	N/A	CELESTITE PTB:	N/A

SI calculations based on Tomson-Oddo

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OIL FIELD DIV
DOW



P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-18-95

LAST REPORT: 9-15-95

TIME: 8:45 PM

ANALYSIS (PPM)

TEMPERATURE: 62.2

SPECIFIC GRAVITY: 1.045

PH: 9.15

DISSOLVED OXYGEN: .4

H₂S: 3.4

SULFIDES: 0

ALKALINITY: 7,200

CHLORIDES: 19,000

BICARBONATE: 244

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Lt.Gry

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: OP

ANALYSIS CONDUCTED BY:

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DIST. 3



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Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-15-95

LAST REPORT: 9-13-95

TIME: 3:45 PM

ANALYSIS (PPM) (Truck Sample Southwest Disposal)

TEMPERATURE: 78.0

SPECIFIC GRAVITY: 1.135

PH: 9.05

DISSOLVED OXYGEN: N/A

H₂S: 22.2

SULFIDES: 0

ALKALINITY: 32,400

CHLORIDES: 50,000

BICARBONATE: 395

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Yellow

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: N/A

ANALYSIS CONDUCTED BY:

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DISTR.

Water Analysis Report

Customer: **SUNCO**

Address:

9/27/95

City:

State:

Zip:

Attention: Mike Talovich

Date Sampled: 9/13/95

CC1: Mike Leonard

Date Recieved: 9/22/95

CC2:

SALESMAN NAME: Rick Steph

LEASE: Disposal

SAMPLE POINT: Disposal Pond(Top)

WELL: Disposal Pond(Top)

REMARKS: CO3-3600; O2- 400 PPB

CHLORIDE: 17000

SULFATE: 830

BICARBONATE: 10004

CALCIUM: 28

MAGNESIUM: 111

IRON: 1

BARIUM:

STRONTIUM:

MEASURED pH: 9.05

TEMPERATURE: 68

DISSOLVED CO2: 1

MOLE PERCENT CO2 IN GAS:

DISSOLVED H2S: 5.0

PRESSURE (PSIA): 100

SODIUM (PPM): 14949

IONIC STRENGTH: 0.66

CALCITE (CaCO3) SI: 2.30

GYPSUM (CaSO4) SI: -2.43

BARITE (BaSO4) SI: N/A

CELESTITE (SrSO4) SI: N/A

CALCITE PTB: 24.4

GYPSUM PTB: N/A

BARITE PTB: N/A

CELESTITE PTB: N/A

SI calculations based on Tomson-Oddo

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OIL COIL
EAST

John L. Luccan



P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-13-95

LAST REPORT: 9-11-95

TIME: 2:15 PM

ANALYSIS (PPM) (Top)

TEMPERATURE: 68.2

SPECIFIC GRAVITY: 1.030

PH: 9.05

DISSOLVED OXYGEN: .4 ppm

H₂S: 5.80

SULFIDES: .2

ALKALINITY: 3,600

CHLORIDES: 17,000

BICARBONATE: 10,004

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: grey

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: oper.

ANALYSIS CONDUCTED BY:

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FARMINGTON, NM. 87499

PHONE: (505) 324-0040

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P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-11-95

LAST REPORT: 9-8-95

TIME: 7:45 AM

ANALYSIS (PPM)

TEMPERATURE: 61.4

SPECIFIC GRAVITY: 1.025

PH: 9.05

DISSOLVED OXYGEN: .4 ppm

H₂S: 8.55

SULFIDES: .2

ALKALINITY: 288

CHLORIDES: 15,000

BICARBONATE: 6,100

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: grey

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: oper.

ANALYSIS CONDUCTED BY:

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FARMINGTON, NM. 87499

PHONE: (505) 324-0040

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OIL COIL DIV.
PAGE 3



Champion
Technologies, Inc.

Committed To Improvement

Water Analysis Report

Customer: SUNCO

9/27/95

Address:

City:

State:

Zip:

Attention: Mike Talovich

Date Sampled: 9/11/95

CC1: Mike Leonard

Date Recieved: 9/22/95

CC2:

SALESMAN NAME: Rick Steph

LEASE: Disposal

SAMPLE POINT: Disposal Well

WELL: Disposal Well

REMARKS: CO3-288; O2-400PPB

CHLORIDE: 15000

SULFATE: 762

BICARBONATE: 6100

CALCIUM: 32

MAGNESIUM: 94

IRON: 1

BARIUM:

STRONTIUM:

MEASURED pH: 9.05

TEMPERATURE: 61

DISSOLVED CO2: 1

MOLE PERCENT CO2 IN GAS:

DISSOLVED H2S: 8.0

PRESSURE (PSIA): 100

SODIUM (PPM): 12176

IONIC STRENGTH: 0.54

CALCITE (CaCO3) SI: 1.96

CALCITE PTB: 27.7

GYPSUM (CaSO4) SI: -2.36

GYPSUM PTB: N/A

BARITE (BaSO4) SI: N/A

BARITE PTB: N/A

CELESTITE (SrSO4) SI: N/A

CELESTITE PTB: N/A

SI calculations based on Tomson-Oddo

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J. Duncan



P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-11-95

LAST REPORT: 9-8-95

TIME: 7:45 AM

ANALYSIS (PPM)

TEMPERATURE: 61.4

SPECIFIC GRAVITY: 1.025

PH: 9.05

DISSOLVED OXYGEN: .4 ppm

H₂S: 8.55

SULFIDES: .2

ALKALINITY: 288

CHLORIDES: 15,000

BICARBONATE: 6,100

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: grey

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: oper.

ANALYSIS CONDUCTED BY:

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DIST. 3



Champion
Technologies, Inc.

Committed To Improvement

Water Analysis Report

Customer: **SUNCO**

9/22/95

Address:

City:

State:

Zip:

Attention: Mike Talovich

Date Sampled:

ATTACH TO:

9/8/95

CC1: Mike Leonard

Date Recieved:

9/13/95

CC2:

SALESMAN NAME: Rick Steph

LEASE: Disposal

SAMPLE POINT: Disposal

WELL: Disposal

REMARKS: CO₃=384, O₂= 0.6 PPM

CHLORIDE: 14000

SULFATE: 2095

BICARBONATE: 3172

CALCIUM: 80

MAGNESIUM: 72

IRON: 1

BARIUM:

STRONTIUM:

MEASURED pH: 9.15

TEMPERATURE: 62

DISSOLVED CO₂: 1

MOLE PERCENT CO₂ IN GAS:

DISSOLVED H₂S: 5.1

PRESSURE (PSIA): 100

SODIUM (PPM): 11049

IONIC STRENGTH: 0.49

CALCITE (CaCO₃) SI: 1.85

CALCITE PTB: 68.9

GYPSUM (CaSO₄) SI: -1.53

GYPSUM PTB: N/A

BARITE (BaSO₄) SI: N/A

BARITE PTB: N/A

CELESTITE (SrSO₄) SI: N/A

CELESTITE PTB: N/A

SI calculations based on Tomson-Oddo

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DIST. 3

Pyaluncan



P.O. BOX 2187
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Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-8-95

LAST REPORT: 9-6-95

TIME: 8:00 AM

ANALYSIS (PPM)

TEMPERATURE: 62.4

SPECIFIC GRAVITY: 1.030

PH: 9.15

DISSOLVED OXYGEN: .6 ppm

H₂S: 5.13

SULFIDES: 0

ALKALINITY: 384

CHLORIDES: 14,000

BICARBONATE: 3,172

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Lt.

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: oper.

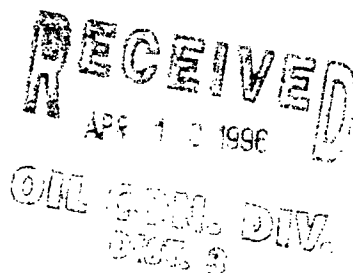
ANALYSIS CONDUCTED BY:

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FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

SINCERELY,





P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-6-95

LAST REPORT: 9-1-95

TIME: 8:30 AM

ANALYSIS (PPM)

TEMPERATURE: 60

SPECIFIC GRAVITY: 1.025

PH: 9.25

DISSOLVED OXYGEN: .4 ppm

H₂S: 2.56

SULFIDES: 0

ALKALINITY: 3,516

CHLORIDES: 13,000

BICARBONATE: 12,017

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARENCE: Clr

DISSOLVED SOLIDS: Lab

SULFATES: Lab

CIRCULATION SYSTEM: oper.

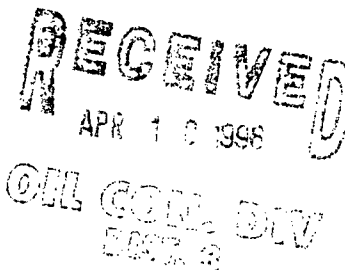
ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

THANK YOU FOR YOUR BUSINESS!

SINCERELY,
RICHARD D. STEPH (SALES ENGINEER)





P.O. BOX 2187
HOBBS, NEW MEXICO 88240

Telephone (505) 393-7726

&WATER ANALYSIS REPORT

SUNCO DISPOSAL POND

DATE: 9-1-95

LAST REPORT: 0

TIME: 4:30 PM

ANALYSIS (PPM)

TEMPERATURE: 78

SPECIFIC GRAVITY: 1.030

PH: 9.50

DISSOLVED OXYGEN: .4 ppm

H₂S: 3.9

SULFIDES: 0

ALKALINITY: 1,824

CHLORIDES: 15,000

BICARBONATE: 6,588

MAGNESIUM: Lab

CALCIUM: Lab

TOTAL HARDNESS: Lab

APPEARANCE: Dark

DISSOLVED SOLIDS: Lab

SULFATES: Lab.

CIRCULATION SYSTEM: oper.

ANALYSIS CONDUCTED BY:

CHAMPION TECHNOLOGIES INC.
P.O. BOX 2936
FARMINGTON, NM. 87499

PHONE: (505) 324-0040

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RICHARD D. STEPH (SALES ENGINEER)

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BEE 3



SERVICE REPORT

Plant SUNCO DISPOSAL
Address _____
Attention M. TALOVICH
Copy to _____

9/1/95

WATER ANALYSIS

4:30 PM.

Sample @ Circulation Lines By. Pump.

Temp. - 78°
PH. - 9.5
H₂S - 2.3 mls (LR)
O₂ - .4 PPM.
CHLORIDES - 15,000
S. GRAVITY - 1.030
CO₃ - 15.2 mls.
HCO₃ - 54 mls.
CO₂ - N/A
APPEARANCE - DARK

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OIL CON. DEPT.
DIST. 3

Date:

9/1/95

Service engineer:

[Signature]

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 8-30-95

LOCATION SW CORNER POND PRAPAL

TIME 7:00

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-28-95

REPRESENTATIVE MIKE CHONARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 1.7 mg/L
TEMPERATURE 13.3°C 64.9°F
H₂S 0.5 mg/L
TOTAL SULFIDES 4.0 mg/L
SULFATES 10-20
CHLORIDES 13000
CHLORINE N/A
TOTAL HARDNESS 280
CALCIUM 120

VOLUME _____
PH 8.45
SPECIFIC GRAVITY/WT 1.015 / 8.45 #
MAGNESIUM 160
BICARBONATE N/A
ALKALINITY 0.21 # 5.21 #
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE GETTING DARKER
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894

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ONE TON

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

SUNCO DISPOSAL

DATE 8-28-95

LOCATION SW CORNER POND PAVIL

TIME 7:00

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-25-95

REPRESENTATIVE MICHAEL LEONARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE 20.0°C 68°F
H₂S 1.5 mg/L
TOTAL SULFIDES 7.5 mg/L
SULFATES 10-20
CHLORIDES 12500
CHLORINE N/A
TOTAL HARDNESS 240
CALCIUM 68

VOLUME _____
PH 8.25
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 172
BICARBONATE N/A
ALKALINITY 0.24M 4.74
DISSOLVED SOLIDS _____
SUSPENDED SOLIDS _____
APPEARANCE DARK
CIRCULATION SYSTEM WATER

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

SUNCO DISPOSAL

DATE 8-22-95 / 8-23-95

SW CORNER Pond PAPER

TIME 6:50A / 7:00

JID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-21-95

8-22-95

TATIVE MIKE LEONARD

PTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 2.4 mg/L / N/A
TEMPERATURE 19.0°C 66.2°F / 19.5°C 67.1°F
H₂S 0.5 mg/L / 0.6 mg/L
TOTAL SULFIDES 8.0 mg/L / 8.0 mg/L
SULFATES 10-20
CHLORIDES 13500
CHLORINE N/A
TOTAL HARDNESS 280
CALCIUM 88

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 1.045*
MAGNESIUM 192
BICARBONATE N/A
ALKALINITY 0.3 AF / 4.65 MF
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WATER

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Ray F. N.

PHONE 324-8224

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 8-21-95

LOCATION SW CORNER POND AREA

TIME 7:00

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-18-95

REPRESENTATIVE MIKE LEONARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 2.7 mg/L
TEMPERATURE 19.1°C 66.4°F
H₂S 0.5 mg/L
TOTAL SULFIDES 8.5 mg/L
SULFATES 10-20
CHLORIDES 14000
CHLORINE N/A
TOTAL HARDNESS 184
CALCIUM 112

VOLUME _____
PH 8.75
SPECIFIC GRAVITY/WT 1.015 / 8.45#
MAGNESIUM 72
BICARBONATE N/A
ALKALINITY 0.4 M 5.4 ME
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

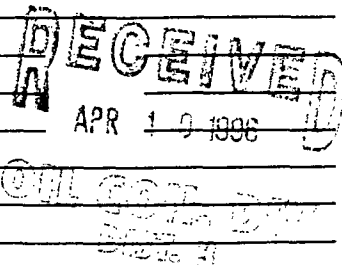
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST L. J. N.

PHONE 334-8894



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 8-17-95 | 8-18-95

LOCATION SW CORNER POND PROPER

TIME 6:40 | 6:40A

UID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-16-95

TATIVE MIKE LEONARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN	<u>2.3 mg/L</u>	<u>2.9 mg/L</u>
TEMPERATURE	<u>20.7°C 69.3°F</u>	<u>19.7°C 67.5°F</u>
H ₂ S	<u>0.5 mg/L</u>	<u>0.4 mg/L</u>
TOTAL SULFIDES	<u>11.5 mg/L</u>	<u>11 mg/L</u>
SULFATES	<u>10-20</u>	
CHLORIDES	<u>13000</u>	
CHLORINE		
TOTAL HARDNESS	<u>140</u>	
CALCIUM	<u>60</u>	

VOLUME _____
PH 8.75
SPECIFIC GRAVITY/WT 1.015 / 8.45#
MAGNESIUM 80
BICARBONATE _____
ALKALINITY 0.35 AF 5.85 MF
DISSOLVED SOLIDS _____
SUSPENDED SOLIDS _____
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

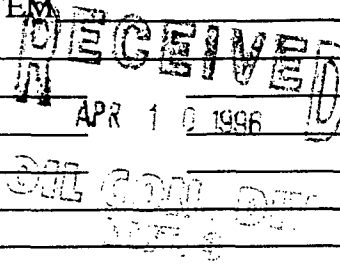
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8814



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 8-15-95 / 8-16-95

LOCATION SW CORNER POND PAPER

TIME 6:30A / 6:30A

FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-14-95

CLIENT MIKE LEONARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

8-15-95

WATER ANALYSIS

DISSOLVED OXYGEN 2.3 mg/L / 2.0
TEMPERATURE 19.7°C 67.5°F / 20.4°C
H₂S 0.5 mg/L / 0.5 mg/L
TOTAL SULFIDES 11 mg/L / 12.5 mg/L
SULFATES 10-20
CHLORIDES 12000
CHLORINE N/A
TOTAL HARDNESS 278
CALCIUM 60

VOLUME _____
PH 8.6
SPECIFIC GRAVITY/WT 1.015 / 1.045
MAGNESIUM 218
BICARBONATE N/A
ALKALINITY 0.41M 5.71M
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

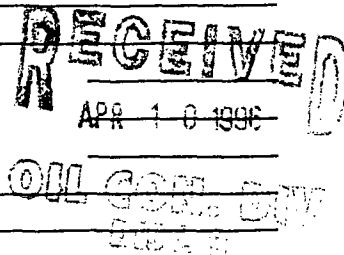
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 8-14-95

LOCATION SW CORNER Pond PRRR

TIME 7:00

FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-11-95

TATIVE MIKE LEONARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 2.3 mg/L
TEMPERATURE 20.1°C 68.2°F
H₂S 0.4 mg/L
TOTAL SULFIDES 11.5
SULFATES 10-20
CHLORIDES 13500
CHLORINE N/A
TOTAL HARDNESS 136
CALCIUM 40

VOLUME _____
PH 8.6
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 96
BICARBONATE N/A
ALKALINITY 0.39 PP 5.29 meq
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

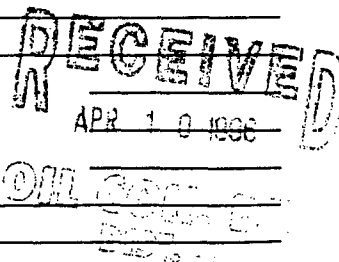
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8874



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

SUNCO DISPOSAL

DATE 8-10-95 // 8-11-95

S W CORNER Pond PAPER

TIME 7:00 A // 7:00 A

FLUID Production Water

DATE PREVIOUS
SERVICE 8-9-95

8-10-95

TATIVE MILK (Brown)

DICTION Monitor H₂S & Total Sulfides

WATER ANALYSIS

DISSOLVED OXYGEN 2.8 mg/L // 2.9 mg/L
TEMPERATURE 21.2°C 70.1°F // 21.3°C 70.3°F
H₂S 0.5 mg/L // 0.5 mg/L
TOTAL SULFIDES 11.0 mg/L // 12.5 mg/L
SULFATES 10-20
CHLORIDES 12250
CHLORINE N/A
TOTAL HARDNESS 184
CALCIUM 70

VOLUME _____
PH 8.65
SPECIFIC GRAVITY/WT 1.015 / 8.45 #
MAGNESIUM 114
BICARBONATE N/A
ALKALINITY 0.37 M 5.17 MF
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM Working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST L. J. M.

PHONE 334-8894

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CLIENT SERVICE REPORT

SUNCO DISPOSAL

DATE 8-8-95 // 8-9-95

SW CORNER POND PUMP // SW CORNER POND PUMP

TIME 7:10A // 7:05A

FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-7-95

8-8-95

INITIALS MIKE LEWIS

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 3.3 mg/L // 2.5 mg/L
TEMPERATURE 21.3°C 70.3°F // 21.3°C 70.3°F
H₂S 0.5 mg/L // 0.6 mg/L
TOTAL SULFIDES 12.0 mg/L // 13.0 mg/L
SULFATES 10-20
CHLORIDES 12250
CHLORINE N/A
TOTAL HARDNESS 230
CALCIUM 84

VOLUME _____
PH 8.65
SPECIFIC GRAVITY/WT 1.010 / 3.41
MAGNESIUM 146
BICARBONATE N/A
ALKALINITY 0.35 AF 5.8 MF
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

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TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

Y SUNCO DISPOSAL

DATE 8-3-95 ^{PARTIAL} 8-4-95 ^{FULL}

LOCATION SW CORNER POND PRAPER // SW CORNER POND PRAPER

TIME 6:50A // 6:20A

D PRODUCTION WATER

DATE PREVIOUS
SERVICE 8-2-95

CONTACT MIKE LEONARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 2.9mg/L // 2.4mg/L
TEMPERATURE 19.7°C 67.4°F // 20.7°C 69.2°F
H₂S 0.5mg/L // <0.1mg/L
TOTAL SULFIDES 13.0mg/L // 10.0mg/L
SULFATES 10-20
CHLORIDES 12500
CHLORINE N/A
TOTAL HARDNESS 160
CALCIUM 68

VOLUME _____
PH 8.65
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 92
BICARBONATE N/A
ALKALINITY 0.35 PF 4.95 MF
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature] PHONE 334-7824

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

8-2-95

SUNCO DISPOSAL

DATE ^{PREVIOUS} 8-1-95 // 8-2-95

DISCHARGE // SW CORNER POND AREA

TIME 7:45A // 6:45A

JID PRODUCTION WATER

DATE PREVIOUS
SERVICE 7/31/95

8-1-95

TATIVE MIKE LEONARD

PTION MONTHLY H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 3.4 mg/L // 2.9 mg/L
TEMPERATURE 20.8°C 69.4°F // 20.1°C 68.1°F
H₂S 0.1 mg/L // 0.3 mg/L
TOTAL SULFIDES 11.0 mg/L // 12.5 mg/L
SULFATES 10-20
CHLORIDES 12250
CHLORINE NA
TOTAL HARDNESS 120
CALCIUM 56

VOLUME
PH 8.45
SPECIFIC GRAVITY/WT 1.015 // 8.45 g
MAGNESIUM 64
BICARBONATE N/A
ALKALINITY 0.42 MP 5.07 MP
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE
CIRCULATION SYSTEM

MUD ANALYSIS

PH
WT
FUNNEL VISCOSITY
RETORT ANALYSIS
% WATER
% OIL
% SOLIDS

VOLUME
APPEARANCE
MIXING SYSTEM

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OIL CONTROL UNIT
EQUIP. 2

RECOMMENDATIONS

TIERRA TECHNOLOGIST *[Signature]*

PHONE 374-8894

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 7-31-95
LOCATION S W CORNER TIME 6:00
TYPE FLUID PRODUCTION WATER DATE PREVIOUS SERVICE 7-28-95

IDENTIFICATION MICHAEL CROWARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN	<u>2.7 mg/L</u>	VOLUME	<u>8.65</u>
TEMPERATURE	<u>20.3°C 68.5°F</u>	PH	<u>8.65</u>
H ₂ S	<u>0.5 mg/L</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.45</u>
TOTAL SULFIDES	<u>12.0 mg/L</u>	MAGNESIUM	<u>44</u>
SULFATES	<u>10-20</u>	BICARBONATE	<u>N/A</u>
CHLORIDES	<u>12500</u>	ALKALINITY	<u>0.37 PP 5.22 MF</u>
CHLORINE	<u>N/A</u>	DISSOLVED SOLIDS	<u>N/A</u>
TOTAL HARDNESS	<u>120</u>	SUSPENDED SOLIDS	<u>N/A</u>
CALCIUM	<u>76</u>	APPEARANCE	<u>Dark translucent</u>
		CIRCULATION SYSTEM	<u>WATER</u>

MUD ANALYSIS

PH	<u> </u>	VOLUME	<u> </u>
WT	<u> </u>	APPEARANCE	<u> </u>
FUNNEL VISCOSITY	<u> </u>		
RETORT ANALYSIS	<u> </u>	MIXING SYSTEM	<u> </u>
% WATER	<u> </u>		
% OIL	<u> </u>		
% SOLIDS	<u> </u>		
RECOMMENDATIONS	<u> </u>		
	<u> </u>		
	<u> </u>		

TIERRA TECHNOLOGIST [Signature] PHONE 324-8894

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TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 7-27-95 ^{PERSONAL} // 7-28-95

7-27-95

IN SW corner

TIME 7:30 // 6:00 A

ID PRODUCTION WATER

DATE PREVIOUS
SERVICE 7-26-95

SENTATIVE MIKE LEONARD

DESCRIPTION monitor H₂S & TOTAL SULFIDES in pond

WATER ANALYSIS

DISSOLVED OXYGEN 2.1 mg/L // 3.1 mg/L
TEMPERATURE 19.3°C 66.7°F // 19.2°C 66.5°F
H₂S 0.3 mg/L // 0.5 mg/L
TOTAL SULFIDES 10.0 mg/L // 11.0 mg/L
SULFATES 10-20
CHLORIDES 13000
CHLORINE N/A
TOTAL HARDNESS 120
CALCIUM 72

VOLUME _____
PH 8.9
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 48
BICARBONATE N/A
ALKALINITY 0.41 PF 6.11 ME
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM underline

MUD ANALYSIS

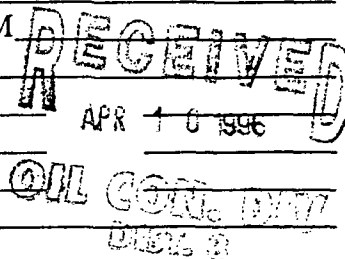
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8874



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 7-25-95 ^{PRELIM} //

7-25-95 ^{ON} SW CORNER //

TIME 6:00 //

PRODUCTION WATER

DATE PREVIOUS
SERVICE _____

LOCATION MILE LEONARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 3.0 // 3.3
TEMPERATURE 18.6°C 65.4°F // 19.3°C 66.7°F
H₂S 0.1 mg/L // 0.3 mg/L
TOTAL SULFIDES 9.0 mg/L // 10.5 mg/L
SULFATES 10-20
CHLORIDES 12000
CHLORINE N/A
TOTAL HARDNESS 68
CALCIUM 64

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 4
BICARBONATE N/A
ALKALINITY 0.47 ME 5.07 ME
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

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TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

CANY SUNCO DISPOSAL

DATE 7-24-95

SOUTH WEST CORNER

TIME 7:00 A

D production water

DATE PREVIOUS
SERVICE 7-21-95

REPRESENTATIVE MIKE LORRARD

JOB DESCRIPTION MANUAL H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 1.7
TEMPERATURE 18.7°C 65.6°F
H₂S 0.1 mg/L
TOTAL SULFIDES 6.5 mg/L
SULFATES 10-20
CHLORIDES 13500
CHLORINE N/A
TOTAL HARDNESS 88
CALCIUM 40

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45#
MAGNESIUM 48
BICARBONATE N/A
ALKALINITY 0.53 PF 5.03 MF
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK TRANSLUCENT
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

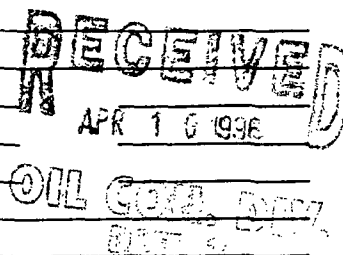
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 7-20-95 ^{PARTIAL} ^{FULL} 7-21-95

LOCATION DISCHARGE // SW CORNER
7-20-95

TIME 7:00 // 7:00

ID PRODUCTION WATER

DATE PREVIOUS
SERVICE 7-19-95

NATIVE MILLER LEONARD

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 1.0 mg/L // 1.3 mg/L
TEMPERATURE 19.6°C 67.3°F // 19.3°C 66.7°F
H₂S 0.2 mg/L // 0.2 mg/L
TOTAL SULFIDES 6.5 mg/L // 6.5 mg/L
SULFATES 10-20
CHLORIDES 13500
CHLORINE N/A
TOTAL HARDNESS 168
CALCIUM 60

VOLUME _____
PH 8.85
SPECIFIC GRAVITY/WT 1.015 / 8.45#
MAGNESIUM 108
BICARBONATE N/A
ALKALINITY 0.59 PE 4.69 mf
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK TRANSLUCENT
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

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OIL CORP. DIV.
DIST. 3

TIERRA TECHNOLOGIST LRN

PHONE 334-8894

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

7-18-95

SUNCO DISPOSAL

DATE ^{PARTIAL} 7-18-95 // ^{FULL} 7-19-95

TIME 7:00A // 8:00am

JID PRODUCTION WATER

DATE PREVIOUS SERVICE

REPRESENTATIVE MIKE LEONARD

7/19/95 DESCRIPTION

WATER ANALYSIS

DISSOLVED OXYGEN 1.4mg/L // 1.0mg/L
TEMPERATURE 19.4°C 66.9°F // 20.3°C 68.5°F
H₂S 0.5mg/L // 0.6mg/L
TOTAL SULFIDES 8.0mg/L // 8.0mg/L
SULFATES 10-20mg/L
CHLORIDES 28,500mg/L
CHLORINE
TOTAL HARDNESS 160ppm
CALCIUM 120ppm

VOLUME
PH 8.75
SPECIFIC GRAVITY/WT 1.015 / 8.45#/gal
MAGNESIUM 40ppm
BICARBONATE
ALKALINITY p = 1.1 m = 8.1
DISSOLVED SOLIDS
SUSPENDED SOLIDS > 28,500mg/L
APPEARANCE GRAY, OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH
WT
FUNNEL VISCOSITY
RETORT ANALYSIS
% WATER
% OIL
% SOLIDS

VOLUME
APPEARANCE
MIXING SYSTEM

RECOMMENDATIONS Continue aggressive treatment

TIERRA TECHNOLOGIST

PHONE 320-0684

RECEIVED
APR 1 1996
OIL CON. DIV.
UNIT 3

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 7/17/95

LOCATION S. CIRC LINE

TIME 8:35am.

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 7/14/95

REPRESENTATIVE ANCE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES.

WATER ANALYSIS

DISSOLVED OXYGEN 1.0mg/l
TEMPERATURE 20°C / 68°F
H₂S 2.0mg/l
TOTAL SULFIDES 7.0mg/l
SULFATES 10-20mg/l
CHLORIDES 26,000mg/l
CHLORINE —
TOTAL HARDNESS 160mg/l
CALCIUM 120mg/l

VOLUME —
PH 8.7
SPECIFIC GRAVITY/WT 1.015 / 8.45#/gal
MAGNESIUM 40mg/l
BICARBONATE —
ALKALINITY p=1.3 m=10.0
DISSOLVED SOLIDS >26,000mg/l
SUSPENDED SOLIDS —
APPEARANCE GRAY, OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —
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BULK 3

RECOMMENDATIONS CONTINUE AGGRESSIVE TRMT, H₂S REMAINS
HIGH.

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

^{SPLIT}
^{PARTIAL}
DATE 67-13-95 // 7-14-95

LOCATION NORTH CENTRAL POND

TIME 6:45A // 4:00P

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE _____

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICI

JOB DESCRIPTION MONITOR H_2S DO ? TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 0.5 // 0.6 mg/l
TEMPERATURE 20°C 68°F // 20°C, 68°F
 H_2S 0.1 // 0.4 mg/l
TOTAL SULFIDES 6.5 mg/l // 5.5 mg/l
SULFATES 20-30 mg/l
CHLORIDES 27000 mg/l
CHLORINE _____
TOTAL HARDNESS 160 ppm
CALCIUM 80 ppm

VOLUME _____
PH 8.7
SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal
MAGNESIUM 80 ppm
BICARBONATE _____
ALKALINITY p = 1.1 m = 9.0
DISSOLVED SOLIDS > 27000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE _____
CIRCULATION SYSTEM OPERATING /
TREATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
RECEIVED
APR 10 1996
OIL CON. DIV.
PMT 3

RECOMMENDATIONS CONTINUE AGGRESSIVE TREAT. CONDITIONS IMPROVING ON
DO & TOTAL SULFIDES

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 7-12-95

LOCATION DISCHARGE

TIME 7:15 A

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 7-11-95

REPRESENTATIVE MILLER LORRARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE 20°C / 68°F
H₂S 0.25mg/L
TOTAL SULFIDES 8.5mg/L
SULFATES 10-20
CHLORIDES 13000
CHLORINE N/A
TOTAL HARDNESS 60
CALCIUM 36

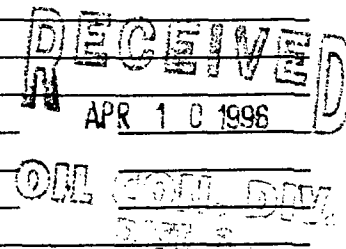
VOLUME _____
PH 8.7
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 24
BICARBONATE N/A
ALKALINITY 0.58 AF 4.98 mg
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE CRAY-GREEN TRANS
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____



RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894

7-10-95

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

ANY SUNCO DISPOSAL

7-11-95 IN DISCHARGE LINE AREA

) PRODUCTION WATER

NTATIVE MIKE LOMARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND // SPLIT TESTS FOR H₂S & TOTAL SULFIDES

TO CLOSE MONITOR POND TILL SULFIDES & H₂S ARE TO ACCEPTABLE LEVELS

SPLIT TESTS
DATE 7-10-95 // 7-11-95

TIME 7:15A // 7:00A

DATE PREVIOUS
SERVICE 7-7-95

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE 20.0°C 68°F
H₂S 7:15Am 0.3mg/L // 7:00a 0.35
TOTAL SULFIDES 7:15A 8.5mg/L // 7:00a 8.0mg/L
SULFATES 10-20
CHLORIDES 13250
CHLORINE N/A
TOTAL HARDNESS 160
CALCIUM 84

VOLUME _____
PH 8.75
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 76
BICARBONATE N/A
ALKALINITY 0.45AP 4.8mf
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE CLEARING
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

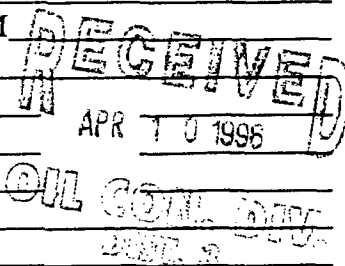
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST AS 7/11/95

PHONE 324-8894



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

SUNCO DISPOSAL

DATE 7-7-95

N S W CORNER OF POND

TIME 11:15 A

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 7-5-95

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE 20.5°C / 68.9°F
H₂S 0.4 mg/L
TOTAL SULFIDES 10.0 mg/L
SULFATES 10-20
CHLORIDES 25000
CHLORINE N/A
TOTAL HARDNESS 76
CALCIUM 60

VOLUME _____
PH 8.85
SPECIFIC GRAVITY/WT 1.015 / 8.45#
MAGNESIUM 16
BICARBONATE N/A
ALKALINITY 0.72 AF 5.52 MP
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE TRANSLUCENT CRAY/GREEN
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

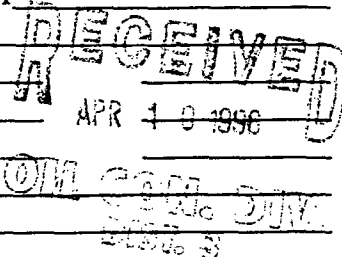
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

SURCO DISPOSAL

DATE 7-5-95

N SAMPLE / NE CORNER

SAMPLE 2 SW CORNER

TIME 12:20

2 FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 7-4-95

ATIVE MIKE CRAND

DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

DUAL ~~SAMPLE~~ SAMPLES TO DETERMINE SOURCE OF PROBLEM IN POND WHICH APPEARS TO BE AROUND SW CORNER
OF POND

1

2

WATER ANALYSIS

DISSOLVED OXYGEN	<u>N/A</u>	<u>N/A</u>
TEMPERATURE	<u>20.5°/68.9°F</u>	<u>20°/68.0°F</u>
H ₂ S	<u>0.3 mg/L</u>	<u>0.7 mg/L</u>
TOTAL SULFIDES	<u>11.5</u>	<u>11.0</u>
SULFATES	<u>10-20</u>	<u>10-20</u>
CHLORIDES	<u>22500</u>	<u>22000</u>
CHLORINE	<u>N/A</u>	<u>N/A</u>
TOTAL HARDNESS	<u>80</u>	<u>100</u>
CALCIUM	<u>40</u>	<u>40</u>

VOLUME

PH 8.75 | 8.85
SPECIFIC GRAVITY/WT 1.010 | 1.015 | 8.41 | 8.45
MAGNESIUM 40 | 60
BICARBONATE N/A
ALKALINITY 0.53 me | 4.88 me | 0.52 M | 4.52 me
DISSOLVED SOLIDS _____
SUSPENDED SOLIDS _____
APPEARANCE SAMPLES EQUAL TRANSLUCENT
CIRCULATION SYSTEM OPERATIONAL

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS DO METER NOT FUNCTIONING

NOTE: SAMPLE #2 BECAME DARKER IN APPEARANCE OVER COURSE OF TESTS

TIERRA TECHNOLOGIST LJ FNU

PHONE 334-8824

RECEIVED
APR 10 1996
OIL CORP. DIV.
TEST 2

TIERRA ENVIRONMENTAL CORPORATIC

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Surco Disposal

DATE 7-4-95

LOCATION SW Corner Discharge

TIME 7:50 AM

TYPE FLUID Produced water

DATE PREVIOUS
SERVICE 6/30/95

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION Monitor H₂S and total sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN 6.4
TEMPERATURE 17.4°C 63°F
H₂S < 1.0
TOTAL SULFIDES 15
SULFATES < 10
CHLORIDES 25,000
CHLORINE —
TOTAL HARDNESS 800
CALCIUM 400

VOLUME —
PH 8.55
SPECIFIC GRAVITY/WT 1.020 18.623
MAGNESIUM 1200
BICARBONATE —
ALKALINITY .90 PF 5.35 mF
DISSOLVED SOLIDS —
SUSPENDED SOLIDS —
APPEARANCE DARK
CIRCULATION SYSTEM working

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —

MIXING SYSTEM —

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OIL CONTROL
DEPT. 2

RECOMMENDATIONS —

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORA

909 West Apache, Farmington, NM 87401

(505) 325-0924



CLIENT SERVICE REPORT

COMPANY SUNCO Disposal

DATE 7-6-95

LOCATION Northwest Discharge line

TIME _____

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6-28-95

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H₂S and total sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN 0.0
TEMPERATURE 18.2 C
H₂S 3.0
TOTAL SULFIDES 20
SULFATES < 10
CHLORIDES 22,000
CHLORINE N/A
TOTAL HARDNESS 400
CALCIUM 400

VOLUME _____
PH 8.0
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 800
BICARBONATE _____
ALKALINITY .94 PF 5.72 ME
DISSOLVED SOLIDS _____
SUSPENDED SOLIDS _____
APPEARANCE DARK
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

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APR 10 1996

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST BLAKE WILLIAMS

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/29/95

LOCATION SE CORNER, CIRC LINE

TIME 8:10 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/26/95

REPRESENTATIVE MIKE TOLEVICH / MIKE LEONARD

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 1.3 mg/l
TEMPERATURE 20°C 68°F
H₂S 0.5 mg/l
TOTAL SULFIDES 12 mg/l
SULFATES 10-20 mg/l
CHLORIDES 27,500 mg/l
CHLORINE —
TOTAL HARDNESS 200 ppm
CALCIUM 120 ppm

VOLUME —
PH 8.9
SPECIFIC GRAVITY/WT 1.015 18.45 #/gal
MAGNESIUM 80 ppm
BICARBONATE —
ALKALINITY p = 1.3 m = 10.3
DISSOLVED SOLIDS > 27,500 mg/l
SUSPENDED SOLIDS —
APPEARANCE GRAY
CIRCULATION SYSTEM DYEING

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —

RECEIVED
APR 10 1996

OIL CON. DIV.
DIT 2

RECOMMENDATIONS CONTINUE SHOCK TREATMENT UNTIL H₂S IS REDUCED

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/26/95

LOCATION SE SIDE, REPAIR VALVE

TIME NOON

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/23/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H_2S , DO & SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 4.3 mg/l
TEMPERATURE 20°C 68°F
 H_2S 10-20 mg/l -0-
TOTAL SULFIDES 7 mg/l
SULFATES 10-20 mg/l
CHLORIDES 25,500 mg/l
CHLORINE —
TOTAL HARDNESS 160 ppm
CALCIUM 100 ppm

VOLUME —
PH 8.7
SPECIFIC GRAVITY/WT 1.015 / 8.45# / gal
MAGNESIUM 60 ppm
BICARBONATE —
ALKALINITY p=1.2 m=9.6
DISSOLVED SOLIDS > 25,500 mg/l
SUSPENDED SOLIDS —
APPEARANCE WHITE, OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
 % WATER —
 % OIL —
 % SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —

RECOMMENDATIONS —

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

RECEIVED
APR 10 1996
OIL GOR. DIV.
CLERK

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/23/95

LOCATION SW CORNER POND SURFACE

TIME 9:50am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/21/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 1.0 mg/l
TEMPERATURE 20°C 68°F
H₂S 0.4 mg/l SEE NOTE →
TOTAL SULFIDES 8 mg/l
SULFATES 10-20 mg/l
CHLORIDES 26,000 mg/l
CHLORINE —
TOTAL HARDNESS 200 ppm
CALCIUM 40 ppm

VOLUME —
PH 8.7
SPECIFIC GRAVITY/WT 1.015 18.45#/gal
MAGNESIUM 160 ppm
BICARBONATE —
ALKALINITY p=1.1 m=9.1
DISSOLVED SOLIDS >26,000 mg/l
SUSPENDED SOLIDS —
APPEARANCE CLOUDY - BLACK SUSP SOLIDS
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —

MIXING SYSTEM —

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APR 10 1996

OIL FIELD
FACILITY

RECOMMENDATIONS TREAT IMMEDIATELY!!

TIERRA TECHNOLOGIST [Signature]

PHONE 326-0684

NOTE: SAMPLED WHILE TREATING - A TEST AFTER TREATMENT
SHOWED NO H₂S. C.O.

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/21/95

LOCATION SW CORNER, POND SURFACES

TIME 9:00 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/19/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVILL

JOB DESCRIPTION MONITOR H_2S , DO, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 1.6 mg/l
TEMPERATURE 20°C 68°F
 H_2S 0
TOTAL SULFIDES 6 mg/l
SULFATES 10-20 mg/l
CHLORIDES 26,000 mg/l
CHLORINE _____
TOTAL HARDNESS 200 ppm
CALCIUM 120 ppm

VOLUME _____
PH 8.8
SPECIFIC GRAVITY/WT 1.015 1.845 #/gal
MAGNESIUM 80 ppm
BICARBONATE _____
ALKALINITY p=1.1 m=9.2
DISSOLVED SOLIDS > 26,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE OPAQUE
CIRCULATION SYSTEM OPENING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECEIVED
APR 1 5 1995
OIL CON. DIV.
TEST 3

RECOMMENDATIONS APPEARANCE IS IMPROVED OVER LAST TEST AS WELL AS
DO & TOTAL SULFIDES, BUT THEY ARE STILL LOW - CONTINUE TREATING

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/19/95

LOCATION SW CORNER POND SURFACE

TIME 6/16/94 9:25am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/16/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 1.4 mg/l
TEMPERATURE 18°C 64.4°F
H₂S 0
TOTAL SULFIDES 7.5 mg/l
SULFATES 10-20 mg/l
CHLORIDES 27,000 mg/l
CHLORINE —
TOTAL HARDNESS 200 ppm
CALCIUM 100 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45#/gal
MAGNESIUM 100 ppm
BICARBONATE _____
ALKALINITY p=1.1 m=9.1
DISSOLVED SOLIDS >27,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE - OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

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DET. 2

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/16/95

LOCATION SW CORNER POND SURFACE

TIME 9:05am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/14/95

REPRESENTATIVE MIKE TOLEVIC / MIKE LEONARD

JOB DESCRIPTION MONITOR P.D., TOTAL SULFIDES, H_2S

WATER ANALYSIS

DISSOLVED OXYGEN 2.9 mg/l
TEMPERATURE 19°C 66°F
 H_2S 0
TOTAL SULFIDES 4 mg/l
SULFATES 10-20 mg/l
CHLORIDES 25,500 mg/l
CHLORINE —
TOTAL HARDNESS 200 ppm
CALCIUM 150 ppm

VOLUME —
PH 8.6
SPECIFIC GRAVITY/WT 1.015 18.45 #/gal
MAGNESIUM 100 ppm
BICARBONATE —
ALKALINITY p = 1.1 m = 9.1
DISSOLVED SOLIDS > 25,500 mg/l
SUSPENDED SOLIDS —
APPEARANCE WHITE OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —

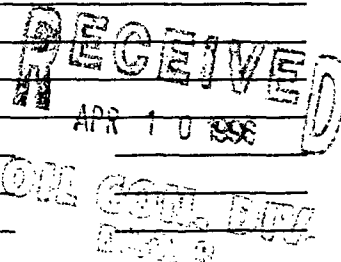
MIXING SYSTEM —

RECOMMENDATIONS CONTINUE PRESENT OPERATION.

(NOTE: P.D. IS WORKED OVER, REPAIRED & WORKING WELL)

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SWCO DISPOSAL

DATE 6/14/95

LOCATION SW CORNER POND SURFACE

TIME 9:20 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/12/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H_2S , TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN <u>OVERHAULING METER</u>	VOLUME _____
TEMPERATURE <u>20°C 68°F</u>	PH <u>8.6</u>
H_2S <u>10-20 mg/l 0</u>	SPECIFIC GRAVITY/WT <u>1.015 / 8.45 #/gal</u>
TOTAL SULFIDES <u>5.5 mg/l</u>	MAGNESIUM <u>80 mg/l</u>
SULFATES <u>10-20 mg/l</u>	BICARBONATE _____
CHLORIDES <u>25,500 mg/l</u>	ALKALINITY <u>p = 1.1 m = 9.4</u>
CHLORINE _____	DISSOLVED SOLIDS <u>5</u>
TOTAL HARDNESS <u>200 mg/l</u>	SUSPENDED SOLIDS <u>> 25,500 mg/l</u>
CALCIUM <u>120 mg/l</u>	APPEARANCE <u>GRAY OPAQUE</u>
_____	CIRCULATION SYSTEM <u>OPERATING</u>
_____	_____

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	MIXING SYSTEM _____
RETORT ANALYSIS _____	_____
% WATER _____	_____
% OIL _____	_____
% SOLIDS _____	_____

RECOMMENDATIONS SULFIDES ARE HIGHER THAN MONDAY, RECOMMEND
TREATMENT

TIERRA TECHNOLOGIST N.D.

PHONE 320-0684

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APR 10 1995
OIL CON. DIV.
DIST. 3

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 6/12/95
LOCATION SW CORNER POND SURFACE TIME 9:15 am
TYPE FLUID PRODUCED WATER DATE PREVIOUS SERVICE 6/9/95
REPRESENTATIVE MIKE TOLEVICH / MIKE LEONARD
JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN METER NOT WORKING, WILL
TEMPERATURE 19°C 66°F CIRCULATE IF
H₂S 0 POSSIBLE
TOTAL SULFIDES 4.5 mg/l
SULFATES 10-20 mg/l
CHLORIDES 25,500 mg/l
CHLORINE —
TOTAL HARDNESS 350 ppm
CALCIUM 170 ppm

VOLUME —
PH 8.7
SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal
MAGNESIUM 180 ppm
BICARBONATE —
ALKALINITY p = 0.2 m = 9.9
DISSOLVED SOLIDS > 25,500 mg/l
SUSPENDED SOLIDS —
APPEARANCE WHITE OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

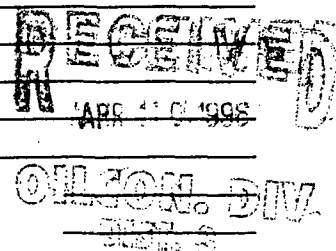
PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —
—
—
—

RECOMMENDATIONS WHILE NO H₂S WAS PRESENT, TOTAL SULFIDES
ARE HIGH, SHOULD TREAT

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 6-9-95

LOCATION NE corner Pond

TIME 9:00

TYPE FLUID Production water

DATE PREVIOUS
SERVICE 6-7-95

REPRESENTATIVE MIKE LONN

JOB DESCRIPTION Monitor H₂S & Total Sulfides in Pond

WATER ANALYSIS

DISSOLVED OXYGEN 3.8
TEMPERATURE 18°C / 64.4°F
H₂S 0
TOTAL SULFIDES 4.0
SULFATES 10-20
CHLORIDES 13250
CHLORINE <1.0
TOTAL HARDNESS 240
CALCIUM 148

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.010 / 8.38#
MAGNESIUM 92
BICARBONATE NA
ALKALINITY 0.6 AF / 4.7 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM none

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

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PHONE 334-8894

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CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 6/7/95

LOCATION SW CORNER, POND SURFACE

TIME 9:10 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/6/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN * 4.9 mg/l
TEMPERATURE 17°C 63°F
H₂S + 20 mg/l 0
TOTAL SULFIDES 5 mg/l
SULFATES 10-20 mg/l
CHLORIDES 26,000 mg/l
CHLORINE -
TOTAL HARDNESS 200 ppm
CALCIUM 140 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal
MAGNESIUM 60 ppm
BICARBONATE _____
ALKALINITY p = 1.1 m = 9.1
DISSOLVED SOLIDS > 26,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE-TAN OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL COM 50%

RECOMMENDATIONS ALTHOUGH NO H₂S IS INDICATED, TOTAL SULFIDES = 5,

RECOMMEND TREATMENT

* THE DO. READING IS SUSPECT, RELY ON SULFIDES FOR MORE INFO

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6/5/95

LOCATION SW CORNER, POND SURFACE

TIME 8:45am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 6/2/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR D.O., H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 4.8 mg/l
TEMPERATURE 17.4°C 63°F
 H_2S 0
TOTAL SULFIDES 4 mg/l
SULFATES 10-20 mg/l
CHLORIDES 24,500 mg/l
CHLORINE 0
TOTAL HARDNESS 230 ppm
CALCIUM 120 ppm

VOLUME _____
PH 8.7
SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal
MAGNESIUM 160
BICARBONATE _____
ALKALINITY p = 1.3 m = 9.3
DISSOLVED SOLIDS >25,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE, OPAQUE W/ BLACK PARTICULATE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT OPERATION

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6-2-95

LOCATION NE CORNER POND

TIME 10:15

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 5-31-95

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION MEASURE H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 3.7
TEMPERATURE 17.7°C / 63.9°F
H₂S 0
TOTAL SULFIDES 2.0 mg/c
SULFATES 10-20
CHLORIDES 21500
CHLORINE 1.0
TOTAL HARDNESS 180
CALCIUM 104

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.05 / 8.42#
MAGNESIUM 76
BICARBONATE N/A
ALKALINITY 0.58 AP / 4.4 mg
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE DARK
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

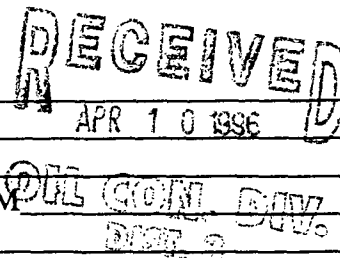
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/31/95

LOCATION SW CORNER POOL SURFACE

TIME 9:55am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/29/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR PO, H₂S, SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN <u>D.O. METER MALFUNCTION</u>	VOLUME _____
TEMPERATURE <u>18°C 64°F</u>	PH <u>8.5</u>
H ₂ S <u>0</u>	SPECIFIC GRAVITY/WT <u>1.015 18.45#/gal</u>
TOTAL SULFIDES <u>3.5 mg/l</u>	MAGNESIUM <u>40 ppm</u>
SULFATES <u>10-20 mg/l</u>	BICARBONATE _____
CHLORIDES <u>25000 mg/l</u>	ALKALINITY <u>p=1.2 m=9.5</u>
CHLORINE <u>0</u>	DISSOLVED SOLIDS <u>> 25000 mg/l</u>
TOTAL HARDNESS <u>160 ppm</u>	SUSPENDED SOLIDS _____
CALCIUM <u>120 ppm</u>	APPEARANCE <u>GRAYISH W/BLACK PARTICULATES</u>
	CIRCULATION SYSTEM <u>OPERATING</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	MIXING SYSTEM <u>OIL CON. DIV.</u>
RETORT ANALYSIS _____	
% WATER _____	
% OIL _____	
% SOLIDS _____	

RECOMMENDATIONS Continue present operation

TIERRA TECHNOLOGIST [Signature] PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/21/95

LOCATION NE CORNER CIRC LINE

TIME 5/26/95 9:10am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/26/95

REPRESENTATIVE MIKE TOLEVICH / MIKE LEONARD

JOB DESCRIPTION MONITOR H₂S, SULFIDES, DO

WATER ANALYSIS

DISSOLVED OXYGEN 2.7 mg/l
TEMPERATURE 17.5°C 64°F
H₂S 0
TOTAL SULFIDES 2.5 mg/l
SULFATES 10-20 mg/l
CHLORIDES 25,000 mg/l
CHLORINE 0
TOTAL HARDNESS 240 ppm
CALCIUM 140 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 18.45#/gal
MAGNESIUM 100 ppm
BICARBONATE _____
ALKALINITY p = 1.1 m = 9
DISSOLVED SOLIDS >23,000
SUSPENDED SOLIDS _____
APPEARANCE BLACK SUSPENDED SOLIDS
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS Continue present operation

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PHONE 320-6684

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/26/95

LOCATION SW CORNER POND SURFACE

TIME 5/24/95 8:05 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/24/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 3.8 mg/l
TEMPERATURE 15.6 °C
H₂S 0
TOTAL SULFIDES 3.5 mg/l
SULFATES 10-20 mg/l
CHLORIDES 24503 mg/l
CHLORINE 0
TOTAL HARDNESS 280 ppm
CALCIUM 160 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal
MAGNESIUM 120 ppm
BICARBONATE _____
ALKALINITY p=1 m=8.4
DISSOLVED SOLIDS >23000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE-TAN OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

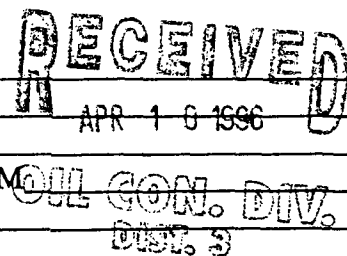
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CON. DIV. _____
DIST. 3 _____

RECOMMENDATIONS CONTINUE PRESENT OPERATION

TIERRA TECHNOLOGIST [Signature]

PHONE 370-0684



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/24/95

LOCATION SW CORNER POND SURFACE

TIME 10:25am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/22/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR P.O., H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN _____

TEMPERATURE 18°C (64°F)

H₂S 0

TOTAL SULFIDES 4 mg/l

SULFATES 10-20 mg/l

CHLORIDES 18,000 mg/l

CHLORINE 0

TOTAL HARDNESS 200 ppm

CALCIUM 120 ppm

VOLUME _____

PH 8.5

SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal

MAGNESIUM 80 ppm

BICARBONATE _____

ALKALINITY p = 1.1 m = 8.6

DISSOLVED SOLIDS 23000 mg/l

SUSPENDED SOLIDS _____

APPEARANCE WHITE-OPAQUE

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE APR 10 1996

MIXING SYSTEM OIL CON. DIV.

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/22/95

LOCATION SW CORNER OF POND SURFACE

TIME 8:30am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/19/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN METER NOT OPERATIONAL

TEMPERATURE 18° C 64° F

H₂S 0

TOTAL SULFIDES 4 mg/l

SULFATES 10-20 mg/l

CHLORIDES 19,000 mg/l

CHLORINE 0

TOTAL HARDNESS 200 mg/l

CALCIUM 120 mg/l

VOLUME _____

PH 8.5

SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal

MAGNESIUM 80 mg/l

BICARBONATE _____

ALKALINITY p=1 m=8.1

DISSOLVED SOLIDS >23,000 ppm

SUSPENDED SOLIDS _____

APPEARANCE WHITE OPAQUE

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST LD

PHONE 320-0684

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DIST. 3

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/19/95

LOCATION SW CORNER OF POND SURFACE

TIME 9:35 am

TYPE FLUID PURIFIED WATER

DATE PREVIOUS
SERVICE 5/17/98

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S, TOTAL SULFIDES

BATTERY DEAD, WILL RECH

WATER ANALYSIS

DISSOLVED OXYGEN THIS PM

TEMPERATURE 18°C 64°F

H₂S 0

TOTAL SULFIDES 1 mg/l

SULFATES 10-20 mg/l

CHLORIDES 24500 mg/l

CHLORINE 0

TOTAL HARDNESS 200 ppm

CALCIUM 140 ppm

VOLUME _____

PH 8.5

SPECIFIC GRAVITY/WT 1.015 18.45 #/gal

MAGNESIUM 160 ppm

BICARBONATE _____

ALKALINITY p = 1.1 m = 8.8

DISSOLVED SOLIDS 23000 mg/l

SUSPENDED SOLIDS _____

APPEARANCE WHITE - OPAQUE

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT OPERATION

TIERRA TECHNOLOGIST [Signature]

PHONE 320/0684

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
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CLIENT SERVICE REPORT

COMPANY SIANCO DISPOSAL

DATE 5/17/95

LOCATION SW CORNER POND SURFACE

TIME 9:20 am

TYPE FLUID PRODUCER WATER

DATE PREVIOUS
SERVICE 5/15/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR DO, H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 2.1 mg/l
TEMPERATURE 14.9°C 59°F
H₂S 0
TOTAL SULFIDES 4.5 mg/l
SULFATES 10-20 mg/l
CHLORIDES 21,000 mg/l
CHLORINE 0
TOTAL HARDNESS 200 ppm
CALCIUM 160 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal
MAGNESIUM 40 ppm
BICARBONATE _____
ALKALINITY p=1.1 m=8.8
DISSOLVED SOLIDS 23,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE - TAN OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT OPERATIONS DO NOT SULFIDES
ARE BORDERLINE ALTHOUGH THERE IS NO H₂S.

TIERRA TECHNOLOGIST (Signature)

PHONE 320-0684

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 5/15/95
LOCATION SW CORNER OF POND SURFACE TIME 8:30 am
TYPE FLUID PRODUCED WATER DATE PREVIOUS SERVICE 5/12/95
REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH
JOB DESCRIPTION MONITOR H₂S, TOTAL SULFIDES, DO

WATER ANALYSIS

DISSOLVED OXYGEN <u>NOT AVAILABLE - REWORKING</u>	VOLUME _____
TEMPERATURE <u>16°C 61°F</u> ± CALIBRATE METER	PH <u>8.5</u>
H ₂ S <u>0</u>	SPECIFIC GRAVITY/WT <u>1.015 / 8.45 lb/gal</u>
TOTAL SULFIDES <u>4 mg/l</u>	MAGNESIUM <u>80 ppm</u>
SULFATES <u>10-20 mg/l</u>	BICARBONATE _____
CHLORIDES <u>24,500 mg/l</u>	ALKALINITY <u>p = 1.4 m = 9</u>
CHLORINE <u>0</u>	DISSOLVED SOLIDS <u>> 23,000 ppm</u>
TOTAL HARDNESS <u>200 ppm</u>	SUSPENDED SOLIDS _____
CALCIUM <u>120 ppm</u>	APPEARANCE <u>WHITE-TAN OPAQUE</u>
	CIRCULATION SYSTEM <u>OPERATING</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	MIXING SYSTEM <u>RECEIVED</u>
RETORT ANALYSIS _____	<u>APR 10 1996</u>
% WATER _____	
% OIL _____	
% SOLIDS _____	

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature] PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/12/95

LOCATION SW CORNER of POND SURFACE

TIME 9:00am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/10/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H_2S + TOTAL SULFIDES

MAX SULFIDES $< 4 mg/l$, $H_2O < 0.2 mg/l$

D.O. $> 2 mg/l$

WATER ANALYSIS

DISSOLVED OXYGEN 6.8 mg/l
TEMPERATURE 15°C
 H_2S 0.2 mg/l
TOTAL SULFIDES 5.5 mg/l
SULFATES 10.20 mg/l
CHLORIDES 24,000 mg/l
CHLORINE 0
TOTAL HARDNESS 168 ppm
CALCIUM 128 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.95 mg/l
MAGNESIUM 40 ppm
BICARBONATE _____
ALKALINITY p = 1.3 m = 10.6
DISSOLVED SOLIDS 223,000 ppm
SUSPENDED SOLIDS _____
APPEARANCE WHITE OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

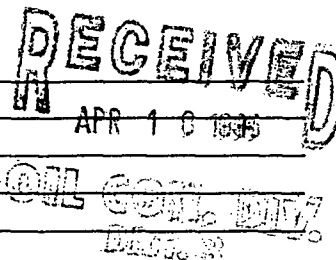
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL SOL. MUD

RECOMMENDATIONS SULFIDES ARE HIGH & SOME H_2S IS INDICATED, RECOMMEND
TREATMENT OF POND W/ $KMnO_4$
* SUSPECT DO READING BECAUSE OF SULFIDE LEVEL

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/10/95

LOCATION SU CORNER SURFACE

TIME 7:40 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/8/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLFUICH

JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 4.1 mg/l

TEMPERATURE 13.1°C 56°F

H_2S 0

TOTAL SULFIDES 3.5 mg/l

SULFATES 10-20 mg/l

CHLORIDES 24,000 mg/l

CHLORINE 0

TOTAL HARDNESS 200 mg/l

CALCIUM 108 mg/l

VOLUME _____

PH 8.5

SPECIFIC GRAVITY/WT 1.015 / 8.45 #/gal

MAGNESIUM 92 mg/l

BICARBONATE _____

ALKALINITY p = 1.23 m = 9.03

DISSOLVED SOLIDS > 23000 mg/l

SUSPENDED SOLIDS _____

APPEARANCE WHITE OPAQUE

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT OPERATION

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5/8/95

LOCATION SW CORNER

TIME 9:10am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 5/5/95

REPRESENTATIVE MIKE TOLEVICH / MIKE LEONARD

JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 3.4 mg/l
TEMPERATURE 12.1°C 54°F
 H_2S 0
TOTAL SULFIDES 4 mg/l
SULFATES 10-20 mg/l
CHLORIDES 24,000 ppm
CHLORINE 0
TOTAL HARDNESS 172 ppm
CALCIUM 96 ppm

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.015 / 8.45 g/gal
MAGNESIUM 76 ppm
BICARBONATE _____
ALKALINITY p = 1.3 m = 9.68
DISSOLVED SOLIDS > 23000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE, SLIGHTLY CLOUDY
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
Dist. 3

RECOMMENDATIONS MAINTAIN CURRENT OPERATION

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

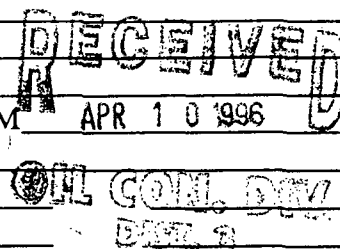
COMPANY SUNCO DISPOSAL DATE 5-5-95
LOCATION NE CORNER TIME 7:44A
TYPE FLUID PRODUCTION WATER DATE PREVIOUS SERVICE 5-3-95
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN	<u>2.6 mg/L</u>	VOLUME	<u> </u>
TEMPERATURE	<u>14.3°C</u>	PH	<u>8.5</u>
H_2S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015</u> / <u>8.45%</u>
TOTAL SULFIDES	<u>2.5 mg/L</u>	MAGNESIUM	<u>132</u>
SULFATES	<u>10-20</u>	BICARBONATE	<u>N/A</u>
CHLORIDES	<u>24000</u>	ALKALINITY	<u>1.03 AF</u> <u>9.48 MF</u>
CHLORINE	<u>N/D</u>	DISSOLVED SOLIDS	<u>N/A</u>
TOTAL HARDNESS	<u>218</u>	SUSPENDED SOLIDS	<u>N/A</u>
CALCIUM	<u>86</u>	APPEARANCE	<u>GOOD</u>
		CIRCULATION SYSTEM	<u>WATER</u>

MUD ANALYSIS

PH	<u> </u>	VOLUME	<u> </u>
WT	<u> </u>	APPEARANCE	<u> </u>
FUNNEL VISCOSITY	<u> </u>	MIXING SYSTEM	<u> </u>
RETORT ANALYSIS	<u> </u>		
% WATER	<u> </u>		
% OIL	<u> </u>		
% SOLIDS	<u> </u>		
RECOMMENDATIONS	<u> </u>		
	<u> </u>		
	<u> </u>		



TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894 / 320-1363

TIERR

Mike,

CORPORATION

87401

The DO gave me

an error, so I had

RT

COMPANY Suncor to clean it & recal.

DATE 5/3/95

LOCATION SW 1 Larry will come

TIME 10:05 a.m.

TYPE FLUID Proven over water & ch it.

DATE PREVIOUS SERVICE 5/1/95

REPRESENTATIVE 1 Thanks

CH

JOB DESCRIPTION MONITOR DO & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 1.5
TEMPERATURE 14°C 57°F
H₂S 0
TOTAL SULFIDES 3 mg/l
SULFATES 10-20 mg/l
CHLORIDES 24,500 ppm
CHLORINE 1 ppm
TOTAL HARDNESS 270 ppm
CALCIUM 100 ppm

VOLUME _____
PH 3.6
SPECIFIC GRAVITY/WT 1.015 18.45 #/gal
MAGNESIUM 120 ppm
BICARBONATE _____
ALKALINITY p = 1.5 m = 10.6
DISSOLVED SOLIDS > 23,000 ppm
SUSPENDED SOLIDS _____
APPEARANCE BROWNISH, CLOUDY
CIRCULATION SYSTEM TREATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE CURRENT OPERATION

TIERRA TECHNOLOGIST

PHONE 320-0684

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BIRMINGHAM

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Waste Disposal

DATE 5/1/95

LOCATION SW CORNER POND SURFACE

TIME 9:15am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 4/27/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 3.5 mg/l

TEMPERATURE 14.3°C 58°F

H₂S 0

TOTAL SULFIDES 4 mg/l

SULFATES 10-20 mg/l

CHLORIDES 24000 ppm

CHLORINE 0

TOTAL HARDNESS 290 ppm

CALCIUM 100 ppm

VOLUME _____

PH 8.5

SPECIFIC GRAVITY/WT 1.015 1.845 #/gal

MAGNESIUM 180 ppm

BICARBONATE _____

ALKALINITY p = 1.3 m = 9

DISSOLVED SOLIDS > 23000 mg/l

SUSPENDED SOLIDS _____

APPEARANCE CLOUDY GRAYISH - HYDROCARBON SKE

CIRCULATION SYSTEM OPERATING

(TREATING)

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME 9.5 GPM

APPEARANCE H

MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320 - 0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4/28/95

LOCATION SW CORNER

TIME 8:30 am

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 4/26/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 5.4 mg/l
TEMPERATURE 12.4°C 54°F
 H_2S 0
TOTAL SULFIDES 3 mg/l
SULFATES 10-20 mg/l
CHLORIDES 23,500 ppm
CHLORINE 0
TOTAL HARDNESS 380
CALCIUM 38

VOLUME _____
PH 8.8
SPECIFIC GRAVITY/WT 1.015 / 8.45 Original
MAGNESIUM 342
BICARBONATE _____
ALKALINITY p = 1.45 m = 8.31
DISSOLVED SOLIDS > 23,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE WHITE, SLIGHTLY OPAQUE
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4/26/95

LOCATION SW CORNER POND SURFACE

TIME 9:30am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 4/24/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 6.0

TEMPERATURE 11.7°C 53°F

H_2S 0

TOTAL SULFIDES 3.6 mg/l

SULFATES 10-20 mg/l

CHLORIDES 23,500 ppm

CHLORINE NONE

TOTAL HARDNESS 292 ppm

CALCIUM _____

VOLUME _____

PH 8.75

SPECIFIC GRAVITY/WT 1.015 / 8.45 lb/gal

MAGNESIUM _____

BICARBONATE _____

ALKALINITY _____

DISSOLVED SOLIDS 723000 mg/l

SUSPENDED SOLIDS _____

APPEARANCE WHITE SLIGHTLY OPAQUE

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT OPERATION - LOOKS GOOD

TIERRA TECHNOLOGIST [Signature]

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4/24/95

LOCATION E. SIDE DISCHARGE

TIME 9:09 am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 4/21/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 11.2 mg/l

TEMPERATURE 10.7°C 51°F

H_2S 0

TOTAL SULFIDES 2.0 mg/l

SULFATES 10-20 mg/l

CHLORIDES 24000 ppm

→ CHLORINE 2.5 ppm HIGH

TOTAL HARDNESS 200 ppm

CALCIUM 80 ppm

VOLUME _____

PH 9.0

SPECIFIC GRAVITY/WT 1.015 / 8.45

MAGNESIUM 120 ppm

BICARBONATE _____

ALKALINITY 2.3 pf m 12.9

DISSOLVED SOLIDS < 23000 mg/l

SUSPENDED SOLIDS _____

APPEARANCE BROWN & CLOUDY

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS WILL SAMPLE FROM POND INSTEAD OF CIRC LINE. GREAT DEAL
OF DARK SEDIMENT COMING FROM LINE. ALL READINGS LOOK O.K. DO SEEMS HIGH,
WELL INDIC ON METER.

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

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DET. 2

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4-21-95

LOCATION NE CORNER

TIME 12 noon

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 4-19-95

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN POND

WATER ANALYSIS

DISSOLVED OXYGEN 1.9 mg/L
TEMPERATURE 9.5°C / 49.1°F
H₂S 0
TOTAL SULFIDES 3.5 mg/L
SULFATES 10-20 mg/L
CHLORIDES 24500 ppm
CHLORINE >0.1
TOTAL HARDNESS 380
CALCIUM 360

VOLUME _____
PH 8.05
SPECIFIC GRAVITY/WT 1.015 / 8.45%
MAGNESIUM 20
BICARBONATE N/A
ALKALINITY 0.86 eq / 7.86 meq
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE GOOD
CIRCULATION SYSTEM WORKING

MUD ANALYSIS

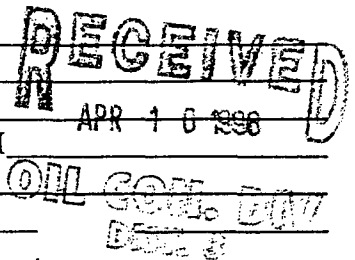
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894 / 334-9024 / 320-1363



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 4/19/95

LOCATION E. SIDE, LIRC LINE

TIME 9:30am

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 4/17/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MAINTAIN DO > 2.0 mg/l, H₂S < 0.1 mg/l
TOTAL SULFIDES < 0.5 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 3.1 mg/l
TEMPERATURE (10.5°C) 51°F
H₂S 0
TOTAL SULFIDES 2 mg/l
SULFATES 10-20 ppm
CHLORIDES 25,000 ppm
CHLORINE TRACE < 1
TOTAL HARDNESS 18 ppm
CALCIUM 4.4 ppm

VOLUME _____
PH 8.25
SPECIFIC GRAVITY/WT 1.015 / 8.46
MAGNESIUM 13.6 ppm
BICARBONATE _____
ALKALINITY 0.5 MP 6.62 (HIGHER THAN NORMAL) $P = 0.5$
DISSOLVED SOLIDS > 23,000 mg/l $M = 6.12$
SUSPENDED SOLIDS _____
APPEARANCE OPAQUE LT. TAN
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT TREATMENT

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 4/17/95

LOCATION E. SIDE, CIRC LINE

TIME 2:15 pm

TYPE FLUID PRODUCED WATER

DATE PREVIOUS
SERVICE 4/14/95

REPRESENTATIVE ~~RONNIE D. DUNN~~ MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MONITOR H_2S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 15.0

TEMPERATURE 10.3°C 50°F

H_2S 0

TOTAL SULFIDES 2.5 mg/L

SULFATES 10-20 FPPM

CHLORIDES 25,000 ppm

CHLORINE <1 (TRACE)

TOTAL HARDNESS _____

CALCIUM _____

VOLUME _____

PH 8.5

SPECIFIC GRAVITY/WT 1.015 /

MAGNESIUM _____

BICARBONATE _____

ALKALINITY _____

DISSOLVED SOLIDS _____

SUSPENDED SOLIDS _____

APPEARANCE OPAQUE WHITE-TAN

CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

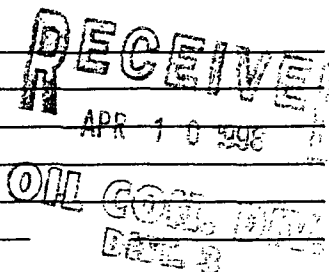
APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS CONTINUE PRESENT OPERATION

TIERRA TECHNOLOGIST [Signature]

PHONE 320-0684



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4-14-95

LOCATION SW corner

TIME 11:00

TYPE FLUID Production water

DATE PREVIOUS
SERVICE 4-12-95

REPRESENTATIVE MIKE LOMARD

JOB DESCRIPTION Monitor H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN NA
TEMPERATURE 12.3°C 54°F
H₂S 0
TOTAL SULFIDES 3.0 mg
SULFATES 10-20 mg/L
CHLORIDES 23400 ppm
CHLORINE <0.1
TOTAL HARDNESS 400
CALCIUM 180

VOLUME _____
PH 8.5
SPECIFIC GRAVITY/WT 1.010 /
MAGNESIUM 220
BICARBONATE —
ALKALINITY .35 P m 2.0
DISSOLVED SOLIDS —
SUSPENDED SOLIDS —
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 334-8894

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DIST. 3

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Water Disposal

DATE 4-12-5

LOCATION N.E. side Pond - Circ. Lake

TIME 8:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 4-10-5

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$;
 $DO, 720 \text{ mg/L}$; Total ~~Sulfides~~ Sulfides $< 0.5 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 5.6 mg/L
TEMPERATURE 54°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 3.5 mg/L
SULFATES 710 ppm
CHLORIDES 15,000
CHLORINE Trace
TOTAL HARDNESS 500 ppm
CALCIUM 220 ppm

VOLUME ~ 60,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1
MAGNESIUM 100 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 22,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - gray
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -
WT -
FUNNEL VISCOSITY -
RETORT ANALYSIS -
% WATER -
% OIL -
% SOLIDS -

VOLUME -
APPEARANCE -
MIXING SYSTEM -

RECOMMENDATIONS Suggest treatment - Total Sulfides

TIERRA TECHNOLOGIST Don Hooten

PHONE 320-2261

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OIL CON. DIV.
DIST. 3

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Trucking/Weather Report DATE 4-10-5
LOCATION N. E. side Pond - Circumline TIME 8:00a
TYPE FLUID Oil Field Mch water DATE PREVIOUS SERVICE 4-7-5
REPRESENTATIVE Mike Leonard / Mike Tolovich
JOB DESCRIPTION Keep DO, & T.O. mg/L; Total Solids & O. mg/L
H₂S & Cl mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L
TEMPERATURE 52.0 F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES 710 ppm
CHLORIDES 15,800 ppm
CHLORINE Trace
TOTAL HARDNESS 400 ppm
CALCIUM 200 ppm

VOLUME at 6000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 280 ppm
BICARBONATE —
ALKALINITY N/A
DISSOLVED SOLIDS 77,000 mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque - gray
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —
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OIL CONTROL
DIST. 507

RECOMMENDATIONS Temp & may experience a sulfides

TIERRA TECHNOLOGIST Dan Hauer

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 4-8-96
LOCATION N.E. Side Port - Circ. Line TIME 9:00a
TYPE FLUID Oil Field Prod Water DATE PREVIOUS SERVICE 4-5-95
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Keep D.O. > 2.0 mg/L; pH < 0.1 mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L
TEMPERATURE 49°F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES > 105 ppm
CHLORIDES 15,200 ppm
CHLORINE Trace
TOTAL HARDNESS 1420 ppm
CALCIUM 200 ppm

VOLUME ~ 60,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 220 ppm
BICARBONATE -
ALKALINITY p = 0.9 m = 1.3
DISSOLVED SOLIDS 722,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque tan
CIRCULATION SYSTEM operating

MUD ANALYSIS

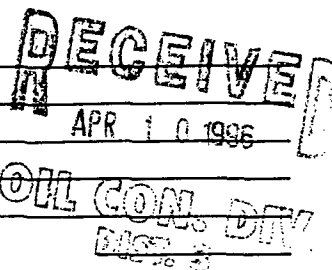
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS Keep line at present Temp.

TIERRA TECHNOLOGIST Dan Warner

PHONE 720-2261



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 4-5-5
LOCATION N.E. 9.6e Pond - Circ. line TIME 9:00a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 4-3-5
REPRESENTATIVE Mike Talovich / Mike Leonard
JOB DESCRIPTION Keep D.O. > 2.0 mg/l; H₂S < 0.1 mg/l;
Total Sulfides < 5.0 mg/l w/ peroxide
treatment w/ oxidizers

WATER ANALYSIS

DISSOLVED OXYGEN 6.0 mg/l
TEMPERATURE 70 F
H₂S 0.0 mg/l
TOTAL SULFIDES 2.0 mg/l
SULFATES > 10 FPM
CHLORIDES 15,800 ppm
CHLORINE Trace
TOTAL HARDNESS 450 ppm
CALCIUM 200 ppm

VOLUME ~ 60,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1
MAGNESIUM 250 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS > 27,000 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque - STAIN - FORMUL
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL CON. DEV.
DRILL 3

RECOMMENDATIONS Looks good

TIERRA TECHNOLOGIST Alan Hansen

PHONE 320-2281

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 4-7-95
LOCATION N.E. side road - Circ. Road TIME 8:30a
TYPE FLUID Oil Field Prod Water DATE PREVIOUS SERVICE 2-21-95
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L;
D.O. 7.0 mg/L; H₂S < 0.1 mg/L

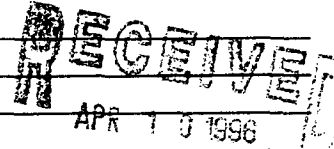
WATER ANALYSIS

DISSOLVED OXYGEN 7.2 mg/L
TEMPERATURE 44°F
H₂S 0.0 mg/L
TOTAL SULFIDES 3.0 mg/L
SULFATES 7.10 ppm
CHLORIDES 14,800 ppm
CHLORINE 500 ppm N/A
TOTAL HARDNESS 380 ppm
CALCIUM 160 ppm

VOLUME ~ 60,000 gal
PH 8.1
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 270 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 720,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Tan
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____



RECOMMENDATIONS Consider treating, Total Sulfides,
& Temp ↑

TIERRA TECHNOLOGIST Jan Weaver PHONE 370-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

Friday
DATE 3-~~08~~-5

LOCATION N.E. Side Pond - Circ. Line

TIME 8:00a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS
SERVICE 3-~~08~~-5
29

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep Total Sulfides $\leq$ 5.0 mg/L; H₂S $\leq$ 0.1 mg/L;
D.O. 7.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/L
TEMPERATURE 41°F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES 710 ppm
CHLORIDES 15,000 ppm
CHLORINE N/A
TOTAL HARDNESS 400 ppm
CALCIUM 180 ppm

VOLUME ~ 60,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1
MAGNESIUM 270 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 77,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque-white
CIRCULATION SYSTEM open-loop

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL
CON. DIV. DIST. 3

RECOMMENDATIONS Suggest small chemical treatment -
Total Sulfides ↑

TIERRA TECHNOLOGIST Don Houser

PHONE 720-9267

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-29-96

LOCATION S.E. Side Pond Circ. line

TIME 8:30a

TYPE FLUID Oil Field Prob. water

DATE PREVIOUS
SERVICE 3-27-96

REPRESENTATIVE Mike Leonard / Mike Tolookh

JOB DESCRIPTION Maintain Total Sulfides < 5.0 mg/L;
H₂S < 0.1 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.8 mg/L

TEMPERATURE 40°F

H₂S 0.0 mg/L

TOTAL SULFIDES 2.0 mg/L

SULFATES 710 ppm

CHLORIDES 15,200 ppm

CHLORINE N/A

TOTAL HARDNESS 470 ppm

CALCIUM 190 ppm

VOLUME ~ 60,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 220 ppm

BICARBONATE —

ALKALINITY N/A

DISSOLVED SOLIDS 77,000 ppm

SUSPENDED SOLIDS —

APPEARANCE opaque - gray

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —

WT —

FUNNEL VISCOSITY —

RETORT ANALYSIS —

% WATER —

% OIL —

% SOLIDS —

VOLUME —

APPEARANCE —

MIXING SYSTEM —

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OIL CON. DIV.
DUCLOS

RECOMMENDATIONS Water color change to gray - however
no ↑ in Total Sulfides - consider small chemical
treatment

TIERRA TECHNOLOGIST Don Hoover

PHONE 970-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-27-96

LOCATION North Side Pond - Circ. Line

TIME 8:00a

TYPE FLUID Cil Field Prod. Water

DATE PREVIOUS
SERVICE 3-14-95

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L;

H₂S < 0.1 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.8 mg/L

TEMPERATURE 41.0 F

H₂S 0.0 mg/L

TOTAL SULFIDES 2.0 mg/L

SULFATES 710 ppm

CHLORIDES 15,000 ppm

CHLORINE Trace

TOTAL HARDNESS 400 ppm

CALCIUM 180 ppm

VOLUME in 60,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0191

MAGNESIUM 240 ppm

BICARBONATE -

ALKALINITY N/A

DISSOLVED SOLIDS > 23,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque - tan

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

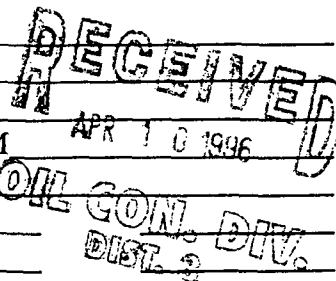
APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS Continue present operation schedule

TIERRA TECHNOLOGIST Wan Hoover

PHONE 320-2261



TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-24-5

LOCATION N.E. Side Pond- Circ. Pond

TIME 9:45a

TYPE FLUID Oil Field Prob. water

DATE PREVIOUS
SERVICE 3-22-5

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L;
H₂S < 0.1 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 7.2 mg/L
TEMPERATURE 48°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.0 mg/L
SULFATES ~ 10 ppm
CHLORIDES 15,000 ppm
CHLORINE Trace
TOTAL HARDNESS 400 ppm
CALCIUM 180 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 120 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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DIST. 3

RECOMMENDATIONS looks fine

TIERRA TECHNOLOGIST Sam Hagan

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-22-5

LOCATION N. Side Pond - Circ Line

TIME 8:00a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS
SERVICE 3-20-5

REPRESENTATIVE Mike Leonard / Mike Valovich

JOB DESCRIPTION Keep D.O. = 2.0 mg/L; Total Sulfides
< 5.0 mg/L; H₂S < 0.1 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.8 mg/L
TEMPERATURE 50°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES ~ 10 ppm
CHLORIDES 15,200 ppm
CHLORINE Trace
TOTAL HARDNESS 420 ppm
CALCIUM 200 ppm

VOLUME ~ 79,000 bbl
PH 8.2
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 72.0 ppm
BICARBONATE —
ALKALINITY p = 0.9 m = 2.1
DISSOLVED SOLIDS ~ 23,000 mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque-tan
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Consider treatment in day or two

TIERRA TECHNOLOGIST Care Houser

PHONE 420-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 3-20-99
LOCATION N.E. Side Pond - Circ. Line TIME 3:00p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 3-16-99
REPRESENTATIVE Mike Leonard / Mike Todorovich
JOB DESCRIPTION Keep Total Solids < 5.0 mg/L ;
P.O. < 2.0 mg/L ; H₂S < 0.1 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/L
TEMPERATURE 59°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 710 ppm
CHLORIDES 15,200 ppm
CHLORINE Trace
TOTAL HARDNESS 490 ppm
CALCIUM 270 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 270 ppm
BICARBONATE —
ALKALINITY N/A
DISSOLVED SOLIDS 777,000 ppm
SUSPENDED SOLIDS —
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —
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DIST. 3

RECOMMENDATIONS

TIERRA TECHNOLOGIST Don Hoover

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-16-95

LOCATION N.E. Side Pond Circ. Line

TIME 8:30a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS SERVICE 3-13-95

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L;

H₂S < 0.1 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/L

TEMPERATURE 49°F

H₂S 0.0 mg/L

TOTAL SULFIDES 1.0 mg/L

SULFATES ~ 10 EPM

CHLORIDES 15,800 ppm

CHLORINE Trace

TOTAL HARDNESS 410 ppm

CALCIUM 100 ppm

VOLUME ~ 75,000 bbl/s

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 120 ppm

BICARBONATE ~

ALKALINITY 11/14

DISSOLVED SOLIDS ~ 12,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque = w/1000 spec

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH ~

WT ~

FUNNEL VISCOSITY ~

RETORT ANALYSIS ~

% WATER ~

% OIL ~

% SOLIDS ~

VOLUME ~

APPEARANCE ~

MIXING SYSTEM ~

RECOMMENDATIONS ~

TIERRA TECHNOLOGIST Dave Brown

PHONE 320-2361

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-13-5

LOCATION N.E. Side Pond - Circ. Line

TIME 9:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 3-10-5

REPRESENTATIVE Mike Leonard / Mike Talevich

JOB DESCRIPTION Keep D.O. > 8.0 mg/L; H₂S < 0.1 mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/L
TEMPERATURE 46°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.0 mg/L
SULFATES ~ 10 EPM
CHLORIDES 15,200 ppm
CHLORINE trace
TOTAL HARDNESS 390 ppm
CALCIUM 180 ppm

VOLUME ~ 75,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1
MAGNESIUM 210 ppm
BICARBONATE <
ALKALINITY N/A
DISSOLVED SOLIDS 773,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE A
MIXING SYSTEM _____
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DIST. 3

RECOMMENDATIONS Looks good

TIERRA TECHNOLOGIST Van Hooser

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 3-10-95
LOCATION N.E. side pond - Circ. Line TIME 10.00h
TYPE FLUID Oil Field Prod Water DATE PREVIOUS SERVICE 3-8-95
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Keep H₂S 4.0 mg/L; Total sulfides < 5.0 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN <u>7.0 mg/L</u>	VOLUME <u>~ 75,000 bbl</u>
TEMPERATURE <u>46°F</u>	PH <u>8.1</u>
H ₂ S <u>0.0 mg/L</u>	SPECIFIC GRAVITY/WT <u>1.015</u>
TOTAL SULFIDES <u>1.5 mg/L</u>	MAGNESIUM <u>320 ppm</u>
SULFATES <u>710 ppm</u>	BICARBONATE <u>-</u>
CHLORIDES <u>15,200 ppm</u>	ALKALINITY <u>p = 0.0 m = 2.0</u>
CHLORINE <u>Trace</u>	DISSOLVED SOLIDS <u>722,000 mg/L</u>
TOTAL HARDNESS <u>500 ppm</u>	SUSPENDED SOLIDS <u>-</u>
CALCIUM <u>270 ppm</u>	APPEARANCE <u>opaque</u>
	CIRCULATION SYSTEM <u>operating</u>

MUD ANALYSIS

PH <u>-</u>	VOLUME <u>-</u>
WT <u>-</u>	APPEARANCE <u>RECEIVED</u>
FUNNEL VISCOSITY <u>-</u>	MIXING SYSTEM <u>APR 10 1996</u>
RETORT ANALYSIS	
% WATER <u>-</u>	
% OIL <u>-</u>	
% SOLIDS <u>-</u>	

RECOMMENDATIONS Total sulfides ↑ slightly - consider treating in 1-2 days

TIERRA TECHNOLOGIST Jan Hansen

PHONE 320-7261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-8-9

LOCATION N.E. side Pond Circling

TIME 8:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 2-6-9

REPRESENTATIVE Mike Leonard / Mike Tabor

JOB DESCRIPTION Keep Total Solids < 5.0 mg/L;

D.O. > 8.0 mg/L; H₂S < 0.1 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.5 mg/L

TEMPERATURE 41°F

H₂S 0.0 mg/L

TOTAL SULFIDES 0.5 mg/L

SULFATES < 10 ppm

CHLORIDES 15,200 ppm

CHLORINE Trace

TOTAL HARDNESS 500 ppm

CALCIUM 220 ppm

VOLUME ~ 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1

MAGNESIUM 200 ppm

BICARBONATE -

ALKALINITY pH = 8.1 AT = 2.1

DISSOLVED SOLIDS ~ 23,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque - white foaming

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

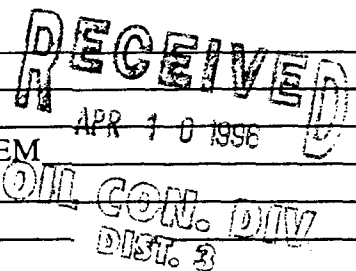
VOLUME -

APPEARANCE -

MIXING SYSTEM -

RECOMMENDATIONS -

TIERRA TECHNOLOGIST Don Hauer PHONE 320-2261



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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 3-6-5
LOCATION South Side Pond - Circ. Line TIME 9:30a
TYPE FLUID Oil Field Prod. water DATE PREVIOUS SERVICE 4-2-5
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/L; $VO_2 < 2.0$ mg/L; Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L
TEMPERATURE 48.0 F
 H_2S 0.0 mg/L
TOTAL SULFIDES 1.0 mg/L
SULFATES < 1.0 ppm
CHLORIDES 15,700 ppm
CHLORINE Trace
TOTAL HARDNESS 480 ppm
CALCIUM 200 ppm

VOLUME ~ 75,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1
MAGNESIUM 790 ppm
BICARBONATE -
ALKALINITY 120.9 meq/L
DISSOLVED SOLIDS 22,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -
WT -
FUNNEL VISCOSITY -
RETORT ANALYSIS -
% WATER -
% OIL -
% SOLIDS -

VOLUME -
APPEARANCE -
MIXING SYSTEM -
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DIST. 3

RECOMMENDATIONS Continue present operation

TIERRA TECHNOLOGIST Van Housen

PHONE 370-2961

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO TRUCKING

DATE 3/3/95

LOCATION NF SIDE PENIS, C1100 LINE

TIME 2:10 pm

TYPE FLUID OIL FIELD PRODUCTION WATER

DATE PREVIOUS
SERVICE 3/1/95

REPRESENTATIVE MIKE LEONARD / MIKE TOLIVICH

JOB DESCRIPTION MAINTAIN D.O. > 2.0 mg/l ; H₂S < 0.1 mg/l

TOTAL SULFIDES < 5.0 mg/l

WATER ANALYSIS

2 DISSOLVED OXYGEN 6.6 mg/l
TEMPERATURE 50°F
H₂S 0
1 x TOTAL SULFIDES 1.0 mg/l
SULFATES 10 ppm
5 CHLORIDES 15,000 ppm
CHLORINE
TOTAL HARDNESS 400 ppm
CALCIUM 120 ppm

VOLUME 75000 Bbls
PH 8.2
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 280 ppm
BICARBONATE
ALKALINITY NA
DISSOLVED SOLIDS > 23,000 ppm
SUSPENDED SOLIDS
APPEARANCE
8 CIRCULATION SYSTEM

MUD ANALYSIS

PH
WT
FUNNEL VISCOSITY
RETORT ANALYSIS
% WATER
% OIL
% SOLIDS

VOLUME
APPEARANCE
MIXING SYSTEM
OIL CON. DIV.
DIST. 3

RECOMMENDATIONS LOOKS FINE-- CONTINUE PRESENT REGULATION & TREATMENT OPERATION

TIERRA TECHNOLOGIST [Signature]

PHONE 325-0924 OFF
320-1736 MOBILE

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 3-1-5

LOCATION S.E. Side Pond - Circ. Line

TIME 9:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 2-24-5

REPRESENTATIVE Mike Leonard / Mike Talowick

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H_2S < 0.1 mg/L;

Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.5 mg/L

TEMPERATURE 48° F

H_2S 0.0 mg/L

TOTAL SULFIDES 1.5 mg/L

SULFATES ~ 10 ppm

CHLORIDES 16,000 ppm

CHLORINE Trace

TOTAL HARDNESS 580 ppm

CALCIUM 250 ppm

VOLUME ~ 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.015 /

MAGNESIUM 330 ppm

BICARBONATE -

ALKALINITY $p = 0.9$ $m = 2.3$

DISSOLVED SOLIDS ~ 23,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque-gray

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM OIL CON. DIV.

DIST. 3

RECOMMENDATIONS -

TIERRA TECHNOLOGIST Dan Houser

PHONE 320-7761

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 2-24-95

LOCATION N. E. side Pond - Circ. Line

TIME 1:30 p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 2-22-95

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep DO, & 2.0 mg/L; H₂S < oil mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L
TEMPERATURE 54.0 F
H₂S 0.0 mg/L
TOTAL SULFIDES 0.5 mg/L
SULFATES ~ 10 ppm
CHLORIDES 16,100 ppm
CHLORINE Trace
TOTAL HARDNESS 580 ppm
CALCIUM 260 ppm

VOLUME ~ 75,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 270 ppm
BICARBONATE —
ALKALINITY N/A
DISSOLVED SOLIDS 79,200 mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque - Tan - foamy
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —
OIL CON. DIV. —
DIST. 3 —

RECOMMENDATIONS Temp ↑ but Sulfides remain low

TIERRA TECHNOLOGIST Don Hauer PHONE 370-2261

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DIST. 3

TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 2-22-95

LOCATION N.E. Gibe Pond - Circ-line

TIME 1:30p

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS
SERVICE 2-20-95

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain P.O. > 2.0 mg/L;
H₂S < 0.1 mg/L; Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.9 mg/L
TEMPERATURE 44°F
H₂S 0.0 mg/L
TOTAL SULFIDES < 0.5 mg/L
SULFATES in 10 ppm
CHLORIDES 16,000 ppm
CHLORINE Trace
TOTAL HARDNESS 600 ppm
CALCIUM 2.90 ppm

VOLUME 211 75,000 ppm
PH 8.0
SPECIFIC GRAVITY/WT 1
MAGNESIUM 350 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 774,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Foamy
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL CON. DIV.
 DEST. 3

RECOMMENDATIONS Looks great

TIERRA TECHNOLOGIST Dan Hansen PHONE 920-2261

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TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 2-28-4
LOCATION S.E. side Pond - Circ. Line TIME 8:15a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 2-17-4
REPRESENTATIVE Mike Leonard / Mike Tulevich
JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L, H_2S < 0.1 mg/L;
D.O. > 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L
TEMPERATURE 41°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 1.0 mg/L
SULFATES ~ 10 EPM
CHLORIDES 15,800
CHLORINE Trace
TOTAL HARDNESS 580 ppm
CALCIUM 220 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 320 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS ~ 23,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Tan - Foamy
CIRCULATION SYSTEM operating

MUD ANALYSIS

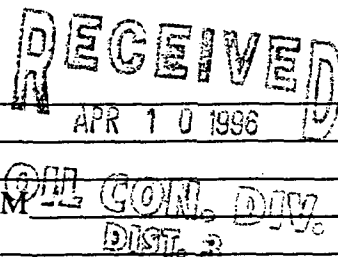
PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM Oil Cont. Div.
DIST. 3

RECOMMENDATIONS Looks good

TIERRA TECHNOLOGIST Dan Wagon

PHONE 320-2261



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 2-17-5

LOCATION East side Pond - Circ. line

TIME 8:45a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS
SERVICE 2-15-5

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L; H₂S < 0.1 mg/L;
D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.5 mg/L

TEMPERATURE 41°F

H₂S 0.0 mg/L

TOTAL SULFIDES < 0.5 mg/L

SULFATES ~ 10 FPM

CHLORIDES 15,000

CHLORINE Trace

TOTAL HARDNESS 500 ppm

CALCIUM 270 ppm

VOLUME ~ 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.015 /

MAGNESIUM 360 ppm

BICARBONATE -

ALKALINITY p = 0.82 m = 1.1

DISSOLVED SOLIDS ~ 23,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque - Tan - Foam

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

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TIERRA TECHNOLOGIST Dan Hanna

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 2-15-95
LOCATION East Side Pond - Circ Line TIME 9:00a
TYPE FLUID Oil Field Prod water DATE PREVIOUS SERVICE 2-13-95
REPRESENTATIVE Mike Leonard / Mike Tolovich
JOB DESCRIPTION Keep DO ≥ 2.0 mg/l; $H_2S < 0.1$ mg/l; Total Sulfides < 5.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN <u>6.6</u>	VOLUME <u>~ 75,000 bbl</u>
TEMPERATURE <u>42.0 F</u>	PH <u>8.1</u>
H_2S <u>0.0 mg/l</u>	SPECIFIC GRAVITY/WT <u>1.0151</u>
TOTAL SULFIDES <u>0.5 mg/l</u>	MAGNESIUM <u>350 ppm</u>
SULFATES <u>~ 10 FEM</u>	BICARBONATE <u>-</u>
CHLORIDES <u>15,200 ppm</u>	ALKALINITY <u>N/A</u>
CHLORINE <u>Trace</u>	DISSOLVED SOLIDS <u>~ 22,000 ppm</u>
TOTAL HARDNESS <u>550 ppm</u>	SUSPENDED SOLIDS <u>-</u>
CALCIUM <u>310 ppm</u>	APPEARANCE <u>clear - TAN</u>
	CIRCULATION SYSTEM <u>operating</u>

MUD ANALYSIS

PH <u></u>	VOLUME <u></u>
WT <u></u>	APPEARANCE <u></u>
FUNNEL VISCOSITY <u></u>	MIXING SYSTEM <u></u>
RETORT ANALYSIS <u></u>	
% WATER <u></u>	
% OIL <u></u>	
% SOLIDS <u></u>	

RECOMMENDATIONS Looks great - continue present operation

TIERRA TECHNOLOGIST [Signature]

PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 2-13-85

LOCATION South Side Pond - Circ. Line

TIME 8:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 2-10-85

REPRESENTATIVE Mike Leonard; Mike Takovida

JOB DESCRIPTION Keep Total Sulfides < 2.0 mg/L ;

H₂S < 0.1 mg/L ; D.O. > 5.0 mg/L

* D.O. Meter down

WATER ANALYSIS

DISSOLVED OXYGEN N/A*

TEMPERATURE 38°F

H₂S 0.0 mg/L

TOTAL SULFIDES < 0.5 mg/L

SULFATES ~ 10 ppm

CHLORIDES 16,000 ppm

CHLORINE Trace

TOTAL HARDNESS 550 ppm

CALCIUM 200 ppm

VOLUME ~ 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.019

MAGNESIUM 350 ppm

BICARBONATE -

ALKALINITY N/A

DISSOLVED SOLIDS ~ 23,000 ppm

SUSPENDED SOLIDS -

APPEARANCE opaque - tan

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS Looks good - continue present operation

TIERRA TECHNOLOGIST Don Keenan

PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 2-10-5

LOCATION N.E. Side Pond - Circ. Line

TIME 8:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 2-2-5

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Maintain Total Sulfides $\leq$ 5.0 mg/L;

D.O. $\geq$ 2.0 mg/L; H_2S $\leq$ 0.1 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.1 mg/L

TEMPERATURE 39°F

H_2S 0.0 mg/L

TOTAL SULFIDES $\leq$ 0.5 mg/L

SULFATES $\sim$ 10 ppm

CHLORIDES 15,800 ppm

CHLORINE Trace

TOTAL HARDNESS 620 ppm

CALCIUM 300 ppm

VOLUME $\sim$ 95,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 320 ppm

BICARBONATE -

ALKALINITY $p = 0.9$ $m = 2.3$

DISSOLVED SOLIDS $\sim$ 17,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE Opaque - Foamy

CIRCULATION SYSTEM Operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

RECOMMENDATIONS Looks good - Continue present

Circulation and Chemical treatment

TIERRA TECHNOLOGIST Dan Rosner PHONE 320-2261

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DIST. 3

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 2-8-5
LOCATION N.E. Side Pond- Circ. Line TIME 9:00a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 2-6-9
REPRESENTATIVE Mike Leonard / Mike Talowich
JOB DESCRIPTION Keep $H_2S < 0.1 \text{ mg/L}$; $D.O. > 2.0 \text{ mg/L}$;
Total Sulfides $< 5.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 6.0 mg/L
TEMPERATURE 37 °F
 H_2S 0.0 mg/L
TOTAL SULFIDES 0.5 mg/L
SULFATES ~ 10 ppm
CHLORIDES 16,200 ppm
CHLORINE Trace
TOTAL HARDNESS 560 ppm
CALCIUM 200 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 320 ppm
BICARBONATE —
ALKALINITY $p = 0.9$ $m = 2.2$
DISSOLVED SOLIDS 713,000 mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque - Feory
CIRCULATION SYSTEM opening

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

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OIL CON. DIV.
DIST. 1

RECOMMENDATIONS Look great

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 2-6-95
LOCATION N. E. Side Pond - Circ. Line TIME 9:00a
TYPE FLUID C-1 Field Prod Water DATE PREVIOUS SERVICE 2-4-95
REPRESENTATIVE Mike Leonard / Mike Talowick
JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/l;
D.O. > 2.0 mg/l; H₂S < 0.1 mg/l w/ Oxidizers
and Denatation

WATER ANALYSIS

DISSOLVED OXYGEN 6.0 mg/l
TEMPERATURE 30°F
H₂S 0.0 mg/l
TOTAL SULFIDES 0.5 mg/l
SULFATES 710 FPM
CHLORIDES 16,700 ppm
CHLORINE Trace
TOTAL HARDNESS 500 ppm
CALCIUM 270 ppm

VOLUME ~ 75,000 bbl
PH 2.1
SPECIFIC GRAVITY/WT 1
MAGNESIUM 320 ppm
BICARBONATE -
ALKALINITY D = 0.9 M = 2.1
DISSOLVED SOLIDS ~ 7,400 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque - white - Featm
CIRCULATION SYSTEM Operating

MUD ANALYSIS

PH
WT
FUNNEL VISCOSITY
RETORT ANALYSIS
 % WATER
 % OIL
 % SOLIDS

VOLUME
APPEARANCE
MIXING SYSTEM
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DIST. 2

RECOMMENDATIONS Total Sulfides remain very low -
Continue present operation

TIERRA TECHNOLOGIST Alan H. H. H. PHONE 320-7261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 2-4-5

LOCATION S.E. Side Pond - Circ. System

TIME 9:00a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS
SERVICE 2-1-5

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L; D.O. > 2.0 mg/L;
H₂S < 0.1 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.5 mg/L

TEMPERATURE 36°F

H₂S 0.0 mg/L

TOTAL SULFIDES 0.5 mg/L

SULFATES ~10 FPM

CHLORIDES 15,800

CHLORINE Trace

TOTAL HARDNESS 580 ppm

CALCIUM 240 ppm

VOLUME ~ 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 340 ppm

BICARBONATE -

ALKALINITY pH 8.1 - m = 2.0

DISSOLVED SOLIDS ~ 23,000 ppm

SUSPENDED SOLIDS -

APPEARANCE opaque - white - forming

CIRCULATION SYSTEM operating

- spray on

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

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DIST. 3

RECOMMENDATIONS looks great - total sulfides very low

TIERRA TECHNOLOGIST Don Hansen

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 2-1-5
LOCATION N.E. Side Pond - Circ. line TIME 3:00 p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 2-70-5
REPRESENTATIVE Mike Leonard / Mike Tatevich
JOB DESCRIPTION Maintain D.O. > 2.0 mg/l; H₂S < 0.1 mg/l;
Total Sulfides < 50 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 5.9 mg/l
TEMPERATURE 41.0 F
H₂S 0.0 mg/l
TOTAL SULFIDES < 1.0 mg/l
SULFATES < 10 ppm
CHLORIDES 16,200 ppm
CHLORINE Trace
TOTAL HARDNESS 490 ppm
CALCIUM 200 ppm

VOLUME ~ 75,000 bbl
PH 8.2
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 790 ppm
BICARBONATE -
ALKALINITY 1 = 0.9 M = 1.1
DISSOLVED SOLIDS 773,000 mg/l
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Looks fine - continue present operation

TIERRA TECHNOLOGIST Dan Houn

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-30-4

LOCATION N. E. Side Pond - Circ Line

TIME 1:15p

TYPE FLUID Cit Field Prod. Water

DATE PREVIOUS SERVICE 1-27-4

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain D.O. 7.0 mg/l ;
H₂S < 0.1 mg/l ; Total Sulfides < 5.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 6.8 mg/l
TEMPERATURE 40°F
H₂S 0.0 mg/l
TOTAL SULFIDES 1.0 mg/l
SULFATES < 10 ppm
CHLORIDES 15,900 ppm
CHLORINE Trace
TOTAL HARDNESS 590 ppm
CALCIUM 210 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 380 ppm
BICARBONATE -
ALKALINITY p = 0.8 m = 2.0
DISSOLVED SOLIDS 77,000 mg/l
SUSPENDED SOLIDS -
APPEARANCE opaque - tall
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

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OIL CON. DIV
DIST. 3

RECOMMENDATIONS Looks good - continue present operations

TIERRA TECHNOLOGIST Clare Hecman

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-27-9

LOCATION South Side Port - Circ. Line

TIME 10:15a

TYPE FLUID Oil Field Prob. Water

DATE PREVIOUS
SERVICE 1-25-9

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain Total Sulfides < 5.0 mg/L;
1/4 & 2 0.1 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L
TEMPERATURE 40°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.0 mg/L
SULFATES < 10 PPM
CHLORIDES 19,000 PPM
CHLORINE Trace
TOTAL HARDNESS 490 PPM
CALCIUM 210 PPM

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1
MAGNESIUM 200 PPM
BICARBONATE -
ALKALINITY D = 0.2 M = 2.0
DISSOLVED SOLIDS 22,000 PPM
SUSPENDED SOLIDS -
APPEARANCE opaque - white
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Looks good - Total Sulfides very low

TIERRA TECHNOLOGIST Alan Hansen PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-25-5

LOCATION North side Road - Circ Line

TIME 10:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 1-23-5

REPRESENTATIVE Mike Leonard / Mike Tatorich

JOB DESCRIPTION Keep Total Sulphides $\leq 5.0 \text{ mg/l}$; $\text{H}_2\text{S} \leq 0.1 \text{ mg/l}$ /
D.O. $\geq 2.0 \text{ mg/l}$

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/l
TEMPERATURE 43°F
 H_2S 0.0 mg/l
TOTAL SULFIDES 1.5 mg/l
SULFATES 710 FDM
CHLORIDES 15,200 ppm
CHLORINE Trace
TOTAL HARDNESS 490 ppm
CALCIUM 250 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM -
BICARBONATE -
ALKALINITY $\rho = 0.8$ $m = 2.1$
DISSOLVED SOLIDS 723,000 ppm
SUSPENDED SOLIDS -
APPEARANCE Opaque - Tan
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
DIST. 2

RECOMMENDATIONS Continue present treatment & aerating

TIERRA TECHNOLOGIST Dan Weaver

PHONE 320-2777

Cold by
Snow
on ground
today

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-23-5

LOCATION S.E. Side Pond - Circ line

TIME 10:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 1-21-5

REPRESENTATIVE _____

JOB DESCRIPTION Keep D.O. 72.0 mg/L, Total Sulfides < 5.0 mg/L;
H₂S < 0.1 mg/L

D.O. meter problem

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE 38°F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES ~ 10 EPMA
CHLORIDES 14,200 ppm
CHLORINE 0.0 mg/L
TOTAL HARDNESS ~ 520 ppm
CALCIUM N/A

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM N/A
BICARBONATE --
ALKALINITY N/A
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS --
APPEARANCE whitish to pink
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS D.O. meter problem - Cold Temp of chemical
testing reports problem - HOWEVER Total Sulfides good

TIERRA TECHNOLOGIST Warren Hoover

PHONE 320-224

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Monday 1-16-96

LOCATION N.E. side Pond - C.R.C. 1.114

TIME 8:30 AM

TYPE FLUID Dil Field Prod Water

DATE PREVIOUS SERVICE 1-13-96

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain DOH < 20 mg/L; H₂S < 0.1 mg/L; Total sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 0.5 mg/L
TEMPERATURE 38.0 F
H₂S 0.0 mg/L
TOTAL SULFIDES 3.0 mg/L
SULFATES 710 F/ML
CHLORIDES 15500
CHLORINE Trace
TOTAL HARDNESS 470 g/L
CALCIUM 200 g/L

VOLUME 75,000 gal
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 240 g/L
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 774,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Turb
CIRCULATION SYSTEM open 24 hrs

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CON. DIV. _____
DIST. 3 _____

RECOMMENDATIONS Total sulfides up slightly - correct chemical treatment

TIERRA TECHNOLOGIST W. A. Hagan PHONE 378-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 1-13-5
LOCATION North Side Pond - Circ. Line TIME 10:45a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE _____
REPRESENTATIVE Mike Leonard / Mike Topouch
JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; H_2S ≤ 0.1 mg/L;
Total Sulfides ≤ 5.0 mg/L w/ circulation and
oxidizing

WATER ANALYSIS

DISSOLVED OXYGEN 2.1 mg/L
TEMPERATURE 43°F
 H_2S 0.1 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 710 ppm
CHLORIDES 15,000 ppm
CHLORINE Trace
TOTAL HARDNESS 390 ppm
CALCIUM 120 ppm

VOLUME 75,000 gal
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 210 ppm
BICARBONATE -
ALKALINITY N/A
DISSOLVED SOLIDS 22,000 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operation

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE **RECEIVED**
MIXING SYSTEM APR 10 1996
OIL COM. DIV.

RECOMMENDATIONS looks fine - continue present operations

TIERRA TECHNOLOGIST Alan Hansen

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-11-5

LOCATION N.E. Side Pond - Circ. Line

TIME 10:00 a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 1-9-5

REPRESENTATIVE Mike Leonard / Mike Talevich

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L / H₂S < 0.1 mg/L;

Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.2 mg/L

TEMPERATURE 44°F

H₂S 0.0 mg/L

TOTAL SULFIDES 1.5 mg/L

SULFATES > 10 ppm

CHLORIDES 15,200 ppm

CHLORINE Trace

TOTAL HARDNESS 420 ppm

CALCIUM 180 ppm

VOLUME ~ 75,000 bbl

PH 8.2

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 240 ppm

BICARBONATE -

ALKALINITY p = 0.0 m = 2.0

DISSOLVED SOLIDS > 22,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque - Milky

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

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OIL CON. DIV
DIST. 3

RECOMMENDATIONS Continue present Treatment

- Looking Great

TIERRA TECHNOLOGIST Don Hoover

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 1-9-5

LOCATION South Side Pond - Circ. Line TIME 9:30a

TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 1-7-5

REPRESENTATIVE Mike Leonard / Mike Tylowicz

JOB DESCRIPTION Keep D.O. ≥ 2.0 mg/L; $H_2S \leq 0.1$ mg/L;
Total sulfides ≤ 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.0⁺ mg/L
TEMPERATURE 42°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES 210 FPM
CHLORIDES 15,000 ppm
CHLORINE Trace to 0.1 mg/L
TOTAL HARDNESS 380 ppm
CALCIUM 180 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.019
MAGNESIUM 200 ppm
BICARBONATE -
ALKALINITY pH = 8.2 m = 2.0
DISSOLVED SOLIDS $\geq 24,000$ mg/L
SUSPENDED SOLIDS -
APPEARANCE milky
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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RECOMMENDATIONS Total sulfides $\uparrow$ slightly. Milky
appearance of concern

TIERRA TECHNOLOGIST Jan Hansen PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-7-97

LOCATION South Side Pond - Circ Line

TIME 8:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 1-4-95

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain H₂S < 0.1 mg/L; O.D. < 2.0 mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN N/A - water too cold

TEMPERATURE 34°F

H₂S 0.0 mg/L

TOTAL SULFIDES 0.0 mg/L

SULFATES < 1.0 ERM

CHLORIDES 15,500 ppm

CHLORINE Trace

TOTAL HARDNESS 490 ppm

CALCIUM 210 ppm

VOLUME < 75,000 gal

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 270 ppm

BICARBONATE -

ALKALINITY pH = 8.41 - 2.7

DISSOLVED SOLIDS < 12,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque - tan

CIRCULATION SYSTEM operating

* Note: Cold water problem

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

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RECOMMENDATIONS looks good

TIERRA TECHNOLOGIST Sam Warr

PHONE 505-226-1

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 1-4-5

LOCATION N.E. Side pond - Circ. line

TIME 8:30 A

TYPE FLUID Oil Field Prod Water

DATE PREVIOUS
SERVICE 1-3-5

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; H₂S ≤ 0.1 mg/L;
Total Sulfides ≤ 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.0 mg/L
TEMPERATURE 39.0 F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES ≤ 100 ppm
CHLORIDES 17500 ppm
CHLORINE Trace
TOTAL HARDNESS 600 ppm
CALCIUM 300 ppm

VOLUME ~ 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 32 ppm
BICARBONATE
ALKALINITY p = 0.9 m = 2.3
DISSOLVED SOLIDS 775,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - white
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH
WT
FUNNEL VISCOSITY
RETORT ANALYSIS
% WATER
% OIL
% SOLIDS

VOLUME
APPEARANCE
MIXING SYSTEM
OIL CON. DIV
DIST. 3

RECOMMENDATIONS looks very good - continue present
treatment & operation

TIERRA TECHNOLOGIST Jim Hauser

PHONE 770-7261

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CLIENT SERVICE REPORT

COMPANY SUNCO Water Disposal

DATE 1-2-95

LOCATION South Side Pond - Circ. Line

TIME 2:45 PM

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 12-22-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain Bio. < 0.2 mg/L; H₂S < 0.1 mg/L; Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 2.5 mg/L
TEMPERATURE 41 °F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.0 mg/L
SULFATES < 10 ppm
CHLORIDES 18,000 ppm
CHLORINE Trace
TOTAL HARDNESS 590 ppm
CALCIUM 290 ppm

VOLUME ~ 75,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 300 ppm
BICARBONATE -
ALKALINITY p = 0.9 m = 2.2
DISSOLVED SOLIDS ~ 23,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE Opaque - Tan
CIRCULATION SYSTEM Open at 11:14

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CON. DIV. _____
DIST. S _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Warren Hester PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY UNICO WATER DISPOSAL

DATE 12-23-84

LOCATION South Side Nurb - Circ Line

TIME 3:40 p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 3-21-84

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain: H₂S < 0.1 mg/L, Total
Sulfides < 5.0 mg/L, D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 4.9 mg/L
TEMPERATURE 43 °F
H₂S 0.0 mg/L
TOTAL SULFIDES 4.0 ~~mg/L~~ mg/L
SULFATES 10.5 ppm
CHLORIDES 16,200 ppm
CHLORINE —
TOTAL HARDNESS —
CALCIUM —

VOLUME + 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM —
BICARBONATE —
ALKALINITY —
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque - yellow
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —
MIXING SYSTEM —

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RECOMMENDATIONS - water testing fine - Larry Hunter with
CK for D.O., H₂S and Total Sulfides next test

TIERRA TECHNOLOGIST Larry Hunter

PHONE 320-2261

Thank
a great
Christmas

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 12-21-94

LOCATION N.E. Side Pond - Circ. Line

TIME 12:00 noon

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 12-19-94

REPRESENTATIVE MIKE LEONARD; MIKE TALOVICH

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H₂S < 0.1 mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.0 mg/L
TEMPERATURE 43°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 10 FPM
CHLORIDES 16,900
CHLORINE Trace
TOTAL HARDNESS 640 ppm
CALCIUM 290 ppm

VOLUME in 75,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 350 ppm
BICARBONATE -
ALKALINITY p=0.9 M=1.7
DISSOLVED SOLIDS > 23,000 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque-gray
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS water looks GOOD

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TIERRA TECHNOLOGIST Wm. Hansen

PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 12-19-94

LOCATION N.E. Side Pond - Circ. line

TIME 1:15 P

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 12-16-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain ~~PH~~ Total Sulfides < 5.0 mg/l;

H₂S < 0.1 mg/l; D.O. > 2.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 4.5 mg/l

TEMPERATURE 45° F

H₂S 0.0 mg/l

TOTAL SULFIDES 1.0 mg/l

SULFATES < 10 ppm

CHLORIDES 15,800

CHLORINE Trace

TOTAL HARDNESS 660 ppm

CALCIUM 300 ppm

VOLUME in 75,000 bbl

PH 8.0

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 360 ppm

BICARBONATE =

ALKALINITY N/A

DISSOLVED SOLIDS 223,000 mg/l

SUSPENDED SOLIDS =

APPEARANCE opaque-gray

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS Looks fine - continue present level
of treatment & aeration

TIERRA TECHNOLOGIST Dan Hoerner

PHONE 320-7261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 12-16-4

LOCATION N.E. Side Pond - Circ. Line

TIME 8:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 12-14-4

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Keep $H_2S < 0.1$ mg/L; D.O. > 2.0 mg/L;
Total Sulfides < 5.0 mg/L

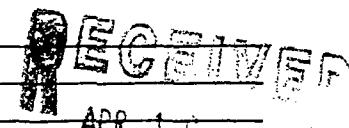
WATER ANALYSIS

DISSOLVED OXYGEN 4.0 mg/L
TEMPERATURE 39°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES < 10 EPA
CHLORIDES 16,500 ppm
CHLORINE Trace
TOTAL HARDNESS 680 ppm
CALCIUM 290 ppm

VOLUME 79,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 390 ppm
BICARBONATE -
ALKALINITY p = 0.9 m = 2.2
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

APR 16 1977
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DIST. 3

RECOMMENDATIONS Total sulfides up slightly - may
consider chemical treatment increase -
Water looks good but D.O. is lower - aerate !!!

TIERRA TECHNOLOGIST Wan Hsuan

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 12-14-4
LOCATION S.E. Side Pond - Circ. Line TIME 10:30a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 12-17-4
REPRESENTATIVE Mike Leonard / Mike Tolovich
JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H₂S < 0.1 mg/L;
Total sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN <u>4.0 mg/L</u>	VOLUME <u>775,000 bbl</u>
TEMPERATURE <u>44°F</u>	PH <u>8.1</u>
H ₂ S <u>0.0 mg/L</u>	SPECIFIC GRAVITY/WT <u>1.015 /</u>
TOTAL SULFIDES <u>1.0 mg/L</u>	MAGNESIUM <u>490 ppm</u>
SULFATES <u>< 10 FPM</u>	BICARBONATE <u>-</u>
CHLORIDES <u>16,800 ppm</u>	ALKALINITY <u>p = 0.9 m = 2.3</u>
CHLORINE <u>Trace</u>	DISSOLVED SOLIDS <u>773,000 mg/L</u>
TOTAL HARDNESS <u>700 ppm</u>	SUSPENDED SOLIDS <u>-</u>
CALCIUM <u>310 ppm</u>	APPEARANCE <u>opaque</u>
	CIRCULATION SYSTEM <u>operating</u>

MUD ANALYSIS

PH <u></u>	VOLUME <u></u>
WT <u></u>	APPEARANCE <u></u>
FUNNEL VISCOSITY <u></u>	MIXING SYSTEM <u></u>
RETORT ANALYSIS <u></u>	
% WATER <u></u>	
% OIL <u></u>	
% SOLIDS <u></u>	

RECOMMENDATIONS looks good - continue present operation
& chemical treatment rate - cold weather or plug

TIERRA TECHNOLOGIST Walt Hoover PHONE 720-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 12-12-94

LOCATION N.E. Side Pond - Circ. Line

TIME 10:15a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 12-9-94

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides
 $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 5.2 mg/L
TEMPERATURE 39°F
 H_2S 0.0 mg/L
TOTAL SULFIDES ~~2.5 mg/L~~ 2.5 mg/L
SULFATES < 1.0 ppm
CHLORIDES 16,800 ppm
CHLORINE Trace
TOTAL HARDNESS 700 ppm
CALCIUM 320 ppm

VOLUME 775,000 bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 380 ppm
BICARBONATE —
ALKALINITY $p = 0.9$ $m = 2.3$
DISSOLVED SOLIDS 223,000 ppm
SUSPENDED SOLIDS —
APPEARANCE opaque - white
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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DIST. 3

RECOMMENDATIONS Looks good

TIERRA TECHNOLOGIST Jan Hoover

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Fri. 12-9-4

LOCATION N.E. Side Pond - Circ. Line

TIME 10:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 12-7-4

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S < 0.1$ mg/L;

Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 7.2 mg/L

TEMPERATURE 35 °F

H_2S 0.0 mg/L

TOTAL SULFIDES 1.0 mg/L

SULFATES < 10 ppm

CHLORIDES 16,800 ppm

CHLORINE Trace

TOTAL HARDNESS 760 ppm

CALCIUM 300 ppm

VOLUME $\approx 75,000$ bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 460 ppm

BICARBONATE -

ALKALINITY ≈ 0.9 eq/L ≈ 2.3

DISSOLVED SOLIDS 223,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque-gray

CIRCULATION SYSTEM Operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

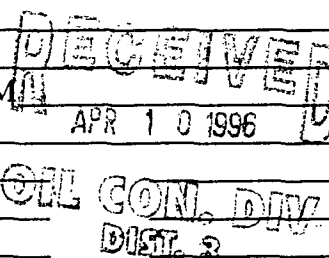
APPEARANCE -

MIXING SYSTEM -

RECOMMENDATIONS Continue present treatment rates & aeration

TIERRA TECHNOLOGIST Wan Hsueh

PHONE 320-2261



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CLIENT SERVICE REPORT

Pearl H.

COMPANY SUNCO WATER DISPOSAL

DATE 12-7-4

LOCATION N.E. Side Pond - Circ. Line

TIME 9:30a

TYPE FLUID oil Field Prod. water

DATE PREVIOUS
SERVICE 12-5-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/l; $H_2S < 0.1$ mg/l;

Total Sulfides < 5.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 5.1 mg/l

TEMPERATURE 43.0 F

H_2S _____

TOTAL SULFIDES 1.5 mg/l

SULFATES < 10 ppm

CHLORIDES 16,500 ppm

CHLORINE Trace

TOTAL HARDNESS 720

CALCIUM 290 ppm

VOLUME $\approx 75,000$ bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 430 ppm

BICARBONATE _____

ALKALINITY $p = 0.9$ $m = 2.3$

DISSOLVED SOLIDS $\approx 22,000$ mg/l

SUSPENDED SOLIDS _____

APPEARANCE opaque

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE yellow

MIXING SYSTEM no. 1

RECOMMENDATIONS Looks fine

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Mon, 12-5-94

LOCATION NE side Pond - Circ. line

TIME 11:15a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 12-2-94

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Maintain Total Sulfides < 5.0 mg/L;

DO < 2.0 mg/L; H₂S < 0.1 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.0 mg/L

TEMPERATURE 40°F

H₂S 0.0 mg/L

TOTAL SULFIDES 1.5 mg/L

SULFATES < 10 FPM

CHLORIDES 18,400 ppm

CHLORINE Trace

TOTAL HARDNESS 760 ppm

CALCIUM 300 ppm

VOLUME 775,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.015

MAGNESIUM 420 ppm

BICARBONATE -

ALKALINITY p = 0.9 m = 2.3

DISSOLVED SOLIDS 713,000 ppm

SUSPENDED SOLIDS -

APPEARANCE opaque-gray

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS Continue present treatment

TIERRA TECHNOLOGIST Dan Hudson

PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Friday 12-2-94

LOCATION N.E. side Pond - Circ. Lake

TIME 10:10 p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 11-70-4

REPRESENTATIVE Mike Leonard / Mike Tabovich

JOB DESCRIPTION Mountain D.O. > 2.0 mg/L ; H₂S < 0.1 mg/L

Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 0.9 mg/L

TEMPERATURE 36°F

H₂S 0.0 mg/L

TOTAL SULFIDES 1.0 mg/L

SULFATES < 10 EPA

CHLORIDES 15,800 ppm

CHLORINE 0.0 ppm

TOTAL HARDNESS 760 ppm

CALCIUM 300 ppm

VOLUME > 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 460 ppm

BICARBONATE -

ALKALINITY p = 0.9 m = 2.3

DISSOLVED SOLIDS > 22,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque / clear

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

RECOMMENDATIONS looks great

TIERRA TECHNOLOGIST [Signature]

PHONE 320-2261

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TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-30-4

LOCATION N.E. side Pond - Circ. line

TIME 10:15a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 11-20-4

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; Total Sulfides
 ≤ 5.0 mg/L; $H_2S \leq 0.1$ mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.0 mg/L
TEMPERATURE 35 °F
 H_2S 0.0 mg/L
TOTAL SULFIDES 0.5 mg/L
SULFATES ≤ 1.0 mg/L
CHLORIDES 16,000
CHLORINE Trace
TOTAL HARDNESS 700 ppm
CALCIUM 200 ppm

VOLUME $\geq 75,000$ bbl
PH 8.1
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 400 ppm
BICARBONATE —
ALKALINITY $p = 0.9$ $m = 2.2$
DISSOLVED SOLIDS $\geq 23,000$ mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque
CIRCULATION SYSTEM operating
- no spray

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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DIST. 3

RECOMMENDATIONS looks great - cold temp. good
Trace of chlorine?

TIERRA TECHNOLOGIST Gian Vassallo

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 11-22-94
LOCATION N.E. side Pond - Circ. Line TIME 2:15 p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 11-22-94
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total sulfides
~~5.0 mg/L~~ $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/l
TEMPERATURE 38°F
 H_2S 0.0 mg/l
TOTAL SULFIDES $< 1.0 \text{ mg/L}$
SULFATES $< 10 \text{ ppm}$
CHLORIDES 18,000 ppm
CHLORINE Trace
TOTAL HARDNESS 720 ppm
CALCIUM 300 ppm

VOLUME 75,000 bbl
PH 8.7
SPECIFIC GRAVITY/WT 1.0751
MAGNESIUM 420 ppm
BICARBONATE -
ALKALINITY $p = 0.9 \text{ m} = 2.3$
DISSOLVED SOLIDS 72,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE clear
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CON. DIV
DIST. 3

RECOMMENDATIONS Cold water good - continue circulating
- little treatment needed

TIERRA TECHNOLOGIST Van Housen PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-23-94

LOCATION N.E. Side Pond - Circ. line

TIME 9:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 11-27-94

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H_2S < 0.1 mg/L;

Total Sulfides < 5.0 mg/L w/ Aeration & oxidizers

WATER ANALYSIS

DISSOLVED OXYGEN 7.9

TEMPERATURE 39°F

H_2S 0.0 mg/L

TOTAL SULFIDES 2.0 mg/L

SULFATES < 10 FPM

CHLORIDES 16,500

CHLORINE 0.0 mg/L

TOTAL HARDNESS 640 ppm

CALCIUM 300 ppm

VOLUME 775,000 bbl

PH 8.0

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 340 ppm

BICARBONATE -

ALKALINITY $p=0.9$ $m=2.2$

DISSOLVED SOLIDS 773,000 ppm

SUSPENDED SOLIDS -

APPEARANCE clear

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

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OIL CON. DIV
DIST. 3

RECOMMENDATIONS Everything looks FINE. D.O. great

TIERRA TECHNOLOGIST Dan Hoan PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 11-21-94
LOCATION Nier Side Pond - Circ. line TIME 2:00a
TYPE FLUID Oil Field Prod. water DATE PREVIOUS SERVICE 11-18-94
REPRESENTATIVE Mike Leonard / Mike Tylavich
JOB DESCRIPTION Maintain H₂S < 0.1 mg/L ;
Total Sulfides < 5.0 mg/L ; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.5
TEMPERATURE 37.0 F
H₂S 0.0
TOTAL SULFIDES 1.5 mg/L
SULFATES < 10 ERM
CHLORIDES +
CHLORINE 0.0 ppm
TOTAL HARDNESS +
CALCIUM +

VOLUME 775,000 bbl
PH 8.0
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM +
BICARBONATE -
ALKALINITY +
DISSOLVED SOLIDS 727,000 mg/L
SUSPENDED SOLIDS +
APPEARANCE Clear
CIRCULATION SYSTEM Starting
up

* Dist. H₂O Frozen

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CON. DIV. _____
DIST. 3

RECOMMENDATIONS Extreme cold is of great benefit -
looks fine

TIERRA TECHNOLOGIST

Dan Hauer

PHONE 320-2261

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909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-18-94

LOCATION N.E. side Pond - Circ. line

TIME 10:30a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS

SERVICE 11-16-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain H_2S < 0.1 mg/L; Total Sulfides
< 5.0 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 3.0 mg/L

TEMPERATURE 41°F

H_2S 0.0 mg/L

TOTAL SULFIDES 2.0 mg/L

SULFATES 10 EPAM

CHLORIDES 16,500 ppm

CHLORINE Trace

TOTAL HARDNESS 600 ppm

CALCIUM 280 ppm

VOLUME 75,000 bbl

PH 8.0

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 320 ppm

BICARBONATE -

ALKALINITY pH = 0.9 m = 2.2

DISSOLVED SOLIDS 723,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE clear

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

RECOMMENDATIONS Continue present aeration & treatment

TIERRA TECHNOLOGIST Dan Hansen PHONE 320-2261

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-16-4

LOCATION N.E. side Pond - Circ. Line

TIME 10:30a

TYPE FLUID Oil Field Prod Water

DATE PREVIOUS
SERVICE 11-14-4

REPRESENTATIVE MIKE LEONARD; MIKE TALOUICH

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S < 0.1$ mg/L;

Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.6 mg/L

TEMPERATURE 42°F

H_2S 0.0 mg/L

TOTAL SULFIDES ~~0.0 mg/L~~ 2.0 mg/L

SULFATES < 10 ppm

CHLORIDES 16,500 ppm

CHLORINE Trace

TOTAL HARDNESS 600 ppm

CALCIUM 380 ppm

VOLUME 7 75,000 bbls

PH 8.0

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 320 ppm

BICARBONATE -

ALKALINITY $p = 0.9$ $M = 2.2$

DISSOLVED SOLIDS 727,000 ppm

SUSPENDED SOLIDS -

APPEARANCE opaque

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

-

-

-

-

RECOMMENDATIONS Continue present aeration & treatment

TIERRA TECHNOLOGIST Don Hasen PHONE 320-2261

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 11-14-94
LOCATION N.E. Side Pond - Circ. Line TIME 11:00a
TYPE FLUID Oil Field Prod. water DATE PREVIOUS SERVICE 11-11-94
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/L; Total Sulfides
 < 5.0 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.6
TEMPERATURE 44°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 10 FPM
CHLORIDES 17,000 ppm
CHLORINE Trace
TOTAL HARDNESS 640 ppm
CALCIUM 300 ppm

VOLUME $> 75,000$ bbl
PH 8.0
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 340 ppm
BICARBONATE -
ALKALINITY $p=0.9$ $m=2.3$
DISSOLVED SOLIDS $> 23,000$ mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 10 1996
OIL CON. _____
DWT 3

RECOMMENDATIONS Looks fine

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-11-94

LOCATION N.E. side Pond - Circ. line

TIME 9:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 11-9-94

REPRESENTATIVE Mike Leonard / Mike Valovich

JOB DESCRIPTION MAINTAIN D.O. $\geq$ 2.0 mg/L; H_2S $\leq$ 0.1 mg/L;
TOTAL SULFIDES $\leq$ 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.8 mg/L

TEMPERATURE 48°F

H_2S 0.0 mg/L

TOTAL SULFIDES ~~2.0 mg/L~~ 2.0 mg/L

SULFATES 10-15 ppm

CHLORIDES 17,000 ppm

CHLORINE 0.0 ppm

TOTAL HARDNESS 760 ppm

CALCIUM 320 ppm

VOLUME ~ 75,000 bbl

PH 8.0

SPECIFIC GRAVITY/WT 1.015 /

MAGNESIUM 440 ppm

BICARBONATE -

ALKALINITY p = 0.9 m = 2.4

DISSOLVED SOLIDS ~ 25,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE opaque - clear

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

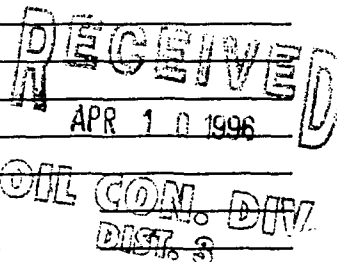
APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS Continue present treatment rate & aeration

TIERRA TECHNOLOGIST Don Weaver

PHONE 320-2265



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 11-9-4

LOCATION N.E. Side Pond - Circ. line TIME 9:00a

TYPE FLUID Oil Field Production Water DATE PREVIOUS SERVICE 11-7-4

REPRESENTATIVE Mike ~~Hebner~~ / Mike Telovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/l; $H_2S < 0.1$ mg/l;

Total Sulfides < 5.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/l

TEMPERATURE 43°F

H_2S 0.0 mg/l

TOTAL SULFIDES 1.0 mg/l

SULFATES 10 FPM

CHLORIDES 16,200 ppm

CHLORINE Trace

TOTAL HARDNESS 480 ppm

CALCIUM 200 ppm

VOLUME 75,000 bbl

PH 8.0

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 280 ppm

BICARBONATE -

ALKALINITY $p = 0.8$, $m = 2.1$

DISSOLVED SOLIDS 22,000 ppm/l

SUSPENDED SOLIDS -

APPEARANCE Clear - opaque

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

RECOMMENDATIONS -

TIERRA TECHNOLOGIST Dan Hauer PHONE 320-2261

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DIST. 3

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-7-4

LOCATION N.E. Side Circ. line

TIME 11:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 11-4-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep - w/ Treatment & aeration - H₂S < 0.1 mg/L;

Total Sulfides < 5.0 mg/L; D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.8 mg/L

TEMPERATURE 50°F

H₂S 0.0 mg/L

TOTAL SULFIDES 1.5 mg/L

SULFATES 10-15 ppm

CHLORIDES 17,000 ppm

CHLORINE Trace

TOTAL HARDNESS 600 ppm

CALCIUM 250 ppm

VOLUME in 75,000 bbl

PH 8.1

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 350 ppm

BICARBONATE -

ALKALINITY p = 0.8 m = 2.3

DISSOLVED SOLIDS > 23,000 mg/L

SUSPENDED SOLIDS -

APPEARANCE Clear - opaque

CIRCULATION SYSTEM operating

w/ sprayers

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE -

MIXING SYSTEM -

-

-

-

-

-

RECOMMENDATIONS looks fine, fine

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-7761

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-4-94

LOCATION SOUTH CIRCULATION LINE

TIME 1:30 pm

TYPE FLUID OIL FIELD PROD. WATER

DATE PREVIOUS
SERVICE 11-2-94

REPRESENTATIVE MIKE LEONARD / MIKE TOLEVICH

JOB DESCRIPTION MAINTAIN D.O. > 2.0 mg/l; H₂S < 0.1 mg/l;

TOTAL SULFIDES < 5.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 2.7 mg/l
TEMPERATURE 49° F
H₂S 0.0 mg/l
TOTAL SULFIDES 1.5 mg/l
SULFATES 10-15 ppm
CHLORIDES 1700 ppm
CHLORINE Trace
TOTAL HARDNESS 440 ppm
CALCIUM 180 ppm

VOLUME 75,000 bbl
PH 8.2
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 260 ppm
BICARBONATE
ALKALINITY P = 0.9 M = 2.2
DISSOLVED SOLIDS > 23,000 ppm
SUSPENDED SOLIDS
APPEARANCE opaque - 1 year
CIRCULATION SYSTEM OPERATING

MUD ANALYSIS

PH
WT
FUNNEL VISCOSITY
RETORT ANALYSIS
% WATER
% OIL
% SOLIDS

VOLUME
APPEARANCE
MIXING SYSTEM
OIL CON. DIV
DIST. 3

RECOMMENDATIONS CAUTION! D.O. DOWN - TOTAL SULFIDES & H₂S
EXCELLENT. TEMPERATURE IS AN ADVANTAGE - CONTINUE PRESENT
TREATMENT & AERATION

TIERRA TECHNOLOGIST CONNIE DINNING

PHONE 320-1736

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 11-1-4

LOCATION N.E. Side Pond - Circ. Line

TIME 8:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 10-18-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain D.O. $\geq$ 2.0 mg/L; $H_2S < 0.1$ mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.0
TEMPERATURE 47°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 10-15 ppm
CHLORIDES 16,500 ppm
CHLORINE Trace
TOTAL HARDNESS 700 ppm
CALCIUM 320 ppm

VOLUME ~ 75,000 bbl
PH 8.2
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 380 ppm
BICARBONATE -
ALKALINITY p = 0.9; m = 2.4
DISSOLVED SOLIDS ~ 14,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - clear
CIRCULATION SYSTEM operating
well

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

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RECOMMENDATIONS Water Foamy - everything else is good

TIERRA TECHNOLOGIST Don Hansen

PHONE 320-2261

Kathy Brown



OIL CONSERVATION DIVISION
RECEIVED

'93 OCT 8 AM 9 32

P.O. BOX 443, FARMINGTON, NM 87499 (505) 327-0416

WATER AND OILFIELD HEAVY HAULING

Attn: Denny G. Foust
State of New Mexico Oil Conservation Division
1000 Rio Brazos Rd
Aztec, N.M. 87410

October 5, 1993

Re: On-Site remediation of solids,

Dear Mr. Foust,

Attached is a copy of the complete analysis, On Site Technology Laboratory performed on our solids at Sunco Disposal.

As you know we have constructed a concrete drying trough for these at our location. We would like to have the Bureau's approval to farm these solids into a burned area on our property, once this process has been completed.

Yours Truly,

Mike Leonard
Sunco Disposal Systems

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OCT. 05 1993
OIL CON. DIV.
DIST. 3

**PRIORITY POLLUTANTS / AROMATIC VOLATILE ORGANICS**

Attn: **Mike Leonard**
Company: **Sunco Waste Disposal**
Address: **P.O. Box 443**
City, State: **Farmington, NM 87499**

Date: **3/19/93**
Lab ID: **1066**

Project Name: **Sunco Pit Remediation Core Sample**
Project Location: **Sunco Waste Disposal**
Sampled by: **DC/GL** Date: **3/15/93**
Analyzed by: **DC** Date: **3/19/93**
Type of Sample: **Soil**

Component		Sample Depth (Inches)		
		48	60	86
Benzene	ppm	<50	<50	<50
Toluene	ppm	<50	<50	<50
Chlorobenzene	ppm	<50	<50	<50
Ethylbenzene	ppm	<50	<50	<50
m,p-Xylene	ppm	<50	<50	<50
o-Xylene	ppm	<50	<50	<50
1,3-Dichlorobenzene	ppm	<50	<50	<50
1,4-Dichlorobenzene	ppm	<50	<50	<50
1,2-Dichlorobenzene	ppm	<50	<50	<50

Method - SW-846 EPA Method 8020B Aromatic Volatile Organics by Gas Chromatography

Analysis Performed by: *David G.*
Date: *3/22/93*

Approved by: *Joe G.*
Date: *3/22/93*

RECEIVED
OCT 05 1993
OIL CON. D
DIST. 4



PRIORITY POLLUTANTS / AROMATIC VOLATILE ORGANICS

Attn: **Mike Leonard**
 Company: **Sunco Waste Disposal**
 Address: **P.O. Box 443**
 City, State: **Farmington, NM 87499**

Date: **3/19/93**
 Lab ID: **1086**

Project Name: **Sunco Pit Remediation Core Sample**
 Project Location: **Sunco Waste Disposal**
 Sampled by: **DC/GL** Date: **3/15/93**
 Analyzed by: **DC** Date: **3/19/93**
 Type of Sample: **Soil**

<u>Component</u>		<u>Sample Depth (inches)</u>		
		<u>12</u>	<u>24</u>	<u>36</u>
Benzene	<i>ppm</i>	<50	<50	<50
Toluene	<i>ppm</i>	<50	<50	<50
Chlorobenzene	<i>ppm</i>	<50	<50	<50
Ethylbenzene	<i>ppm</i>	<50	<50	<50
m,p-Xylene	<i>ppm</i>	<50	<50	<50
o-Xylene	<i>ppm</i>	<50	<50	<50
1,3-Dichlorobenzene	<i>ppm</i>	<50	<50	<50
1,4-Dichlorobenzene	<i>ppm</i>	<50	<50	<50
1,2-Dichlorobenzene	<i>ppm</i>	<50	<50	<50

Method - SW-846 EPA Method 8020B Aromatic Volatile Organics by Gas Chromatography

Analysis Performed by: *David Lee*
 Date: *3/22/93*

Approved by: *David Lee*
 Date: *3/22/93*



PRIORITY POLLUTANTS / METALS

Attn: **Mike Leonard**
 Company: **Sunco Waste Disposal**
 Address: **P.O. Box 443**
 City, State: **Farmington, NM 87499**

Date: **3/19/93**
 Lab ID: **1086**

Project Name: **Sunco Pft Remediation Core Sample**
 Project Location: **Sunco Waste Disposal**
 Sampled by: **DC/GL** Date: **3/15/93**
 Analyzed by: **TW** Date: **3/18/93**
 Type of Sample: **Soil**

Sample Depth (Inches)	Selenium Se	Arsenic As	Mercury Hg
12	0.32 ppb	34.26 ppb	0.48 ppb
24	0.19 ppb	31.61 ppb	0.64 ppb
36	0.24 ppb	27.37 ppb	26.05 ppb
48	1.32 ppb	21.07 ppb	4.82 ppb
60	0.13 ppb	19.80 ppb	2.86 ppb
66	<0.01 ppb	25.80 ppb	4.17 ppb

Method - SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes

Analysis Performed by: *Diana B. Blyden*
 Date: *3/22/93*

Approved by: *[Signature]*
 Date: *3/22/93*



PRIORITY POLLUTANTS / METALS

Attn: **Mike Leonard**
Company: **Sunco Waste Disposal**
Address: **P.O. Box 443**
City, State: **Farmington, NM 87499**

Date: **3/19/93**
Lab ID: **1066**

Project Name: **Sunco Pit Remediation Core Sample**
Project Location: **Sunco Waste Disposal**
Sampled by: **DC/GL** Date: **3/15/93**
Analyzed by: **TW** Date: **3/18/93**
Type of Sample: **Soil**

Sample Depth (Inches)	Copper Cu		Lead Pb	
12	<1.0	ppm	<1.0	ppm
24	<1.0	ppm	<1.0	ppm
36	<1.0	ppm	<1.0	ppm
48	<1.0	ppm	<1.0	ppm
60	<1.0	ppm	<1.0	ppm
66	<1.0	ppm	<1.0	ppm

Method - SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes

Analysis Performed by: *Alison White*
Date: *3/23/93*

Approved by: *[Signature]*

**PRIORITY POLLUTANTS / METALS**

Attn: **Mike Leonard**
Company: **Sunco Waste Disposal**
Address: **P.O. Box 443**
City, State: **Farmington, NM 87499**

Date: **3/19/93**
Lab ID: **1066**

Project Name: **Sunco Pft Remediation Core Sample**
Project Location: **Sunco Waste Disposal**
Sampled by: **DC/GL** Date: **3/15/93**
Analyzed by: **TW** Date: **3/18/93**
Type of Sample: **Soil**

Sample Depth (Inches)	Silver Ag	Zinc Zn	Cadmium Cd
12	<1.0 ppm	0.32 ppm	<0.5 ppm
24	<1.0 ppm	0.33 ppm	<0.5 ppm
36	<1.0 ppm	0.26 ppm	<0.5 ppm
48	<1.0 ppm	0.20 ppm	<0.5 ppm
60	<1.0 ppm	0.20 ppm	<0.5 ppm
66	<1.0 ppm	0.26 ppm	<0.5 ppm

Method - SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes

Analysis Performed by: *Laura White*

Date: *3/23/93*

Approved by: *James G. 1*

Date: *3/27/93*

**TOTAL PETROLEUM HYDROCARBONS - TPH**

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1086*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *GL* Date: *3/18/93*
Type of Sample: *Soil*

<u>Sample Depth (Inches)</u>	<u>Total Petroleum Hydrocarbons</u>
12	1,900 ppm
24	437 ppm
36	841 ppm
48	13 ppm
60	<10 ppm
66	538 ppm

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Analysis Performed by: *Jane Lee*
Date: *3/22/93*

Approved by: *[Signature]*
Date: *3/22/93*

**GENERAL SOIL ANALYSIS**

Attn: **Mike Leonard**
Company: **Sunco Waste Disposal**
Address: **P.O. Box 443**
City, State: **Farmington, NM 87499**

Date: **3/19/93**
Lab ID: **1066**

Project Name: **Sunco Pit Remediation Composite Core Sample**
Project Location: **Sunco Waste Disposal**
Sampled by: **DC/GL** Date: **3/15/93**
Analyzed by: **TW** Date: **3/18/93**
Type of Sample: **Soil**

CATIONS

Sodium	Na	<u>843</u> ppm
Calcium	Ca	<u>94000</u> ppm
Magnesium	Mg	<u>3100</u> ppm
Potassium	K	<u>400</u> ppm

pH	<u>8.46</u>
Iron	Fe <u>70</u> ppm

ANIONS

Carbonate	CO3	<u>12000</u> ppm
Bicarbonate	HCO3	<u>36600</u> ppm

Note - The composite sample was prepared utilizing 15.0 grams of soil from each respective sample depth.

Analysis Performed by: *Merissa White*

Date: *3/23/93*

Approved by: *John Col*

Date: *3/22/93*



March 22, 1993

Mr. Mike Leonard
Sunco Waste Disposal
P.O. Box 443
Farmington, NM 87499

Dear Mr. Leonard,

The core sample at the respective depths, obtained on March 15, 1993, were analyzed in accordance with the parameters put forth by the Oil Conservation Department. The respective data for each sample may be found in the enclosed report. The other Priority Pollutants/Metals we are further analyzing are Nickel, Chromium, Antimony and Thallium. Due to an unforeseen circumstance we were unable to analyze these metals immediately, and therefore will notify you when the remainder analyses have been completed.

Thank you for your patience. Please feel free to call if you have any questions.

Sincerely,


David W. Cox
Lab Manager



CHAIN OF CUSTODY RECORD

Client/Project Name		Project Location		ANALYSES / PARAMETERS			
Sampler: (Signature)		Chain of Custody Tape No.		Remarks			
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Date	Time
Skimming Pond Leaked	5/13/93	0945	2584	H ₂ O	4	5/13/93	1155
Skimming Pond	5/13/93	1015	85	/	1	5/13/93	1155
Evap Pond Leaked	5/13/93	1030	86	/	1	5/13/93	1155
Evap Pond	5/13/93	1100	87	/	1	5/13/93	1155
FILE COPY							
Relinquished by: (Signature)				Received by: (Signature)		Date	
Denny G. Fount				J. P. Fount		5/13/93	
Relinquished by: (Signature)				Received by: (Signature)		Date	
						5/13/93	
Relinquished by: (Signature)				Received by: (Signature)		Date	

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

3304 Longmire Drive
College Station, TX 77845
Telephone (409) 774-4999

Inter-Mountain Laboratories, Inc.

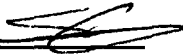
10010

Client: OIL CONSERVATION DIVISION
Sample ID: Skimming Pond Leak Detector
Laboratory ID: 2584
Sample Matrix: Water
Condition: Cool/Intact

Date Reported: 05/26/93
Date Sampled: 05/13/93
Time Sampled: 0945
Date Received: 05/13/93

Parameter	Analytical Result	Units		Units
Lab pH.....	8.3	s.u.		
Lab Conductivity @ 25° C.....	29,600	umhos/cm		
Total Dissolved Solids @ 180°C.....	18,800	mg/L		
Total Dissolved Solids (Calc).....	17,700	mg/L		
Total Alkalinity as CaCO ₃	2,500	mg/L		
Total Hardness as CaCO ₃	588	mg/L		
Bicarbonate as HCO ₃	3,010	mg/L	49.37	meq/L
Carbonate as CO ₃	18	mg/L	0.61	meq/L
Hydroxide as OH.....	0	mg/L	0.00	meq/L
Chloride.....	8,970	mg/L	253.11	meq/L
Sulfate.....	132	mg/L	2.74	meq/L
Calcium.....	93	mg/L	4.64	meq/L
Magnesium.....	86	mg/L	7.11	meq/L
Potassium.....	311	mg/L	7.95	meq/L
Sodium.....	6,660	mg/L	289.47	meq/L
Cations.....			309.18	meq/L
Anions.....			305.83	meq/L
Cation/Anion Difference.....			0.54	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 17th ed., 1989.

Reviewed by 

Client: OIL CONSERVATION DIVISION
Sample ID: Skimming Pond
Laboratory ID: 2585
Sample Matrix: Water
Condition: Cool/Intact

Date Reported: 05/26/93
Date Sampled: 05/13/93
Time Sampled: 1015
Date Received: 05/13/93

Parameter	Analytical Result	Units		Units
Lab pH.....	7.7	s.u.		
Lab Conductivity @ 25° C.....	39,100	umhos/cm		
Total Dissolved Solids @ 180°C.....	25,200	mg/L		
Total Dissolved Solids (Calc).....	24,000	mg/L		
Total Alkalinity as CaCO ₃	1,060	mg/L		
Total Hardness as CaCO ₃	1,120	mg/L		
Bicarbonate as HCO ₃	1,300	mg/L	21.24	meq/L
Carbonate as CO ₃	0	mg/L	0.00	meq/L
Hydroxide as OH.....	0	mg/L	0.00	meq/L
Chloride.....	13,060	mg/L	368.37	meq/L
Sulfate.....	790	mg/L	16.46	meq/L
Calcium.....	235	mg/L	11.71	meq/L
Magnesium.....	130	mg/L	10.68	meq/L
Potassium.....	131	mg/L	3.34	meq/L
Sodium.....	8,980	mg/L	390.60	meq/L
Cations.....			416.33	meq/L
Anions.....			406.07	meq/L
Cation/Anion Difference.....			1.25	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 17th ed., 1989.

Reviewed by 

Client: **OIL CONSERVATION DIVISION**
Sample ID: Evaporation Pond Leak Detector
Laboratory ID: 2586
Sample Matrix: Water
Condition: Cool/Intact

Date Reported: 05/26/93
Date Sampled: 05/13/93
Time Sampled: 1030
Date Received: 05/13/93

Parameter	Analytical Result	Units	Units
Lab pH.....	7.8	s.u.	
Lab Conductivity @ 25° C.....	32,800	umhos/cm	
Total Dissolved Solids @ 180°C.....	21,200	mg/L	
Total Dissolved Solids (Calc).....	19,700	mg/L	
Total Alkalinity as CaCO ₃	2,050	mg/L	
Total Hardness as CaCO ₃	899	mg/L	
Bicarbonate as HCO ₃	2,500	mg/L	41.01 meq/L
Carbonate as CO ₃	0	mg/L	0.00 meq/L
Hydroxide as OH.....	0	mg/L	0.00 meq/L
Chloride.....	10,550	mg/L	297.73 meq/L
Sulfate.....	115	mg/L	2.40 meq/L
Calcium.....	184	mg/L	9.19 meq/L
Magnesium.....	107	mg/L	8.79 meq/L
Potassium.....	581	mg/L	14.85 meq/L
Sodium.....	6,930	mg/L	301.44 meq/L
Cations.....			334.26 meq/L
Anions.....			341.14 meq/L
Cation/Anion Difference.....			1.02 %

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 17th ed., 1989.

Reviewed by 

Client: **OIL CONSERVATION DIVISION**
Sample ID: Evaporation Pond
Laboratory ID: 2587
Sample Matrix: Water
Condition: Cool/Intact

Date Reported: 05/26/93
Date Sampled: 05/13/93
Time Sampled: 1100
Date Received: 05/13/93

Parameter	Analytical Result	Units	Units	
Lab pH.....	7.7	s.u.		
Lab Conductivity @ 25° C.....	35,700	umhos/cm		
Total Dissolved Solids @ 180°C.....	23,300	mg/L		
Total Dissolved Solids (Calc).....	22,100	mg/L		
Total Alkalinity as CaCO ₃	1,690	mg/L		
Total Hardness as CaCO ₃	883	mg/L		
Bicarbonate as HCO ₃	2,070	mg/L	33.90	meq/L
Carbonate as CO ₃	0	mg/L	0.00	meq/L
Hydroxide as OH.....	0	mg/L	0.00	meq/L
Chloride.....	11,800	mg/L	332.90	meq/L
Sulfate.....	506	mg/L	10.54	meq/L
Calcium.....	160	mg/L	7.96	meq/L
Magnesium.....	118	mg/L	9.70	meq/L
Potassium.....	490	mg/L	12.52	meq/L
Sodium.....	7,990	mg/L	347.32	meq/L
Cations.....			377.51	meq/L
Anions.....			377.34	meq/L
Cation/Anion Difference.....			0.02	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 17th ed., 1989.

Reviewed by 

Oil Conservation Division

Case Narrative

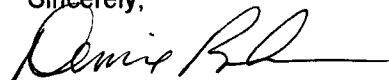
On May 13, 1993, four water samples were submitted to Inter-Mountain Laboratories - Farmington for analysis. The samples were received cool and intact and were designated "Sunco Disposal". Analyses for Purgeable Aromatics were performed on the water samples as per the accompanying chain of custody form.

BTEX analysis was performed by EPA Method 5030, Purge and Trap, and EPA Method 602.2, Purgeable Aromatics, using an OI Analytical 4560 Purge and Trap and a Hewlett-Packard 5890 Gas Chromatograph, equipped with a photoionization detector. Target analytes were detected in the samples at levels above the stated detection limits, as indicated on the report sheets.

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 samples reported herein are found in Standard Methods for Analysis of Water and Waste Water, 1992 and The Federal Register, Vol. 49, NO. 209, October, 1984.

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

Sincerely,



Dr. Denise A. Bohemier,
Organic Lab Supervisor

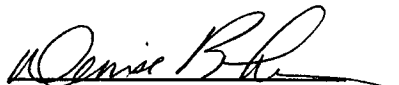
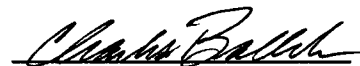
PURGEABLE AROMATICS**Oil Conservation Division**

Project ID:	Sunco Disposal	Report Date:	05/21/93
Sample ID:	Skimming Pond Leak Detector	Date Sampled:	05/13/93
Lab ID:	2584	Date Received:	05/13/93
Sample Matrix:	Water	Date Analyzed:	05/21/93
Preservative:	Cool, HCl		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	1.93	0.20
Chlorobenzene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
1,3-Dichlorobenzene	ND	0.20
1,4-Dichlorobenzene	ND	0.20
1,2-Dichlorobenzene	ND	0.20

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	101	88 -110%
	Bromofluorobenzene	97	86 -115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.**Comments:**
Analyst
Review

PURGEABLE AROMATICS**Oil Conservation Division**

Project ID: Sunco Disposal
Sample ID: Skimming Pond
Lab ID: 2585
Sample Matrix: Water
Preservative: Cool, HCl
Condition: Intact

Report Date: 05/21/93
Date Sampled: 05/13/93
Date Received: 05/13/93
Date Analyzed: 05/21/93

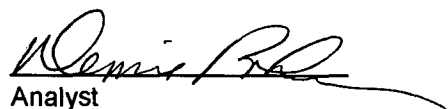
Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	1,920	100
Toluene	6,410	100
Chlorobenzene	ND	100
Ethylbenzene	349	100
m,p-Xylenes	3,210	200
o-Xylene	893	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100

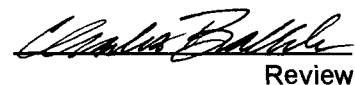
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	99	88 -110%
	Bromofluorobenzene	98	86 -115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:


Analyst


Review

PURGEABLE AROMATICSOil Conservation Division

Project ID:	Sunco Disposal	Report Date:	05/24/93
Sample ID:	Evaporation Pond Leak Detector	Date Sampled:	05/13/93
Lab ID:	2586	Date Received:	05/13/93
Sample Matrix:	Water	Date Analyzed:	05/21/93
Preservative:	Cool, HCl		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	45.6	2.00
Toluene	136	2.00
Chlorobenzene	ND	2.00
Ethylbenzene	3.53	2.00
m,p-Xylenes	34.4	4.00
o-Xylene	8.37	2.00
1,3-Dichlorobenzene	ND	2.00
1,4-Dichlorobenzene	ND	2.00
1,2-Dichlorobenzene	ND	2.00

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	98	88 -110%
	Bromofluorobenzene	95	86 -115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.**Comments:**
Analyst
Review

PURGEABLE AROMATICS**Oil Conservation Division**

Project ID: Sunco Disposal
Sample ID: Evaporation Pond
Lab ID: 2587
Sample Matrix: Water
Preservative: Cool, HCl
Condition: Intact

Report Date: 05/24/93
Date Sampled: 05/13/93
Date Received: 05/13/93
Date Analyzed: 05/21/93

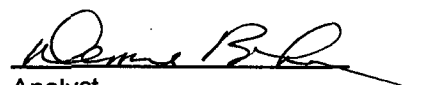
Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	61.7	2.00
Toluene	167	2.00
Chlorobenzene	ND	2.00
Ethylbenzene	3.86	2.00
m,p-Xylenes	129	4.00
o-Xylene	36.8	2.00
1,3-Dichlorobenzene	ND	2.00
1,4-Dichlorobenzene	ND	2.00
1,2-Dichlorobenzene	ND	2.00

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	98	88 -110%
	Bromofluorobenzene	93	86 -115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:


Analyst


Review

Purgeable Aromatics**Duplicate Analysis**

Lab ID: 2585Dup
Sample Matrix: Water
Preservative: Cool, HCl
Condition: Intact

Report Date: 05/21/93
Date Sampled: 05/13/93
Date Received: 05/13/93
Date Analyzed: 05/21/93

Target Analyte	Original Conc. (ug/L)	Duplicate Conc. (ug/L)	Acceptance Range (ug/L)
Benzene	1,920	2,050	1630 - 2340
Toluene	6,410	6,670	5360 - 7720
Chlorobenzene	ND	ND	NA
Ethylbenzene	349	368	237 - 481
m,p-Xylenes	3,210	3,190	NE
o-Xylene	893	906	NE
1,3-Dichlorobenzene	ND	ND	NA
1,4-Dichlorobenzene	ND	ND	NA
1,2-Dichlorobenzene	ND	ND	NA

ND - Analyte not detected at the stated detection limit.

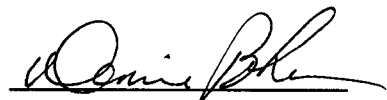
NA - Not applicable or not calculated.

NE - Duplicate acceptance range not established by the EPA.

	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
Quality Control:	Toluene-d8	98	88 - 110%
	Bromofluorobenzene	98	86 - 115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:


Analyst

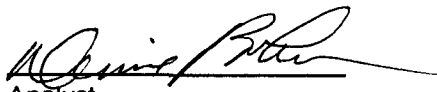
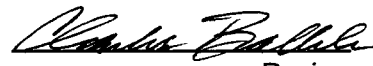

Review

PURGEABLE AROMATICS**Quality Control Report****Method Blank Analysis**Sample Matrix: Water
Lab ID: MB34110Report Date: 05/21/93
Date Analyzed: 05/21/93

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Chlorobenzene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
1,3-Dichlorobenzene	ND	0.20
1,4-Dichlorobenzene	ND	0.20
1,2-Dichlorobenzene	ND	0.20

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	97	88 -110%
	Bromofluorobenzene	94	86 -115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.**Comments:**
Analyst
Review

Purgeable Aromatics**Matrix Spike Analysis**

Lab ID: MBSpk
Sample Matrix: Water
Preservative: NA
Condition: NA

Report Date: 05/24/93
Date Sampled: NA
Date Received: NA
Date Analyzed: 05/21/93

Target Analyte	Spike Added (ug/L)	Original Conc. (ug/L)	Spiked Sample Conc. (ug/L)	% Recovery	Acceptance Limits (%)
Benzene	10	ND	9.64	96%	39 - 150
Toluene	10	ND	10.0	100%	46 - 148
Chlorobenzene	10	ND	9.82	98%	55 - 135
Ethylbenzene	10	ND	9.80	98%	32 - 160
m,p-Xylenes	20	ND	19.7	99%	NE
o-Xylene	10	ND	9.87	99%	NE
1,3-Dichlorobenzene	10	ND	9.78	98%	50 - 141
1,4-Dichlorobenzene	10	ND	9.80	98%	42 - 143
1,2-Dichlorobenzene	10	ND	9.87	99%	37 - 154

ND - Analyte not detected at the stated detection limit.

NA - Not applicable or not calculated.

NE - Spike acceptance range not established by the EPA.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Toluene-d8	98	88 - 110%
	Bromofluorobenzene	99	86 - 115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:


Analyst


Review



TOTAL PETROLEUM HYDROCARBONS - TPH

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: 3/19/93
Lab ID: 1066

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: 3/15/93
Analyzed by: *GL* Date: 3/18/93
Type of Sample: *Soil*

RECEIVED

APR 13 1993

OIL CONSERVATION DIV.
SANTA FE

<u>Sample Depth (inches)</u>	<u>Total Petroleum Hydrocarbons</u>
12	1,900 ppm
24	437 ppm
36	841 ppm
48	13 ppm
60	<10 ppm
66	538 ppm

RECEIVED
APR 13 1993
OIL CONSERVATION DIV.
SANTA FE

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Analysis Performed by: *[Signature]*

Date: 3/22/93

Approved by: *[Signature]*

Date: 3/22/93



PRIORITY POLLUTANTS / AROMATIC VOLATILE ORGANICS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *DC* Date: *3/19/93*
Type of Sample: *Soil*

RECEIVED

APR 13 1993

**OIL CONSERVATION DIV.
SANTA FE**

<u>Component</u>	<u>Sample Depth (inches)</u>		
	<u>12</u>	<u>24</u>	<u>36</u>
<i>Benzene</i>	<i>ppm</i> <50	<50	<50
<i>Toluene</i>	<i>ppm</i> <50	<50	<50
<i>Chlorobenzene</i>	<i>ppm</i> <50	<50	<50
<i>Ethylbenzene</i>	<i>ppm</i> <50	<50	<50
<i>m,p-Xylene</i>	<i>ppm</i> <50	<50	<50
<i>o-Xylene</i>	<i>ppm</i> <50	<50	<50
<i>1,3-Dichlorobenzene</i>	<i>ppm</i> <50	<50	<50
<i>1,4-Dichlorobenzene</i>	<i>ppm</i> <50	<50	<50
<i>1,2-Dichlorobenzene</i>	<i>ppm</i> <50	<50	<50

Method - *SW-846 EPA Method 8020B Aromatic Volatile Organics by Gas Chromatography*

Analysis Performed by: *David Cox*

Date: *3/22/93*

Approved by: *David Cox*

Date: *3/22/93*

FAX: (505) 325-6256 ■ SALES: (505) 325-2432 ■ LAB: (505) 325-5667

657 WEST MAPLE ■ P. O. BOX 2606 ■ FARMINGTON, NEW MEXICO 87499



PRIORITY POLLUTANTS / AROMATIC VOLATILE ORGANICS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *DC* Date: *3/19/93*
Type of Sample: *Soil*

<u>Component</u>	<u>Sample Depth (inches)</u>		
	<u>48</u>	<u>60</u>	<u>66</u>
<i>Benzene</i>	<i>ppm</i> <50	<50	<50
<i>Toluene</i>	<i>ppm</i> <50	<50	<50
<i>Chlorobenzene</i>	<i>ppm</i> <50	<50	<50
<i>Ethylbenzene</i>	<i>ppm</i> <50	<50	<50
<i>m,p-Xylene</i>	<i>ppm</i> <50	<50	<50
<i>o-Xylene</i>	<i>ppm</i> <50	<50	<50
<i>1,3-Dichlorobenzene</i>	<i>ppm</i> <50	<50	<50
<i>1,4-Dichlorobenzene</i>	<i>ppm</i> <50	<50	<50
<i>1,2-Dichlorobenzene</i>	<i>ppm</i> <50	<50	<50

Method - *SW-846 EPA Method 8020B Aromatic Volatile Organics by Gas Chromatography*

Analysis Performed by: *David G. G.*

Date: *3/22/93*

Approved by: *Joe G.*

Date: *3/22/93*

FAX: (505) 325-6256 ■ SALES: (505) 325-2432 ■ LAB: (505) 325-5667

657 WEST MAPLE ■ P. O. BOX 2606 ■ FARMINGTON, NEW MEXICO 87499



PRIORITY POLLUTANTS / METALS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL*
Analyzed by: *TW*
Type of Sample: *Soil*

Date: *3/15/93*
Date: *3/18/93*

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APR 13 1993

**OIL CONSERVATION DIV.
SANTA FE**

Sample Depth (inches)	Silver Ag	Zinc Zn	Cadmium Cd
12	<1.0 ppm	0.32 ppm	<0.5 ppm
24	<1.0 ppm	0.33 ppm	<0.5 ppm
36	<1.0 ppm	0.26 ppm	<0.5 ppm
48	<1.0 ppm	0.20 ppm	<0.5 ppm
60	<1.0 ppm	0.20 ppm	<0.5 ppm
66	<1.0 ppm	0.26 ppm	<0.5 ppm

Method - SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes

Analysis Performed by: *Laura White*
Date: *3/23/93*

Approved by: *Jan G*
Date: *3/22/93*



PRIORITY POLLUTANTS / METALS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1066*

RECEIVED

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL*
Analyzed by: *TW*
Type of Sample: *Soil*

Date: *3/15/93*
Date: *3/18/93*

APR 13 1993

**OIL CONSERVATION DIV.
SANTA FE**

Sample Depth (inches)	Copper Cu	Lead Pb
12	<1.0 ppm	<1.0 ppm
24	<1.0 ppm	<1.0 ppm
36	<1.0 ppm	<1.0 ppm
48	<1.0 ppm	<1.0 ppm
60	<1.0 ppm	<1.0 ppm
66	<1.0 ppm	<1.0 ppm

Method - *SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes*

Analysis Performed by: *Diana White*

Date: *3/23/93*

Approved by: *Jim Cox*

Date: *3/22/93*



PRIORITY POLLUTANTS / METALS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/31/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *TW* Date: *3/29/93*
Type of Sample: *Soil*

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OIL CONSERVATION DIV.
SANTA FE

Sample Depth (inches)	Nickel Ni	Chromium Cr	Antimony Sb
12	0.22 ppm	<0.05 ppm	0.1 ppm
24	0.21 ppm	<0.05 ppm	<0.05 ppm
36	0.56 ppm	<0.05 ppm	<0.05 ppm
48	0.23 ppm	<0.05 ppm	<0.05 ppm
60	0.22 ppm	<0.05 ppm	0.6 ppm
66	0.21 ppm	<0.05 ppm	0.3 ppm

Method - SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes

Analysis Performed by: *Jessica White*
Date: *4/3/93*

Approved by: *James Cox*
Date: *4/3/93*



PRIORITY POLLUTANTS / METALS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/31/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *TW* Date: *3/29/93*
Type of Sample: *Soil*

Sample Depth (inches)	Thallium TI	
12	<0.7	ppm
24	<0.7	ppm
36	<0.7	ppm
48	<0.7	ppm
60	<0.7	ppm
66	<0.7	ppm

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APR 13 1993

**OIL CONSERVATION DIV.
SANTA FE**

Method - *SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes*

Analysis Performed by: *Jesse White*
Date: *4/3/93*

Approved by: *David*
Date: *4/3/93*



PRIORITY POLLUTANTS / METALS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *TW* Date: *3/18/93*
Type of Sample: *Soil*

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Sample Depth (inches)	Selenium Se	Arsenic As	Mercury Hg
12	0.32 ppb	34.26 ppb	0.48 ppb
24	0.19 ppb	31.61 ppb	0.64 ppb
36	0.24 ppb	27.37 ppb	26.05 ppb
48	1.32 ppb	21.07 ppb	4.82 ppb
60	0.13 ppb	19.80 ppb	2.86 ppb
66	<0.01 ppb	25.90 ppb	4.17 ppb

Method - *SW-846 EPA Test Methods for Evaluating Solid Waste / Metallic Analytes*

Analysis Performed by: *Dim Bilgen*
Date: *3/22/93*

Approved by: *[Signature]*
Date: *3/22/93*



GENERAL SOIL ANALYSIS

Attn: *Mike Leonard*
Company: *Sunco Waste Disposal*
Address: *P.O. Box 443*
City, State: *Farmington, NM 87499*

Date: *3/19/93*
Lab ID: *1066*

Project Name: *Sunco Pit Remediation Composite Core Sample*
Project Location: *Sunco Waste Disposal*
Sampled by: *DC/GL* Date: *3/15/93*
Analyzed by: *TW* Date: *3/18/93*
Type of Sample: *Soil*

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SANTA FE

CATIONS

Sodium	Na	<u>843</u> ppm
Calcium	Ca	<u>94000</u> ppm
Magnesium	Mg	<u>3100</u> ppm
Potassium	K	<u>400</u> ppm

pH	<u>8.46</u>
Iron	Fe <u>70</u> ppm

ANIONS

Carbonate	CO ₃	<u>12000</u> ppm
Bicarbonate	HCO ₃	<u>36600</u> ppm

Note - The composite sample was prepared utilizing 15.0 grams of soil from each respective sample depth.

Analysis Performed by: *Renee White*

Date: *3/23/93*

Approved by: *Jim Cal*

Date: *3/22/93*

FAX: (505) 325-6256 ■ SALES: (505) 325-2432 ■ LAB: (505) 325-5667

657 WEST MAPLE ■ P. O. BOX 2606 ■ FARMINGTON, NEW MEXICO 87499

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 10-31-94

LOCATION N.E. Side Pond Circ. Line

TIME 4:15 p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 10-29-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L ; Total Sulfides < 5.0 mg/L ;

H₂S < 0.1 mg/L

WATER ANALYSIS

H₂S 0.0 mg/L

VOLUME ~ 75,000 bbl

TOTAL SULFIDES 2.0 mg/L

PH 8.3

SULFATES 10-15 BPM

SPECIFIC GRAVITY 1.025

CHLORIDES 17,000 ppm

DISSOLVED SOLIDS ~ 23,000 ppm

CHLORINE Trace

SUSPENDED SOLIDS -

TOTAL HARDNESS 490 ppm

APPEARANCE opaque - clear

CALCIUM 200 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 290 ppm

Temp. 43°F

BICARBONATE -

D.O. = 7.3 mg/L
ALK = p = 0.9 m = 2.4

MUD ANALYSIS

PH -

VOLUME -

WT -

APPEARANCE -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

RECOMMENDATIONS Water is good - Temp & treatment are
working to control problems

TIERRA TECHNOLOGIST Gabe Hammer PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 10-28-4
LOCATION N.E. Side Pond Circ. line TIME 4:00 p
TYPE FLUID Oil Field Prod. water DATE PREVIOUS SERVICE 10-26-4
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain H₂S < 0.1 mg/L ; DO₂ > 2.0 mg/L ;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

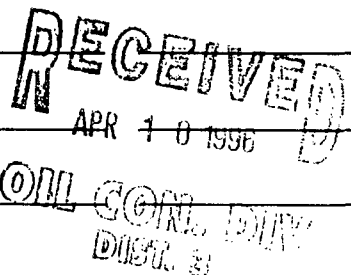
H ₂ S <u>0.0 mg/L</u>	VOLUME _____
TOTAL SULFIDES <u>2.0 mg/L</u>	PH <u>8.3</u>
SULFATES <u>10-15 mg/L</u>	SPECIFIC GRAVITY <u>1.015</u>
CHLORIDES <u>16,500 ppm</u>	DISSOLVED SOLIDS <u>729,000 ppm</u>
CHLORINE <u>Trace</u>	SUSPENDED SOLIDS _____
TOTAL HARDNESS <u>480 ppm</u>	APPEARANCE <u>opaque</u>
CALCIUM <u>200 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>280 ppm</u>	<u>Alk. $\rho = 0.9$; $m = 2.3$</u>
BICARBONATE _____	<u>Temp °F = 61</u>
	<u>DO₂ = 6.0 mg/L</u>
	<u>THO₂ = 4.0 mg/L</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

RECOMMENDATIONS Looks fine

TIERRA TECHNOLOGIST Don Hauser PHONE 320-2261



TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 10-26-94
LOCATION NE CORRAL POND TIME 3:30 PM
TYPE FLUID PRODUCTION WATER DATE PREVIOUS SERVICE 10-24-94
REPRESENTATIVE MIKE CRONIN
JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES IN IMPOUNDMENT

WATER ANALYSIS

DISSOLVED OXYGEN	<u>0.3 mg/L</u>	VOLUME	
TEMPERATURE	<u>13.2°</u>	PH	<u>7.7</u>
H ₂ S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015</u> /
TOTAL SULFIDES	<u>2.5</u>	MAGNESIUM	<u>80</u>
SULFATES	<u>10-20</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>11400</u>	ALKALINITY	<u>0.6 PE 3.3 ME</u>
CHLORINE	<u>0</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>280</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>200</u>	APPEARANCE	<u>COND</u>
		CIRCULATION SYSTEM	<u>WATER</u>

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	RECEIVED
FUNNEL VISCOSITY		MIXING SYSTEM	<u>APR 10 1996</u>
RETORT ANALYSIS			OIL CON. DET.
% WATER			DISC. 3
% OIL			
% SOLIDS			

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature] PHONE 320-1363

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 10/24/94

LOCATION N E corner

TIME 1:00 PM

TYPE FLUID Production water

DATE PREVIOUS
SERVICE _____

REPRESENTATIVE MIKE CROMBIE

JOB DESCRIPTION monitors H₂S & TOTAL SULFIDES IN Pond

WATER ANALYSIS

DISSOLVED OXYGEN 6.5 mg/L
TEMPERATURE 12.7c / 55°F
H₂S 0
TOTAL SULFIDES 2.5 mg/L
SULFATES 10-20 RAN
CHLORIDES 14000
CHLORINE < 1.0
TOTAL HARDNESS 240
CALCIUM 180

VOLUME _____
PH 8.0 by meter
SPECIFIC GRAVITY/WT 1.010 /
MAGNESIUM 240
BICARBONATE -
ALKALINITY 0.98 2.3m
DISSOLVED SOLIDS _____
SUSPENDED SOLIDS _____
APPEARANCE Good
CIRCULATION SYSTEM Volume

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM DECENT
APR 10 1995
OIL CON. 1.0
DIL. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST for 72

PHONE 320-1263

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNICO WATER DISPOSAL DATE 10-2-84
LOCATION N.E. Side Pond - Circ. Line TIME 8:00a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 10-19-84
REPRESENTATIVE Mike Leonard / Mike Tolovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$;
Total Sulfides $< 5.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 7.0
TEMPERATURE 48.0 F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES 10-15 mg/L
CHLORIDES 12,000 ppm
CHLORINE 0.0 ppm
TOTAL HARDNESS 780 ppm
CALCIUM 400 ppm

VOLUME 70,000 gal
PH 8.4
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 380 ppm
BICARBONATE —
ALKALINITY 1 = 1.2; 41 = 2.5
DISSOLVED SOLIDS 714,000 mg/L
SUSPENDED SOLIDS —
APPEARANCE opaque - clear
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE DECEIVED
MIXING SYSTEM —
OIL CON. DIV.
DIST. 3

RECOMMENDATIONS looks fine - OK

TIERRA TECHNOLOGIST Van Horn

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 10-19-94
LOCATION N.E. Side Pond - Circ. Line TIME 9:30a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 10-17-94
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$;
Total Sulfides $< 5.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 7.0 mg/L
TEMPERATURE 49°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES 15-20 EPM
CHLORIDES 16,000 ppm
CHLORINE 0.0 ppm
TOTAL HARDNESS 600 ppm
CALCIUM 240 ppm

VOLUME in 70,000 bbl
PH 8.35
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 360 ppm
BICARBONATE -
ALKALINITY $p = 1.1$; $m = 2.1$
DISSOLVED SOLIDS 23,000 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque-white
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL CON. DIV.
DIST. # _____

RECOMMENDATIONS Water very foamy? All other indications
are excellent

TIERRA TECHNOLOGIST

Dan Adams

PHONE 320-2261

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TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 10-17-4
LOCATION N.E. Side Pond - Circ. Line TIME 8:30a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 10-14-4
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H₂S < 0.1 mg/L;
Total Sulfides < 5.0 mg/L

* = meter problem

WATER ANALYSIS

DISSOLVED OXYGEN * 5.0 mg/L
TEMPERATURE 44°F
H₂S 0.0 mg/L
TOTAL SULFIDES 3.0 mg/L
SULFATES 10-15 EPM
CHLORIDES 18,000 ppm
CHLORINE Trace
TOTAL HARDNESS 480 ppm
CALCIUM 200 ppm

VOLUME ~ 70,000 bbl
PH 8.35
SPECIFIC GRAVITY/WT 1.0157
MAGNESIUM 280 ppm
BICARBONATE -
ALKALINITY 0.8 M = 2.2
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Foamy
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

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OIL CORP. DIV.
DIST. 3

RECOMMENDATIONS Looks good - Foam may be of concern

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-1261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 10-14-4

LOCATION N.E. Side Pond - Circ. Line

TIME 10:15a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 10-12-4

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION MAINWATER D.O. $\approx$ 2.0 mg/L; H_2S $<$ 0.1 mg/L;
Total Sulfides $<$ 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 4.0 mg/L^T
TEMPERATURE 65°F
 H_2S 0.6 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 10-15 mg/L
CHLORIDES 18,000 ppm
CHLORINE Trace
TOTAL HARDNESS 480 ppm
CALCIUM 180 ppm

VOLUME 80,000 gal
PH 8.4
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 300 ppm
BICARBONATE Trace
ALKALINITY 2.0 11 = 1.2
DISSOLVED SOLIDS ---
SUSPENDED SOLIDS ---
APPEARANCE Trace
CIRCULATION SYSTEM Open/11/4

MUD ANALYSIS

PH ---
WT ---
FUNNEL VISCOSITY ---
RETORT ANALYSIS ---
% WATER ---
% OIL ---
% SOLIDS ---

VOLUME ---
APPEARANCE ---
MIXING SYSTEM ---
RECEIVED
APR 10 1996
OIL CON. DIV.
DIST. S

RECOMMENDATIONS ---

TIERRA TECHNOLOGIST Don Hooper

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 10-12-4

LOCATION N.E. side Pond - Circ. line

TIME 4:00p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 10-10-4

REPRESENTATIVE Mike Leonard / Mike Torburch

JOB DESCRIPTION Maintain D.O. = 2.0 mg/L; H₂S < 0.1 mg/L;

Total Sulfides < 5.0 mg/L

D.O. meter not working properly

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE *68°F
H₂S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 15-20 mg/L
CHLORIDES 15,000 ppm
CHLORINE Trace
TOTAL HARDNESS 420 ppm
CALCIUM 180 ppm

VOLUME + 65,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 240 ppm
BICARBONATE -
ALKALINITY 1 = 0.9 M = 7.3
DISSOLVED SOLIDS > 23,000 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -
WT -
FUNNEL VISCOSITY -
RETORT ANALYSIS -
% WATER -
% OIL -
% SOLIDS -

VOLUME -
APPEARANCE -
MIXING SYSTEM -
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OIL CON. DIV.
DEPT. 3

RECOMMENDATIONS All aspects look good - could not obtain
D.O. due to meter failure, - Chlorine down!

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

Monday
DATE 10-10-4

LOCATION Surface Pond East Side - Circ. Line

TIME 12:30p

TYPE FLUID N.E. Pond of Pond
Oil Field Prod. water

DATE PREVIOUS
SERVICE 10-7-4

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S < 0.1$ mg/L;
Total Sulfides < 2.0 mg/L

Note: S = surface of Pond, East Side Pit
B = Circ. Line, N.E. side

WATER ANALYSIS

DISSOLVED OXYGEN S = 2.3 mg/L B = 5.0 mg/L
TEMPERATURE S = 60°F B = 65°F
 H_2S S = 0.0 mg/L B = 0.0 mg/L
TOTAL SULFIDES S = 2.0 mg/L B = 2.0 mg/L
SULFATES 10-20 EPM (B)
CHLORIDES 17,500 (B)
* CHLORINE 1.0-1.5 ppm
TOTAL HARDNESS 480 ppm
CALCIUM 180 ppm

VOLUME 65-70,000 bbl
PH 7.5
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 20 ppm
BICARBONATE 10 ppm
ALKALINITY 100 mg/L
DISSOLVED SOLIDS 2,000 mg/L
SUSPENDED SOLIDS 100 mg/L
APPEARANCE opaque
CIRCULATION SYSTEM open

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CON. DIV. _____
DIST. _____

RECOMMENDATIONS Chlorine up? H_2S & Sulfides O.K. - Continue
observation of color & call if H_2S odor is detected
D.O. is low at surface?

TIERRA TECHNOLOGIST Don Adams

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 10-7-4
LOCATION N.E. Side Pond - Circ. Line TIME 2:30 p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 10-5-4
REPRESENTATIVE Mike Leonard; Mike Telovich
JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H₂S < 0.1 mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.0
TEMPERATURE 57°F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES 20⁺ EPM
CHLORIDES 17,000 ppm
CHLORINE Trace
TOTAL HARDNESS 480 ppm
CALCIUM 200 ppm

VOLUME + 65,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 700 ppm
BICARBONATE -
ALKALINITY p = 0.8 m = 2.4
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque gray
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Temp is excellent; Total sulfides are ok;
Sulfates are high - but ok; H₂S sulfides kept low. D.O. is good,
due to low temp & cheap treat & aeration

TIERRA TECHNOLOGIST Dan Hansen PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 10-5-94
LOCATION N.E. Side Pond - Circ. Line TIME 11:30 a
TYPE FLUID Oil Field Prod Fluid DATE PREVIOUS SERVICE 10-3-94
REPRESENTATIVE Mike Leonard; Mike Thlewich
JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S < 0.1$ mg/L;
Total Sulphides < 5.0 mg/L with no aeration & chemical
Treat,

WATER ANALYSIS

DISSOLVED OXYGEN 3.0 mg/L
TEMPERATURE 64°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 5.0 mg/L
SULFATES 10-20 ERM
CHLORIDES 17,500 ppm
CHLORINE Trace
TOTAL HARDNESS 480 ppm
CALCIUM 180 ppm

VOLUME m 65,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 300 ppm
BICARBONATE -
ALKALINITY pH 0.8 m = 2.2
DISSOLVED SOLIDS 223,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - tan
CIRCULATION SYSTEM operating -
winb high

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
DIST. 2

RECOMMENDATIONS D.O. down slightly + Total Sulphides up - Temp.
is good - watch if daily temp. ↑

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 10-3-94
LOCATION A.E. Side Pond - Circ. Line TIME 2:30p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 10-1-94
REPRESENTATIVE Mike Leonard; Mike Talovich
JOB DESCRIPTION Mattnah D.O. $\approx 2.0 \text{ mg/l}$; $\text{H}_2\text{S} < 0.1 \text{ mg/l}$;
Total Sulfides $< 5.0 \text{ mg/l}$

WATER ANALYSIS

DISSOLVED OXYGEN 4.2 mg/l
TEMPERATURE 65°F
 H_2S Trace
TOTAL SULFIDES 3.0 mg/l
SULFATES 10-20 ppm
CHLORIDES 16,000 ppm
CHLORINE ~~16,000 ppm~~ trace
TOTAL HARDNESS 400 ppm
CALCIUM 180 ppm

VOLUME 6,000 bbls
PH 8.3
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 220 ppm
BICARBONATE -
ALKALINITY $\text{pH} \approx 8.0$ $\text{m} = 2.3$
DISSOLVED SOLIDS 723,000 ppm
SUSPENDED SOLIDS -
APPEARANCE opaque - tan - foamy
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV
DIST. 3

RECOMMENDATIONS looks good - Temp. still an advantage

TIERRA TECHNOLOGIST

Van Heer

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 10-1-4
LOCATION N.E. Side Pond - Circ. Line TIME 8:00 a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 9-29-4
REPRESENTATIVE Mike Leonard; Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/l}$; Total Sulfides $< 5.0 \text{ mg/l}$;
 $D.O. > 3.0 \text{ mg/l}$ @ present temp.

WATER ANALYSIS

DISSOLVED OXYGEN 5.4
TEMPERATURE 56°F
 H_2S 0.4 mg/l - Trace
TOTAL SULFIDES 3.0 mg/l
SULFATES 10-20 ppm
CHLORIDES 17,000
CHLORINE Trace - 1.0 ppm
TOTAL HARDNESS 720 ppm
CALCIUM 300 ppm

VOLUME > 65,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 420 ppm
BICARBONATE -
ALKALINITY p = 0.8 m = 2.3
DISSOLVED SOLIDS > 23,000 mg/l
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CONTROL DIV.
DIST. 3

RECOMMENDATIONS Cool water great benefit - water is very foamy out of Circ. Line - impossible chlorite or other chemical effect. Total Sulfides excellent w/ Trace of H_2S - If Temp. of water rises dramatically - observe closely
TIERRA TECHNOLOGIST Jan Walker PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 9-29-4
LOCATION East Side Pond - Circ. Line TIME 6:00p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 9-27-4
REPRESENTATIVE Mike Leonard; Mike Talovich
JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; Total Sulfides ≤ 5.0 mg/L; $H_2S \leq 0.1$ mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.0 mg/L
TEMPERATURE 63°F
 H_2S _____
TOTAL SULFIDES 3.0 mg/L
SULFATES *
CHLORIDES *
CHLORINE Trace
TOTAL HARDNESS *
CALCIUM *

VOLUME 765,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT + 1
MAGNESIUM *
BICARBONATE *
ALKALINITY *
DISSOLVED SOLIDS *
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

* = Kits for test not available
- will do complete analyses
Saturday

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____
OIL COR. DATA
DUST 3

RECOMMENDATIONS Some odor but total sulfides O.K. and D.O. good. Temp. is excellent. Will provide complete check Saturday

TIERRA TECHNOLOGIST Don Hoover PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-20-4

LOCATION East side Pit - Circ. Line

TIME 6:30pm

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE _____

REPRESENTATIVE Mike Leonard, Mike Talovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S < 0.1$ mg/L;
Total sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 4.0 mg/L
TEMPERATURE 63 °F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES 10-15 ppm
CHLORIDES 17,500
CHLORINE < 0.1 ppm
TOTAL HARDNESS 450 ppm
CALCIUM 200 ppm

VOLUME 7 65,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 0.615 /
MAGNESIUM 250 ppm
BICARBONATE -
ALKALINITY p = 0.8 m = 2.2
DISSOLVED SOLIDS 713,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL

RECOMMENDATIONS Looks good - some odor, not sulfides;
Continue present treatment rate & denoxide unless
water color changes - then increase treatment & call

TIERRA TECHNOLOGIST Dan Haas PHONE 320-2761

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-23-94

LOCATION East Side Road, Circ. Line

TIME 10:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-21-94

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S \leq 0.1$ mg/L,
Total sulfides ≤ 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 6.0
TEMPERATURE 61°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES 10-15 FPM
CHLORIDES 15,200 ppm
CHLORINE ≤ 0.1 ppm (Trecal)
TOTAL HARDNESS 440 ppm
CALCIUM 190 ppm

VOLUME ~ 65,000 bbl
PH 8.25
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 250 ppm
BICARBONATE -
ALKALINITY As ord m = 7.1
DISSOLVED SOLIDS 22,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CONTROL DIV. _____
DIST. B _____

RECOMMENDATIONS looks very good

TIERRA TECHNOLOGIST Don Hoover PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-21-4

LOCATION East side Pond Circ. line

TIME 11:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-19-4

REPRESENTATIVE Mike Leonard / Mike Tolovich

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; H₂S < 0.1 mg/L;
Total sulfides < 5.0 mg/L w/ aeration and
oxidizing chemical

WATER ANALYSIS

DISSOLVED OXYGEN 2.9 mg/L
TEMPERATURE 62°F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.5 mg/L
SULFATES 10-20 FPM
CHLORIDES 16,000 ppm
CHLORINE < 0.1 ppm
TOTAL HARDNESS 420 ppm
CALCIUM 180 ppm

VOLUME > 65,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 0.015 /
MAGNESIUM 240 mg/L
BICARBONATE -
ALKALINITY p = 0.8 m = 2.0
DISSOLVED SOLIDS > 23,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - clean
CIRCULATION SYSTEM operating -
shut off last night

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS D.O. lower - reflects comp. shut down last
night. Everything else looks fine. Continue aeration
& treat rates - Cool weather is great for water

TIERRA TECHNOLOGIST Dan Hauser

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-18-4

LOCATION East side Pond - Circ. Line

TIME 1:00 p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-16-4

REPRESENTATIVE Mike Leonard / Mike Terlovich

JOB DESCRIPTION Maintain D.O. > 2.0 mg/l; H₂S < 0.1 mg/l;
Total sulfides < 5.0 mg/l

WATER ANALYSIS

DISSOLVED OXYGEN 4.3 mg/l
TEMPERATURE 70°F
H₂S 0.0 mg/l
TOTAL SULFIDES 3.0 mg/l
SULFATES 10-20 ppm
CHLORIDES 15,500 ppm
CHLORINE < 0.1 ppm
TOTAL HARDNESS 420 ppm
CALCIUM 180 ppm

VOLUME 765,000 bbl
PH _____
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 260 ppm
BICARBONATE _____
ALKALINITY pH = 8.7 M = 2.0
DISSOLVED SOLIDS 723,000 mg/l
SUSPENDED SOLIDS _____
APPEARANCE opaque
CIRCULATION SYSTEM
operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
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OIL CON. DIV
DIST. 3

RECOMMENDATIONS looks good - Temp. cool @ night
will help

TIERRA TECHNOLOGIST Wan Hauer PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-16-4

LOCATION East Side Pond - Circ. Line

TIME 9145a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-14-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain D.O. ≥ 2.0 mg/L; $H_2S < 0.1$ mg/L;
Total Sulfides < 5.0 mg/L.

WATER ANALYSIS

DISSOLVED OXYGEN 5.1 mg/L
TEMPERATURE 60°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 5.0 mg/L
SULFATES 10-15 mg/L
CHLORIDES 15,000 ppm
CHLORINE Trace
TOTAL HARDNESS 410 ppm
CALCIUM 180 ppm

VOLUME 65,000 +
PH 8.2
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 230 ppm
BICARBONATE -
ALKALINITY 0.8 meq/L
DISSOLVED SOLIDS $\geq 23,000$ mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - clean
CIRCULATION SYSTEM operating
- Aeration on

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE III
MIXING SYSTEM OIL CON. 100%
DIST. 3

RECOMMENDATIONS Cool weather is benefit. Water looks
excellent. Do not decrease Chem. Treat. rate because
Total Sulfides are 5.0 mg/L - under limit

TIERRA TECHNOLOGIST Van Hoven

PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL (WATER)

DATE 9-14-94

LOCATION Sample taken - East side pond - Circuline

TIME 11:00a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-12-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L, H₂S < 0.1 mg/L;

Total sulfides < 5.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 5.0 mg/L

TEMPERATURE 65°F

H₂S 0.0 mg/L

TOTAL SULFIDES 3.5 mg/L

SULFATES 10-15 ppm

CHLORIDES 16,200 ppm

CHLORINE < 0.1 ppm

TOTAL HARDNESS 420 ppm

CALCIUM 120 ppm

VOLUME 69,000 bbls +

PH 8.25

SPECIFIC GRAVITY/WT 1

MAGNESIUM 240 ppm

BICARBONATE -

ALKALINITY p = 0.8 m = 2.2

DISSOLVED SOLIDS 23,000 ppm +

SUSPENDED SOLIDS -

APPEARANCE clean - gray

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____

WT _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

% WATER _____

% OIL _____

% SOLIDS _____

VOLUME _____

APPEARANCE _____

MIXING SYSTEM _____

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OIL (CONC. DIV.)
BEST 3

RECOMMENDATIONS Temp. is good - Present Chem. Treat. is

OK, but keep vig. test - Temp. in at 170° F. Water

is in excellent condition - present - Continue present care

TIERRA TECHNOLOGIST Car Wanner PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-12-94

LOCATION East Side Pond - Circ. Line

TIME 10:00

EFFLUENT Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-9-94

REPRESENTATIVE Mike Leonard; Mike Tolovich

DESCRIPTION Maintain $H_2S < 0.1$ mg/L; Total sulfides
 < 0 mg/L; D.O. > 2.0 mg/L (this temp.)

WATER ANALYSIS

DISSOLVED OXYGEN 3.9 mg/L
TEMPERATURE 67°F
0.0 mg/L
TOTAL SULFIDES 4.0 mg/L
FATES 10-15 ppm
SULFIDES 15,500 ppm
AMMONIA < 0.1 ppm
TOTAL HARDNESS 420 ppm
CALCIUM 180 ppm

VOLUME 760,000 bbl
PH 8.25
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 240 ppm
BICARBONATE -
ALKALINITY p = 0.8 m = 2.2
DISSOLVED SOLIDS > 23,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Gray
CIRCULATION SYSTEM operating -
Aeration on

MUD ANALYSIS

LINEAL VISCOSITY -
PORT ANALYSIS -
% WATER -
% OIL -
% SOLIDS -

VOLUME -
APPEARANCE -

MIXING SYSTEM OIL CON. DIV.
DIET. 3

RECOMMENDATIONS Continue present treatment + aeration rates,
my. is a benefit. "Looks Good"

TECHNOLOGIST Don Kroen

PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 9-9-94
LOCATION NE corner TIME 12:31
TYPE FLUID production water DATE PREVIOUS SERVICE 9-7-94
REPRESENTATIVE Mike Leones
JOB DESCRIPTION Monitor H₂S and sulfides in prod

WATER ANALYSIS

DISSOLVED OXYGEN NA
TEMPERATURE NA
H₂S 0
TOTAL SULFIDES 210
SULFATES 0
CHLORIDES 13,000
CHLORINE 0
TOTAL HARDNESS 460
CALCIUM NA

VOLUME 7.95
PH 7.95
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM NA
BICARBONATE NA
ALKALINITY 0.41F 41 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH 0
WT 0
FUNNEL VISCOSITY 0
RETORT ANALYSIS 0
% WATER 0
% OIL 0
% SOLIDS 0

VOLUME 0
APPEARANCE 0
MIXING SYSTEM 0
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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blair Williams PHONE 325-1911

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 9-7-4

LOCATION East Side Pond - Circ. Line TIME 9:00 a

TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 9-5-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Prevent odor + noxious gases by aerating
+ circulating water + treating with proper oxidizer to keep
 $H_2S < 0.1 \text{ mg/L}$; $D.O. > 2.0 \text{ mg/L}$; Total sulfides $< 0.5 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 3.8 mg/L
TEMPERATURE 65°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 1.5 mg/L
SULFATES 10-15 FPM
CHLORIDES 16,200 ppm
CHLORINE $< 0.1 \text{ ppm}$
TOTAL HARDNESS 400 ppm
CALCIUM 160 ppm

VOLUME 760,000 bbl
PH 8.2
SPECIFIC GRAVITY/WT 0.0151
MAGNESIUM 240 mg/L
BICARBONATE -
ALKALINITY $p = 0.7 - m = 2.0$
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS - VL
APPEARANCE clear
CIRCULATION SYSTEM operating
- aeration on

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Looks Great - continue present care -
Temp. is a real plus - If temp. remains in 60's @ night -
may consider reducing chemical treat. slightly

TIERRA TECHNOLOGIST Don Hamen

PHONE 320-2261
598-6059 - 14

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 9-5-4

LOCATION East Side Pond - Circ. Line

TIME 8:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 9-2-4

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Maintain: $H_2S < 0.1 \text{ mg/L}$; Total
Sulfides $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 4.0 mg/L
TEMPERATURE 64°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 0.2 mg/L
SULFATES 10-15 EPM
CHLORIDES _____
CHLORINE $< 0.1 \text{ ppm}$
TOTAL HARDNESS 600 ppm
CALCIUM 240 ppm

VOLUME + 60,000
PH 8.25
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 360 ppm
BICARBONATE _____
ALKALINITY $p = 0.9$; $m = 2.2$
DISSOLVED SOLIDS 23,000 mg/L
SUSPENDED SOLIDS _____
APPEARANCE opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS Looks good - continue aeration
& Chem. Treat. level

TIERRA TECHNOLOGIST

Don Brown

PHONE 320-2261

*Now
Labor Day*

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OIL CONTROL DIV.
DIST. 3

TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 9-2-94
LOCATION East Side Pond - Circ. Line TIME 1:10 p
TYPE FLUID Oil Field Prod. Fluid DATE PREVIOUS SERVICE 8-31-94
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides
 $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 4.7 mg/L
TEMPERATURE 76°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES 10-20 mg/L
CHLORIDES 16,800 ppm
CHLORINE < 0.1 ppm
TOTAL HARDNESS 400 ppm
CALCIUM 180 ppm

VOLUME 60 gal
PH 8.35
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 220 ppm
BICARBONATE -
ALKALINITY $p = 0.7 \text{ m} = 210$
DISSOLVED SOLIDS 22,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE clear - tan
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -
WT -
FUNNEL VISCOSITY -
RETORT ANALYSIS -
% WATER -
% OIL -
% SOLIDS -

VOLUME -
APPEARANCE OIL CON. DIV.
MIXING SYSTEM DIST. 3

RECOMMENDATIONS Water is OK; Total sulfides are low
and D.O. is high

TIERRA TECHNOLOGIST Dan Hascall

PHONE 370-7261
will be gone Sunday - if
needed call Tierra office No.

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 8-31-4
LOCATION East Side Road - Circ. Lake TIME 11:15 a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 8-29-4
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain H₂S < 0.1 mg/L; Total Sulfides < 5.0 mg/L; T.D. < 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 3.2
TEMPERATURE 71.0 F
H₂S 0.0 mg/L
TOTAL SULFIDES 2.0 mg/L
SULFATES 10-20 ppm
CHLORIDES 16,500
CHLORINE 40.1 ppm
TOTAL HARDNESS 280 ppm
CALCIUM 120

VOLUME ~ 60,000 bbl
PH 8.7
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 160 ppm
BICARBONATE -
ALKALINITY -
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE Clear
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -
VT -
FUNNEL VISCOSITY -
RETORT ANALYSIS -
% WATER -
% OIL -
% SOLIDS -

VOLUME -
APPEARANCE -
MIXING SYSTEM -
OIL CORL DIV. -
DIST. 3 -

RECOMMENDATIONS Look for more

TIERRA TECHNOLOGIST Don Wacker

PHONE 320-7761

909 West Apache, Farmington, NM 87401
(505) 325-0924

COMPANY SUNCO WATER DISPOSAL DATE 8-29-4
LOCATION East Side Pond- Circ. Line TIME 10:00 p
WASTE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 8-26-4
REPRESENTATIVE Mike Leonard / Mike Talovich
DESCRIPTION Maintain $\text{D.O.} > 2.0 \text{ mg/L}$; $\text{H}_2\text{S} < 0.1 \text{ mg/L}$;
total Sulfides $< 5.0 \text{ mg/L}$

ERRA TECHNOLOGIST

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 8-26-94
LOCATION NE Corner Discharge TIME 2:25 PM
TYPE FLUID production water DATE PREVIOUS SERVICE 8-24-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitored H₂S and total sulfides on pad

WATER ANALYSIS

DISSOLVED OXYGEN 4.1
TEMPERATURE 22.2°C 71.96°F
H₂S 0
TOTAL SULFIDES < 20.0
SULFATES N/A
CHLORIDES 13,500
CHLORINE < 1.0
TOTAL HARDNESS 460
CALCIUM N/A

VOLUME _____
PH 8.15
SPECIFIC GRAVITY/WT 1
MAGNESIUM N/A
BICARBONATE N/A
ALKALINITY 0.5 PF 4.4 MF
DISSOLVED SOLIDS N/A
SUSPENDED SOLIDS N/A
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 10 1996
OIL CON. DIV
DML 3

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blair Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 8-24-94
LOCATION NE corner discharge TIME _____
TYPE FLUID production water DATE PREVIOUS SERVICE 8-22-94
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION monitor H₂S and total sulfides on pad

WATER ANALYSIS

DISSOLVED OXYGEN 1.6
TEMPERATURE 22.9°C 73.22°F
H₂S 0
TOTAL SULFIDES <10.0
SULFATES NA
CHLORIDES 18,000
CHLORINE <1.0
TOTAL HARDNESS 500
CALCIUM NA

VOLUME _____
PH 7.80
SPECIFIC GRAVITY/WT 1.015 18.454
MAGNESIUM NA
BICARBONATE NA
ALKALINITY 0.4 PF 4.0 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Mon. 8-22-4

LOCATION East Side Pond - Circ. Line

TIME 11:30a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 8-19-4

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION With aeration & chemical treatment - do not

Allow $H_2S > 0.1 \text{ mg/l}$; Total sulfides $> 5.0 \text{ mg/l}$;

D.O. $< 2.0 \text{ mg/l}$

WATER ANALYSIS

DISSOLVED OXYGEN 5.0 mg/l

TEMPERATURE 72°F

H_2S 0.0 mg/l

TOTAL SULFIDES 3.0 mg/l

SULFATES 10-15 EPA

CHLORIDES 18,000 ppm

CHLORINE < 0.1 ppm

TOTAL HARDNESS 300 ppm

CALCIUM 120 ppm

VOLUME ~ 50,000 bbl

PH 8.35

SPECIFIC GRAVITY/WT 1.0151

MAGNESIUM 280 ppm

BICARBONATE -

ALKALINITY 0.7 (p); 1.9 (m)

DISSOLVED SOLIDS 223,000 mg/l

SUSPENDED SOLIDS -

APPEARANCE opaque-TAN

CIRCULATION SYSTEM operating

MUD ANALYSIS

PH -

WT -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

% WATER -

% OIL -

% SOLIDS -

VOLUME -

APPEARANCE RECEIVED

MIXING SYSTEM APR 10 1996

OIL CON. DIV.
DIST. 3

RECOMMENDATIONS looks good - Continue aeration day & night;
+ present chemical treatment. Temp °F is ↓, Total
sulfides excellent & water color better

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 8-19-4

LOCATION East side Pond - Top of water
Center

TIME 12:00p

TYPE FLUID Oil Field Production Water

DATE PREVIOUS
SERVICE 8-18-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides
 $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$

Sample - Top of Pond East side, Center

WATER ANALYSIS

DISSOLVED OXYGEN 2.4 mg/L
TEMPERATURE 79.0°F
 H_2S 0.1 mg/L
TOTAL SULFIDES 3.0 mg/L
SULFATES 10-15 mg/L
CHLORIDES 16,500 ppm
CHLORINE $< 0.1 \text{ ppm}$
TOTAL HARDNESS 440 ppm
CALCIUM 180 ppm

VOLUME 1m 50,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 0.105 /
MAGNESIUM 260 ppm
BICARBONATE -
ALKALINITY $0.8 \text{ M} = 7.0$
DISSOLVED SOLIDS 21,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - Gray
CIRCULATION SYSTEM Aeration
Not operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
RECEIVED
APR 16 1984
OIL CONT. DET.
DET. _____

RECOMMENDATIONS D.O. $>$ - Very important to maximize aeration;
Add One Can Chemicals note - H_2S is continuing to be
produced - although @ low levels - Aerate, Aerate - Water temp $\uparrow$

TIERRA TECHNOLOGIST Dan Weaver

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 8-17-4

LOCATION East Side Pond- Circ. line

TIME 9:30a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS
SERVICE 8-15-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain H_2S < 0.1 mg/L; Total Sulfides < 4.0 mg/L;
D.O. > 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 3.0 mg/L
TEMPERATURE 74°F
 H_2S 0.1 mg/L
TOTAL SULFIDES 4.0 mg/L
SULFATES 10-20 ppm
CHLORIDES 17,000
CHLORINE < 0.1 ppm
TOTAL HARDNESS 560 ppm
CALCIUM 200 ppm

VOLUME 750,000 bbl
PH 8.3
SPECIFIC GRAVITY/WT 0.0151
MAGNESIUM 360 ppm
BICARBONATE -
ALKALINITY p = 0.8; m = 2.0
DISSOLVED SOLIDS 723,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE Clear - tan
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL CONTROL DIV.
DIST. 3

RECOMMENDATIONS H_2S ↑ from 0 to 0.1 mg/L; Total Sulfides ↑
from 0.3 to 0.4 mg/L. Aerate @ maximum and slightly
increase chemical treatment in water temp. ↑ slightly

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

*Speciation
Check*

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 8-18-4

LOCATION East Side Pond - Circ. Line

TIME 12:30 p

TYPE FLUID Line ran 5 min
Mike Leonard; Mike Talovich

DATE PREVIOUS
SERVICE 8-17-4

REPRESENTATIVE _____

JOB DESCRIPTION _____

WATER ANALYSIS

DISSOLVED OXYGEN 3.6
TEMPERATURE 77°F
H₂S 0.3 mg/l
TOTAL SULFIDES 3.0 mg/l
SULFATES _____
CHLORIDES _____
CHLORINE _____
TOTAL HARDNESS _____
CALCIUM _____

VOLUME _____
PH _____
SPECIFIC GRAVITY/WT _____ / _____
MAGNESIUM _____
BICARBONATE _____
ALKALINITY _____
DISSOLVED SOLIDS _____
SUSPENDED SOLIDS _____
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS Add 1 can chemical DOW - another
in 4 hrs. H₂S is being converted from total sulfides
- one cause is the high Temp of water - 77°F
Acrate @ MEXIMEX
TIERRA TECHNOLOGIST Don Aaron PHONE 598-6059
320-7261

*call me tonight if you suspect the treatment
is not effective enough*

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 8-15-4

LOCATION East Side Pond - Circ. Pipe

TIME 9:30a

TYPE FLUID Oil Field Production Water

DATE PREVIOUS
SERVICE 8-12-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain H_2S < 0.1 mg/L; Total sulfides < 5.0 mg/L;
D.O. > 2.0 mg/L with chemical treatment & aeration

WATER ANALYSIS

DISSOLVED OXYGEN N/A
TEMPERATURE 73°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 3.0 mg/L
SULFATES 10-15 ppm
CHLORIDES 16,200 ppm
CHLORINE 40.1 ppm
TOTAL HARDNESS 460 ppm
CALCIUM 180 ppm

VOLUME 750,000 bbls
PH 8.25
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 220 ppm
BICARBONATE -
ALKALINITY 0.8 m = 2.4
DISSOLVED SOLIDS 22,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque-gray
CIRCULATION SYSTEM operating

MUD ANALYSIS

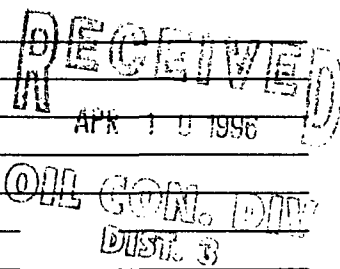
PH -
WT -
FUNNEL VISCOSITY -
RETORT ANALYSIS -
 % WATER -
 % OIL -
 % SOLIDS -

VOLUME -
APPEARANCE -
MIXING SYSTEM -
-
-

RECOMMENDATIONS Looks good. D.O. should be available
next check

TIERRA TECHNOLOGIST Don Hoover

PHONE 320-2261



TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 8-12-4

LOCATION East side Pond- Circ. Syst.

TIME 8:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 8-10-4

REPRESENTATIVE Mike Leonard; Mike Talovich

JOB DESCRIPTION Maintain H_2S ≤ 0.1 mg/L; Total Sulfides ≤ 50 mg/L;
D.O. > 2.0 mg/L (this temp)

WATER ANALYSIS

DISSOLVED OXYGEN - meter down
TEMPERATURE 71°F
 H_2S 0.0 mg/L
TOTAL SULFIDES ≤ 5.0 mg/L
SULFATES 10-15 FPM
CHLORIDES 17,000 ppm
CHLORINE ≤ 0.1 mg/L (ppm)
TOTAL HARDNESS 480 ppm
CALCIUM 200 ppm

VOLUME 60,000 bbls
PH 8.1
SPECIFIC GRAVITY/WT 1.015 /
MAGNESIUM 280
BICARBONATE -
ALKALINITY D = 0.8 M = 2.5
DISSOLVED SOLIDS 773,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE opaque - clean
CIRCULATION SYSTEM operating well

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS H_2S & Total Sulfides are excellent -
Keep present treatment & operation

TIERRA TECHNOLOGIST

Dan Hoover

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 4-10-4
LOCATION East Side Plant - Circ. Line TIME 9:00 a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 2-2-4
REPRESENTATIVE Mike Tabonard; Mille Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$

WATER ANALYSIS

DISSOLVED OXYGEN 4.5 mg/L
TEMPERATURE 73°F
 H_2S 0.0 mg/L
TOTAL SULFIDES 4.5.0 mg/L
SULFATES 10-15 EPM
CHLORIDES 17,500 ppm
CHLORINE < 0.1 ppm
TOTAL HARDNESS 520 ppm
CALCIUM 180 ppm

VOLUME _____
PH 2.15
SPECIFIC GRAVITY/WT 1.0151
MAGNESIUM 340 ppm
BICARBONATE -
ALKALINITY p=0.9 m=2.5
DISSOLVED SOLIDS 22,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE Clear - opaque
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE RECEIVED
MIXING SYSTEM APR 10 1995
OIL CON. DIV.
DET. 3

RECOMMENDATIONS Keep up present operation - Treatment may be reduced a little

TIERRA TECHNOLOGIST Don Whelan

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 8-8-21
LOCATION East side Pond - Circ. line TIME 10:00 a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 8-5-21
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain H₂S < 5.0 mg/L; Total Sulfides < 5.0 mg/L; P.O. < 2.0 mg/L

WATER ANALYSIS

DISSOLVED OXYGEN 4.3 mg/L
TEMPERATURE 75°F
H₂S 0.0 mg/L
TOTAL SULFIDES < 5.0 mg/L
SULFATES 10-15 EPM
CHLORIDES 18,200 ppm
CHLORINE 20.1 ppm
TOTAL HARDNESS 590 ppm
CALCIUM 200 ppm

VOLUME _____
PH 8.15
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 380 ppm
BICARBONATE _____
ALKALINITY D = 0.8 M = 2.4
DISSOLVED SOLIDS 27,200 mg/L
SUSPENDED SOLIDS _____
APPEARANCE opaque - clear
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

RECOMMENDATIONS looks good - continue present treat level & operation

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-7261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 8-5-4
8/3/00

LOCATION East Side Pond - Circ. Line

TIME 8:30 a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 8-3-4

REPRESENTATIVE Mike Leonard; Mike Tolauich; Allen Estes

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total sulfides $< 5.0 \text{ mg/L}$;
D.O. $> 2.0 \text{ mg/L}$ (this temp.) w/ aeration & chemical treat.

WATER ANALYSIS

DISSOLVED OXYGEN 5.4 mg/L
TEMPERATURE $^{\circ}\text{F} =$ 71
 H_2S 0.0 mg/L
TOTAL SULFIDES $< 5.0 \text{ mg/L}$
SULFATES 10-20 FPM
CHLORIDES 17,800 ppm
CHLORINE $< 0.1 \text{ ppm}$
TOTAL HARDNESS 580 ppm
CALCIUM 350 ppm

VOLUME $\sim 65,000 \text{ bbl}$
PH 8.15
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 230 ppm
BICARBONATE -
ALKALINITY $p = 0.9 \quad m = 2.5$
DISSOLVED SOLIDS 223,000 mg/L
SUSPENDED SOLIDS -
APPEARANCE clear
CIRCULATION SYSTEM operating

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE RECEIVED
MIXING SYSTEM APR 10 1996
OIL FIELD ENV
DATA

RECOMMENDATIONS Looks good - D.O. good - $H_2S = 0$
Maintain present treatment & aeration

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-2260

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE _____

LOCATION East Side Pond - Circ Line TIME _____

PE FLUID Oil Field Prod. Fluid DATE PREVIOUS SERVICE _____

PRESENTATIVE Mike Leonard / Mike Tolovich / Allen Estes

B DESCRIPTION Maintain D.O. < 2.0 mg/L; H₂S < 0.1 mg/L;
Total Sulfides < 5.0 mg/L. w/ aeration & chem. Treat.

WATER ANALYSIS

DISSOLVED OXYGEN 3.9
TEMPERATURE 25.6°C, 78°F
S 0.0 mg/L
TOTAL SULFIDES < 5.0 mg/L
SULFATES 10-20-ERM
CHLORIDES 18,000 ppm
CHLORINE < 0.1 ppm
TOTAL HARDNESS 380
CALCIUM 180

VOLUME 65,000 bbl
PH 8.15
SPECIFIC GRAVITY/WT 1.015
MAGNESIUM 200
BICARBONATE -
ALKALINITY pH 8.15 = 2.0
DISSOLVED SOLIDS 23,000
SUSPENDED SOLIDS -
APPEARANCE opaque - clear
CIRCULATION SYSTEM operating

MUD ANALYSIS

WATER _____
T _____
ANNULAR VISCOSITY _____
PORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS Looks good - maintain present chemical
treatment & aerate - aerate - circulate - circulate

TIERRA TECHNOLOGIST

Don Warner

PHONE

320-7261

RECEIVED
APR 10 1996

OIL FIELD
DATA

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Mon 8-1-4

LOCATION East Side Pond - Circ. Line

TIME 9:40

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE Fri 7-29-4

REPRESENTATIVE Mike Leonard; Mike Talovich, Allen Estes

JOB DESCRIPTION Maintain D.O. > 2.0 mg/L; $H_2S < 0.1$ mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

H_2S 0.0 mg/L

VOLUME 70,000 BBL

TOTAL SULFIDES < 5.0 mg/L

PH 8.0

SULFATES 10-20 EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 17,000 ppm

DISSOLVED SOLIDS $> 23,000$ mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 240 ppm

APPEARANCE clear

CALCIUM 100 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 140 ppm

Full Capacity

BICARBONATE -

D.O. = 4.5 mg/L Temp °C = 23.7, °F = 75
Alk. $P = 0.8$ $M = 2.0$

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECEIVED

APR 10 1995

OIL CON. DIV.
Dist. 3

RECOMMENDATIONS Looks good - Keep present level of aeration
and chemical treatment

TIERRA TECHNOLOGIST

Dan Howe

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 7-7-94
LOCATION East Side Pond - Circ. Line TIME 10:45a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 7-7-74
REPRESENTATIVE Mike Leonard / Mike Talocich / Allen Estes
JOB DESCRIPTION Maintain H₂S < 0.1 mg/L; Total Sulfides < 5.0 mg/L; Sulfates < 10-15 FMM (this time); D.O. < 2.0 mg/L

WATER ANALYSIS

H ₂ S	<u>0.0 mg/L</u>	VOLUME	<u>70,000 bbl</u>
TOTAL SULFIDES	<u>< 5.0 mg/L</u>	PH	<u>8.2</u>
SULFATES	<u>10-15 FMM</u>	SPECIFIC GRAVITY	<u>1.015</u>
CHLORIDES	<u>10,000 ppm</u>	DISSOLVED SOLIDS	<u>7,000 mg/L</u>
CHLORINE	<u>< 0.1 ppm</u>	SUSPENDED SOLIDS	<u>—</u>
TOTAL HARDNESS	<u>400 ppm</u>	APPEARANCE	<u>opaque - clear</u>
CALCIUM	<u>170 ppm</u>	CIRCULATION SYSTEM	<u>operating</u>
MAGNESIUM	<u>200 ppm</u>	D.O.	<u>< 4.0 mg/L</u>
BICARBONATE	<u>—</u>	TEMP °C =	<u>73.9 °F = 75</u>
		Alkalinity	<u>0.19 m = 2.8</u>

MUD ANALYSIS

PH	_____	VOLUME	_____
WT	_____	APPEARANCE	_____
FUNNEL VISCOSITY	_____		
RETORT ANALYSIS	_____	MIXING SYSTEM	RECEIVED
% WATER	_____		APR 10 1996
% OIL	_____		OIL CONTROL
% SOLIDS	_____		DIST. 3

RECOMMENDATIONS Don't rock the boat - Excellent

TIERRA TECHNOLOGIST Don Heuser PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Wed, 7-27-4

LOCATION East Side Pond - Circ. Line

TIME 8:30 a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE _____

REPRESENTATIVE Mike Leonard, Mike Talovich, Allen Estes

JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/l ; Total Sulfides < 5 mg/l ; Sulfates < 20 EPM ; D.O. > 2.0 mg/l

WATER ANALYSIS

H_2S 0.0 mg/l

VOLUME 60-70,000 bbl

TOTAL SULFIDES < 5.0 mg/l

PH 8.15

SULFATES 10-20 EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 18,200 ppm

DISSOLVED SOLIDS $> 23,000$ mg/l

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS ~~xx~~ 420 ppm

APPEARANCE opaque - clear

CALCIUM 120 ppm

CIRCULATION SYSTEM operating well

MAGNESIUM 300 ppm

D.O. = 3.4 mg/l, Temp °C = 22.1, °F = 72

BICARBONATE -

Alkalinity p = 0.9 m = 2.9

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS Water is excellent - maintain present treatment & aeration until well repair complete - will ~~an~~ evaluate conditions then for possible treatment reduction

TIERRA TECHNOLOGIST Dan Brown PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 7-25-4
LOCATION East Side Pond - Circ. Line TIME 9:45a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 7-22-4
REPRESENTATIVE Mike Leonard / Mike Taloukh / Allen Estes
JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/L; Total Sulfides < 5.0 mg/L; Sulfates < 20 BPM; D.O. > 2.0 mg/L

WATER ANALYSIS

H_2S <u>0.0 mg/L</u>	VOLUME <u>769000 gal</u>
TOTAL SULFIDES <u>< 5.0 mg/L</u>	PH <u>8.1</u>
SULFATES <u>10-20 BPM</u>	SPECIFIC GRAVITY <u>1.015</u>
CHLORIDES <u>18,200 ppm</u>	DISSOLVED SOLIDS <u>723,000 ppm</u>
CHLORINE <u>Trace</u>	SUSPENDED SOLIDS <u>—</u>
TOTAL HARDNESS <u>320 ppm</u>	APPEARANCE <u>opaque</u>
CALCIUM <u>140 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>180 ppm</u>	D.O. = <u>4.8 mg/L</u>
BICARBONATE <u>—</u>	Temp $C = 23.6$, $^{\circ}F = 74$
	Alkalinity $p = 0.9$ $m = 2.6$

MUD ANALYSIS

PH <u> </u>	VOLUME <u> </u>
WT <u> </u>	APPEARANCE <u> </u>
FUNNEL VISCOSITY <u> </u>	
RETORT ANALYSIS <u> </u>	MIXING SYSTEM <u> </u>
% WATER <u> </u>	
% OIL <u> </u>	
% SOLIDS <u> </u>	

RECOMMENDATIONS looks good - maintain present treatment & aeration

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261 M
325 0924 O.
508 6059 H

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 7-22-4
LOCATION East Side Pond - Circ. line TIME 7:00a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 7-21-4
REPRESENTATIVE Mike Leonard, Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides $< 5.0 \text{ mg/L}$; D.O. $> 2.0 \text{ mg/L}$ with aeration, circulation + Chemical Treatment

WATER ANALYSIS

H_2S <u>0 mg/L</u>	VOLUME <u>$> 60,000 \text{ bbl}$</u>
TOTAL SULFIDES <u>$< 5.0 \text{ mg/L}$</u>	PH <u>8.2</u>
SULFATES <u>10-20 EPM</u>	SPECIFIC GRAVITY <u>1.020</u>
CHLORIDES <u>18,200</u>	DISSOLVED SOLIDS <u>$\sim 30,000 \text{ mg/L (APP)}$</u>
CHLORINE <u>Trace</u>	SUSPENDED SOLIDS <u>—</u>
TOTAL HARDNESS <u>680 ppm</u>	APPEARANCE <u>opaque-gray</u>
CALCIUM <u>300 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>380 ppm</u>	D.O. = <u>3.8</u> ; Temp $^{\circ}\text{C} = 21.6$, $^{\circ}\text{F} = 71$
BICARBONATE <u>—</u>	Alkalinity $p = 0.8$ $m = 2.6$

MUD ANALYSIS

PH <u> </u>	VOLUME <u> </u>
WT <u> </u>	APPEARANCE <u> </u>
FUNNEL VISCOSITY <u> </u>	<u> </u>
RETORT ANALYSIS <u> </u>	MIXING SYSTEM <u> </u>
% WATER <u> </u>	<u> </u>
% OIL <u> </u>	<u> </u>
% SOLIDS <u> </u>	<u> </u>

RECOMMENDATIONS $H_2S \downarrow$ from previous CK to 0.0 mg/L -
Water looks good

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261 M
325-0924 O
598-6059 H

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Monitor Check

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 7-21-4

LOCATION East Side Pond - Circ line

TIME 8:00a

TYPE FLUID _____

DATE PREVIOUS
SERVICE 7-20-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION _____

WATER ANALYSIS

H₂S 0.1 mg/L

VOLUME _____

TOTAL SULFIDES < 5.0 mg/L

PH 8.1

SULFATES _____

SPECIFIC GRAVITY _____

CHLORIDES _____

DISSOLVED SOLIDS _____

CHLORINE _____

SUSPENDED SOLIDS _____

TOTAL HARDNESS _____

APPEARANCE opaque-gray

CALCIUM _____

CIRCULATION SYSTEM _____

MAGNESIUM _____

D.O. = 2.0 mg/L

BICARBONATE _____

Temp °C = 20.3 °F = 69.0

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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OIL CONTROL
BENTON

RECOMMENDATIONS H₂S & Total sulfides ↓ from previous ck.

D.O. ↓ - increase with additional chemical treatment

and aeration - system working well - Call if change/adjust

TIERRA TECHNOLOGIST Alan Hecce

PHONE 320-2761 (Mch)

325-0924 ext.

548-6659 home

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER
~~DISPOSAL~~ DATE 7-20-4

LOCATION East Side Pond - Circ. Line TIME 8:15 a

TYPE FLUID Oil Field Prod. water and ? DATE PREVIOUS SERVICE 7-18-4

REPRESENTATIVE Mike Leonard / Mike Talovich

JOE DESCRIPTION Maintain $H_2S < 0.1$ mg/L ; Total Sulfides < 5.0 mg/L ;
D.O. > 2.0 mg/L @ present Temp with chemical treatment and aeration

WATER ANALYSIS

H_2S <u>0.3 mg/L</u>	VOLUME <u>$> 60,000$ bbl</u>
TOTAL SULFIDES <u>8.0 mg/L</u>	PH <u>8.0</u>
SULFATES <u>15-20 EPM</u>	SPECIFIC GRAVITY <u>1.020</u>
CHLORIDES <u>16,500 ppm</u>	DISSOLVED SOLIDS <u>$> 30,000$ mg/L</u>
CHLORINE <u>0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>600 ppm</u>	APPEARANCE <u>opaque - Gray</u>
CALCIUM <u>280 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>320 ppm</u>	D.O. = <u>3.2 mg/L</u>
BICARBONATE <u>-</u>	Temp $^{\circ}C = 21.5$, $^{\circ}F = 71$
	Alkalinity, $p = 0.8$ $m = 2.7$

MUD ANALYSIS

PH <u> </u>	VOLUME <u> </u>
WT <u> </u>	APPEARANCE <u> </u>
FUNNEL VISCOSITY <u> </u>	
RETORT ANALYSIS <u> </u>	MIXING SYSTEM <u> </u>
% WATER <u> </u>	
% OIL <u> </u>	
% SOLIDS <u> </u>	

RECOMMENDATIONS H_2S is up slightly ; D.O. is O.K. ; Total Sulfides
are holding - increase chemical treatment 10-20% to
reduce H_2S - Continue aeration @ maximum

TIERRA TECHNOLOGIST Dan Hower PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY BASIN DISPOSAL

DATE Mon-7-18-9

LOCATION East Side Pond - Circ. Line

TIME 11:00 p

TYPE FLUID Oil Field Prod, water - ?

DATE PREVIOUS SERVICE 7-15-9

REPRESENTATIVE Mike Leonard / Mike Talbot

JOB DESCRIPTION Maintain D.O. = 1.0 mg/L (this temp); H₂S = 0.1 mg/L
Total sulfides < 5.0 mg/L; Sulfates < 10.0 ppm (this temp)

WATER ANALYSIS

H₂S < 0.1 mg/L

VOLUME > 60,000 bbl

TOTAL SULFIDES 8-9 mg/L

PH 8.3

SULFATES 10-15 mg/L EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 18,500 ppm

DISSOLVED SOLIDS 723,000 mg/L

CHLORINE < 1.0 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 380 ppm

APPEARANCE opaque - white

CALCIUM 180 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 200 ppm

D.O. = 2.4 Temp °C = 22.5; °F = 72.5
Alkalinity P = 0.9 m = 2.6

BICARBONATE -

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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OIL CON. DEPT.
DIST. 2

RECOMMENDATIONS Continue Treat. Rate - Call Tierra
if Treat. does not control H₂S smell - Doing great
Job considering...

TIERRA TECHNOLOGIST Don Horner PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY BASIN WATER DISPOSAL DATE 7-15-94
LOCATION East Side Pond - Circ. Line TIME 8:45 a
TYPE FLUID Oil Field Prod. Fluid DATE PREVIOUS
SERVICE 7-13-94
REPRESENTATIVE MIKE LEONARD / MIKE TALOVICH
JOB DESCRIPTION Maintain D.O. $\geq$ 1.0 @ present Temp.; $H_2S < 0.1$ mg/L;
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

H_2S <u>0.0 mg/L</u>	VOLUME <u>~ 50,000 bbl</u>
TOTAL SULFIDES <u>~ 7.0 mg/L</u>	PH <u>8.3</u>
SULFATES <u>10-15 EPM</u>	SPECIFIC GRAVITY <u>1.015</u>
CHLORIDES <u>17,200 ppm</u>	DISSOLVED SOLIDS <u>~ 23,000 mg/L</u>
CHLORINE <u>< 0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>320 ppm</u>	APPEARANCE <u>opaque to clear</u>
CALCIUM <u>160 ppm</u>	CIRCULATION SYSTEM <u>operating -</u>
MAGNESIUM <u>260 ppm</u>	<u>aeration on</u>
BICARBONATE <u>-</u>	<u>D.O. = 3.3 Temp. $^{\circ}C = 20.9$, $^{\circ}F = 70$</u>
	<u>Alkalinity $p = 0.8$ $m = 2.4$</u>

MUD ANALYSIS

PH <u>-</u>	VOLUME <u>-</u>
WT <u>-</u>	APPEARANCE <u>-</u>
FUNNEL VISCOSITY <u>-</u>	
RETORT ANALYSIS <u>-</u>	MIXING SYSTEM <u>-</u>
% WATER <u>-</u>	
% OIL <u>-</u>	
% SOLIDS <u>-</u>	

RECOMMENDATIONS looks good - maintain present treatment &
aeration - Total Sulfides up a little

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY BASIN WATER DISPOSAL DATE 7-13-4
LOCATION East Side Pond - Circ. Line TIME 2:00 p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 7-11-4
REPRESENTATIVE Mike Leonard, Mike Talovich
JOB DESCRIPTION Maintain D.O. > 2.0; H₂S < 0.1 mg/L f
Total Sulfides < 5.0 mg/L

WATER ANALYSIS

H ₂ S	<u>0 mg/L</u>	VOLUME	<u>50,000 bbl</u>
TOTAL SULFIDES	<u>6 mg/L</u>	PH	<u>8.15</u>
SULFATES	<u>10-15 EPM</u>	SPECIFIC GRAVITY	<u>1.015</u>
CHLORIDES	<u>15,200 ppm</u>	DISSOLVED SOLIDS	<u>22,000 mg/L</u>
CHLORINE	<u>< 0.1 ppm</u>	SUSPENDED SOLIDS	<u>-</u>
TOTAL HARDNESS	<u>480 ppm</u>	APPEARANCE	<u>opaque - white</u>
CALCIUM	<u>200 ppm</u>	CIRCULATION SYSTEM	<u>operating</u>
MAGNESIUM	<u>200 ppm</u>	D.O. = 3.1 Temp °F = 76	
BICARBONATE	<u>-</u>	Air/linity p = 0.8 m = 2.4	

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS Temp ↑ and Total Sulfides up slightly -
H₂S still 0, Continue aeration & Circulation at maximum,
Increase Chemical Treatment to 10%
TIERRA TECHNOLOGIST Don Warner PHONE 370-2261

TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY BASIN WATER Dis. DATE 7-11-4
LOCATION East Side - Circ. Line (pond) TIME 10:15
TYPE FLUID Oil Field Prod. water DATE PREVIOUS SERVICE 7-8-4
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION ANALYSIS D.O. & 2.0 mg/L; H₂S & 0.1 mg/L;
Total sulfides < 5.0 mg/L; Sulfates < 10 PPM

WATER ANALYSIS

H ₂ S	<u>0 mg/L</u>	VOLUME	<u>50,000 bbl</u>
TOTAL SULFIDES	<u>25.0 mg/L</u>	PH	<u>8.2</u>
SULFATES	<u>410 PPM</u>	SPECIFIC GRAVITY	<u>1.015</u>
CHLORIDES	<u>17,000 ppm</u>	DISSOLVED SOLIDS	<u>22,000 mg/L</u>
CHLORINE	<u>40.1 ppm</u>	SUSPENDED SOLIDS	<u>—</u>
TOTAL HARDNESS	<u>400 ppm</u>	APPEARANCE	<u>opaque - white</u>
CALCIUM	<u>160 ppm</u>	CIRCULATION SYSTEM	<u>operating</u>
MAGNESIUM	<u>240 ppm</u>		
BICARBONATE	<u>—</u>		

MUD ANALYSIS

PH	_____	VOLUME	_____
WT	_____	APPEARANCE	_____
FUNNEL VISCOSITY	_____		
RETORT ANALYSIS	_____	MIXING SYSTEM	_____
% WATER	_____		
% OIL	_____		
% SOLIDS	_____		

RECOMMENDATIONS looks good - continue present
operation & treatment

TIERRA TECHNOLOGIST Dan Warner PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 7-8-4

LOCATION East Side Pond - Circ. Line

TIME 11:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 7-6-4

REPRESENTATIVE Mike Leonard / Mike Tarlovich

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides $< 5.0 \text{ mg/L}$;
Sulfates $< 10 \text{ ERM}$; D.O. $> 2.0 \text{ mg/L}$

WATER ANALYSIS

H_2S 0 mg/L

VOLUME < 50,000 bbl

TOTAL SULFIDES < 5.0 mg/L

PH 8.25

SULFATES 10 ERM

SPECIFIC GRAVITY 1.015

CHLORIDES 17,500 ppm

DISSOLVED SOLIDS 23,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 420 ppm

APPEARANCE opaque-white

CALCIUM 180 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 240 ppm

Temp °C = 22.9 °F = 73
Alkalinity $p = 0.9$ $m = 2.14$
D.O. = 1.3

BICARBONATE -

MUD ANALYSIS

PH -

VOLUME -

WT -

APPEARANCE -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

MIXING SYSTEM -

% WATER -

% OIL -

% SOLIDS -

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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Looks good for temp.; D.O. a little low; Continue
Treatment level and aerate - aerate - aerate

TIERRA TECHNOLOGIST

Daniel Hassen

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 7-6-4

LOCATION East Side Pond - Circ. system pipe

TIME 9:00a

TYPE FLUID Oil Field Prod. Fluid (water)

DATE PREVIOUS
SERVICE 7-4-4

REPRESENTATIVE Mike Talovich / Mike Leonard

JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/L; Total Sulfides < 5.0 mg/L
D.O. $> 4.0 - 2.0$ mg/L; Total Sulfates < 10.0 EPM
w/ Aeration & Chemical Treatment

WATER ANALYSIS

H_2S 0.0 mg/L

VOLUME 250,000 bbl

TOTAL SULFIDES < 10.0 mg/L

PH 8.0

SULFATES > 15.0 mg/L EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 16,000 ppm

DISSOLVED SOLIDS $> 23,000$ mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 760 ppm

APPEARANCE opaque - white

CALCIUM 300 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 460 ppm

→ D.O. = 0.2
Temp °C = 19.5 °F = 67
Alkalinity $p = 0.7$ $m = 2.3$

BICARBONATE -

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Dissolved Oxygen is Low - Increase Circ.,
and aeration - chemical treatment needs help at present
level. Continued level of D.O. will require ↑ chem. Treat.

TIERRA TECHNOLOGIST _____ PHONE _____

TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

SUNCO

COMPANY BASTA WATER DISPOSAL

DATE 7-4-94

LOCATION East Side Pond-Circ. Line

TIME 11:00a

TYPE FLUID Oil Field Prod. Fluid

DATE PREVIOUS SERVICE 7-1-94

REPRESENTATIVE Mike Leonard / Mike Toloczko

JOB DESCRIPTION Maintain D.O. 1.0-2.0 mg/L; H₂S < 0.1 mg/L; Total Sulfides < 5.0 mg/L; Sulfates < 10 EPM

WATER ANALYSIS

H₂S < 0.1 mg/L

VOLUME < 50,000 bbl

TOTAL SULFIDES 5-10 mg/L

PH 8.0

SULFATES 10-15 EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 16,500 ppm

DISSOLVED SOLIDS > 20,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS —

TOTAL HARDNESS 640 ppm

APPEARANCE opaque-white

CALCIUM 300 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 340 ppm

D.O. = 0.9 mg/L
Temp °C = 20.4 °F

BICARBONATE —

Alkalinity pH = 8.0 m = 9.1

MUD ANALYSIS

PH —

VOLUME —

WT —

APPEARANCE —

FUNNEL VISCOSITY —

RETORT ANALYSIS —

MIXING SYSTEM —

% WATER —

% OIL —

% SOLIDS —

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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Oxygen (D.O.) low, Increase aeration & Circ. Chem. Treat. Cont. H₂S prod. - may consider increasing Treat slightly

TIERRA TECHNOLOGIST Dan Hrou PHONE 970-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 6-29-4
LOCATION East Side Pond - Circa Line TIME 11:30 a
TYPE FLUID Oil Field Prob. Fluid DATE PREVIOUS SERVICE 6-27-4
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain D.O. > 1.0 - 2.0; H₂S < 0.1 mg/L;
Total Sulfides < 5.0 mg/L; Sulfates < 10 EPM w/
NO ODER

WATER ANALYSIS

H ₂ S <u>0 mg/L</u>	VOLUME <u>59000 bbl</u>
TOTAL SULFIDES <u>6 mg/L</u>	PH <u>8.0</u>
SULFATES <u>10-15 EPM</u>	SPECIFIC GRAVITY <u>1.015</u>
CHLORIDES <u>16,000 ppm</u>	DISSOLVED SOLIDS <u>23,000 +</u>
CHLORINE <u>< 0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>200 ppm</u>	APPEARANCE <u>opaque - white</u>
CALCIUM <u>390 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>410 ppm</u>	D.O. = 2.0 Temp. 02 = 2.5 OF = 77
BICARBONATE <u>-</u>	Alkalinity <u>p = 0.7 m = 2.2</u>

Dan will be Back
on Tuesday

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Continue present treatment and operation
total sulfides up slightly - be observant for odor change & increase
alkalinity if indicated. System looks good considering the heat
TIERRA TECHNOLOGIST Dan Hoover PHONE 320-7761

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY BUNCO WATER DISPOSAL DATE 6-29-4
LOCATION East Side Pond - Circ. Line TIME 8:10
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 6-27-4
REPRESENTATIVE Mike Leonard / Mike Tolowick
JOB DESCRIPTION Treat + Aerate to maintain Dissolved Oxygen
> 2.0 mg/L; H_2S < 0.1 mg/L; Total Sulfides < 5.0 mg/L
Sulfates < 5-10 EPM

WATER ANALYSIS

H_2S <u>0 mg/L</u>	VOLUME <u>50,000 bbl</u>
TOTAL SULFIDES <u>5-10 mg/L</u>	PH <u>8.1</u>
SULFATES <u>> 15 mg/L</u>	SPECIFIC GRAVITY <u>1.015</u>
CHLORIDES <u>18,000 ppm</u>	DISSOLVED SOLIDS <u>> 22,000 mg/L</u>
CHLORINE <u>< 0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>440 ppm</u>	APPEARANCE <u>opaque-gray</u>
CALCIUM <u>180 ppm</u>	CIRCULATION SYSTEM <u>operating -</u>
MAGNESIUM <u>260 ppm</u>	<u>aeration on</u>
BICARBONATE <u>up slightly</u>	<u>Dissolved Oxygen = 1.7</u>
	<u>Temp 08 = 20.0 °F = 67</u>
	<u>Alkalinity p = 1.8 m = 2.8</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Total Sulfides up slightly - D.O. is marginal -
maintain or increase aeration + chemical treatment
looks good under present Temp. conditions
TIERRA TECHNOLOGIST Dan Weaver PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 6-27-4
LOCATION East Side Pond - Circ. line TIME 10:15 a
TYPE FLUID Oil Field Prod. Fluid (water) DATE PREVIOUS SERVICE 6-25-4
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain D.O. > 2.0; H₂S < 0.1 mg/L;
Total sulfide < 5.0 mg/L; sulfates < 10.0 EPM

WATER ANALYSIS

H ₂ S <u>0 mg/L</u>	VOLUME <u>50,000 bbl</u>
TOTAL SULFIDES <u>4.5 mg/L</u>	PH <u>8.1</u>
SULFATES <u>10-15 EPM</u>	SPECIFIC GRAVITY <u>1.015</u>
CHLORIDES <u>17,000</u>	DISSOLVED SOLIDS <u>223,000 mg/L</u>
CHLORINE <u>40.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>400 ppm</u>	APPEARANCE <u>opaque - gray</u>
CALCIUM <u>180 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>220 ppm</u>	D.O. <u>1.7</u> Temp <u>21.4 °C = 70.7 °F</u>
BICARBONATE <u>-</u>	AIR = <u>p = 1.0</u> M = <u>2.1</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

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DIST. 4

RECOMMENDATIONS Increase aeration (D.O. low)
Sulfides excellent

TIERRA TECHNOLOGIST Don Wadsworth PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Fri 6-24-94

LOCATION East side Road - Circ. Line

TIME 9:00 a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 6-22-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Keep O₂g ↓ by keeping H₂S ↓ 0.1 mg/L, Total Sulfides ↓ 5 mg/L; Sulfates ↓ 10 EPM with Oxidizer chemicals & ~~aeration~~ + Prod Vol. ↓

WATER ANALYSIS

S < 0.1 mg/L

VOLUME < 55,000 bbl

TOTAL SULFIDES 5-10 mg/L

PH 8.10

SULFATES 10-15 EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 15,200 ppm

DISSOLVED SOLIDS 723,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 580 ppm

APPEARANCE opaque - dark

CALCIUM 240 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 340 ppm

D.O. = 1.9 Temp °C = 20.2 DOF = 69°
Alkalinity $p = 0.6$ $m = 2.0$

BICARBONATE -

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS Dissolved Oxygen (D.O.) is lower - increase aeration to maximum. Chemical Treat. is maintaining H₂S at low level. [Aerate @ Maximum & Consider ↑ Chem. Treat.]

TIERRA TECHNOLOGIST Dan Hansen PHONE 470-7261

If Odor or Color changes over weekend - call for check

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 6-28-94

LOCATION East Side Pond - Circ. Syst. TIME 9:00a

TYPE FLUID Oil Fluid Prod. Fluid DATE PREVIOUS SERVICE 6-20-94

REPRESENTATIVE Mike Leonard / Mike Talovich

JOB DESCRIPTION Maintain $H_2S < 0.01 \text{ mg/L}$; Total sulfides $< 5.0 \text{ mg/L}$, Sulfates $< 5 \text{ EPM}$

WATER ANALYSIS

H_2S 0.0 mg/L VOLUME $655,000$

TOTAL SULFIDES $5-10 \text{ mg/L}$ PH 8.1

SULFATES $10-15 \text{ EPM}$ SPECIFIC GRAVITY 1.015

CHLORIDES $15,000 \text{ ppm}$ DISSOLVED SOLIDS $27,000 \text{ mg/L}$

CHLORINE $< 0.1 \text{ ppm}$ SUSPENDED SOLIDS —

TOTAL HARDNESS 600 ppm APPEARANCE opaque

CALCIUM 250 ppm CIRCULATION SYSTEM operating

MAGNESIUM 350 ppm $T_{in} 70^\circ F$ $21.1^\circ C$; $D.O. = 3.1$

BICARBONATE — $AKR \approx P = 1.6$ $M = 2.1$

MUD ANALYSIS

PH — VOLUME —

WT — APPEARANCE —

FUNNEL VISCOSITY —

RETORT ANALYSIS — MIXING SYSTEM —

% WATER —

% OIL —

% SOLIDS —

RECOMMENDATIONS looks good - maintain present treatment

TIERRA TECHNOLOGIST Don Hauer PHONE 320-4261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Water DISPOSAL DATE Mon. 6-20-94
LOCATION East Side Pond - Circ. Line TIME _____
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 6-17-94
REPRESENTATIVE Mike Leonard / Mike Talovich
JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/l ; Total Sulfides < 5 mg/l ; Sulfates < 10 EPM w/ aeration + oxidizers

WATER ANALYSIS

H_2S <u>0 mg/l</u>	VOLUME <u>$< 55,000$ bbl</u>
TOTAL SULFIDES <u>5-10 mg/l</u>	PH <u>8.25</u>
SULFATES <u>10-15 EPM</u>	SPECIFIC GRAVITY <u>1.020</u>
CHLORIDES <u>15,200</u>	DISSOLVED SOLIDS <u>30,000 mg/l</u>
CHLORINE <u>< 0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>760 ppm</u>	APPEARANCE <u>opaque - gray</u>
CALCIUM <u>240 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>520</u>	D.O. = <u>5.1 mg/l</u> Temp $^{\circ}C = 17.2$ $^{\circ}F = 68$
BICARBONATE <u>-</u>	ALK <u>$p = 0.8$ $m = 2.6$</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

RECOMMENDATIONS Maintain present aeration and chemical treatment
D.O. looks good

TIERRA TECHNOLOGIST Dan Hawver PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE Friday 6-17-4

LOCATION East Side Pond - Circ. Line

TIME _____

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE _____

REPRESENTATIVE Mike L. / Mike Talovich

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides $< 5.0 \text{ mg/L}$;

Sulfates $< 10 \text{ EPM}$ @ This Temp. via Aeration & Oxidizers

WATER ANALYSIS

$H_2S < 0.1 \text{ mg/L}$

VOLUME 55,000 bbl

TOTAL SULFIDES 5-10 mg/L

PH 8.05

SULFATES 10-15 EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 15,000 ppm

DISSOLVED SOLIDS $> 20,000 \text{ mg/L}$

CHLORINE $< 0.1 \text{ ppm}$

SUSPENDED SOLIDS —

TOTAL HARDNESS 640 ppm

APPEARANCE opaque

CALCIUM 240 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 400 ppm

D.O. = 2.9 Temp °C = 17.5 °F = 64°

BICARBONATE —

Alkalinity p = 0.8 M = 2.3

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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DIST. 3

RECOMMENDATIONS Looks Good - Maintain present Treatment of

55 lbs oxidizer - Consider Treating ea day

TIERRA TECHNOLOGIST Daniel Hoare PHONE _____

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 6-15-4

LOCATION East Side Pond- Circ. Line

TIME 9:15 a

TYPE FLUID Oil Field Prod. Fluid

DATE PREVIOUS
SERVICE 6-13-4

REPRESENTATIVE Mike L. / Mike T.

JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/L; Total Sulfides < 5.0 mg/L;
Sulfates < 10 EPM w/ Aeration & Treatment w/ oxidizer

WATER ANALYSIS

H_2S 0.0 mg/L

VOLUME $< 60,000$ bbl

TOTAL SULFIDES 5-10 mg/L

PH 8.0

SULFATES 15-20 mg/L

SPECIFIC GRAVITY 1.015

CHLORIDES 15,000 ppm

DISSOLVED SOLIDS 77,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 480 ppm

APPEARANCE opaque - brown (Circ. Line)
water in pond 8/12

CALCIUM 200 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 280 ppm

D.O. 2.2 Temp °C = 20.3 °F = 69
Alkalinity $p = 0.5$ $m = 1.0$

BICARBONATE -

Will calculate when required to
characterize water - from
Alkalinity Data

MUD ANALYSIS

PH -

VOLUME -

WT -

APPEARANCE -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

MIXING SYSTEM -

% WATER -

% OIL -

% SOLIDS -

RECOMMENDATIONS Sulfates ↑, Total Sulfides ↑, H_2S OK @ 0 mg/L

Increase aeration + lower aeration - Circ. lines to bottom - expect

black sediment from bottom to surface w/ Temp. ↑. Increase
oxidant treatment slightly.

TIERRA TECHNOLOGIST Don Weaver PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL

DATE 6-13-4

LOCATION East Side Pond - Circ. Line

TIME 10:45a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 6-10-4

REPRESENTATIVE Mike L. / Mike T.

JOBDISCUSSION Maintain $H_2S < 0.1$ mg/L ; Total Sulfides < 5.0 mg/L
Sulfates < 10 EPM via aeration & treatment w/ oxidizer

WATER ANALYSIS

H_2S 0 mg/L

VOLUME 60,000⁺ bbl

TOTAL SULFIDES 5-10 mg/L

PH 8.01

SULFATES 10-15 EPM

SPECIFIC GRAVITY 1.015

CHLORIDES 14,000 ppm

DISSOLVED SOLIDS 72,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS —

TOTAL HARDNESS 780 ppm

APPEARANCE opaque

CALCIUM 200 ppm

CIRCULATION SYSTEM Operating

MAGNESIUM 280 ppm

D.O. = 3.2 mg/L Temp $^{\circ}C = 18.6$ $^{\circ}F = 65$

BICARBONATE —

Alkalinity $p = 0.6$ $m = 2.1$

MUD ANALYSIS

PH —

VOLUME —

WT —

APPEARANCE —

FUNNEL VISCOSITY —

RETORT ANALYSIS —

MIXING SYSTEM —

% WATER —

% OIL —

% SOLIDS —

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DIRE. S

RECOMMENDATIONS Continue present treatment & aeration
- looks good for warmer weather. Increased Treatment
will $\downarrow$ Total Sulfides

TIERRA TECHNOLOGIST Dan Hammer PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO WATER DISPOSAL DATE 6-10-94

LOCATION East Side Pond- Circ. Line TIME 10:30 a

TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 6-8-94

REPRESENTATIVE Mike L. / Mike T.

JOB DESCRIPTION Maintain $H_2S < 0.1$ mg/l; Total Sulfides < 5.0 mg/l

Sulfates < 10 EPM via aeration and treatment w/ oxidizer

WATER ANALYSIS

H_2S 0.0 mg/l VOLUME 60,000 bbl +

TOTAL SULFIDES 5-10 mg/l PH 8.0

SULFATES 10-15 EPM SPECIFIC GRAVITY 1.015

CHLORIDES 13,000 ppm DISSOLVED SOLIDS 23,000 ppm (mg/l)

CHLORINE < 0.1 ppm SUSPENDED SOLIDS —

TOTAL HARDNESS 680 ppm APPEARANCE Translucent-white

CALCIUM 300 ppm CIRCULATION SYSTEM operating

MAGNESIUM 380 ppm D.O. = 3.9 mg/l Temp °C = 18.6 °F = 65

BICARBONATE — Alkalinity - p = 0.6 m = 2.3

MUD ANALYSIS

PH — VOLUME —

WT — APPEARANCE —

FUNNEL VISCOSITY —

RETORT ANALYSIS — MIXING SYSTEM —

% WATER —

% OIL —

% SOLIDS —

RECOMMENDATIONS Continue present aeration schedule + Treatment

- H_2S ↓, O_2 adequate

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261 Mch

325-0924 OFF.

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE WED' 6-8-4

LOCATION East Side Pond - Circ. line

TIME 11:00 a

TYPE FLUID Oil Field Prod. water

DATE PREVIOUS SERVICE 6-6-4

REPRESENTATIVE Mike L. / Mike T.

JOB DESCRIPTION Maintain $H_2S < 0.1 \text{ mg/L}$; Total Sulfides $< 5.0 \text{ mg/L}$

Sulfates $< 10 \text{ EPM}$

WATER ANALYSIS

H_2S 0 mg/L

VOLUME 60,000⁺

TOTAL SULFIDES 10-15 mg/L

PH 8.10

SULFATES 10-20 EPM

SPECIFIC GRAVITY 1.020

CHLORIDES 13,000

DISSOLVED SOLIDS 720,000 mg/L

CHLORINE 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 520 ppm

APPEARANCE opaque-tan

CALCIUM 250 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 270 ppm

O.O. = 4.3, Temp C = 19.1 °F = 66
Alk 0.5 M = 1.6

BICARBONATE -

MUD ANALYSIS

PH -

VOLUME -

WT -

APPEARANCE -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

MIXING SYSTEM -

% WATER -

% OIL -

% SOLIDS -

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DIST. C.

RECOMMENDATIONS Continue present aeration and chemical treatment

- H_2S production being eliminated

TIERRA TECHNOLOGIST Dan Warner

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 6-6-4
LOCATION East Side - Circ. line TIME 9:30 a
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 6-3-4
REPRESENTATIVE Mike Leonard, Mike Tolovic
JOB DESCRIPTION Disposal Water Conditioning → $H_2S < 1.0 \text{ mg/L}$
Total Sulfides $< 5.0 \text{ mg/L}$, Sulfates $< 10 \text{ EPM}$

WATER ANALYSIS

H_2S <u>$< 0.1 \text{ mg/L}$</u>	VOLUME <u>62,004 bbl</u>
TOTAL SULFIDES <u>5-10 mg/L</u>	PH <u>8.0</u>
SULFATES <u>10-15 EPM</u>	SPECIFIC GRAVITY <u>1.010⁺</u>
CHLORIDES <u>13,000</u>	DISSOLVED SOLIDS <u>715,000 mg/L</u>
CHLORINE <u>0 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>640 ppm</u>	APPEARANCE <u>opaque</u>
CALCIUM <u>280 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>360 ppm</u>	<u>w/ spray</u>
BICARBONATE <u>-</u>	D.O. = 6.8 Temp °C = 18.9 °F = 66°K
	Alkalinity p = 0.5 m = 1.7

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

RECOMMENDATIONS Total Sulfides continue to be up slightly,
No H_2S --- Treatment & Aeration doing job

TIERRA TECHNOLOGIST Daniel Warner PHONE 320-2261
325-0924

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 6-3-94

LOCATION East Side Pond - Circ. Line

TIME 8:15 a.

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 6-1-94

REPRESENTATIVE Mike Leonard, Mike Tolovic

JOB DESCRIPTION Aerate and treat w/ oxidizer to maintain $H_2S < 0.1 \text{ mg/L}$ (K_2)

Total Sulfides $< 5.0 \text{ mg/L}$ (K_4); Sulfates $< 10 \text{ EPM}$

WATER ANALYSIS

H_2S 0.0 mg/L

VOLUME 62,000 bbl

TOTAL SULFIDES 5.0-6.0 mg/L

PH 8.2

SULFATES 10-15 EPM

SPECIFIC GRAVITY ~~78~~ 1.010

CHLORIDES 13,200 ppm

DISSOLVED SOLIDS $> 15,000 \text{ mg/L}$

CHLORINE 0 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 800 ppm

APPEARANCE opaque-white

CALCIUM 320 ppm

CIRCULATION SYSTEM operating-

MAGNESIUM 480 ppm

spraying

BICARBONATE -

D.O. = 4.1 mg/L Temp $^{\circ}\text{C} = 18.0$ $^{\circ}\text{F} = 65.0$
Alkalinity $P = 0.5$ $M = 1.8$

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS Treat - every other day
Total Sulfides and Sulfates up slightly - but
operation [oxidizer + aeration] eliminating H_2S formation.
No changes in treatment indicated - Yet. [note hardness up]

TIERRA TECHNOLOGIST Dan Hansen

PHONE 320-2261 (Mobi)

OF. - 325-0924

H. - 598-6059

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OIL COMPANY

ENGINEER

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 6-1-94

LOCATION East Side Circ, Line TIME 10:15 a

TYPE FLUID Oil Field Prod. Water DATE PREVIOUS
SERVICE 5-30-94

REPRESENTATIVE Mike Leonard / Mike Tolovicin

JOB DESCRIPTION Aerate and treat w/ oxidizer to maintain

H₂S < 0.1 mg/Kg, Total Sulfides < 5.0 mg/Kg, Sulfates < 10 EPM

WATER ANALYSIS

H₂S 0 mg/Kg

VOLUME _____

TOTAL SULFIDES < 2.0 mg/Kg

PH 7.70

SULFATES < 10 EPM

SPECIFIC GRAVITY 1.010

CHLORIDES 16,000

DISSOLVED SOLIDS 715,000 mg/Kg

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS —

TOTAL HARDNESS 600 ppm

APPEARANCE opaque - clear

CALCIUM > 400 ppm - poor end pt.

CIRCULATION SYSTEM operating

MAGNESIUM 200 - poor end pt

D.O. = 5.0, Temp °C = 18.3 °F = 65.0

BICARBONATE —

Alkalinity p = 0.5 m = 1.0

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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RECOMMENDATIONS Chemical added to water 2 Hrs before test -

Water in excellent condition - maintain present

treatment & aeration

TIERRA TECHNOLOGIST Dan Hoover

PHONE 320-9261

HOME 598-6050

OFF 325-0924

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5-30-4

LOCATION East side, Circ. Line

TIME 7:00p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS SERVICE 5-27-4

REPRESENTATIVE Mike Leonard / Mike Telovich

JOB DESCRIPTION Aerate & Treat w/ oxidizer to maintain

thg < 0.1 mg/l; Total Sulfides < 5.0 mg/l; Sulfates < 100 ppm

WATER ANALYSIS

H₂S 0 mg/l

VOLUME _____

TOTAL SULFIDES < 5 mg/l

PH 7.90

SULFATES < 100 ppm

SPECIFIC GRAVITY 1.010

CHLORIDES 16,900 ppm

DISSOLVED SOLIDS 71,900 mg/l

CHLORINE < 0.1 mg/l (ppm)

SUSPENDED SOLIDS -

TOTAL HARDNESS 490 ppm

APPEARANCE opaque - brown

CALCIUM 220 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 270 ppm

D.O. = 6.8 Temp °C = 21.5 °F = 70

BICARBONATE -

Alkalinity p = 0.6 M = 1.4

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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OIL CO. &
DISC.

RECOMMENDATIONS Maintain present treatment & aeration -

looks good for this temp of 70 °F

TIERRA TECHNOLOGIST Dan Hannon

PHONE 505-325-1261

Home 505-6059

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 5-27-4
LOCATION ^{East} ~~West~~ Side Circ. Line TIME 9:00 a
TYPE FLUID Oil Field Production Water DATE PREVIOUS SERVICE 5-25-4
REPRESENTATIVE Mike Leonora / Mike Tolovic
JOB DESCRIPTION Aerate & Treat w/ Chosen oxidizer to maintain
H₂S < 0.1 mg/l; Total Sulfides < 5.0 mg/l; Sulfates < 10 EPM

WATER ANALYSIS

H ₂ S <u>< 0.1 mg/l / reading = 0</u>	VOLUME _____
TOTAL SULFIDES <u>< 5.0 mg/l</u>	PH <u>7.80</u>
SULFATES <u>< 10 EPM</u>	SPECIFIC GRAVITY <u>1.01</u>
CHLORIDES <u>13,200 ppm</u>	DISSOLVED SOLIDS <u>715,000 mg/kg</u>
CHLORINE <u>< 0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>590 ppm</u>	APPEARANCE <u>opaque -</u>
CALCIUM <u>360 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>230 ppm</u>	D.O. = 5.3 Temp °C = 14.5 °F = 58
BICARBONATE <u>-</u>	Alkalinity p = 0.5 m = 1.2

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

RECOMMENDATIONS Maintain present treatment and aeration
water is excellent

TIERRA TECHNOLOGIST Dan Weaver PHONE 320-2261
325-0924

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 5-25-4

LOCATION East Side Pond - Circ. Line TIME 1:30p

TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 5-23-4

REPRESENTATIVE Mike Leonard / Mike Tolovicm

JOB DESCRIPTION Aerate & Treat w/ Chosen oxidizer to maintain

H₂S < 0.1 mg/L; Total Sulfides < 5.0 mg/L; Sulfates < 10 EPM

D.O. > 4.0 mg/L

WATER ANALYSIS

H₂S < 0.1 mg/L

VOLUME 62,000

TOTAL SULFIDES < 5.0 mg/L

PH 7.65

SULFATES < 10 EPM

SPECIFIC GRAVITY 1.010

CHLORIDES 14,000 ppm

DISSOLVED SOLIDS 715,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 480 ppm

APPEARANCE opaque - white

CALCIUM 150 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 330 ppm

D.O. = 6.2 mg/L Temp °C = 15.3 °F = 60

BICARBONATE -

Alkalinity p = 0.6 f(T) = 1.6

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

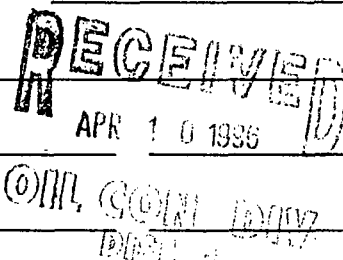
% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS Cool Weather & Cloudy skys good — maintain
present treatment and circulation rates

TIERRA TECHNOLOGIST Dan Warner PHONE 320-2261



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5-23-94

LOCATION East Side Circ. Line

TIME 3:15 p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 5-20-94

REPRESENTATIVE Mike Leonard, Mike Tolovicm

JOB DESCRIPTION Aerate and treat w/ chosen oxidizer to maintain
 $H_2S < 0.1 \text{ mg/L}$; Total Sulfides $< 5.0 \text{ mg/L}$; Sulfates $< 10 \text{ EPM}$;
 $D.O. > 4.0 \text{ mg/L}$

WATER ANALYSIS

$H_2S < 0.1 \text{ mg/L}$

VOLUME _____

TOTAL SULFIDES $< 5.0 \text{ mg/L}$

PH 7.8

SULFATES $< 10 \text{ EPM}$

SPECIFIC GRAVITY > 1.010

CHLORIDES $16,200 \text{ ppm}$

DISSOLVED SOLIDS 715000 mg/L

CHLORINE Present but $< 1.0 \text{ ppm (wt)}$

SUSPENDED SOLIDS -

TOTAL HARDNESS 410 ppm

APPEARANCE opaque

CALCIUM 120 ppm

CIRCULATION SYSTEM operating well

MAGNESIUM 270 ppm

Alkalinity $p = 0.7 \quad T = 1.6$

BICARBONATE -

D.O. meter in repair - no temp. or O₂

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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DRI

RECOMMENDATIONS Continue present treatment levels and aeration,
Water looks good, but keep wifil due to ↑ in temp.

TIERRA TECHNOLOGIST

Don Hoover

PHONE 320-2261
325-0924

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 5-20-4
LOCATION East Side Circ. pipe TIME 4:00 p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS
SERVICE 5-12-4
REPRESENTATIVE Mike Leonard / Mike Tolovich
JOB DESCRIPTION Control H₂S by Sequestering Total Sulfides
< 5.0 mg/L and Sulfates < 10 EPM

WATER ANALYSIS

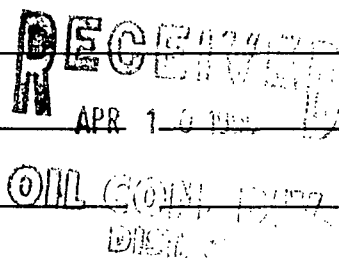
H ₂ S	<u>< 0.1 mg/L</u>	VOLUME	
TOTAL SULFIDES	<u>< 5.0 mg/L</u>	PH	<u>8.05</u>
SULFATES	<u>< 10 EPM</u>	SPECIFIC GRAVITY	<u>1.010</u>
CHLORIDES	<u>14,200 ppm</u>	DISSOLVED SOLIDS	<u>719,000 mg/L</u>
CHLORINE	<u>< 0.1 mg/L</u>	SUSPENDED SOLIDS	<u>—</u>
TOTAL HARDNESS	<u>400 ppm</u>	APPEARANCE	<u>opaque - clear</u>
CALCIUM	<u>190 ppm</u>	CIRCULATION SYSTEM	<u>Operating</u>
MAGNESIUM	<u>210 ppm</u>		<u>D.O. - meter being repaired</u>
BICARBONATE	<u>—</u>		<u>Alkalinity pH = 8.1 mf = 7.2</u>

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS Water looks good

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261



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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 5-18-94

LOCATION East Side Circ. Line

TIME 2:30p

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 5-16-94

REPRESENTATIVE Mike Leonard, Mike T.

JOB DESCRIPTION Keep w/ $KMnO_4$ and aeration: $H_2S < 0.1 mg/L$

Total Sulfides $< 5.0 mg/L$, Sulfates $< 10 EPM$

WATER ANALYSIS

H_2S $< 0.1 mg/L$

VOLUME 80,000 bbl

TOTAL SULFIDES $< 5.0 mg/L$

PH 7.85

SULFATES $< 10 mg/L$

SPECIFIC GRAVITY 1.010

CHLORIDES 19,000 ppm

DISSOLVED SOLIDS 715,000 mg/L

CHLORINE $< 0.1 mg/L$ (ppm)

SUSPENDED SOLIDS -

TOTAL HARDNESS 480 ppm

APPEARANCE opaque - brown

CALCIUM 200 ppm

CIRCULATION SYSTEM operating OK

MAGNESIUM 280 ppm

D.O. = w Inst. Down Temp. $68-70$

BICARBONATE -

ALK. = $pH=1$ $mf=1.9$

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

STORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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RECOMMENDATIONS Maintain present chemical treatment - Sulfides
being controlled

TIERRA TECHNOLOGIST

Dan Brown

PHONE 320-2261

325-0924

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 5-16-4
LOCATION East Side Pond - Circ. Line TIME 4:00 p
TYPE FLUID Oil Field Prod. H₂O DATE PREVIOUS SERVICE 5-13-4
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION Keep Total Sulfides < 5.0 mg/L; H₂S < 0.1 mg/L
Sulfates < 10 ERM by treating w/ KMnO₄ and aeration
Circulate - Circulate - Circulate

WATER ANALYSIS

H ₂ S <u>< 1.0 ppm or mg/L</u>	VOLUME _____
TOTAL SULFIDES <u>< 5.0 mg/L</u>	PH <u>8.1</u>
SULFATES <u>< 10 ERM</u>	SPECIFIC GRAVITY <u>> 1.012</u>
CHLORIDES <u>17,000 ppm</u>	DISSOLVED SOLIDS <u>> 25,000 mg/L</u>
CHLORINE <u>< 1.0 ppm</u>	SUSPENDED SOLIDS <u>—</u>
TOTAL HARDNESS <u>420 ppm</u>	APPEARANCE <u>opaque - Brown</u>
CALCIUM <u>210 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>270 ppm</u>	<u>D.O. - No Reading - That's Down</u>
BICARBONATE <u>—</u>	<u>Temp °C = 19.1 °C - 66 °F</u>
	<u>ALK 0.9 = pf m = 2.9</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

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DUST. P.

RECOMMENDATIONS Pond water low; Solids & salts ↑. H₂S
and sulfides OK. - Must keep aeration and KMnO₄
Treatment at present levels or greater. Temp ↑ will be important
TIERRA TECHNOLOGIST Dan Hansen PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Simco Disposal

DATE 5-13-94

LOCATION NE corner discharge

TIME 5:51 PM

TYPE FLUID production water

DATE PREVIOUS SERVICE 5-11-94

REPRESENTATIVE _____

JOB DESCRIPTION monitor H₂S and sulfides on pump

WATER ANALYSIS

H₂S 0

VOLUME _____

TOTAL SULFIDES 10

PH 7.95

SULFATES <10

SPECIFIC GRAVITY 1.015 8.454

CHLORIDES 11,500

DISSOLVED ~~SOLIDS~~ N/A

CHLORINE 0

~~TEMPERATURE~~ 19.3°C 66.7°F

TOTAL HARDNESS 200

APPEARANCE Gray

CALCIUM 120

CIRCULATION SYSTEM working

MAGNESIUM 80

Alkalinity 0.3 PF 3.7 MF

BICARBONATE NA

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blair William PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 5-11-94
LOCATION Discharge TIME 6:42 PM
TYPE FLUID production water DATE PREVIOUS SERVICE 5-9-94
REPRESENTATIVE MUE LEONARD
JOB DESCRIPTION Monitor H₂S and total sulfides on pond

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME		
TOTAL SULFIDES	<u>15</u>	PH	<u>8.10</u>	
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015</u>	<u>8.454</u>
CHLORIDES	<u>10,000</u>	DISSOLVED SOLIDS	<u>N/A</u>	
CHLORINE	<u>2.5</u>	TEMPERATURE	<u>72.4°C</u>	
TOTAL HARDNESS	<u>360</u>	SUSPENDED SOLIDS	<u>72.32°F</u>	
CALCIUM	<u>120</u>	APPEARANCE	<u>Good</u>	
MAGNESIUM	<u>240</u>	CIRCULATION SYSTEM	<u>Working</u>	
BICARBONATE	<u>N/A</u>	ALKALINITY	<u>0.3 PF</u>	<u>2.9 MF</u>

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

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CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 5-9-94
LOCATION East-Pit- Circ. Line TIME 2:00 p
TYPE FLUID oil field prod. water DATE PREVIOUS SERVICE 5-6-94
REPRESENTATIVE Mike Leonard / Mike Tolovicher
JOB DESCRIPTION Add KMnO₄ and aerate to maintain H₂S < 0.1 mg/L
Total Sulfides < 5.0 mg/L and Sulfates < 10.0 EPM

WATER ANALYSIS

H ₂ S <u>< 0.1 mg/L</u>	VOLUME _____
TOTAL SULFIDES <u>< 5.0 mg/L</u>	PH <u>8.05</u>
SULFATES <u>< 10 EPM</u>	SPECIFIC GRAVITY <u>1.010</u>
CHLORIDES <u>13,100 ppm</u>	DISSOLVED SOLIDS <u>> 15,000 mg/L</u>
CHLORINE <u>5.10 0.1-1.0 mg/L</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>400 ppm</u>	APPEARANCE <u>opaque - brownish</u>
CALCIUM <u>190 ppm</u>	CIRCULATION SYSTEM <u>Operating</u>
MAGNESIUM <u>210 ppm</u>	D.O. = <u>6.5 mg/L</u>
BICARBONATE <u>✓</u>	Temp °F = <u>67</u> °C = <u>19.3</u>
	Alkalinity pH = <u>19</u> mEq = <u>1.9</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	RECEIVED
% OIL _____	APR 10 1994
% SOLIDS _____	OIL CODE

RECOMMENDATIONS observe odor of water because Temp ↑. Preserve
Sulfides OK. Color is changing - may Increase Treatment

TIERRA TECHNOLOGIST Dan Hansen PHONE 820-2261
Will be gone until 5-16-94 → call 325-0924 for

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 5-6-4
LOCATION East Side Pond - Circ. Line TIME 2:00 p
TYPE FLUID Oil Field Prod. Water DATE PREVIOUS SERVICE 5-4-4
REPRESENTATIVE Mike Leonard / Mike T.
JOB DESCRIPTION Control H_2S < 0.1 mg/L; TOTAL Sulfides < 5.0 mg/L
Sulfates < 10 EPM

WATER ANALYSIS

H_2S <u>< 0.1 mg/L</u>	VOLUME _____
TOTAL SULFIDES <u>< 5.0 mg/L</u>	PH <u>8.05</u>
SULFATES <u>< 10 EPM</u>	SPECIFIC GRAVITY <u>1.010</u>
CHLORIDES <u>15,000 ppm</u>	DISSOLVED SOLIDS <u>~15,000 mg/L</u>
CHLORINE <u>< 0.1 ppm</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>300 ppm</u>	APPEARANCE <u>opaque - white</u>
CALCIUM <u>170 ppm</u>	CIRCULATION SYSTEM <u>operating</u>
MAGNESIUM <u>210 ppm</u>	D.O. = 3.4 mg/L Temp = °C <u>20.1</u> , °F <u>68</u>
BICARBONATE <u>-</u>	ALK. <u>Alk = 0.9</u> <u>ML = 2.4</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

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RECOMMENDATIONS Continue present chemical treatments and
aeration operation. However, the water temp. is increasing,
- be observant for ↑ in aerobic bacteria activity and ↑ in H_2S
TIERRA TECHNOLOGIST Daniel Haslam PHONE 320-2261

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 5-4-4

LOCATION East Side Pond - Circ. pipe

TIME 2:15 a

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 5-2-4

REPRESENTATIVE Mike Leonard / Mike Talovic m

JOB DESCRIPTION Maintain Levels; H₂S < 0.1 mg/L, Sulfates < 10 EPM

Total Sulfides < 5.0 mg/L

WATER ANALYSIS

H₂S < 0.1 mg/L

VOLUME -

TOTAL SULFIDES < 5.0 mg/L

PH 8.0

SULFATES < 10 EPM

SPECIFIC GRAVITY 1.010

CHLORIDES 14,000

DISSOLVED SOLIDS 715,000 mg/L

CHLORINE < 0.1 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 410 ppm

APPEARANCE opaque

CALCIUM 2.05 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 2.05 ppm

D.O. = 4.9 Temp °C = 17.5, °F = 63.5

BICARBONATE -

ALK tit = 0.6 ml = 3.0

MUD ANALYSIS

PH -

VOLUME -

WT -

APPEARANCE -

FUNNEL VISCOSITY -

RETORT ANALYSIS -

MIXING SYSTEM -

% WATER -

% OIL -

% SOLIDS -

RECOMMENDATIONS looks good - maintain treatment and
operation levels

TIERRA TECHNOLOGIST Daniel Weaver PHONE 320-7201

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TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 5-2-94

LOCATION East Side Pond - Circ. Pipe

TIME _____

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 4-29-94

REPRESENTATIVE Mike Leonard / Mike T.

JOB DESCRIPTION Maintain Levels: $H_2S < 0.1$ mg/l, Sulfates < 10 ppm,

Total Sulfides < 5.0 mg/l

WATER ANALYSIS

H_2S < 0.1 mg/l

VOLUME 89,000 bbl/s

TOTAL SULFIDES < 10 mg/l

PH 8.2

SULFATES $< 10-20$ mg/l

SPECIFIC GRAVITY 1.010

CHLORIDES 12,800 ppm

DISSOLVED SOLIDS 715,000

CHLORINE < 0.1 mg/l ppm

SUSPENDED SOLIDS —

TOTAL HARDNESS 460 ppm

APPEARANCE opaque -

CALCIUM 220 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 240 ppm

ALK: $pf = 1.2$ $pm = 2.4$

BICARBONATE —

D.O. = ~~2.2~~ Temp. $^{\circ}C = 16.5$, $^{\circ}F = 62^{\circ}$

MUD ANALYSIS

PH _____

VOLUME _____

wf _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS Total Sulfides and Sulfates slightly up - increase

Chemical treatment and aeration. Hardness down, pH up slightly. D.O. Same

Overall - Water looks good, Note: D.O. should be higher as Temp. increases

TIERRA TECHNOLOGIST Dan Hauer PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4-29-94

LOCATION East Side Pond from Circ. pipe

TIME 11:00 a

TYPE FLUID Oil Field Prod. Fluid

DATE PREVIOUS
SERVICE 4-27-94

REPRESENTATIVE Mike Leonard / Mike T.

JOB DESCRIPTION Maintain H_2S < 1.0 ^{mg/L} ppm; Sulfates < 10 EPM;

Total Sulfides < 5.0 mg/L in present cool weather

WATER ANALYSIS

H_2S < 0.1 mg/L

VOLUME _____

TOTAL SULFIDES < 5 mg/L

PH 7.95

SULFATES < 10 EPM

SPECIFIC GRAVITY 1.010

CHLORIDES 12,700

DISSOLVED SOLIDS > 15,000 mg/L

CHLORINE 91 ppm

SUSPENDED SOLIDS —

TOTAL HARDNESS 1010 ppm

APPEARANCE opaque - white

CALCIUM 400 ppm

CIRCULATION SYSTEM operating

MAGNESIUM 610 ppm

D.O. = 4.0 Temp = 11.4°C, 52.5°F

BICARBONATE —

Alkalinity: $pH = 1.1$ $Mf = 1.8$

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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OIL CON. DIV.
DIST. 3

RECOMMENDATIONS Maintain present chemical treatment and circulation/aeration system

TIERRA TECHNOLOGIST

Daniel Hooper

PHONE 320-7261

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 4-27-4

LOCATION Crouch Mesa; East Side Circ. Line

TIME 11:30 am

TYPE FLUID Production Water

DATE PREVIOUS
SERVICE 4-25-4

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION Maintain $H_2S < 1.0 \text{ mg/L}$; Total Sulfides $< 10 \text{ mg/L}$

Treat w/ KMnO₄ & aerate w/ circulation system

WATER ANALYSIS

$H_2S < 0.1$

VOLUME -

TOTAL SULFIDES $< 5.0 \text{ mg/L}$

PH 8.3

SULFATES $< 10 \text{ EPM}$

SPECIFIC GRAVITY 1.015

CHLORIDES 13,800 ppm

DISSOLVED SOLIDS -

CHLORINE < 1.0

SUSPENDED SOLIDS -

TOTAL HARDNESS 880 ppm

APPEARANCE opaque-gray

CALCIUM 460 ppm

CIRCULATION SYSTEM operating well

MAGNESIUM 420

D.O. = 3.4 Temp = $11.9^\circ \text{C} = 53.4^\circ \text{F}$

BICARBONATE -

Alkalinity $\text{pH} = 1.0 \text{ Mf} = 1.1$

MUD ANALYSIS

PH -

VOLUME -

WT -

APPEARANCE -

FUNNEL VISCOSITY -

-

SETTLE ANALYSIS -

MIXING SYSTEM -

% WATER -

-

% OIL -

-

% SOLIDS -

-

RECOMMENDATIONS looks good- continue present treatment

TIERRA TECHNOLOGIST

Dan Houser

PHONE 720-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco + Disposal DATE 4-25-4
LOCATION Crook Mesa - East side of Road - Flowline TIME 4:30 PM
TYPE FLUID Oil Field Production Water DATE PREVIOUS SERVICE 4-22-4
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION Keep H₂S below 1.0 ppm

WATER ANALYSIS

H ₂ S <u>< 1.0 ppm</u>	VOLUME _____
TOTAL SULFIDES <u>< 1.0 ppm</u>	PH <u>8.0</u>
SULFATES <u>< 1.0 ppm</u>	SPECIFIC GRAVITY <u>1.05</u>
CHLORIDES <u>14,100 ppm</u>	DISSOLVED SOLIDS <u>-</u>
CHLORINE <u>< 1 mg/Kg</u>	SUSPENDED SOLIDS <u>-</u>
TOTAL HARDNESS <u>800 ppm</u>	APPEARANCE <u>opaque</u>
CALCIUM <u>420 ppm</u>	CIRCULATION SYSTEM <u>operating - good</u>
MAGNESIUM <u>320 ppm</u>	D.O. = <u>4.6 mg/L</u>
BICARBONATE <u>-</u>	Temp = <u>16.6° C</u>
	Alkalinity: <u>pf = 1.4</u> <u>Mf = 2.4</u>

MUD ANALYSIS

PH _____	VOLUME _____
WT _____	APPEARANCE _____
FUNNEL VISCOSITY _____	
RETORT ANALYSIS _____	MIXING SYSTEM _____
% WATER _____	
% OIL _____	
% SOLIDS _____	

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RECOMMENDATIONS Maintain present treatment + circulation schedule
H₂S + sulfides being controlled

TIERRA TECHNOLOGIST

Don Hauer

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 4-22-4

LOCATION East Side - Rec. Pipe

TIME 2:20 pm

TYPE FLUID Oil Field Prod. Water

DATE PREVIOUS
SERVICE 4-20-4

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION Maintain Low Levels of H_2S and Total Sulfides w/

> 4.0 mg/L O_2 and Chemical Treat,

eration/circulation

WATER ANALYSIS

H_2S 4.1 mg/L

VOLUME _____

TOTAL SULFIDES < 5 mg/L

PH 8.05

SULFATES < 10 FPM

SPECIFIC GRAVITY 1.020

CHLORIDES 13,200 ppm

DISSOLVED SOLIDS 30,000 ppm

CHLORINE 1.0 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 320 ppm

APPEARANCE opaque - good

CALCIUM 200 ppm

CIRCULATION SYSTEM operating well

MAGNESIUM 120 ppm

D.O. = 4.1 mg/L Temp. $^{\circ}C$ = 20 $^{\circ}F$ 68

BICARBONATE -

Alkalinity P_t = 0.5 M_f = 2.5

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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DIST. 3

RECOMMENDATIONS O_2 OK - keep vis/ on circulation system

H_2S & Total levels of Sulfides good

TIERRA TECHNOLOGIST Dan Hansen

PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL - CROUCH MESA

DATE 4-20-94

LOCATION CROUCH MESA - East Side Circ. Line

TIME 2:20 pm

TYPE FLUID Production Water

DATE PREVIOUS
SERVICE 4-18-94

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION Control H_2S and Total Sulfides in water w/ $KMnO_4$ and
other required chemicals

WATER ANALYSIS

H_2S -6-

VOLUME _____

TOTAL SULFIDES < 5 mg/L

PH 8.05

SULFATES < 10 ppm

SPECIFIC GRAVITY 1.015

CHLORIDES 12,900 ppm

DISSOLVED SOLIDS 29,000 ppm

CHLORINE < 1.0 ppm

SUSPENDED SOLIDS -

TOTAL HARDNESS 480 ppm

APPEARANCE good - opaque/clear

CALCIUM 220 ppm

CIRCULATION SYSTEM operating &
Excellent

MAGNESIUM 260 ppm

Temp. - 17.2°C, 63°F

BICARBONATE -

Alkalinity Pf = 0.5 Mf = 2.9

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS Maintain present chemical treatment and circulation /
aeration procedure - odor in sulfides, etc., low

TIERRA TECHNOLOGIST Dan Hoover PHONE 320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco

DATE 4-18-4

LOCATION Crouch Mesa

TIME 3:00 p

TYPE FLUID Salt Water - Production

DATE PREVIOUS
SERVICE 4-15-4

REPRESENTATIVE Mike

JOB DESCRIPTION Maintain low sulfides, H_2S

WATER ANALYSIS

H_2S < 0.1 mg/l

VOLUME _____

TOTAL SULFIDES 20 mg/l

PH 8.15

SULFATES < 10 EPM

SPECIFIC GRAVITY 1.020 / D₁₅ = 33000

CHLORIDES 12,600 ppm

DISSOLVED ^{O₂} ~~_____~~ 7.1 mg/l

CHLORINE < 1.5 ppm

^{Temperature} ~~_____~~ 17.1°C (62.7°F)

TOTAL HARDNESS 520 ppm

APPEARANCE Opaque

CALCIUM 280 ppm

CIRCULATION SYSTEM "Excellent"

MAGNESIUM 240 ppm

ALKALINITY: AF 0.4 MF 2.4

BICARBONATE -

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

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RECOMMENDATIONS Maintain present conditions - D.O. = excellent
 H_2S + Total Sulfides controlled

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909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 4-15-94
LOCATION — TIME 1:00 P
TYPE FLUID Production water DATE PREVIOUS SERVICE 4-13-94
REPRESENTATIVE MIKE CRAND
JOB DESCRIPTION Monitor H₂S & TOTAL SULFIDES IN FLOW

WATER ANALYSIS

H ₂ S <u>0</u>	VOLUME <u>—</u>
TOTAL SULFIDES <u><1</u>	PH <u>8.1</u>
SULFATES <u><10</u>	SPECIFIC GRAVITY <u>1.010 8.43%</u>
CHLORIDES <u>11400</u>	DISSOLVED ^{O₂} SOLIDS <u>1.7</u>
CHLORINE <u><1.0</u>	SUSPENDED SOLIDS ^{TEMP} <u>64°F</u>
TOTAL HARDNESS <u>640</u>	APPEARANCE <u>Good</u>
CALCIUM <u>400</u>	CIRCULATION SYSTEM <u>working</u>
MAGNESIUM <u>240</u>	<u>ALK .6 AF 1.6 ME</u>
BICARBONATE <u>N/A</u>	

MUD ANALYSIS

PH <u>—</u>	VOLUME <u>—</u>
WT <u>—</u>	APPEARANCE <u>—</u>
FUNNEL VISCOSITY <u>—</u>	
RETORT ANALYSIS <u>—</u>	MIXING SYSTEM <u>—</u>
% WATER <u>—</u>	
% OIL <u>—</u>	
% SOLIDS <u>—</u>	

RECOMMENDATIONS —
—
—

TIERRA TECHNOLOGIST DR. DAN HOOVER PHONE 320-2261

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CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 4-13-94
LOCATION NE corner TIME 12:00P
TYPE FLUID production water DATE PREVIOUS SERVICE 4-11-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION Monitor H₂S and total sulfides on pond

WATER ANALYSIS

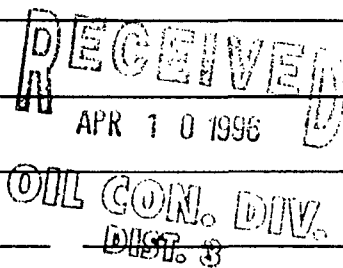
H ₂ S	<u>0</u>	VOLUME	
TOTAL SULFIDES	<u>5</u>	PH	<u>8.35</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015</u> <u>8.454</u>
CHLORIDES	<u>11,500</u>	DISSOLVED ^{O₂} SOLIDS	<u>2.5</u>
CHLORINE	<u><3.0</u>	TEMPERATURE ^{TEMPERATURE} SOLIDS	<u>13.2°C</u> <u>55.76°F</u>
TOTAL HARDNESS	<u>280</u>	APPEARANCE	<u>Good</u>
CALCIUM	<u>240</u>	CIRCULATION SYSTEM	<u>Working</u>
MAGNESIUM	<u>40</u>	alkalinity:	<u>0.25 PF</u> <u>3.25 MF</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blair Williams PHONE 320-194



TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 4-11-94
LOCATION Discharge TIME 2:45PM
TYPE FLUID production water DATE PREVIOUS SERVICE 4-8-94
REPRESENTATIVE MULE LEONARD
JOB DESCRIPTION Monitor H₂S and sulfides

WATER ANALYSIS

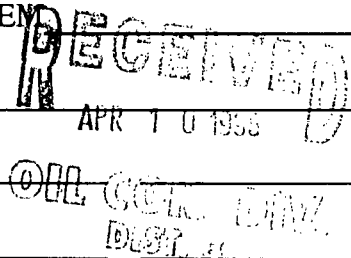
H ₂ S	<u>0</u>	VOLUME	
TOTAL SULFIDES	<u><10</u>	PH	<u>8.35</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015 8.454</u>
CHLORIDES	<u>12,000</u>	DISSOLVED ^{O₂} SOLIDS	<u>3.1</u>
CHLORINE	<u><4.0</u>	TEMPERATURE SOLIDS	<u>11.5°C 53F'</u>
TOTAL HARDNESS	<u>200</u>	APPEARANCE	<u>Good</u>
CALCIUM	<u>80</u>	CIRCULATION SYSTEM	<u>working</u>
MAGNESIUM	<u>120</u>	ALKALINITY	<u>0.35 PF 3.35 MF</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911



TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY Source Disposal

DATE 4-8-94

LOCATION NE Corner

TIME 1:00 PM

TYPE FLUID production water

DATE PREVIOUS
SERVICE 4-6-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION Monitor H₂S and Sulfides

WATER ANALYSIS

H₂S 0

VOLUME _____

TOTAL SULFIDES 10

PH 8.45

SULFATES 210

SPECIFIC GRAVITY 1.015 8.454

CHLORIDES 14,000

DISSOLVED ^{O₂} ~~SOLIDS~~ 1.8

CHLORINE <8.0

~~TEMPERATURE~~ 13.9°C 57.02°F

TOTAL HARDNESS 240

APPEARANCE Good

CALCIUM 80

CIRCULATION SYSTEM working

MAGNESIUM 160

ALKALINITY = 0.5 PF

BICARBONATE NA

MUD ANALYSIS

PH _____

VOLUME _____

WT _____

APPEARANCE _____

FUNNEL VISCOSITY _____

RETORT ANALYSIS _____

MIXING SYSTEM _____

% WATER _____

% OIL _____

% SOLIDS _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blain Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 11-12-94
LOCATION Discharge TIME 2:50 PM
TYPE FLUID production water DATE PREVIOUS SERVICE 4-4-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitor H₂S and sulfides on pond

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	<u></u>
TOTAL SULFIDES	<u><10</u>	PH	<u>8.50</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015</u> <u>8.454</u>
CHLORIDES	<u>14,500</u>	DISSOLVED ^{O₂} SOLIDS	<u>1.9</u>
CHLORINE	<u>5.0</u>	TEMPERATURE SOLIDS	<u>12.6°C</u>
TOTAL HARDNESS	<u>280</u>	APPEARANCE	<u>good</u>
CALCIUM	<u>80</u>	CIRCULATION SYSTEM	<u>working</u>
MAGNESIUM	<u>200</u>	ALUMINUM	<u>0.3 PF</u> <u>2.6 MF</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH	<u></u>	VOLUME	<u></u>
WT	<u></u>	APPEARANCE	<u></u>
FUNNEL VISCOSITY	<u></u>		
RETORT ANALYSIS	<u></u>	MIXING SYSTEM	<u></u>
% WATER	<u></u>		
% OIL	<u></u>		
% SOLIDS	<u></u>		

RECOMMENDATIONS

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TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 4-4-94
LOCATION SE corner TIME 10:35 AM
TYPE FLUID production water DATE PREVIOUS SERVICE 4-1-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION Monitor H₂S and sulfides on pond

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	
TOTAL SULFIDES	<u><10</u>	PH	<u>8.45</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015</u> <u>81.454</u>
CHLORIDES	<u>13.000</u>	DISSOLVED ^{O₂} SOLIDS	<u>2.0</u>
CHLORINE	<u>7.0</u>	^{TEMPERATURE} SOLIDS SOLIDS	<u>12.9°C</u> <u>55.22°F</u>
TOTAL HARDNESS	<u>320</u>	APPEARANCE	<u>Good</u>
CALCIUM	<u>120</u>	CIRCULATION SYSTEM	<u>working</u>
MAGNESIUM	<u>200</u>	ALKALINITY	<u>0.4 PF</u> <u>2.7 MF</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

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CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 4-1-94
LOCATION NE corner TIME 10:50 AM
TYPE FLUID production water DATE PREVIOUS
SERVICE 3-30-94
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION Monitor H₂S and sulfides on pond

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	
TOTAL SULFIDES	<u>10</u>	PH	<u>8.40</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	
CHLORIDES	<u>14,000</u>	DISSOLVED ^{O₂} S	<u>25</u>
CHLORINE	<u><20</u>	Temperature <u>13.5°C - 56.3°F</u>	
TOTAL HARDNESS	<u>280</u>	APPEARANCE	<u>Good</u>
CALCIUM	<u>120</u>	CIRCULATION SYSTEM	<u>Working</u>
MAGNESIUM	<u>160</u>	AVAILABILITY: <u>0.3PF</u>	<u>2.75 MF</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS

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TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 3-30-94
LOCATION Discharge TIME 11:45 Am
TYPE FLUID production water DATE PREVIOUS SERVICE 3-28-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION Monitor H₂S and Sulfides

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	<u></u>
TOTAL SULFIDES	<u>15</u>	PH	<u>8.55</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015 8.454</u>
CHLORIDES	<u>14,000</u>	DISSOLVEDS ^{O₂} SOLIDS	<u>4.8</u>
CHLORINE	<u><2.0</u>	TEMPERATURE ^{TEMPERATURE} SOLIDS	<u>10.9°C 51.62°F</u>
TOTAL HARDNESS	<u>286</u>	APPEARANCE	<u>Good</u>
CALCIUM	<u>60</u>	CIRCULATION SYSTEM	<u>working</u>
MAGNESIUM	<u>220</u>	ALKALINITY: 0.3 PF	<u>3.6 MF</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH	<u></u>	VOLUME	<u></u>
WT	<u></u>	APPEARANCE	<u></u>
FUNNEL VISCOSITY	<u></u>		
RETORT ANALYSIS	<u></u>	MIXING SYSTEM	<u></u>
% WATER	<u></u>		
% OIL	<u></u>		
% SOLIDS	<u></u>		

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 3-28-94
LOCATION SE corner TIME 3:00 PM
TYPE FLUID production water DATE PREVIOUS SERVICE 3-25-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION Monitor H₂S and sulfides

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	
TOTAL SULFIDES	<u>10</u>	PH	<u>8.75</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.010 8.431</u>
CHLORIDES	<u>10,000</u>	DISSOLVED ^{O₂} SOLIDS	<u>4.1</u>
CHLORINE	<u><1.0</u>	TEMPERATURE	
TOTAL HARDNESS	<u>320</u>	SUSPENDED SOLIDS	<u>13.3°C 55.9°F</u>
CALCIUM	<u>120</u>	APPEARANCE	<u>Good</u>
MAGNESIUM	<u>200</u>	CIRCULATION SYSTEM	<u>Working</u>
BICARBONATE	<u>NA</u>	ALKALINITY	<u>0.55 PF 4.05 MF</u>

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blair Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 3-25-94
LOCATION EAST SIDE ROAD TIME 4:30
TYPE FLUID PRODUCTION WATER DATE PREVIOUS SERVICE 3-23-94
REPRESENTATIVE MICHAEL CROWARD
JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	
TOTAL SULFIDES	<u>4</u>	PH	<u>8.35</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015 / 8.45</u>
CHLORIDES	<u>12500</u>	DISSOLVED ^{O₂} SOLIDS	<u>1.3</u>
CHLORINE	<u><1</u>	^{TEMP} SUSPENDED SOLIDS	<u>14.2°C / 57.6°F</u>
TOTAL HARDNESS	<u>208</u>	APPEARANCE	<u>Good</u>
CALCIUM	<u>92</u>	CIRCULATION SYSTEM	<u>WORKING</u>
MAGNESIUM	<u>116</u>	ALK	<u>0.24 PC 2.99 MP</u>
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS

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TIERRA TECHNOLOGIST [Signature] PHONE 320-1363

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 3-23-94
LOCATION NE corner TIME 9:10 am
TYPE FLUID production water DATE PREVIOUS SERVICE 3-21-94
REPRESENTATIVE MIKE LEWIS
JOB DESCRIPTION Monitor H₂S and Sulfides on pump
Temp: 10.8°C 51.44°F Alkalinity: 0.4PF 3.2MF
Dissolved oxygen: 0.9

WATER ANALYSIS

H ₂ S	<u>0</u>	VOLUME	<u></u>
TOTAL SULFIDES	<u>10</u>	PH	<u>8.45</u>
SULFATES	<u><10</u>	SPECIFIC GRAVITY	<u>1.015 8.454</u>
CHLORIDES	<u>11,500</u>	DISSOLVED SOLIDS	<u>NA</u>
CHLORINE	<u>7.0</u>	SUSPENDED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>280</u>	APPEARANCE	<u>(good)</u>
CALCIUM	<u>120</u>	CIRCULATION SYSTEM	<u>working</u>
MAGNESIUM	<u>160</u>		
BICARBONATE	<u>NA</u>		

MUD ANALYSIS

PH	<u></u>	VOLUME	<u></u>
WT	<u></u>	APPEARANCE	<u></u>
FUNNEL VISCOSITY	<u></u>		
RETORT ANALYSIS	<u></u>	MIXING SYSTEM	<u></u>
% WATER	<u></u>		
% OIL	<u></u>		
% SOLIDS	<u></u>		

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blain Williams PHONE 320-1911



TIERRA ENVIRONMENTAL CORPORATION

SAMPLED FOR Sludge Disposal

SAMPLE DATE 3-21-94 TIME 12:00 PM

SAMPLE LOCATION NF Corner

pH 8.20 TEMPERATURE 12.9°C 54.86°F

CHLORINE <1.0 HYDROGEN SULFIDE 0

SULFATE <10 SULFIDE 15

TOTAL HARDNESS AS $C_A CO_3$ Hardness 240 Ca 120 Mg 120 DISSOLVED OXYGEN (PPM) 5.2

CHLORIDES (PPM) 14,000

% OIL WT. #/GAL 1.015 8.454

COMMENTS: ALKALINITY: 0.5 PF 3.2 MF

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OIL CON.
DIST. #

Bryan Williams

320-1911

TESTED BY



TIERRA ENVIRONMENTAL CORPORATION

SAMPLED FOR Sunco Disposal

SAMPLE DATE 3-18-94 TIME 10:40 A

SAMPLE LOCATION NE corner

pH 8.25 TEMPERATURE 10.9°C 51.6°F

CHLORINE <1.0 HYDROGEN SULFIDE 0

SULFATE <10 SULFIDE 15

TOTAL HARDNESS AS CaCO_3 Hardness 340 Ca 120 Mg 240 DISSOLVED OXYGEN (PPM) 4.8

CHLORIDES (PPM) 11,000

% OIL WT. #/GAL 1.015 8.454

COMMENTS: ALKALINITY: 0.5 PF 3.7 MF

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DIST. 3

Blaine Williams 320-1911
TESTED BY



TIERRA ENVIRONMENTAL CORPORATION

SAMPLED FOR SUNCO DISPOSAL

SAMPLE DATE 3-17-94 TIME _____

SAMPLE LOCATION NE corner

pH 8.35 TEMPERATURE 13.1°C 55°F

CHLORINE <1.0 HYDROGEN SULFIDE 0

SULFATE <10.0 SULFIDE 10

TOTAL HARDNESS AS CaCO_3 HARDNESS 400 CA 120 mg 280 DISSOLVED OXYGEN (PPM) 1.2

CHLORIDES (PPM) 11,000

% OIL _____ WT. #/GAL 1.015 8.454

COMMENTS: ALKALINITY 0.35 PF 3.15 MF

LABORATORY

EE APR 1 1994

CHLORINE

Blaine Williams

320-1911

TESTED BY



TIERRA ENVIRONMENTAL CORPORATION

SAMPLED FOR SUNCO DISPOSAL

SAMPLE DATE 3-14-94

TIME 3:30 p

SAMPLE LOCATION EAST SIDE POND

pH 8.55

TEMPERATURE 14.1°C / 57.4°F

CHLORINE <1.0

HYDROGEN SULFIDE 0

SULFATE <10

SULFIDE 3

TOTAL HARDNESS AS CaCO_3 272

DISSOLVED OXYGEN (PPM) 0.9

136 calcium

136 magnesium

CHLORIDES (PPM) 12500

% OIL

WT. #/GAL 1.015 / 8.42 #

COMMENTS: ALKA 0.26 PF 3.16 MF

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TIERRA ENVIRONMENTAL CORPORATION

SAMPLED FOR SWCO Disposal

SAMPLE DATE 3-11-94 TIME 12:43 PM

SAMPLE LOCATION NE corner

pH 8.35 TEMPERATURE 12.1°C 53.78°F

CHLORINE _____ HYDROGEN SULFIDE 0

SULFATE <10 SULFIDE 10

TOTAL HARDNESS AS CaCO_3 400 Ca 280 Mg 120 DISSOLVED OXYGEN (PPM) 1.5

CHLORIDES (PPM) 12,000

% OIL _____ WT. #/GAL 1.015 8.454

COMMENTS: Alkalinity 0.35 PF 3.05 MF

TESTED BY



TIERRA ENVIRONMENTAL CORPORATION

SAMPLED FOR SWCO Disposal

SAMPLE DATE 3-9-94 TIME 11:50 AM

SAMPLE LOCATION North End pond

pH 7.95 TEMPERATURE 11.2°C

CHLORINE 4.0 HYDROGEN SULFIDE 0

SULFATE 210 SULFIDE 10

TOTAL HARDNESS AS CaCO_3 240 DISSOLVED OXYGEN (PPM) 0.6

Calcium - 80
magnesium - 160

CHLORIDES (PPM) 11,000

~~%~~ ~~ALKALINITY~~: 0.3 PF 3.1 MF WT. #/GAL 1.015 8.454

COMMENTS: _____

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OIL COMPANY
LABORATORY

Blair Williams
TESTED BY

TIERRA ENVIRONMENTAL CORPORATION

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CLIENT SERVICE REPORT

COMPANY Source Disposal

DATE 3-7-94

LOCATION _____

TIME 4:05P

TYPE FLUID production water

DATE PREVIOUS
SERVICE 3-4-94

REPRESENTATIVE MIKE LEMAS

JOB DESCRIPTION Monitor H₂S and total sulfides

WATER ANALYSIS

DISSOLVED OXYGEN 4.7
TEMPERATURE 13.8°C 56.84
H₂S 0
TOTAL SULFIDES 10
SULFATES <10
CHLORIDES 12,000
CHLORINE 8.0
TOTAL HARDNESS 400
CALCIUM 160

VOLUME _____
PH 8.15
SPECIFIC GRAVITY/WT 1.015 18.454
MAGNESIUM 240
BICARBONATE NA
ALKALINITY 0.4PF 3.3MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM RECEIVED

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OIL CONTROL
DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 3-4-94

LOCATION North End pond TIME 12:20

TYPE FLUID production water DATE PREVIOUS SERVICE 3-2-94

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION monitor H₂S and sulfides

WATER ANALYSIS

DISSOLVED OXYGEN 1.5
TEMPERATURE 11.8°C 53.24°F
H₂S 0
TOTAL SULFIDES 15
SULFATES <10
CHLORIDES 12,800
CHLORINE 15,800 8.0
TOTAL HARDNESS 36.0
CALCIUM 12.0

VOLUME _____
PH 8.10
SPECIFIC GRAVITY/WT 1.015 1.8454
MAGNESIUM 240
BICARBONATE NA
ALKALINITY 0.20 PF 3.2 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blair Williams PHONE 320-1941

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Smco Disposal DATE 3-2-94

LOCATION SE corner TIME 12:00P

TYPE FLUID production water DATE PREVIOUS SERVICE 2-22-94

REPRESENTATIVE MILK LEMANA

JOB DESCRIPTION Monitor H₂S and sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN 3.3
TEMPERATURE 9.6°C 49.3°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 14,000
CHLORINE 60
TOTAL HARDNESS 360
CALCIUM ~~200~~ 160

VOLUME _____
PH 8.15
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 200
BICARBONATE NA
ALKALINITY 0.3 PF 2.75 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

OIL CON. DIV
DIST. 2

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blume William PHONE 320-194

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Disposal DATE 2-28-94
LOCATION NE corner TIME 3:15 P
TYPE FLUID production water DATE PREVIOUS SERVICE 2-5-94
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION monitor H₂S and total sulfides on pump

WATER ANALYSIS

DISSOLVED OXYGEN 4.0
TEMPERATURE 8.5°C 47.3°C
H₂S NA
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 15,000
CHLORINE <8.0
TOTAL HARDNESS 400
CALCIUM 140

VOLUME LA
PH 8.20
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM NA 240
BICARBONATE NA
ALKALINITY 6.4 PF 2.7 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

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OIL CONL DIV
DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1363 320-1911

909 West Apache, Farmington, NM 87401
(505) 325-0924

COMPANY Sinco Disposal DATE 2-25-94

LOCATION NE corner Discharge TIME 3:15P

TYPE FLUID production water DATE PREVIOUS SERVICE 2-23-94

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION monitor H₂S and sulfides emissions

DISSOLVED OXYGEN	5.1		VOLUME	
TEMPERATURE	7.6°C	45.7°F	PH	8.30
H ₂ S	0		SPECIFIC GRAVITY/WT	1.015 / 8.454
TOTAL SULFIDES	10		MAGNESIUM	240
SULFATES	210		BICARBONATE	nt
CHLORIDES	12,500		ALKALINITY	0.25 PF 3.5 MF
CHLORINE	6.0		DISSOLVED SOLIDS	nt
TOTAL HARDNESS	400		SUSPENDED SOLIDS	nt
CALCIUM	160		APPEARANCE	Good
			CIRCULATION SYSTEM	working

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

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RECOMMENDATIONS

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911 320-1363

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Suwo Disposal DATE 2-23-94
LOCATION N section discharge TIME 1:00P
TYPE FLUID production water DATE PREVIOUS SERVICE 2-21-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitor H₂S and sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN 6.5
TEMPERATURE 7.1°C 44.78°F
H₂S 0
TOTAL SULFIDES <5
SULFATES <10
CHLORIDES 12.000
CHLORINE 7.0
TOTAL HARDNESS 28.0
CALCIUM 16.0

VOLUME _____
PH 8.25
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 120
BICARBONATE NA
ALKALINITY 0.3PP 3.05 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
OIL GOAL _____
DIST. _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Bernie Williams

PHONE 320-1911 or 320-1363

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 2-21-94

LOCATION Discharge TIME 3:00 P

TYPE FLUID production water DATE PREVIOUS
SERVICE 2-18-94

REPRESENTATIVE MILLER LEONARD

JOB DESCRIPTION Monitor H₂S and Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN 4.2
TEMPERATURE 7.1°C 44.78°F
H₂S 0
TOTAL SULFIDES <20
SULFATES 510
CHLORIDES 11,500
CHLORINE <1.0
TOTAL HARDNESS 360
CALCIUM 160

VOLUME _____
PH 8.25
SPECIFIC GRAVITY/WT 1.015 18.454
MAGNESIUM 200
BICARBONATE NA
ALKALINITY 0.4PF 3.4MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE good
CIRCULATION SYSTEM working

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

APR 10 1994

OIL CON. DIV.
DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Bonne Williams PHONE 320-1363

320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Disposal DATE 2-18-94
LOCATION NE Corner Discharge TIME 12:20 PM
TYPE FLUID production water DATE PREVIOUS SERVICE 2-16-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION Monitor N_2S and Sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN	<u>1.9</u>	VOLUME	
TEMPERATURE	<u>7.1°C 44.78°F</u>	PH	<u>8.25</u>
H ₂ S	<u>+</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u><5</u>	MAGNESIUM	<u>120</u>
SULFATES	<u>510</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>14,000</u>	ALKALINITY	<u>0.35 PF 2.95 MF</u>
CHLORINE	<u>4</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>280</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>160</u>	APPEARANCE	<u>water Good</u>
		CIRCULATION SYSTEM	<u>working</u>

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

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(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 2-16-94

LOCATION Discharge

TIME 2:30

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 2-14-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 6.9
TEMPERATURE 5.4°C / 41.7°F
H₂S 0
TOTAL SULFIDES 4
SULFATES <10
CHLORIDES 13700
CHLORINE 5.0
TOTAL HARDNESS 360
CALCIUM 170

VOLUME _____
PH 8.15
SPECIFIC GRAVITY/WT 1.015 / 8.45
MAGNESIUM 190
BICARBONATE NA
ALKALINITY 0.31 AF 2.23 ME
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Cloud
CIRCULATION SYSTEM underflow

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 1 11 1994
OIL CONTROL DATA
DATE 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320-1363

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Disposal DATE 2-14-94

LOCATION NE corner TIME 1:00P

TYPE FLUID production water DATE PREVIOUS SERVICE 2-11-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H₂S and sulfides on pump

WATER ANALYSIS

DISSOLVED OXYGEN 6.8
TEMPERATURE 5.3°C 41.54°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 11,500
CHLORINE <6.0
TOTAL HARDNESS 320
CALCIUM 200

VOLUME _____
PH 8.35
SPECIFIC GRAVITY/WT 1.015 18.454
MAGNESIUM 120
BICARBONATE NA
ALKALINITY 0.3PF 3.05ME
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE OK
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 10 1994
OIL CON. DIV.
DIST. R

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Bryan Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE Friday ^{11th} Feb '94

LOCATION Crouch Mesa - Discharge/Rec. Line

TIME 12:15 pm

TYPE FLUID Production/Injection Water

DATE PREVIOUS
SERVICE 2-9-94

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION monitor / Water Analysis - H₂S + Sulfides + Oxygen

WATER ANALYSIS

DISSOLVED OXYGEN 6.8
TEMPERATURE 11.0 C 51.8 F
H₂S 0
TOTAL SULFIDES 2.0
SULFATES < 10
CHLORIDES 8,000 ppm
CHLORINE < 4
TOTAL HARDNESS 320
CALCIUM 200

VOLUME —
PH 7.85
SPECIFIC GRAVITY/WT 1.025 / 8.93
MAGNESIUM 120
BICARBONATE —
ALKALINITY 0.29 / 2.0 mp
DISSOLVED SOLIDS —
SUSPENDED SOLIDS —
APPEARANCE good
CIRCULATION SYSTEM in operation

MUD ANALYSIS

PH —
WT —
FUNNEL VISCOSITY —
RETORT ANALYSIS —
% WATER —
% OIL —
% SOLIDS —

VOLUME —
APPEARANCE —

MIXING SYSTEM —

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LAB.

RECOMMENDATIONS

Oxygen O.K.

TIERRA TECHNOLOGIST Don Hauer

PHONE 320-1363
320-2261

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 2-9-94

LOCATION Discharge

TIME 10:45A

TYPE FLUID production water

DATE PREVIOUS
SERVICE 2-7-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION Monitor H₂S and total sulfides

WATER ANALYSIS

DISSOLVED OXYGEN 0.9
TEMPERATURE 6.4°C 43.5°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 14,000
CHLORINE 7.0
TOTAL HARDNESS 400
CALCIUM 160

VOLUME _____
PH 8.25
SPECIFIC GRAVITY/WT 1.015 18.454
MAGNESIUM 240
BICARBONATE NA
ALKALINITY 0.25PF 2.55MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1211

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 2-7-94

LOCATION Discharge

TIME 1:19P

TYPE FLUID production water

DATE PREVIOUS
SERVICE 2-4-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION Monitor H₂S and Sulfides on pump

WATER ANALYSIS

DISSOLVED OXYGEN 7.3
TEMPERATURE 4.6°C 40.3°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 14,000
CHLORINE <8.0
TOTAL HARDNESS 400
CALCIUM 320

VOLUME _____
PH 8.25
SPECIFIC GRAVITY/WT 1.015 18.454
MAGNESIUM 280
BICARBONATE NA
ALKALINITY 0.4PF 2.9MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 1 1994
OIL CONTROL
DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 2-4-94
LOCATION NE corner Discharge line TIME 11:41A
TYPE FLUID production water DATE PREVIOUS SERVICE 2-2-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION Monitor H₂S and total sulfides on pump

WATER ANALYSIS

DISSOLVED OXYGEN 7.2
TEMPERATURE 5.9°C 42.62°F
H₂S 0
TOTAL SULFIDES 15
SULFATES <10
CHLORIDES 13,000
CHLORINE 9.0
TOTAL HARDNESS 400
CALCIUM 160

VOLUME _____
PH 8.05
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 240
BICARBONATE NA
ALKALINITY 0.25PF 2.50MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 10 1996
OIL CON. DIV.
DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL DATE 2-2-94
LOCATION Discharge TIME 1:30P
TYPE FLUID production water DATE PREVIOUS SERVICE 1-31-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitor H₂S and sulfides c-o ponds

WATER ANALYSIS

DISSOLVED OXYGEN	<u>7.5</u>	VOLUME	
TEMPERATURE	<u>3.2°C 37.8°F</u>	PH	<u>7.85</u>
H ₂ S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u>5</u>	MAGNESIUM	<u>240</u>
SULFATES	<u><10</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>13,000</u>	ALKALINITY	<u>0.3PF 2.82ME</u>
CHLORINE	<u>5.0</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>440</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>200</u>	APPEARANCE	
		CIRCULATION SYSTEM	

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY		MIXING SYSTEM	
RETORT ANALYSIS			
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS

TIERRA TECHNOLOGIST Brian Williams

PHONE 320-1411

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY SUNCO Disposal

DATE 1-31-94

LOCATION NE corner

TIME 3:00P

TYPE FLUID production water

DATE PREVIOUS
SERVICE 1-28-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H₂S and total sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN 6.5
TEMPERATURE 38°C 38.9°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 12,000
CHLORINE 6.0
TOTAL HARDNESS 400
CALCIUM 100

VOLUME _____
PH 7.95
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 240
BICARBONATE NA
ALKALINITY 0.32 PF 3.03 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 1 0 1994
OIL CON. _____
DIL. _____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-28-94

LOCATION Discharge TIME 9:43A

TYPE FLUID production water DATE PREVIOUS SERVICE 1-26-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H₂S and total sulfides on pond

WATER ANALYSIS

DISSOLVED OXYGEN 7.9
TEMPERATURE 50°F 41°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 12,500
CHLORINE <8.0
TOTAL HARDNESS 400
CALCIUM 180

VOLUME _____
PH 8.10
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 220
BICARBONATE NA
ALKALINITY 0.40F 3.1MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____

MIXING SYSTEM _____

APR 10 1996

OIL CON. DIR.
DIST. 3

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST David PHONE 320-111

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-26-94
LOCATION EAST SIDE pond TIME 1:17P
TYPE FLUID production water DATE PREVIOUS SERVICE 1-25-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitor H₂S and total Sulphides on pond

WATER ANALYSIS

DISSOLVED OXYGEN	<u>6.4</u>	VOLUME	<u> </u>
TEMPERATURE	<u>4.5°C 40.1°F</u>	PH	<u>8.05</u>
H ₂ S	<u> </u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u>5</u>	MAGNESIUM	<u>240</u>
SULFATES	<u>210</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>12,750</u>	ALKALINITY	<u>0.35PF 3.05MF</u>
CHLORINE	<u>6.0</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>360</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>120</u>	APPEARANCE	<u>Good</u>
		CIRCULATION SYSTEM	<u> </u>

MUD ANALYSIS

PH	<u> </u>	VOLUME	<u> </u>
WT	<u> </u>	APPEARANCE	<u> </u>
FUNNEL VISCOSITY	<u> </u>		
RETORT ANALYSIS	<u> </u>	MIXING SYSTEM	<u> </u>
% WATER	<u> </u>		
% OIL	<u> </u>		
% SOLIDS	<u> </u>		
RECOMMENDATIONS	<u> </u>		

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DET. 3

TIERRA TECHNOLOGIST Bill

PHONE 325-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-24-94

LOCATION NW Corner TIME 12:48

TYPE FLUID production water DATE PREVIOUS SERVICE 1-21-94

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION Monitor H₂S and Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN 0.0
TEMPERATURE 54°C 41.9°F
H₂S 0
TOTAL SULFIDES 5
SULFATES <10
CHLORIDES 12,500
CHLORINE 4.0
TOTAL HARDNESS 300
CALCIUM 180

VOLUME _____
PH 8.05
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 180
BICARBONATE NA
ALKALINITY 0.4 PP 2.6 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 1 8 1996
OIL CON. DIV.
DIST. M

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Brian Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-21-94

LOCATION NE Corner TIME 9:15A

TYPE FLUID production water DATE PREVIOUS SERVICE 1-20-94

REPRESENTATIVE Mike Leonard

JOB DESCRIPTION Monitor H₂S and total Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN 7.1
TEMPERATURE 6.4°C
H₂S 0
TOTAL SULFIDES 10
SULFATES <10
CHLORIDES 13,300
CHLORINE 9
TOTAL HARDNESS 700
CALCIUM 200

VOLUME _____
PH 8.10
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 200
BICARBONATE NA
ALKALINITY 0.2782 / 2.44 ME
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 7 0 1994
OIL COIL DIST. BY
DIST. BY

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-19-94
LOCATION NE corner TIME 8:27A
TYPE FLUID production water DATE PREVIOUS SERVICE 1-17-94
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION monitor H₂S and total Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN	<u>6.4</u>	VOLUME	
TEMPERATURE	<u>4.3°C 39.7°F</u>	PH	<u>8.55</u>
H ₂ S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u>10</u>	MAGNESIUM	<u>160</u>
SULFATES	<u>510</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>14,000</u>	ALKALINITY	<u>0.38P 2.11 MF</u>
CHLORINE	<u>410</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>320</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>160</u>	APPEARANCE	<u>Good</u>
		CIRCULATION SYSTEM	

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY		MIXING SYSTEM	
RETORT ANALYSIS			
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-17-94
LOCATION NE Corner TIME 9:39a
TYPE FLUID production water DATE PREVIOUS SERVICE 1-14-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitor H₂S and total Sulphides on pond

WATER ANALYSIS

DISSOLVED OXYGEN	<u>5.7</u>	VOLUME	<u>8.05</u>
TEMPERATURE	<u>5.0°C</u>	PH	<u>8.05</u>
H ₂ S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u>5</u>	MAGNESIUM	<u>160</u>
SULFATES	<u><10</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>14,000</u>	ALKALINITY	<u>0.21 PF 2.33 ME</u>
CHLORINE	<u><1.0</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>280</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>120</u>	APPEARANCE	<u>(good)</u>
		CIRCULATION SYSTEM	

MUD ANALYSIS

PH		VOLUME	
WT		APPEARANCE	
FUNNEL VISCOSITY			
RETORT ANALYSIS		MIXING SYSTEM	
% WATER			
% OIL			
% SOLIDS			

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

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APR 10 1996
OIL CON. DIV.
DIST. 31

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
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CLIENT SERVICE REPORT

COMPANY SWCC Disposal

DATE 1-14-94

LOCATION NE corner

TIME 10:41A

TYPE FLUID production water

DATE PREVIOUS
SERVICE 1-12-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H₂S and total sulphides

WATER ANALYSIS

DISSOLVED OXYGEN 7.3
TEMPERATURE 3.4°C
H₂S 0
TOTAL SULFIDES 5
SULFATES 6.0
CHLORIDES 12,500
CHLORINE 61.0
TOTAL HARDNESS 320
CALCIUM 120

VOLUME _____
PH 8.10
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 200
BICARBONATE NA
ALKALINITY 0.1PF 2.4MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____

OIL CON. DIV.
APR 10 1996

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal

DATE 1-12-94

LOCATION SE Corner

TIME 9:42A

TYPE FLUID production water

DATE PREVIOUS
SERVICE 1-10-94

REPRESENTATIVE MIKE LEONARD

JOB DESCRIPTION monitor H_2S and total Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN 12.0
TEMPERATURE 5.7°C 42.3°F
 H_2S 6
TOTAL SULFIDES 10
SULFATES <10
CHLORIDES 12,250
CHLORINE <1
TOTAL HARDNESS 240
CALCIUM 100

VOLUME _____
PH 8.00
SPECIFIC GRAVITY/WT 1.015 / 8.454
MAGNESIUM 140
BICARBONATE NA
ALKALINITY 0.21F 2.7ME
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE _____
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
APR 10 1996
OIL CONT. DIV.
DIST. S.

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams

PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-10-94
LOCATION NE corner TIME 8:41A
TYPE FLUID production water DATE PREVIOUS SERVICE 1-7-94
REPRESENTATIVE MIKE LEONARD
JOB DESCRIPTION monitor H₂S and total sulphides on pump

WATER ANALYSIS

DISSOLVED OXYGEN	<u>12.5</u>	VOLUME	<u></u>
TEMPERATURE	<u>37°C 38.7°C</u>	PH	<u>8.05</u>
H ₂ S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u>2</u>	MAGNESIUM	<u>190</u>
SULFATES	<u><10</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>13,750</u>	ALKALINITY	<u>4.2 PE 2.25 ME</u>
CHLORINE	<u><1</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>300</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>110</u>	APPEARANCE	<u>Good</u>
		CIRCULATION SYSTEM	<u></u>

MUD ANALYSIS

PH	<u></u>	VOLUME	<u></u>
WT	<u></u>	APPEARANCE	<u>10/15/94 11:55 AM</u>
FUNNEL VISCOSITY	<u></u>	MIXING SYSTEM	<u>APR 10 1996</u>
RETORT ANALYSIS	<u></u>		<u>OIL CONL [unclear]</u>
% WATER	<u></u>		<u>DIST. 2</u>
% OIL	<u></u>		
% SOLIDS	<u></u>		

RECOMMENDATIONS

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401

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CLIENT SERVICE REPORT

COMPANY SUNCO DISPOSAL

DATE 1-7-94

LOCATION NB COLUMBIA POND

TIME 9:45

TYPE FLUID PRODUCTION WATER

DATE PREVIOUS
SERVICE 1-5-94

REPRESENTATIVE MIKE CROWLEY

JOB DESCRIPTION MONITOR H₂S & TOTAL SULFIDES

WATER ANALYSIS

DISSOLVED OXYGEN 7.4
TEMPERATURE 23.3°C / 36.1°F
H₂S 0
TOTAL SULFIDES 4
SULFATES <10
CHLORIDES 12800
CHLORINE 1.0
TOTAL HARDNESS 360
CALCIUM 136

VOLUME _____
PH 7.9
SPECIFIC GRAVITY/WT 1.015 / 8.45*
MAGNESIUM 224
BICARBONATE NA
ALKALINITY 0.09 M / 2.39 MP
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
% WATER _____
% OIL _____
% SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM _____
RECEIVED
APR 10 1994
OIL

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST [Signature]

PHONE 320-1363

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
(505) 325-0924

CLIENT SERVICE REPORT

COMPANY Sunco Disposal DATE 1-5-94
LOCATION NE corner TIME 8:30A
TYPE FLUID production water DATE PREVIOUS SERVICE _____
REPRESENTATIVE Mike Leonard
JOB DESCRIPTION Monitor H₂S and total Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN	<u>6.1</u>	VOLUME	_____
TEMPERATURE	<u>5.1°C 41.2°F</u>	PH	<u>8.05</u>
H ₂ S	<u>0</u>	SPECIFIC GRAVITY/WT	<u>1.015 / 8.454</u>
TOTAL SULFIDES	<u>2</u>	MAGNESIUM	<u>160</u>
SULFATES	<u><10</u>	BICARBONATE	<u>NA</u>
CHLORIDES	<u>13,000</u>	ALKALINITY	<u>6.22 PF 2.9 MF</u>
CHLORINE	<u><1.0</u>	DISSOLVED SOLIDS	<u>NA</u>
TOTAL HARDNESS	<u>280</u>	SUSPENDED SOLIDS	<u>NA</u>
CALCIUM	<u>120</u>	APPEARANCE	<u>Good</u>
		CIRCULATION SYSTEM	_____

MUD ANALYSIS

PH	_____	VOLUME	_____
WT	_____	APPEARANCE	<u>RECEIVED</u>
FUNNEL VISCOSITY	_____	MIXING SYSTEM	<u>APR 1 1994</u>
RETORT ANALYSIS	_____		<u>OIL</u>
% WATER	_____		_____
% OIL	_____		_____
% SOLIDS	_____		_____

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blair Williams PHONE 320-1911

TIERRA ENVIRONMENTAL CORPORATION

909 West Apache, Farmington, NM 87401
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CLIENT SERVICE REPORT

COMPANY Suncor Disposal

DATE 1-3-94

LOCATION NE Corner

TIME 8:43A

TYPE FLUID production water

DATE PREVIOUS
SERVICE 12-31-93

REPRESENTATIVE Mike Leavans

JOB DESCRIPTION Monitor H₂S and total Sulphides

WATER ANALYSIS

DISSOLVED OXYGEN 6.8
TEMPERATURE 5.0°C 41°F
H₂S 0
TOTAL SULFIDES 2
SULFATES <10
CHLORIDES 13,400
CHLORINE <1.5
TOTAL HARDNESS 360
CALCIUM 1100

VOLUME _____
PH 8.00
SPECIFIC GRAVITY/WT 1.015 / 18.454
MAGNESIUM 200
BICARBONATE NA
ALKALINITY 0.25 PF 2.25 MF
DISSOLVED SOLIDS NA
SUSPENDED SOLIDS NA
APPEARANCE Good
CIRCULATION SYSTEM _____

MUD ANALYSIS

PH _____
WT _____
FUNNEL VISCOSITY _____
RETORT ANALYSIS _____
 % WATER _____
 % OIL _____
 % SOLIDS _____

VOLUME _____
APPEARANCE _____
MIXING SYSTEM APR 1 11 1996
OIL CON. DIV.
DIST. #

RECOMMENDATIONS _____

TIERRA TECHNOLOGIST Blaine Williams PHONE 320-1911