NM1 - 15

### MONITORING REPORTS

YEAR(S):

1999-1996



P.O. Box 25547 • Albuquerque, New Mexico 87125 Phone (505) 247-4646 • Fax (505) 797-4874 5 County Road 6065 • Farmington, New Mexico 87401 (505)598-9626 • Fax (505) 598-9627

August 27, 1999

Ms. Martyne J. Kieling NM Energy, Mineral and Natural Resources Oil Conservation Division **Environmental Bureau** 2040 South Pacheco Street Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility:

**Quarterly Report - August 1999** 

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the August 1999 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

No soils were accepted into the facility for this past quarter, therefore, the soil log is not part of this report. One native soil sample was retrieved from each active treatment area, Cells 1, 2, 3 and 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table one (1). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted November, 1999. Please call me if you have any questions or require additional information.

Sincere

Daniele Berardelli

Rhino Environmental Services, Inc.

**Attachments** 

CC:

Ms. Donna Williams

OCD, District - 1

P.O. Box 1908

Hobbs, New Mexico 88241-1980

### **TABLE NO. 1 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020. The analytical results are summarized in Table No. 1.

TABLE NO. 1 Summary of Analytical Results from Native Soil Sampling							
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рH		
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10					
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10					
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	<10					
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	22					

Analyses for Cells 1, 2, 3 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

Although Cell 4 does demonstrate trace levels of TPH are present, the concentration of 22 mg/kg does not represent a number of concern and the contamination was more than likely due to careless collection procedures. However, Rhino has made a note of this and will continue to carefully monitor this cell.

### FIGURE No. 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.



Cell 1	x	Cell 2	x	Cell 3	Cell 4	x	Cell 5	
}								

X denotes sample collection location

Not to Scale

**APPENDIX A - ANALYTICAL RESULTS** 



August 24, 1999

Ms. Daniele Berardelli Rhino Env. - Farmington 5 CR 6065

Farmington, NM 87401

TEL: 800-499-8393

FAX: 505-392-9376

Work Order: 9908368 Project: GooYea 08/99

Dear Client:

Anachem, Inc. received 4 samples on 08/20/1999 for the analyses presented in the following report.

The samples were analyzed for the following tests:

BTEX by EPA 8021 - Solid Methanol Sample Container Charge TPH by EPA 418.1 - Solid

Respectfully Submitted, Anachem, Inc.

Howard H. Hayden, B.S.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned. The use of our name and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials.

9908368-01A To 9908368-04A

Page \_\_\_\_ Of \_5\_\_.

Date: 24-Aug-99

CI	IENT:
V.	A P & CLEAR

Rhino Env. - Farmington

Work Order:

9908368

Project:

GooYea 08/99

Analyses		Result	Limit	Units			Date Analyzed
Allalyses			- Exami	Cides			Date Analyzed
Lab ID:	9908368-01A	·					
Client Sample ID:	Cell 1 & 1-A		Collection	Date:	8/19/99		
Location:	Lea County, NM		Matrix:		SOIL		
9908368-01A	BTEX BY EPA 802	I - SOLID	<del></del>	Pı	ep Date	,	Analyst: AT
Benzene	5 1 Dt 5 1 Dt 7 100	ND	0.4	mg/Kg	op out		8/20/99
Toluene		ND	0.5	mg/Kg			8/20/99
Ethylbenzene		ND	0.5	mg/Kg			8/20/99
Xylenes, Total		ND	0.5	mg/Kg			8/20/99
9908368-01A	TPH BY EPA 418.1	- SOLID		Pi	rep Date	8/24/99	Analyst AT
Petroleum Hydrocar	bons, TR	ND	10	mg/Kg			8/24/99
Lab ID:	9908368-02A						11.
Client Sample ID:	,,		Collection	n Date:	8/19/99		
Location:	Lea County, NM		Matrix:		SOIL		
9908368-02A	BTEX BY EPA 802	1 - SOLID		Pi	rep Date		Analyst: A1
Benzene		ND	0.4	mg/Kg	•		8/20/99
Toluene		ND	0.5	mg/Kg			8/20/99
Ethylbenzene		ND	0.5	mg/Kg			8/20/99
Xylenes, Total		ND	0.5	mg/Kg			8/20/99
9908368-02A	TPH BY EPA 418.1	- SOLID		P	rep Date	8/24/99	Analyst: A1
Petroleum Hydrocar	bons, TR	ND	10	mg/Kg	•		8/24/99
Lab ID:	9908368-03A					<u> </u>	10 To harmon
Client Sample ID:			Collection	n Date:	8/19/99		
Location:	Lea County, NM		Matrix:		SOIL		
9908368-03A	BTEX BY EPA 802	1 - SOLID		P	rep Date		Analyst: A
Benzene		ND	0.4	mg/Kg			8/20/99
Toluene		ND	0.5	mg/Kg			8/20/99
Ethylbenzene		ND	0.5	mg/Kg			8/20/99
Xylenes, Total		ND	0.5	mg/Kg			8/20/99
9908368-03A	TPH BY EPA 418.1	- SOLID		P	rep Date	8/24/99	Analyst: A
Petroleum Hydrocai	bons, TR	ND	10	mg/Kg	•		8/24/99

Qualiflers:

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

Date: 24-Aug-99

CLIENT:

Rhino Euv. - Farmington

Work Order:

9908368

Project:

GooYca 08/99

Analyses		Result	Limit	Units		Date Analyzed
Lab ID:	9908368-04A					
Client Sample ID:	Cell 4 & 4-A		Collection	Date:	8/19/99	
Location:	Lea County, NM		Matrix:		SOIL	
9908368-04A	BTEX BY EPA 802	- SOLID		P	rep Date	Analyst: AT
Benzene		ND	0.4	mg/Kg	•	8/20/99
Toluene		ND	0.5	mg/Kg		8/20/99
Ethylbenzene		ND	0.5	mg/Kg		8/20/99
Xylenes, Total		ND	0.5	mg/Kg		6/20/99
9908 <b>3</b> 68-04A	TPH BY EPA 418.1	- SOLID		þ	rep Date 8/24/99	Analyst: AT
Petroleum Hydrocari	bons, TA	22	10	mg/Kg	•	8/24/99

Date: 24-Aug-99

QC SUMMARY REPORT

CLIENT:

Rhino Env. - Farmington

Work Order:

9908368

Project:

GooYea 08/99

TPH by EPA 418.1 - Solid Units: mg/Kg Analysis Date 8/24/99

Analyte SPK value REC 1 REC 2 LowLimit HighLimit %RPD RPDLimit

Petroleum Hydrocarbons, TR 146 150 2.7%

Date: 24-Aug-99

CLIENT:

Rhino Env. - Farmington

Work Order:

9908368

Project:

GooYea 08/99

QC	SUN	<b>MMA</b>	RY	RE	EPC	R	Τ
----	-----	------------	----	----	-----	---	---

BTEX by EPA 8021 - Solid			Units:	mg/Kg	Analysis Date 8/20/99		99
Analyte	SPK value	REC 1	REC 2	LowLimit	High <b>Limit</b>	%RPD	<b>RPDLimit</b>
Berizana	100	116.0%	110.0%	60%	140%	5.3%	30
Ethylbenzene	100	107.0%	107.0%	60%	140%	0.0%	30
Toluene	100	115.0%	108.0%	60%	140%	6.3%	30
Xylenes, Total	300	110.0%	108.0%	60%	140%	1.8%	30



### THE REPRODUCTION OF

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**FOLLOWING** 

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**CANNOT BE IMPROVED** 

**DUE TO** 

THE CONDITION OF

THE ORIGINAL

# Purchase Order/Chain Of Custody

Page \_\_\_of \_\_\_\_

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

GOC Seals Intact  Method of Shipment	Relinduished By     Date     Time     Received By     Date     Time     Sample Receipt Notes       Image: Control of the property	9. 10. 10.	COURT 1053 1/2055 1/205	(10113-A) /1012 (10113-A) /1012	2. Poll 1 R 1/04 1/03 1/08 1/08 1/08 1/08 1/08 1/08 1/08 1/08	2007 (3.1.1) Date/Time	City, State, Zip: FQ.1 $\cap_{\text{LL}} \cap_{\text{CL}} \cap$	Report To: Danie W. Boro ratifity  Company: My To: (Buyer) (Anima Cinjurania (Anthermore))  Address: S ( C ( C ( C ) C ) Address: PC ( B ) S S S 47
Submission #	in the event that Anachem determines that a sample is hazardous, the client agrees to:  Pay For Sample Disposal  Accept Returned Sample					TPIA BTE  Maritime Property of the Control of the C		Analysis

010 REV 5/97

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.



P.O. Box 25547 • Albuquerque, New Mexico 87125 Phone (505) 247-4646 • Fax (505) 797-4874 5 County Road 6065 • Farmington, New Mexico 87401 (505)598-9626 • Fax (505) 598-9627

May 25, 1999

Ms. Martyne J. Kieling NM Energy, Mineral and Natural Resources Oil Conservation Division Environmental Bureau 2040 South Pacheco Street Santa Fe, New Mexico 87505 Pb: (505) 827-7153

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility:

Quarterly Report - May 1999

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the May 1999 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

.IIN - 2 1999

e de la Managa

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

No soils were accepted into the facility for this past quarter, therefore, the soil log is not part of this report. One native soil sample was retrieved from each active treatment area, Cells 1, 2, 3 and 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table one (1). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted August, 1999. Please call me if you have any questions or require additional information.

Sincerely

Daniele Berardelli

Rhino Environmental Services, Inc.

**Attachments** 

CC:

Ms. Donna Williams

OCD, District - 1 P.O. Box 1908

Hobbs, New Mexico 88241-1980



### **TABLE NO. 1 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020. The analytical results are summarized in Table No. 1.

TABLE NO. 1 Summary of Analytical Results from Native Soil Sampling								
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН			
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10						
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10						
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	<10						
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10						

Analyses for Cells 1, 2, 3 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.



Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
	į			
d d				
x	x	x	×	
	^			

X denotes sample collection location

Not to Scale



**APPENDIX A - ANALYTICAL RESULTS** 



Customer Name: Date Received:

Rhino Env. - Farmington May 19, 1999 at 10:00:00

Date Reported: Submission #: May 24, 1999 9905000286

Project:

**GOOYEA 0299** 

SAMPLES The submission consisted of 4 samples with sample

I.D.'s shown in the attached data tables.

TESTS

The samples listed in the attached result pages were analyzed for:

\* BTEX (EPA 8021)

\* METHANOL SAMPLE CONTAINER PREP, NEW MEXICO

\* TPH (EPA 418.1)

Distribution Of Reports

1-Ms. Daniele Berardelli of Rhino Env. - Farmington Ph. 505-598-9626 Fax 505-598-9627

Respectfully Submitted, Anachem.Inc.

Howard H. Hayden, B.S.

Chemist

Submission #: 9905000286 lims

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page\_ 138724 to 138727

Client Name: Rhino Env. - Farmington

Submission #: 9905000286 Project Name: GOOYEA 0299 Report Date: 05/24/99

Client Sample #: CELL 1 & 1-A

138724 Order Type: Normal Matrix: Soil Methanol Vial,40z Glass Jar\Aqua Lid GOOYEA, LEA CO., NM Laboratory ID #: Sample Container: Sampling Location: Sampling Date:

05/17/99

BTEX (EPA 8021) Analyte	<u>Results(mg/kg)</u> <0.40	Detection Limit 0.40
Benzene Toluene	<0.50	0.50
Ethyl Benzene Xylenes	<0.50 <0.50	0.50 0.50

TPH (EPA 418.1)

TPH Prep Date: 05/19/99 **Detection Limit** Results(mg/kg) <u>Analyte</u> <10 10 Total Petroleum Hydrocarbons

Client Sample #: CELL 2 & 2-A

Laboratory ID #: Sample Container:

138725 Order Type: Normal Matrix: Soil Methanol Vial,402 Glass Jar\Aqua Lid GOOYEA, LEA CO., NM

Sampling Location: Sampling Date:

05/17/99

BTEX (EPA 8021) Results(mg/kg) Detection Limit **Analyte** 0.40 Benzene <0.40 0.50 < 0.50 Toluene < 0.50 0.50 Ethyl Benzene 0.50 < 0.50 **Xylenes** 

TPH (EPA 418.1)

TPH Prep Date: 05/19/99 Detection Limit Results(mg/kg) **Analyte** 10 <10 Total Petroleum Hydrocarbons

Client Sample #: CELL 3 & 3-A Laboratory ID #: 1387 Sample Container: Meth 138726 Order Type: Normal Matrix: Soil Methanol Vial,402 Glass Jar\Aqua Lid GOOYEA, LEA CO., NM

Sampling Location: Sampling Date:

05/17/99

BTEX (EPA 8021) Detection Limit Results(mg/kg) Analyte < 0.40 0.40 Benzene < 0.50 0.50 Toluene 0.50 < 0.50 Ethyl Benzene

TPH (EPA 418.1)

Xylenes

TPH Prep Date: 05/19/99 **Detection Limit** Analyte Results(mg/kg) 10 <10 Total Petroleum Hydrocarbons

<0.50

0.50

Client Name: Rhino Env. - Farmington Submission #: 9905000286 Project Name: GOOYEA 0299 Report Date: 05/24/99

Client Sample #: CELL 4 & 4-A
Laboratory ID #: 138727 Order Type: Normal Matrix: Soil
Sample Container: Methanol Vial, 402 Glass Jar\Aqua Lid
Sampling Location: GOOYEA, LEA CO., NM
Sampling Date: 05/17/99

BTEX (EPA 8021) Analyte Benzene Toluene Ethyl Benzene Xylenes	<u>Results(mg/kg)</u> <0.40 <0.50 <0.50 <0.50	<u>Detection Limit</u> 0.40 0.50 0.50 0.50
TPH (EPA 418.1) TPH Prep Date: 05/19/99 Analyte Total Petroleum Hydrocarbons	Results(mg/kg) <10	<u>Detection Limit</u> 10

Report To: Rhino Environmental

Anthony Taylor

TPH

Lab Number: 9905000286 Page <u>4</u> of <u>4</u>

Project: GOOYEA 0299

### QUALITY CONTROL DATA

<b>METHOD</b>	ANALYST		<u>MATRIX</u>	DATE EXTRACTED		DATE ANALYZED	
BTEX 8021	Anthony Tay	lor	Solid	5/19/99		5/19/99	
SPIKE COMPOUND	SPIKE AMOUNT	% REC _1	% REC _2	% REC QC LIMIT	<u>% VAR.</u>	% VAR QC LIMIT	
Benzene	100 ppb	111	117	80-120	5.1	20.0	
Toluene	100 ppb	103	110	80-120	6.4	20.0	
Ethyl Benzene	100 ppb	106	110	80-120	3.6	20.0	
Xylenes	300 ppb	103	108	80-120	4.6	20.0	

### **QUALITY CONTROL DATA**

TPH results are reported in parts per million (ppm) in solid.

		Value 1	Value 2	% Var.	
TPH:		136	134	1.5	
CONCEN	TRATION UNIT	'S: TPF	I - ppm		
DETECT	ON LIMITS:	TPF	I - 10		
ANALYST	<u>ANALYTE</u>	DATE EXT	RACTED	DATE ANALYZED	<u>.</u>

5/19/99

5/19/99

## Purchase Order/Chain Of Custody

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fat: 972-727-9686

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P.O. Box 25547 • Albuquerque, New Mexico 87125 5 County (505) 6687 • 4646 in Fext, (505) MC97c-487461 (505) 598-9626 • Fax (505) 598-9627

February 25, 1999

Ms. Martyne J. Kieling NM Energy, Mineral and Natural Resources Oil Conservation Division Environmental Bureau 2040 South Pacheco Street Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: <u>Goo-Yea</u> Landfarm Facility:

**Quarterly Report - February 1999** 

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the February 1999 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

No soils were accepted into the facility for this past quarter, therefore, the soil log is not part of this report. One native soil sample was retrieved from each active treatment area, Cells 1, 2, 3 and 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table one (1). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted May, 1999. Please call me if you have any questions or require additional information.

Sincere

Dániele Berardelli

Rhino Environmental Services. Inc.

**Attachments** 

CC: Ms. Donna Williams

OCD, District - 1 P.O. Box 1908

Hobbs, New Mexico 88241-1980



### **TABLE NO. 1 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020, RCRA Total Metals and General Chemistry. The analytical results are summarized in Table No. 1.

	Summary o	of Analytic	TABLE NO. 1 al Results from Nativ	ve Soil Sampling	
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	< 1.00 Arsenic 19.9 Barium < 0.12 Cadmium 1.28 Chromium 3.68 Lead < 2.00 Selenium < 1.00 Silver	48.0 Alkalinity, Total 58.6 Bicarbonate Ion 21.1 Calcium <1.0 Carbonate Ion 7.42 Chloride 13.9 Magnesium 0.025 Mercury 17.6 Potassium 22.6 Sodium 25.0 Sulfate	5.8
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	3.48 Arsenic 124 Barium < 0.12 Cadmium 0.72 Chromium < 1.48 Lead < 2.00 Selenium < 1.00 Silver	192 Alkalinity, Total 234 Bicarbonate Ion 93.6 Calcium <1.0 Carbonate Ion 4.16 Chloride 14.9 Magnesium <0.02 Mercury 7.02 Potassium 18.6 Sodium 74.6 Sulfate	7.7
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	<10	< 1.00 Arsenic 96.4 Barium < 0.12 Cadmium 1.68 Chromium < 1.48 Lead < 2.00 Selenium < 1.00 Silver	108 Alkalinity, Total 132 Bicarbonate Ion 103 Calcium <1.0 Carbonate Ion 2.15 Chloride 30.7 Magnesium <0.02 Mercury 7.74 Potassium 11.9 Sodium 16.3 Sulfate	7.7



	TABLE NO. 1, Continued Summary of Analytical Results from Native Soil Sampling										
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg ેડ	рН						
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	<1.00 Arsenic 8.84 Barium <0.12 Cadmium 2.12 Chromium 3.52 Lead <2.00 Selenium <1.00 Silver	132 Alkalinity, Total 160 Bicarbonate Ion 370 Calcium <1.0 Carbonate Ion 71.0 Chloride 184 Magnesium <0.02 Mercury 22.9 Potassium 352 Sodium 2020 Sulfate  130 144 32.7 6.6 31.7 3.74 32.7 3.74 3.74 3.74							

Analyses for Cells 1, 2, 3 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

9.0

### FIGURE No. 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.

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$\downarrow$
S

Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
	Ì			
x	x	x	x	

X denotes sample collection location

Not to Scale



**APPENDIX A - ANALYTICAL RESULTS** 



Customer Name: **Date Received:** 

Rhino Env. - Farmington February 3, 1999 at 10:00:00

Date Reported:

Submission #:

February 18, 1999 9902000070

**Project:** 

**GOOYEA 0299** 

**SAMPLES** The submission consisted of 4 samples with sample

I.D.'s shown in the attached data tables.

TESTS

1.

The samples listed in the attached result pages were analyzed for:

\* ALKALINITY, TOTAL (EPA 310.1)

\* BICARBONATE ION (EPA 310.1)

\* BTEX (EPA 8021)

\* CALCIUM/Ca (EPA 200.7)

\* CARBONATE ION (EPA 310.1)

\* CHLORIDE (EPA 300.0)

\* MAGNESIUM/Mg (EPA 200.7)

\* MERCURY DIGESTION (EPA 7470)

\* MERCURY/Hg BY COLD VAPOR (EPA 7471)

\* METHANOL SAMPLE CONTAINER PREP, NEW MEXICO

\* MICROWAVE DIGESTION (EPA 3015) LIQUID \* MICROWAVE DIGESTION (EPA 3051) SOLID

pH (EPA 150.1)

POTASSIUM/K (EPA 200.7)

\* SODIUM/Na (EPA 200.7) \* SULFATE (EPA 300.0)

\* TOTAL RCRA METALS (EPA 6010)

\* TPH (EPA 418.1)

Distribution Of Reports

1-Ms. Daniele Berardelli of Rhino Env. - Farmington Ph. 505-598-9626 Fax 505-598-9627

Submission #: 9902000070 lims

Respectfully Submitted, Anachem.Inc.

Howard H. Hayden, B.S. Chemist

C-51/1e C.E. Newton, Ph.D.

Chemist

Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page\_ 128863 to 128866

Client Name: Rhino Env. - Farmington Submission #: 9902000070
Project Name: GOOYEA 0299
Report Date: 02/18/99

Client Sample #: CELL 1 & 1-A

Laboratory ID #: 128863 Order Type: Normal Matrix: Soil
Sample Container: 4oz EPA Glass Jar\Aqua Lid,Methanol Jar
Sampling Location: DP 619, LEA COUNTY, NM
Sampling Date: 01/28/99

Temperature (Celcius):4

pH For Liquid

ALKALINITY, TOTAL (EPA 310.1) Analyte Total Alkalinity	Results(mg/kg) 48	<u>Detection Limit</u> 1.0
BICARBONATE ION (EPA 310.1) Analyte Bicarbonate, HCO3 (CaCO3)	Results(mg/kg) 58.6	<u>Detection Limit</u> 1.0
BTEX (EPA 8021) Analyte Benzene Toluene Ethyl Benzene Xylenes	Results(mg/kg) <0.40 <0.50 <0.50 <0.50	<u>Detection Limit</u> 0.40 0.50 0.50 0.50
CALCIUM/Ca (EPA 200.7) Analyte Calcium (for anion extract; total concentration: 1280 mg/kg)	Results(mg/kg) 21.1	Detection Limit 0.05
CARBONATE ION (EPA 310.1) Analyte Carbonate, CO3 (CaCO3)	Results(mg/kg) <1.0	Detection Limit 1.0
CHLORIDE (EPA 300.0) Analyte Chloride	Results(mg/kg) 7.42	Detection Limit 0.1
MAGNESIUM/Mg (EPA 200.7) Analyte Magnesium (for anion extract; total concentration: 916 mg/kg)	Results(mg/kg) 13.9	Detection Limit 1.5
MERCURY DIGESTION (EPA 7470) Mercury Digestion Date: 02/12/99  MERCURY/Hg BY COLD VAPOR (EPA 7471) Analyte Mercury	Results(mg/kg) <b>0.025</b>	<u>Detection Limit</u> 0.02
MICROWAVE DIGESTION (EPA 3015) LIQUID Microwave Digestion Date: 02/12/99  MICROWAVE DIGESTION (EPA 3051) SOLID Microwave Digestion Date: 02/12/99		
pH (EPA 150.1) Analyte	Results()	Detection Limit

**5.8** 

0.05

Client Name: Rhino Env. - Farmington Submission #: 9902000070
Project Name: GOOYEA 0299
Report Date: 02/18/99

ASSIUM/K (EPA 200.7)

rte
sium
nion extract; total concentration: 967 mg/kg

POTASSIUM/K (EPA 200.7) <u>Analyte</u> Results(mg/kg) **Detection Limit** Potassium 17.6 0.5 (for anion extract; total concentration: 967 mg/kg) SODIUM/Na (EPA 200.7) Analyte Results(mg/kg) **Detection Limit** Sodium 22.6 0.05 (for anion extract; total concentration: 40.4 mg/kg) SULFATE (EPA 300.0) Results(mg/kg) **Detection Limit** <u>Analyte</u> Sulfate 25.0 1.0 TOTAL RCRA METALS (EPA 6010) Results(mg/kg) **Detection Limit** Analyte Arsenic <1.00 1.00 Barium 19.9 0.12 Cadmium < 0.12 0.12 1.28 0.12 Chromium

 Barium
 19.9
 0.12

 Cadmium
 <0.12</td>
 0.12

 Chromium
 1.28
 0.12

 Lead
 3.68
 1.48

 Selenium
 <2.00</td>
 2.00

 Silver
 <1.00</td>
 1.00

 TPH (EPA 418.1)

 TPH Prep Date: 02/07/99

TPH Prep Date: 02/07/99

Analyte Results(mg/kg) Detection Limit

Total Petroleum Hydrocarbons <10 10

Client Sample #: CELL 2 & 2-A

Laboratory ID #: 128864 Order Type: Normal Matrix: Soil Sample Container: 40z EPA Glass Jar\Aqua Lid,Methanol Jar Sampling Location: DP 619, LEA COUNTY, NM

Sampling Location: Sampling Date : Temperature (Celcius):4

**Total Alkalinity** 

01/28/99

ALKALINITY, TOTAL (EPA 310.1)
Analyte Results(mg/kg) Detection Limit

192

BICARBONATE ION (EPA 310.1)

Analyte Results(mg/kg) Detection Limit
Bicarbonate, HCO3 (CaCO3)

234

1.0

**BTEX (EPA 8021)** Detection Limit Results(mg/kg) Analyte < 0.40 0.40 Benzene < 0.50 0.50 Toluene Ethyl Benzene < 0.50 0.50 < 0.50 0.50 **Xylenes** 

 CALCIUM/Ca (EPA 200.7)
 Results(mg/kg)
 Detection Limit

 Calcium
 93.6
 0.05

 (for anion extract; total concentration: 4620 mg/kg)
 93.6
 0.05

CARBONATE ION (EPA 310.1)

Analyte Results(mg/kg) Detection Limit
Carbonate, CO3 (CaCO3) <1.0 1.0

1.0

Client Name: Rhino Env. - Farmington Submission #: 9902000070

Project Name: GOOYEA 0299 Report Date: 02/18/99

CHLORIDE (EPA 300.0)

 Analyte
 Results(mg/kg)
 Detection Limit

 Chloride
 4.16
 0.1

MAGNESIUM/Mg (EPA 200.7)

Analyte Results(mg/kg) Detection Limit
Magnesium 14.9 1.5

(for anion extract; total concentration: 3660 mg/kg)

**MERCURY DIGESTION (EPA 7470)** 

Mercury Digestion Date: 02/12/99

MERCURY/Hg BY COLD VAPOR (EPA 7471)

 $\begin{array}{c|cccc} \underline{\textbf{Analyte}} & \underline{\textbf{Results(mg/kg)}} & \underline{\textbf{Detection Limit}} \\ \underline{\textbf{Mercury}} & <0.02 & 0.02 \end{array}$ 

MICROWAVE DIGESTION (EPA 3015) LIQUID

Microwave Digestion Date: 02/12/99

MICROWAVE DIGESTION (EPA 3051) SOLID

Microwave Digestion Date: 02/12/99

pH (EPA 150.1)

Analyte Results(---) Detection Limit
pH For Liquid 7.7 0.05

POTASSIUM/K (EPA 200.7)

 Analyte
 Results(mg/kg)
 Detection Limit

 Potassium
 7.02
 0.5

(for anion extract; total concentration: 1510 mg/kg)

SODIUM/Na (EPA 200.7)

Analyte Results(mg/kg) Detection Limit
Sodium 18.6 0.05

(for anion extract; total concentration: 225 mg/kg)

SULFATE (EPA 300.0)

Analyte Results(mg/kg) Detection Limit
Sulfate 74.6 1.0

TOTAL RCRA METALS (EPA 6010)

<u>Analyte</u> Results(mg/kg) **Detection Limit** Arsenic 3.48 1.00 Barium 124 0.12 Cadmium < 0.12 0.12 Chromium 0.720 0.12 Lead 1.48 <1.48 Selenium < 2.00 2.00 Silver <1.00 1.00

TPH (EPA 418.1)

TPH Prep Date: 02/07/99

Analyte Results(mg/kg) Detection Limit

Total Petroleum Hydrocarbons <10 10

Client Name: Rhino Env. - Farmington Submission #: 9902000070 Project Name: GOOYEA 0299 Report Date: 02/18/99

Client Sample #: CELL 3 & 3-A

Laboratory ID #: 128865 Order Type: Normal Matrix: Soil
Sample Container: 4oz EPA Glass Jar\Aqua Lid,Methanol Jar
Sampling Location: DP 619, LEA COUNTY, NM
Sampling Date: 01/28/99

Temperature (Celcius):4

ALKALINITY, TOTAL (EPA 310.1)	4.5	
Analyte	Results(mg/kg)	Detection Limit
Total Alkalinity	108	1.0
BICARBONATE ION (EPA 310.1)	T) 1/ (1)	D T
Analyte	Results(mg/kg)	Detection Limit
Bicarbonate, HCO3 (CaCO3)	132	1.0
BTEX (EPA 8021)		
Analyte	Results(mg/kg)	Detection Limit
Benzene	<0.40	0.40
Toluene	<0.50	0.50
Ethyl Benzene	<0.50	0.50
Xylenes	<0.50	0.50
Trylonos	10.00	0.00
CALCIUM/Ca (EPA 200.7)		
<u>Analyte</u>	Results(mg/kg)	<u>Detection Limit</u>
Calcium	103	0.05
(for anion extract; total concentration: 3970 mg/kg)		
CARBONATE ION (EPA 310.1)		T
Analyte	Results(mg/kg)	Detection Limit
Carbonate, CO3 (CaCO3)	<1.0	1.0
CHLORIDE (EPA 300.0)		
Analyte	Results(mg/kg)	Detection Limit
	2.15	0.1
Chloride	2.15	0.1
MAGNESIUMIMg (EPA 200.7)		
Analyte	Results(mg/kg)	Detection Limit
Magnesium	30.7	1.5
(for anion extract; total concentration: 4600 mg/kg)	50	1.0
,		
MERCURY DIGESTION (EPA 7470)		
Mercury Digestion Date: 02/12/99		
MERCURY/Hg BY COLD VAPOR (EPA 7471)	D 11 ( / /	Details The
Analyte	Results(mg/kg)	Detection Limit
Mercury	< 0.02	0.02
MICROWAVE DIGESTION (EPA 3015) LIQUID		
Microwave Digestion Date: 02/12/99		
Microwave Digestion Date. On 12100		
MICROWAVE DIGESTION (EPA 3051) SOLID		
Microwave Digestion Date: 02/12/99		
-		
pH (EPA 150.1)	<b>.</b>	
Analyte	$\frac{\text{Results}()}{\text{constant}}$	<u>Detection Limit</u>
pH For Liquid	7.7	0.05

Client Name: Rhino Env. - Farmington **Submission #:** 9902000070 Project Name: GOOYEA 0299 **Report Date: 02/18/99** 

POTASSIUM/K (EPA 200.7) **Detection Limit** <u>Analyte</u> Results(mg/kg) Potassium 7.74 0.5 (for anion extract; total concentration: 2580 mg/kg) SODIUM/Na (EPA 200.7) Analyte Results(mg/kg) Detection Limit Sodium 0.05 11.9 (for anion extract; total concentration: 147 mg/kg) SULFATE (EPA 300.0)  $\frac{Results(mg/kg)}{}$ **Detection Limit** Analyte\_ Sulfate 16.3 1.0 TOTAL RCRA METALS (EPA 6010) **Detection Limit** Results(mg/kg) Analyte\_ <1.00 1.00 Arsenic 96.4 0.12 Barium < 0.12 0.12 Cadmium 0.12 Chromium 1.68 Lead <1.48 1.48 < 2.00 2.00 Selenium <1.00 1.00 Silver

TPH (EPA 418.1) TPH Prep Date: 02/07/99 Results(mg/kg) **Detection Limit** <u>Analyte</u>

Total Petroleum Hydrocarbons <10 Client Sample #: CELL 4 & 4-A 128866 Order Type: Normal Matrix: Soil Laboratory ID #:

Sample Container: Sampling Location: 40z EPA Glass Jar\Aqua Lid,Methanol Jar DP 619, LEA COUNTY, NM

Sampling Date:

01/28/99

Temperature (Celcius):4

ALKALINITY, TOTAL (EPA 310.1) Results(mg/kg) **Detection Limit** Analyte\_ **Total Alkalinity** 132 1.0

**BICARBONATE ION (EPA 310.1)** Results(mg/kg) **Detection Limit** <u>Analyte</u> Bicarbonate, HCO3 (CaCO3) 160

BTEX (EPA 8021) Detection Limit Analyte\_ Results(mg/kg) < 0.40 0.40 Benzene < 0.50 0.50 Toluene < 0.50 0.50 Ethyl Benzene < 0.50 0.50 Xylenes

CALCIUM/Ca (EPA 200.7) **Analyte** Results(mg/kg) **Detection Limit** Calcium 370 0.05 (for anion extract; total concentration: 5600 mg/kg)

CARBONATE ION (EPA 310.1) **Detection Limit** Results(mg/kg) Analyte\_ Carbonate, CO3 (CaCO3) <1.0 1.0

10

1.0

Client Name: Rhino Env. - Farmington Submission #: 9902000070

Project Name: GOOYEA 0299 Report Date: 02/18/99

CHLORIDE (EPA 300.0)

 Analyte
 Results(mg/kg)
 Detection Limit

 Chloride
 71
 0.1

MAGNESIUM/Mg (EPA 200.7)

Analyte Results(mg/kg) Detection Limit
Magnesium 184 1.5

(for anion extract; total concentration: 2750 mg/kg)

**MERCURY DIGESTION (EPA 7470)** 

Mercury Digestion Date: 02/12/99

MERCURY/Hg BY COLD VAPOR (EPA 7471)

 $\begin{array}{c|ccccc} \underline{Analyte} & \underline{Results(mg/kg)} & \underline{Detection\ Limit} \\ Mercury & <0.02 & 0.02 \end{array}$ 

MICROWAVE DIGESTION (EPA 3015) LIQUID

Microwave Digestion Date: 02/12/99

**MICROWAVE DIGESTION (EPA 3051) SOLID** 

Microwave Digestion Date: 02/12/99

pH (EPA 150.1)

Analyte Results(----) Detection Limit
pH For Liquid 7.0 0.05

POTASSIUM/K (EPA 200.7)

Analyte Results(mg/kg) Detection Limit
Potassium 22.9 0.5

(for anion extract; total concentration: 1770 mg/kg)

SODIUM/Na (EPA 200.7)

Analyte Results(mg/kg) Detection Limit
Sodium 352 0.05

(for anion extract; total concentration: 784 mg/kg)

SULFATE (EPA 300.0)

Analyte Results(mg/kg) Detection Limit
Sulfate 2020 1.0

TOTAL RCRA METALS (EPA 6010)

**Analyte** Results(mg/kg) Detection Limit Arsenic <1.00 1.00 Barium 8.84 0.12 Cadmium < 0.12 0.12 Chromium 0.12 2.12 Lead 3.52 1.48 Selenium 2.00 <2.00 Silver <1.00 1.00

TPH (EPA 418.1)

TPH Prep Date: 02/07/99

Analyte Results(mg/kg) Detection Limit
Total Petroleum Hydrocarbons <10 10

Report To: Rhino Environmental

Lab Number: 9902000070

Page 8 of 8

Project: GooYea 0299

### **QUALITY CONTROL DATA**

<u>METHOD</u>	ANALYST		MATE	<u>RIX</u>	DATE	EXTRACTE	<u>)</u>	DATE	ANALYZED
BTEX 8021	Anthony Tay	vlor	Solid		2/4/99				2/4/99
SPIKE COMPOUND	SPIKE <u>AMOUNT</u>	% RE _1	С	% RE _2	С	% REC QC LIMIT	% VAI	<u>R.</u>	% VAR QC <u>LIMIT</u>
Benzene	100 ppb	87.8		94.0		80-120	6.5		20.0
Toluene	100 ppb	90.7		90.1		80-120	0.66		20.0
Ethyl Benzene	100 ppb	89.4		98.1		80-120	8.8		20.0
Xylenes	300 ppb	83.9		82.8		80-120	1.3		20.0

### **QUALITY CONTROL DATA**

TPH results are reported in parts per million (ppm) in solid.

Value 1 Value 2 % Var.

TPH: 132 130 1.5

CONCENTRATION UNITS: TPH - ppm DETECTION LIMITS: TPH - 10

ANALYST Anthony Taylor TPH DATE EXTRACTED DATE ANALYZED 2/7/99 2/7/99

### **QUALITY CONTROL DATA**

ANALYTE	DATE <u>ANALYZED</u>	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF <u>VAR %</u>	REC1/%	REC2/%
Total Alkalinity	2/15/99		7.1	3.0	92	96
Chloride	2/8/99		0.231	1.7	111	107.4
Mercury	2/15/99		0.048	25.5	114	84
Sulfate	2/8/99		1.06	3.2	91.8	96
Silver	2/14/99	4.0	0.098	2.0	98.9	101.7
Arsenic	2/14/99	4.0	0.040	0.8	98.7	99.9
Chromium	2/14/99	4.0	0.057	1.2	90.3	91.9
Lead	2/14/99	4.0	0.029	0.5	96.7	97.5
Selenium	2/14/99	4.0	0.042	0.8	105.5	106.6
Barium	2/14/99	4.0	0.058	0.7	80.8	79.2
Cadmium	2/14/99	4.0	0.064	1.3	99.9	101.7

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100 Page ∠of ↓.

Purchase Order/Chain Of Custody

Fax: 972-727-9686 Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003

In the event that Anachem determines that a sample is hazardous, the client agrees to:
Pay For Sample Disposal 9902-70 Analysis Accept Returned Sample X X Submission # X X X X "The March 19me Have 19/nothanol Mothand 700 Sample Notes Phone: SOSONTY 64 6 Fax: 797-4874 g ଅ ā ) ક Sample Receipt Notes Method of Shipment City, State, Zip: A 16., NM 8719S Preserved Properly COC Seals Intact Courses, Non Temperature Date/Time Address: P.O. BOX DSSY7 Quote #: Bill To: (Buyer) (1/2/1000) 10:00 Time Purchase Order #: ||SE Sonl Matrix City, State: Laa Date Sampled By: 100% City, State, Ziptanminofon, (UM 8740) -9627 Received By 20% Report To: Days ale Secondal Is Rush: (0%) 25% Project Name: GOOYEQ, OQ99 Time L Cell 2-A 8. Cell 4-12 2. Coll 1-A -3 المح) 6 Phone SS SR-962 (Fax: Client Sample ID 5. Coll 3 7. Cell 4 3. Cell 2 Address: S CR 6008 Date 20 Project Location: GOD YRA اع اعا Company: (Chico <u>ö</u> Relinquished Bro 478821 128865 28873 ,2*886*/<sub>6</sub> Date Due: Lab#

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

010 REV 5/97



P.O. Box 25547 • Albuquerque, New Mexico 87125 Phone (505) 247-4646 • Fax (505) 797-4874 5 County Road 6065 • Farmington, New Mexico 87401 (505)598-9626 • Fax (505) 598-9627

**December 14, 1998** 

Ms. Martyne J. Kieling NM Energy, Mineral and Natural Resources Oil Conservation Division Environmental Bureau 2040 South Pacheco Street Santa Fe, New Mexico 87505 Ph: (505) 827-7153

Fx: (505) 827-8177

Goo-Yea Landfarm Facility: Re:

**Quarterly Report - November 1998** 

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the November 1998 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

No soils were accepted into the facility for this past quarter, therefore, the soil log is not part of this report. One native soil sample was retrieved from each active treatment area, Cells 1, 2, 3 and 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted February, 1999. Rhino apologizes for the tardiness of this report. Please don't hesitate to call if you have any questions or require additional information.

Daniele Berardelli

Rhino Environmental Services, Inc.

**Attachments** 

Stylvor mental Bureau Officers in a fire situation

### **TABLE 1 - SOIL AND WATER LOG**

# DISCHARGE PLAN DP-619 QUARTERLY REPORT November 1998

### Soil accepted from August 1, 1998 to October 31, 1998

A total of 84 cubic yards (cy) of soil were received during this quarter. A list of these soils are shown in the table below. All soils were disced on a regular basis.

### TABLE NO. 1

DATE	VOLUME	SOURCE	TYPE	SECTION
8/14/98	84 cy	Sierra Well Service 2726 Lovington Hwy. Hobbs, NM	Oilfield/ Non-Exempt	Cell 3

### **TABLE NO. 2 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020. The analytical results are summarized in Table No. 1.

TABLE NO. 1 Summary of An	alytical Results from Native Soil Sampl	ing	
Sample ID	BTEX mg/kg	TPH mg/kg	
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	

Analyses for Cells 1, 2, 3 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

### FIGURE No. 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.



Cell 1	Cell 2	Cell 3	Cell 4	Cell 5

X denotes sample collection location

Not to Scale



**APPENDIX A - ANALYTICAL RESULTS** 



**Customer Name:** 

Rhino Env. - Farmington

Date Received:

December 1, 1998 at 10:00:00 December 7, 1998

Date Reported:

Submission #:

9812000007

Project:

**GOOYEA - 1198** 

**SAMPLES** The submission consisted of 4 samples with sample

I.D.'s shown in the attached data tables.

TESTS

The samples listed in the attached result pages were analyzed for:

\* BTEX (EPA 8021)

\* METHANOL SAMPLE CONTAINER PREP, NEW MEXICO

\* TPH (EPA 418.1)

\* TS-TOTAL SOLIDS (EPA 160.3)

Distribution Of Reports

Submission #: 9812000007 lims

122744 to 122747

1-Ms. Daniele Berardelli of Rhino Env. - Farmington Ph. 505-598-9626 Fax 505-598-9627

Respectfully Submitted, Anachem, Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page / of

Client Name: Rhino Env. - Farmington

**Submission #:** 9812000007 Project Name: GOOYEA - 1198

**Report Date: 12/07/98** 

Client Sample #: CELL 1 01 & 02

Laboratory ID #: Sample Container: 122744 Order Type: Normal Matrix: Soil Methanol Jar,4oz EPA Glass Jar\White lid

Sampling Location:

LEA COUNTY, NEW MEXICO

Sampling Date:

11/29/98

BTEX	(EPA	2021)
HILLA		$\alpha u_{z}$

Analyte Results(n	ng/kg) Detection Limit
Benzene <0.	.40 0.40
Toluene <0.	.50 0.50
Ethyl Benzene <0.	.50 0.50
Xylenes <0.	.50 0.50

TPH (EPA 418.1)

TPH Prep Date: 12/07/98

<u>Analyte</u> Total Petroleum Hydrocarbons Results(mg/kg) <10

<u>Detection Limit</u> 10

TS-TOTAL SOLIDS (EPA 160.3)

<u>Analyte</u> **Total Solids**  Results(%) 89.8

**Detection Limit** 

MOISTURE = 10.2%

Client Sample #: CELL 2 01 & 02

Laboratory ID #: Sample Container:

122745 Order Type: Normal Matrix: Soil Methanol Jar, 40z EPA Glass Jar\White lid

Sampling Location:

LEA COUNTY, NEW MEXICO

Sampling Date:

11/29/98

BTEX (EPA 8021)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	<0.50	0.50

TPH (EPA 418.1)

TPH Prep Date: 12/07/98

**Detection Limit** Analyte Results(mg/kg) Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

Analyte Results(%) **Detection Limit Total Solids** 91.2 MOISTURE = 8.8%

Client Sample #: CELL 3 01 & 02

Laboratory ID #: Sample Container:

122746 Order Type: Normal Matrix: Soil Methanol Jar,40z EPA Glass Jar\White lid LEA COUNTY, NEW MEXICO

Sampling Location: Sampling Date:

11/29/98

DOTTE CODA COCA

BTEX (EPA 8021)		
Analyte	Results(mg/kg)	Detection Limit
Benzene	< 0.40	0.40
Toluene .	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Name: Rhino Env. - Farmington

Submission #: 9812000007 Project Name: GOOYEA - 1198 Report Date: 12/07/98

TPH (EPA 418.1)

TPH Prep Date: 12/07/98

**Analyte** Results(mg/kg) **Detection Limit** Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

Results(%) **Detection Limit** Analyte 88.4

**Total Solids** MOISTURE = 11.6%

Client Sample #: CELL 4 01 & 02

122747 Order Type: Normal Matrix: Soil Methanol Jar,40z EPA Glass Jar\White lid Laboratory ID #: Sample Container:

Sampling Location: LEA COUNTY, NEW MEXICO

Sampling Date: 11/29/98

BTEX (EPA 8021)

Analyte Results(mg/kg) Detection Limit Benzene < 0.40 0.400.50 Toluene < 0.50 Ethyl Benzene < 0.50 0.50 < 0.50 0.50 **Xylenes** 

TPH (EPA 418.1)

TPH Prep Date: 12/07/98 Detection Limit

<u>Analyte</u> Results(mg/kg) Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

Results(%) **Detection Limit** Analyte

90.6 **Total Solids** MOISTURE = 9.4%

Report To: Rhino Environmental Services

Lab Number: 9812000007

Page 4 of 4

Project: Gooyea-1198

### **QUALITY CONTROL DATA**

ANALYTE	DATE ANALYZED	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF <u>VAR %</u>	REC1/%	REC2/%
Total Solids	12/1/98		±0.212	0.23		

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100

### **QUALITY CONTROL DATA**

### TPH results are reported in parts per million (ppm) in solid.

Value 1 Value 2 % Var.

TPH: 116 120 3.3

CONCENTRATION UNITS: TPH - ppm

DETECTION LIMITS: TPH - 10

LYST ANALYTE DATE EXTRACTED DATE ANALYZED

ANALYST ANALYTE DATE EXTRACTED DATE ANALY
Anthony Taylor TPH 12/7/98 12/7/98

### **QUALITY CONTROL DATA**

<u>METHOD</u>	ANALYST		MATRIX	DATE EXTRAC	TED DATE	ANALYZED
BTEX 8021	Anthony Tay	lor	Solid	12/2/98	12/2/98	
SPIKE COMPOUND	SPIKE AMOUNT	% REC	% RE	CC % REC 6	QC <u>% VAR.</u>	% VAR QC <u>LIMIT</u>
Benzene	100 ppb	114	113	80-120	0.8	20.0
Toluene	100 ppb	124	121	80-120	2.4	20.0
Ethyl Benzene	100 ppb	113	111	80-120	1.7	20.0
Xylenes	300 ppb	122	122	80-120	0.0	20.0

Page / of /.

Purchase Order/Chain Of Custody

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

+		1	Delinia D	LATINDA (WATA)		Analycic
Keport 10: DAN /E	KERDOIL 10: DAN/ELE BERARDELL	Bill 10: (Buyer)	- [	100000000000000000000000000000000000000		CIC(IBIT)
Company: RHIND	Company: RHIND ENVIRONMENTAL SEPVICES	Purchase Order #:				7755
Address: 5 C.		Address: 7.0,	7.0.BOX 25547	11		V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
City, State, Zip: 174	City, State, Zip: PAZMINGTON, NM 8740/	City, State, Zip:	REDOUGH	ABOQUESONE, NM		₩ <del> </del>
Phone: BOC-494	Phone: 800-499-8393 Fax (505)598-9627	Phone: 800-74	120-292-008	Fax: (205) 797-4	77-4874	020
Project Name: $C_{\mathcal{O}}$	Project Name: GOO YEA - 1198		-	Quote #:		
Project Location: LEA	COONTY	City, State: NM			7.J.	- Y: ≆01
Date Due:		Sampled By:	ALLEN	HODGE		315 315 810 815 810 810 810 810 810 810 810 810 810 810
Lab#	Client Sample ID		Matrix	Date/Time	Sample Notes	W H
122744	1. CELL 1-6.1		Soil	11/24/98@ 8:30	108	×
*	2. CELL 1-0Z			0000080156111	METHANOL	×
122745	3. (ELL 2-01			11/25/08 @ 9.56/11	ILË	<i>&gt;</i>
4	4. CELL 2-02			11/34/RC9.30	MERRINOL	×
9/1221	5. CELL 3-01			05:60 85/50/11	166	×
<b>&gt;</b>	6. CELL 3-02			11/2/48 0, 10:00	METHANOL	×
122347	7. CELL 4-01			11/29/98 @ 10:30	100	× ×
7	8. CELL 4-02		·	11-29-48/10:30	METHANOL	K
	9. Cetter				*,	
	10.					
Relinquished By	Date Time Received By	Date	Time	Sample Receipt Notes	tes	In the event that Anachem determines that a
AM H	MASS 16:00 Mad 7.	hombiel 12/1	98 10:00	Temperature	, .	Pay For Sample Disposal
				Preserved Properly		Accept Retailled Sample
			,	COC Seals Intact		
				Method of Shipment	Į.	
						2/8/2-01
010 BEV 5/07						

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

010 REV 5/97



P.O. Box 25547 • Albuquerque, New Mexico 87125 (505) 247-4646 • Fax (505) 797-4874 5 County Road 6065 • Farmington, New Mexico 87401 (505)598-9626 • Fax (505) 598-9627

June 25, 1998

Ms. Martyne J. Kieling
NM Energy, Mineral and Natural Resources
Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505
Ph: (505) 827-7153

Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility: Quarterly Report - May 1998

Dear Ms. Kieling:

# RECEIVED

JUL 01 1998

Environmental Bureau
Oil Conservation Division

Rhino Environmental Services, Inc. (Rhino) would like to apologize for the tardiness of this report. As can be read on Anachem's cover sheet, samples were submitted to the laboratory on May 20, 1998, however, results were not reported until June 23, 1998.

In accordance with the conditions set forth in the permit, enclosed please find the February 1998 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

No soils were accepted into the facility for this past quarter, therefore, the soil log is not part of this report. One native soil sample was retrieved from each active treatment area, Cells 1, 2, 3 and 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted August, 1998. Please don't hesitate to call if you have any questions or require additional information.

Sincereld

Dánielé Berardelli

Rhino Environmental Services, Inc.

Attachments

CC:

Mr. Wayne Price OCD, District - 1 P.O. Box 1908

Hobbs, New Mexico 88241-1980

PALLY KA



### **TABLE NO. 1 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020, RCRA Total Metals and General Chemistry. The analytical results are summarized in Table No. 1.

	Summary o	of Analytic	TABLE NO. 1 al Results from Nativ	ve Soil Sampling	
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рH
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	< 3.05 Arsenic 24.0 Barium < 0.35 Cadmium 4.0 Chromium 3.5 Lead < 2.50 Selenium < 1.50 Silver	25.0 Alkalinity, Total 25.0 Bicarbonate Alkalinity 30.5 Bicarbonate Ion 47.9 Calcium <1.0 Carbonate Ion 1.06 Chloride 4.10 Magnesium <0.02 Mercury 8.30 Potassium 8.0 Sodium <0.1 Sulfate	7.9
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	< 0.61 Arsenic 20.0 Barium < 0.07 Cadmium 3.5 Chromium 3.2 Lead < 0.50 Selenium < 0.30 Silver	40.0 Alkalinity, Total 40.0 Bicarbonate Alkalinity 48.8 Bicarbonate Ion 20.3 Calcium <1.0 Carbonate Ion 1.05 Chloride <1.5 Magnesium <0.02 Mercury 5.50 Potassium 6.80 Sodium 1.45 Sulfate	7.8
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	?? 36	< 0.61 Arsenic 19.0 Barium < 0.07 Cadmium 3.4 Chromium 2.6 Lead < 0.50 Selenium < 0.30 Silver	25.0 Alkalinity, Total 25.0 Bicarbonate Alkalinity 30.5 Bicarbonate Ion 29.4 Calcium <1.0 Carbonate Ion 0.49 Chloride <1.5 Magnesium <0.02 Mercury 5.00 Potassium 8.4 Sodium <1.0 Sulfate	7.9



	Summary o		LE NO. 1, Continued al Results from Nati		1
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	< 0.615 Arsenic 50.0 Barium 0.07 Cadmium 5.0 Chromium 5.0 Lead 0.50 Selenium < 0.30 Silver	45.0 Alkalinity, Total 45.0 Bicarbonate Alkalinity 54.9 Bicarbonate Ion 52.5 Calcium <1.0 Carbonate Ion 89.6 Chloride 24.0 Magnesium <0.02 Mercury 28.1 Potassium 70.8 Sodium 8.70 Sulfate	8.0

Analyses for Cells 1, 2 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

\*Cell 3 results report trace amount of TPH. Rhino believes this is most likely due to contamination during sample collection. High winds were experienced probably causing a bit of cross contamination to occur. Upon request by the OCD, Rhino will re-sample Cell 3 for TPH analysis.



**APPENDIX A - ANALYTICAL RESULTS** 



## ANACHEM INC.

PECEIVED

JUL 17 1998

Martyne, Background 2.2.

8 Prestige Circle, Suite 104 Allen, Texas 75002 972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

**Customer Name:** Rhino Env. - Farmington **Date Received:** May 20, 1998 at 09:00:00

**Date Reported:** June 23, 1998 Submission #: 9805000278 Project: GY QTR - 0598

Here are the original results for the quarterly sampling (5/48).

Totals

**SAMPLES** The submission consisted of 8 samples with sar

I.D.'s shown in the attached data tables.

Also Thanks very much for all your help with the new permit.

Daniele

**TESTS** 

The samples listed in the attached result pages.

\* ALKALINITY, TOTAL (EPA 310.1)

- \* BICARBONATE ALKALINITY (EPA 310.1)
- \* BICARBONATE ION (EPA 310.1)
- \* BTEX (EPA 8020)
- \* CALCIUM/Ca (EPA 200.7)
- \* CARBONATE ION (EPA 310.1)
- \* CHLORIDE (EPA 300.0)
- \* MAGNESIUM/Mg (EPA 200.7)
- \* MERCURY DIGESTION (EPA 7470)
- \* MERCURY/Hg BY COLD VAPOR (EPA 7471)
- \* MICROWAVE DIGESTION (EPA 3051) SOLID
- pH (EPA 150.1)
- \* POTASSIUM/K (EPA 200.7)
- \* SODIUM/Na (EPA 200.7)
- \* SULFATE (EPA 300.0)
- \* TOTAL RCRA METALS (EPA 6010)
- \* TPH (EPA 418.1)

**Distribution Of Reports** 

Submission #: 9805000278 lims

1-Ms. Daniele Berardelli of Rhino Env. - Farmington Ph. 505-598-9626 Fax 505-598-9627

15 under FPA Cimit

Respectfully Submitted, Anachem,Inc.

Howard H. Hayden, B.S. Chemist

C.E. Newton, Ph.D.

C510

Chemist

Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials.

Page

Client Name: Rhino Env. - Farmington

**Submission #:** 9805000278 Project Name: GY QTR - 0598

**Report Date: 06/23/98** 

Client Sample #: CELL 1-A

Laboratory ID #: Sample Container: 106363 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid

Sampling Location: Sampling Date:

LEA COUNTY, NM 05/17/98

Temperature (Celcius):4

ALKALINITY, TOTAL (EPA 310.1) Analyte Total Alkalinity	Results(mg/kg) 25	Detection Limit 1.0
BICARBONATE ALKALINITY (EPA 310.1) Analyte Bicarbonate Alkalinity	Results(mg/kg) 25	Detection Limit 1.0
BICARBONATE ION (EPA 310.1) Analyte Bicarbonate, HCO3 (CaCO3)	Results(mg/kg) 30.5	Detection Limit 1.0

CALCIUM/Ca (EPA 200.7)

Results(mg/kg) **Detection Limit** <u>Analyte</u> 47.9 0.05 (for anion extract; total concentration = 11200mg/kg)

CARBONATE ION (EPA 310.1)

Results(mg/kg) **Detection Limit** Analyte Carbonate, CO3 (CaCO3) <1.0 1.0

CHLORIDE (EPA 300.0)

Results(mg/kg) **Detection Limit** <u>Analyte</u> Chloride 1.06 0.1

MAGNESIUM/Mg (EPA 200.7)

Results(mg/kg) Detection Limit <u>Analyte</u> Magnesium 4.1 1.5 (for anion extract; total concentration = 463mg/kg)

**MERCURY DIGESTION (EPA 7470)** 

Mercury Digestion Date: 05/20/98

MERCURY/Hg BY COLD VAPOR (EPA 7471) Results(mg/kg) **Detection Limit** <u>Analyte</u> 0.02Mercury < 0.02

MICROWAVE DIGESTION (EPA 3051) SOLID

Microwave Digestion Date: 05/20/98

pH (EPA 150.1) **Analyte** Results(----) Detection Limit 0.05 pH For Liquid 7.9

POTASSIUM/K (EPA 200.7)

Results(mg/kg) Detection Limit <u>Analyte</u> Potassium 8.3 0.5

(for anion extract; total concentration = 485mg/kg)

SODIUM/Na (EPA 200.7) Analyte Results(mg/kg) <u>Detection Limit</u> 8.0 0.05 Sodium (for anion extract; total concentration = 125mg/kg)

Client Name: Rhino Env. - Farmington

Submission #: 9805000278 Project Name: GY QTR - 0598

Report Date: 06/23/98

<u>Analyte</u>	$\frac{\text{Results}(\text{mg/kg})}{\text{kg}}$	Detection Limit
Sulfate	<0.1	0.1

### TOTAL RCRA METALS (EPA 6010)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Arsenic	< 3.05	3.05
Barium	24.0	0.05
Cadmium	< 0.35	0.35
Chromium	4.0	0.375
Lead	<b>3.5</b>	2.00
Selenium	< 2.50	2.50
Silver	<1.50	1.50

### TPH (EPA 418.1)

TPH Prep Date: 05/27/98		
Analyte	Results(mg/kg)	<u>Detection Limit</u>
Total Petroleum Hydrocarbons	<10	10

106364 Order Type: Normal Matrix: Soil

Client Sample #: CELL 1-B
Laboratory ID #: 1
Sample Container: M
Sampling Location: L
Sampling Date: 0
Temperature (Celcius):4

Methanol Jar LEA COUNTY, NM

05/17/98

BTEX (EPA 8020)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Sample #: CELL 2-A

106365 Order Type: Normal Matrix: Soil 4oz EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM Laboratory ID #: Sample Container: Sampling Location: Sampling Date: Temperature (Celcius):4

05/17/98

ALKALINITY, TOTAL (EPA 310.1)

alyte Results(mg/kg)		<u>Detection Limit</u>	
Total Alkalinity	40	1.0	

### RICARRONATE ALKALINITY (EPA 310.1)

DICARDONALE ALMALMALI (DI A 510.1)		
Analyte	Results(mg/kg)	Detection Limit
Bicarbonate Alkalinity	40	1.0

### **BICARBONATE ION (EPA 310.1)**

Analyte	Results(mg/kg)	<u>Detection Limit</u>
Bicarbonate, HCO3 (CaCO3)	48.8	1.0

### CALCIUM/Ca (EPA 200.7)

Analyte	Results(mg/kg)	Detection Limit
Calcium	20.3	0.05
(for anion extract; total concentration = 9100mg/kg)		

Client Name: Rhino Env. - Farmington Submission #: 9805000278 Project Name: GY QTR - 0598 Report Date: 06/23/98

CARBONATE ION (EPA 310.1) Analyte Carbonate, CO3 (CaCO3)	Results(mg/kg) <1.0	Detection Limit 1.0
CHLORIDE (EPA 300.0) Analyte Chloride	Results(mg/kg) 1.05	Detection Limit 0.1
MAGNESIUM/Mg (EPA 200.7) Analyte Magnesium (for anion extract; total concentration = 424mg/kg)	Results(mg/kg) <1.5	Detection Limit 1.5
MERCURY DIGESTION (EPA 7470) Mercury Digestion Date: 05/20/98  MERCURY/Hg BY COLD VAPOR (EPA 7471) Analyte Mercury  MICROWAVE DIGESTION (EPA 3051) SOLID Microwave Digestion Date: 05/20/98	Results(mg/kg) <0.02	Detection Limit 0.02
pH (EPA 150.1) Analyte pH For Liquid	<u>Results()</u> <b>7.8</b>	Detection Limit 0.05
POTASSIUM/K (EPA 200.7) Analyte Potassium (for anion extract; total concentration = 454mg/kg)	Results(mg/kg) 5.5	<u>Detection Limit</u> 0.5
SODIUM/Na (EPA 200.7) Analyte Sodium (for anion extract; total concentration = 122mg/kg)	Results(mg/kg) 6.8	Detection Limit 0.05
SULFATE (EPA 300.0) Analyte Sulfate	Results(mg/kg) 1.45	Detection Limit 1.0
Analyte Arsenic Barium Cadmium Chromium Lead Selenium Silver	Results(mg/kg) <0.61 20.0 <0.07 3.5 3.2 <0.5 <0.3	Detection Limit 0.61 0.01 0.07 0.075 0.40 0.5 0.3
TPH (EPA 418.1) TPH Prep Date: 05/27/98 Analyte Total Petroleum Hydrocarbons	Results(mg/kg) <10	Detection Limit 10

Client Name: Rhino En-. - Farmington

**Submission #:** 9805000278 Project Name: GY QTR - 0598

**Report Date: 06/23/98** 

Client Sample #: CELL 2-B

106366 Order Type: Normal Matrix: Soil

Laboratory ID #: Sample Container: Sampling Location:

Methanol Jar LEA COUNTY, NM

Sampling Date: Temperature (Celcius):4

05/17/98

BT	EX	(EPA	<i>8020)</i>

Analyte	$\frac{\text{Results}(\text{mg/kg})}{\text{mg/kg}}$	Detection Limit
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Sample #: CELL 3-A

Laboratory ID #:

106367 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid

Sample Container:

Sampling Location: Sampling Date:

LEA COUNTY, NM 05/17/98

Temperature (Celcius):4

Analyte	1	$\frac{\text{Results}(\text{mg/kg})}{\text{mg/kg}}$	Detection Limit
Total Alkalinity		25	1.0

### **BICARBONATE ALKALINITY (EPA 310.1)**

Analyte	$\frac{\text{Results}(\text{mg/kg})}{\text{mg/kg}}$	<u>Detection Limit</u>
Bicarbonate Alkalinity	25	1.0

### **BICARBONATE ION (EPA 310.1)**

Analyte	$\frac{\text{Results}(\text{mg/kg})}{\text{kg}}$	Detection Limit
Bicarbonate, HCO3 (CaCO3)	30.5	1.0

### CALCIUM/Ca (EPA 200.7)

Analyte	Results(mg/kg)	Detection Limit
Calcium	29.4	0.05
(for anion extract; total concentration = 8250mg/kg)		

### CARRONATE ION (EPA 310.1)

CIMILE TOTAL (EL TE COLO.)		- · · · · · · · · · · · · · · · · · · ·
Analyte	Results(mg/kg)	Detection Limit
Carbonate, CO3 (CaCO3)	1.0	1.0
Carbonate, CO3 (CaCO3)	<1.0	1.0

### CHLORIDE (EPA 300.0)

<u>Analyte</u>	$\frac{\text{Results}(\text{mg/kg})}{\text{mg/kg}}$	<u>Detection Limit</u>
Chloride	0.49	0.1

### MAGNESIUM/Mg (EPA 200.7)

Analyte	Results(mg/kg)	Detection Limit
Magnesium	<1.5	1.5
(for anion extract; total concentration = 451mg/kg)		

### **MERCURY DIGESTION (EPA 7470)**

Mercury Digestion Date: 05/20/98

Analyte	Results(mg/kg)	Detection Limit
Mercury	< 0.02	0.02

Client Name: Rhino Env. - Farmington Submission #: 9805000278 Project Name: GY QTR - 0598 Report Date: 06/23/98

### MICROWAVE DIGESTION (EPA 3051) SOLID

Microwave Digestion Date: 05/20/98

pH	(EPA	<i>150.1)</i>	

Results(----) <u>Analyte</u> **Detection Limit** pH For Liquid 7.9 0.05

### POTASSIUM/K (EPA 200.7)

**Analyte** Results(mg/kg) Detection Limit Potassium 5.0 0.5 (for anion extract; total concentration = 500mg/kg)

### SODIUM/Na (EPA 200.7)

**Analyte** Results(mg/kg) **Detection Limit** Sodium 8.4 0.05 (for anion extract; total concentration = 116mg/kg)

### SULFATE (EPA 300.0)

**Analyte** Results(mg/kg) **Detection Limit** Sulfate <1.0 1.0

### TOTAL RCRA METALS (EPA 6010)

<u>Analyte</u>	Results(mg/kg)	<u>Detection Limit</u>
Arsenic	< 0.61	0.61
Barium	19.0	0.01
Cadmium	< 0.07	0.07
Chromium	<b>3.4</b> /	0.075
Lead	<b>2.6</b> .	0.40
Selenium	<0.5	0.5
Silver	<0.3	0.3

### TPH (EPA 418.1)

TPH Prep Date: 05/27/98 Results(mg/kg) Detection Limit <u>Analyte</u> Total Petroleum Hydrocarbons 36 10

106368 Order Type: Normal Matrix: Soil

Client Sample #: CELL 3-B
Laboratory ID #: 1
Sample Container: 1 Methanol Jar

Sampling Location: LEA COUNTY, NM Sampling Date: 05/17/98

Temperature (Celcius):4

### BTEX (EPA 8020)

Analyte	Results(mg/kg)	Detection Limit
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Name: Rhino Env. - Farmington Submission #: 9805000278

Project Name: GY QTR - 0598 Report Date: 06/23/98

Client Sample #: CELL 4-A
Laboratory ID #: 106369 Order Type: Normal Matrix: Soil
Sample Container: 4oz EPA Approved Glass Jar\Aqua Lid

Sampling Location: Sampling Date: Temperature (Celcius):4

05/17/98

ALKALINITY, TOTAL (EPA 310.1)		
Analyte	Results(mg/kg)	Detection Limit
Total Alkalinity	45	1.0
BICARBONATE ALKALINITY (EPA 310.1) Analyte	Results(mg/kg)	Detection Limit
Bicarbonate Alkalinity	45	1.0
BICARBONATE ION (EPA 310.1) Analyte Bicarbonate, HCO3 (CaCO3)	Results(mg/kg) 54.9	Detection Limit
Bicarbonate, HCO3 (CaCO3)	<b>34.</b> 9	1.0
CALCIUM/Ca (EPA 200.7) Analyte Calcium (for anion extract; total concentration = 13900mg/kg)	Results(mg/kg) <b>52.5</b>	<u>Detection Limit</u> 0.05
CARBONATE ION (EPA 310.1) Analyte Carbonate, CO3 (CaCO3)	Results(mg/kg) <1.0	Detection Limit 1.0
CHLORIDE (EPA 300.0) Analyte Chloride	Results(mg/l) <b>89.6</b>	Detection Limit 0.1
MAGNESIUM/Mg (EPA 200.7) Analyte  Magnesium (for anion extract; total concentration = 975mg/kg)	Results(mg/kg) <b>24.0</b>	Detection Limit 1.5
MERCURY DIGESTION (EPA 7470) Mercury Digestion Date: 05/20/98		
MERCURY/Hg BY COLD VAPOR (EPA 7471) Analyte	Results(mg/kg)	Detection Limit

MICROWAVE DIGESTION (EPA 3051) SOLID

Microwave Digestion Date: 05/20/98

pH (EPA 150.1) <u>Analyte</u> pH For Liquid

Mercury

**Detection Limit** Results(----) 0.05 8.0

< 0.02

Results(mg/kg)

28.1

POTASSIUM/K (EPA 200.7) <u>Analyte</u>

Potassium (for anion extract; total concentration = 745mg/kg)

SODIUM/Na (EPA 200.7) Analyte

Sodium (for anion extract; total concentration = 285mg/kg) Results(mg/kg) 70.8

**Detection Limit** 0.05

**Detection Limit** 

0.5

0.02

Client Name: Rhino Env. - Farmington Submission #: 9805000278 Project Name: GY QTR - 0598 Report Date: 06/23/98

SULFATE (	(EPA 300.0)

Analyte		Results(mg/kg)	<b>Detection Limit</b>
Sulfate	-	8.7	1.0

TOTAL RCRA METALS (EPA 6010)

Analyte	Results(mg/kg)	Detection Limit
Arsenic	< 0.61	0.61
Barium	50.0	0.01
Cadmium	< 0.07	0.07
Chromium	<b>:5.0</b>	0.075
Lead	<b>5.0</b>	0.40
Selenium	<0.5	0.5
Silver	<0.3	0.3

TPH (EPA 418.1)
TPH Prep Date: 05/27/98
Analyte Results(mg/kg) **Detection Limit** 10 Total Petroleum Hydrocarbons <10

Client Sample #: CELL 4-B
Laboratory ID #: 1
Sample Container: M
Sampling Location: L
Sampling Date: 0
Temperature (Celcius):4

106370 Order Type: Normal Matrix: Soil

Methanol Jar LEA COUNTY, NM 05/17/98

BTEX (EPA 8020)	Results(mg/kg)	Detection Limit
<u>Analyte</u>	nesuits(mg/kg)	
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Report To: Rhino Environmental

Lab Number: 9805000278

Page <u>9</u> of <u>9</u>

Project: GYQTR-9598

### **QUALITY CONTROL DATA**

<u>METHOD</u>	<u>ANALYST</u>		MATR	IX	DATE	EXTRACTEI	DATE AN	ALYZED
BTEX 8020	Howard Hay	den (	Solid		5/20/9	8		5/20/98
SPIKE COMPOUND	SPIKE AMOUNT	% RE(	C	% RE0	C	% REC QC LIMIT	% VAR.	% VAR QC <u>LIMIT</u>
Benzene Toluene Ethyl Benzene Xylenes	100 ppb 100 ppb 100 ppb 300 ppb	86.8 101 107 107		86.1 102 108 109		80-120 80-120 80-120 80-120	0.8 0.9 0.9 1.8	20.0 20.0 20.0 20.0

### **QUALITY CONTROL DATA**

### TPH results are reported in parts per million (ppm) in solid.

		Value 1	Value 2	% Var.
TPH:		136	134	1.5
CONCENTRA	TION UNITS	S: TPH -	ppm	
DETECTION	LIMITS:	TPH -	10	
ANALYST	ANALYTE	DATE EXTRA	ACTED	DATE ANALYZED
Anthony Taylor	TPH	5/27/98		5/27/98

### **QUALITY CONTROL DATA**

ANALYTE	DATE ANALYZED	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF VAR %	REC1/%	REC2/%
Total Alkalinity	6/9/98		63.6	12	95.1	110
Chloride	6/15/98		0	0	90	90
Mercury	5/21/98		0.004	2.4	97	101
Silver	5/22/98	4.0	0.099	2.9	86.7	83.2
Arsenic	5/22/98	4.0	0.064	1.9	85.1	82.8
Chromium	5/22/98	4.0	0.092	2.6	86.1	82.8
Lead	5/22/98	4.0	0.050	1.4	84.2	82.4
Selenium	5/22/98	4.0	0.035	1.2	79.4	80.6
Barium	5/22/98	4.0	0.212	4.7	92.9	85.4
Cadmium	5/22/98	4.0	0.099	3.0	85.3	81.8

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100

# Purchase Order/Chain Of Custody

Page of

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

Submission # 9805 - 278					
	Method of Shipment				
	COC Seals Intact		-		
Accept Accounted Smilliple	Preserved Properly	5/20/88 9:00	The Howel	0	
Pay For Sample Disposal	Temperature 4°C	15/19/03/10:15	10:15/ Com Herma	Jy 5/15 11	She
In the event that Anachem determines that a	Sample Receipt Notes	Date Time	Time Received By	Date T	Relinguished By
				10.	
				9.	
X	5/17 1830 1 chmothanol		B	8. Cell 4-1	0%
X	5/17 1822 1 00	•	<u>-</u>	7. Cell 4- A	69
X	-	•	B	3	89
x x	8/11 1754) c	•	D	5. Cell 3 - 1	67
×	97 1744 Smulhand	•	B	2-	66
XX	\$11 1735 PC			3. Cell 2-A	65
×	S/17 1722 "mothand	•	3	2. Cell 1-B	1 64
X X	8/7 17/5 ic	Sal	<i>D</i>	1. Cell 1-A	106363
B	Date/Time Sample Notes	Matrix		Client Sample ID	Lab#
PH	Deser.	d By: Shew	)25% 50% 100% Sampled By:	Rush: 0%	Date Due:
EK.		NW	City, State:	Lea County	Project Location:
118, 80, CRI	Quote #:		78	GYQTR-0598	Project Name:
30	6 Fax: 797-4874	Phone: 5052474646	598-9627 Phone: S	Phone: 5255989626 Fax:	Phone: Sas
neta M	im 87125	City, State, Zip: Alb., NM 87128		city, State, Zip: Farmington, NM 87401	City, State, Zip:
ls	BCX 25547	P.O. Box:	Address:	CR 6065	Address: 5 (
-	6	order #: 6498-1998	Purchase Order #:	huno	Company:
Analysis	Environmental	(Buyer) Rhino	Bill To: (	Berardelli	Report To:
Fax: 9/2-/2/-9080	Allen, 1X /5002 Phone: 9/2-/2/-9003 F		IIIC. 8 Prestige Circle, Suite 104,	Allachem, inc.	

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

010 REV 5/97



P.O. Box 25547 • Albuquerque, New Mexico 87125 (505) 247-4646 • Fax (505) 797-4874 5 County Road 6065 • Farmington, New Mexico 87401 (505)598-9626 • Fax (505) 598-9627

August 31, 1998

Ms. Martyne J. Kieling
NM Energy, Mineral and Natural Resources
Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility:

**Quarterly Report - August 1998** 

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the August 1998 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

SEP - 2 1998

L Conservation division

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

No soils were accepted into the facility for this past quarter, therefore, the soil log is not part of this report. One native soil sample was retrieved from each active treatment area, Cells 1, 2, 3 and 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted August, 1998. Please don't hesitate to call if you have any questions or require additional information.

Daniele Berardelli

Rhino Environmental Services, Inc.

**Attachments** 

Sincere

CC: Mr. \

Mr. Wayne Price OCD, District - 1 P.O. Box 1908

Hobbs, New Mexico 88241-1980



### **TABLE NO. 1 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020. The analytical results are summarized in Table No. 1.

TABLE NO. 1 Summary of Analytical Results from Native Soil Sampling				
Sample ID	BTEX mg/kg	TPH mg/kg		
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10		
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10		
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10		
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10		

Analyses for Cells 1, 2 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

### FIGURE No. 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.

N
1
*
S

Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
×	x	х	x	

X denotes sample collection location

Not to Scale

**APPENDIX A - ANALYTICAL RESULTS** 





**3**972 727 9686

Customer Name: Date Received:

Rhino Env. - Farmington August 19, 1998 at 10:00:00

Date Reported:

August 25, 1998

Submission #:

9808000323

Project:

GY 0898

**SAMPLES** The submission consisted of 4 samples with sample I.D.'s shown in the attached data tables.

TESTS

The samples listed in the attached result pages were analyzed for:

\* BTEX (EPA 8020)

\* METHANOL SAMPLE CONTAINER PREP, NEW MEXICO

\* TPH (EPA 418.1)

\* TS-TOTAL SOLIDS (EPA 160.3)

<u>Distribution Of Reports</u>

1-Ms. Daniele Berardelli of Rhino Env. - Farmington

Ph. 505-598-9626 Fax 505-598-9627

Submission #: 9808000323 lims

Respectfully Submitted, Anachem Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page\_ 119164 to 113167

Client Name: Rhino Env. - Farmington

Submission #: 9808000323 Project Name: GY 0898 Report Date: 08/25/98

Client Sample #: CELLIA & B Laboratory ID #: 11316

Sample Container:

113164 Order Type: Normal Matrix: Soil 4oz Glass Jar\Aqua Lid,Methanol Jar GOOYEA, LEA COUNTY, NM

Sampling Location: Sampling Date: Temperature (Celcius):4

08/17/98

BTEX (EPA 8020)

Analyte Benzene Toluene	<u>Results(mg/kg)</u> <0.40	<u>Detection Limit</u> 0.40
	<0.50	0.50
Ethyl Benzene	<0.50	0.50
Xylenes	<0.50	0.50

TPH (EPA 418.1)

TPH Prep Date: 08/25/98

<u>Analyte</u> Total Petroleum Hydrocarbons

Results(mg/kg) <10

Detection Limit 10

TS-TOTAL SOLIDS (EPA 160.3)

Analyte Total Solids

Results(%) 82.7

Detection Limit

Client Sample #: CELL 2 A & B
Laboratory ID #: 11316
Sample Container: 40z G

113165 Order Type: Normal Matrix: Soil 40z Glass Jar\Aqua Lid, Methanol Jar GOOYEA, LEA COUNTY, NM

Sampling Location: Sampling Date:

08/17/98

Temperature (Celcius):4

RTTY (FDA 9090)

DIEA (BFA 6020)		
<u>Analyte</u>	Results(mg/kg)	Detection Limit
Benzene	<0.40	0.40
Toluene	<0.50	0.50
Ethyl Benzene	<0.50	0.50
Xylenes	<0.50	0.50

TPH (EPA 418.1)

TPH Prep Date: 08/25/98

**Analyte** Results(mg/kg) Detection Limit Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

<u>Analyte</u> Results(%) Detection Limit **Total Solids** 90.3

Client Sample #: CELL 3 A & B

Laboratory ID #: Sample Container:

118166 Order Type: Normal Matrix Soil 40z Glass Jar\Aqua Lid,Methanol Jar G00YEA, LEA COUNTY, NM

Sampling Location: Sampling Date:

08/17/98

Temperature (Celcius):4

BTEX (EPA 8020)

Analyte Benzene Toluene Ethyl Benzene	Results(mg/kg) <0.40 <0.50 <0.50	<u>Detection Limit</u> 0.40 0.50 0.50
Xylenes	<0.50	0.50

Client Name: Rhino Env. - Farmington Submission #: 9808000323 Project Name: GY 0898 Report Date: 08/25/98

**TPH (EPA 418.1)** 

TPH Prep Date: 08/25/98

Analyte Results(mg/kg) <u>Detection Limit</u> Total Petroleum Hydrocarbons <10 10

ANACHEM INC.

TS-TOTAL SOLIDS (EPA 160.3)

Analyte Results(%) **Detection Limit** Total Solids 90.0

Client Sample #: CELL 4 A & B

Laboratory ID #: 113167 Order Type: Normal Matrix: Soil

Client Sample #: CELL 4 A & B

Laboratory ID #: 13167 Order Type: Normal Matrix: Soil 4oz Glass Jar\Aqua Lid,Methanol Jar GOOYEA, LEA COUNTY, NM

08/17/98

Sampling Location: Sampling Date: Temperature (Celcius):4

BT	EX	(EF	A	80	20)

Analyte	Results(mg/kg)	Detection Limit
Benzene	< 0.40	0.40
Toluene	<0.50	0.50
Ethyl Benzene	<0.50	0.50
Xylenes	< 0.50	0.50

TPH (EPA 418.1)

TPH Prep Date: 08/25/98

Analyte Results(mg/kg) Detection Limit Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

Analyte Results(%) Detection Limit **Total Solids** 88.9

Report To: Rhino Environmental

Lab Number: 9808000323 ·

A STORY TO TAKE

Page 4 of 4

Project: 640898

### **QUALITY CONTROL DATA**

ANALYTE	DATE <u>ANALYZED</u>	SPIKE (ppm)	STAND. DEV.	CO <b>EFF</b> . OF <u>VAR %</u>	REC1/%	REX 125%
Total Solids	8/24/98	-constant light and con-	0.14	0.17		

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100

ARTAT VOM

**5**972 727 9686

### **QUALITY CONTROL DATA**

N/A/TOTY

	METHOD	ANALYST		MATH	TX	DATE	EXTRACTEL	DATE AN	ALYZED
	BTEX 8020	Howard Hay	den	Solid		8/20/98	3	8/20/9	8
SPIK COM	E POUND	SPIKE AMOUNT	% REC	<b>C</b>	% RE(	C	% REC QC LIMIT	% VAR.	% VAR QC LIMIT
Benz	еде	100 ppb	82.1		80.1		80-120	2.4	20.0
Toluc	ene	100 ppb	86.5		83.7		80-120	3.2	20.0
Ethy	l Benzene	100 ppb	100		85.8		80-120	14.2	20.0
Xylei	nes	300 ppb	98.9		85.8		80-120	13.2	20.0

### QUALITY CONTROL DATA

TPH results are reported in parts per million (ppm) in solid.

	Value 1	Value 2	% Var.
TPH:	116	120	3.3

CONCENTRATION UNITS: TPH - ppm

DETECTION LIMITS: TPH - 10

ANALYST ANALYTE DATE EXTRACTED DATE ANALYZED

Anthony Taylor TPH 8/25/98 8/25/98

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

**☎**972 727 9686

Purchase Order/Chain Of Custody

Anachem. Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

Submission # 9808-373		.,	
	Method of Shipment		
	COC Seals Intact		
Coope In wanted Smiths	Preserved Properly		
Pay For Sample Disposal	Temperature 4°c	- Lill 8/14/28 10:00	MANUAL ECO STORE AMANUAL THE
In the event that Anachem determines that a	Sample Receipt Notes	Date Time	RelingBished By Date Time Received By
			10.
			9.
XX	1903 12 millioner		1 8 Call 4-13
X	8-17/1903 1ª		113167 7. Cold 4-A
××	8-17/1827 (Muthamod)		1 6 Call 3-B
×	8-17/1827 10		113166 5 CM 3- A
	2 Southand		1 + Cell 2-B
X	C.		# 11316 3 C.20 2-A
× 1/2 0			1 to 2: Copp 1 - B
×	8-17/1730 ice	8	113164 1 Call 1-A
5	Date/Time Sample Notes	Martx	Lab# Client Sample ID
Pi Pi No	Mando A. Beardully	Sampled By: D Kned Anchounds A	Date Due: Rush: (0%) 25% 50% 100%
<u> </u>	N NM	City, State: Lea Courdy	Project Location: 600 Yes.
Bi	Quote #:		Project Name: 640893
6.1 FE	Phone: SOS2474646 Fax: SOS7974874	HOPLARSOS allow	9687
×	n STIAS	City, State, Zip: Alb., NM	City, sum, Zing
	18847	Address P.O. BOX BSS47	Address: SCR 606S
		Purchase Order #: 640898	
Analysis	Environmental	BIN To: (Buyer) Phino	Report To: Daniele Briar ole Uli
гах: 9/2-/2/-y686	Phone: 972-727-9003	ie, Suite 104, Allen, TX 75002	Allachem, Inc. 8 Prestige Circle, Suite 104,



300 Broadway NE • Albuquerque, New Mexico 87102 (505) 242-6464 • Fax (505) 247-4941 5 County Road 6065 • Farmington, New Mexico 87401 (505)598-9626 • Fax (505) 598-9627

February 24, 1998

Ms. Martyne J. Kieling
NM Energy, Mineral and Natural Resources
Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility:

**Quarterly Report - February 1998** 

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the February 1998 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

OIL CONSERVATION DIVISION

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

Table one (1) includes all soils accepted from November 1, 1997 through January 31, 1998. One native soil sample was retrieved from the treatment area in Cell 1, Cell 2, Cell 3 and Cell 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. An additional cell, number 6, has been constructed. Background samples for this cells were collected and submitted for the appropriate analysis. Figure No. 1 is a site map showing the location of sample collection. Analyses for Cell 1, Cell 2, Cell 3 and Cell 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted May, 1998. Please don't hesitate to call if you have any questions or require additional information.

1/ 100

Daniele Berardelli

Rhino Environmental Services, Inc.

**Attachments** 

CC:

Wayne Price OCD, District - 1

**TABLE NO. 1 - Soil Log** 

# GOO-YEA LANDFARM FACILITY QUARTERLY REPORT February 1998

Soil accepted from November 1, 997 to January 31, 1998.

A total of 1,320 cubic yards (cy) of soils were received during this quarter. A list of those soils are shown in the table below. All soils were disced on a regular basis.

### TABLE NO. 1

DATE	VOLUME	SOURCE	SECTION
12-31-97 to 01- 09-98	640 cy Exempt	Bonneville Fuels Corporation Norris Well #2 Lea County, NM	Cell 4
12-29-97 to 01- 05-98	500 cy Exempt	Bonneville Fuels Corporation Norris Well #4 Lea County, NM	Cell 4
01-14-98 & 01- 15-98	180 cy Exempt	Texaco E & P, Inc. Cooper Jal # 119 Lea County, NM	Cell 4

### **TABLE NO. 2 - Analytical Results**

### **Quarterly Native Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4 and one background sample was collected from Cell 5. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020. The Cell 5 background sample was submitted for analysis by EPA method 418.1, EPA method 8020, RCRA Total Metals, and General Chemistry. The analytical results are summarized in Table No. 1.

TABLE NO. 2 Summary of Analytical Results from Native Soil Sampling								
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН			
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10	·					
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10						
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10						
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10						
Cell 6		< 10	< 1.53 Arsenic 7.24 Barium < 0.18 Cadmium < 0.19 Chromium < 1.00 Lead < 1.25 Selenium < 0.75 Silver	70.8 Bicarbonate 908 Calcium <10 Carbonate 40.0 Chloride 1.68 Fluoride 840 Magnesium <0.02 Mercury <1.0 Nitrate <1.0 Phosphate 515 Potassium 236 Sodium 104 Sulfate	7.5			

Background

Analyses for Cells 1, 2, 3 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred.

**APPENDIX A - Analytical Results** 

### FIGURE No. 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.

N ←→ S

Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
}		٠.		
X	x	X	x	×

X denotes sample collection location

Not to Scale

**APPENDIX A - ANALYTICAL RESULTS** 

972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

**Customer Name:** Date Received: Rhino Env. - Farmington February 6, 1998 at 10:00:00

**Date Reported:** 

February 12, 1998

Submission #:

9802000056

Project:

GY 0298

**SAMPLES** The submission consisted of 8 samples with sample

I.D.'s shown in the attached data tables.

**TESTS** 

The samples listed in the attached result pages were analyzed for:

\* BTEX (EPA 8020)

\* METHANOL SAMPLE CONTAINER PREP, NEW MEXICO

\* TPH (EPA 418.1)

\* TS-TOTAL SOLIDS (EPA 160.3)

**Distribution Of Reports** 

Submission #: 9802000056 lims

1-Ms. Daniele Berardelli of Rhino Env. - Farmington Ph. 505-598-9626 Fax 505-598-9627

Respectfully Submitted, Anachem.Inc.

Howard H. Hayden, B.S.

Chemist

CEM

C.E. Newton, Ph.D.

Chemist

Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page\_\_ 98635 to 98642

Visit us on the internet at http://www.anachem.com

Client Name: Rhino Env. - Farmington

**Submission #:** 9802000056 Project Name: GY 0298 **Report Date: 02/12/98** 

Client Sample #: GY01-A

98635 Order Type: Normal Matrix: Soil Laboratory ID #:

Sample Container: Sampling Location: Methanol Jar LEA COUNTY, NM

Sampling Date:

02/03/98

Temperature (Celcius):4

BTEX	(EPA	8020)
------	------	-------

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Sample #: GY01-B

Laboratory ID #: Sample Container: 98636 Order Type: Normal Matrix: Soil 4oz EPA Approved Glass Jar\Aqua Lid

Sampling Location: Sampling Date:

LEA COUNTY, NM

02/03/98

Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 02/09/98

<u>Analyte</u> Results(mg/kg) Detection Limit <10 10

Total Petroleum Hydrocarbons

TS-TOTAL SOLIDS (EPA 160.3)

Results(%) **Detection Limit** <u>Analyte</u> **Total Solids** 90.9 1

Client Sample #: GY02-A

98637 Order Type: Normal Matrix: Soil Laboratory ID #:

Sample Container: Sampling Location: Methanol Jar LEA COUNTY, NM

Sampling Date:

02/03/98

Temperature (Celcius):4

BTEX (EPA 8020)

Analyte		$\frac{\text{Results}(mg/kg)}{}$	<b>Detection Limit</b>
Benzene		< 0.40	0.40
Toluene		< 0.50	0.50
Ethyl Benzene	•	< 0.50	0.50
Xvlenes		< 0.50	0.50

Client Sample #: GY02-B Laboratory ID #: Sample Container: Sampling Location: Sampling Date:

Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid

LEA COUNTY, NM 02/03/98

Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 02/09/98 <u>Analyte</u> Results(mg/kg) Detection Limit Total Petroleum Hydrocarbons <10 10

Client Name: Rhino Env. - Farmington

**Submission #:** 9802000056 Project Name: GY 0298 **Report Date: 02/12/98** 

TS-TOTAL SOLIDS (EPA 160.3)

Analyte\_ Results(%) **Detection Limit Total Solids** 88.0 1

Client Sample #: GY03-A

Laboratory ID #: Sample Container: Sampling Location: 98639 Order Type: Normal Matrix: Soil

Methanol Jar LEA COUNTY, NM

02/03/98

Sampling Date:

Temperature (Celcius):4

BTEX (EPA 8020)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Sample #: GY03-B

Laboratory ID #: Sample Container: 98640 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid

Sampling Location: Sampling Date:

LEA COUNTY, NM 02/03/98

Temperature (Celcius):4

**TPH** (**EPA** 418.1)

TPH Prep Date: 02/09/98 Results(mg/kg) **Detection Limit** <u>Analyte</u> Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

<u>Analyte</u> Results(%) Detection Limit **Total Solids** 1 88.0

Client Sample #: GY04-A

Laboratory ID #: Sample Container: 98641 Order Type: Normal Matrix: Soil

Sampling Location:

Methanol Jar

Sampling Date:

LEA COUNTY, NM 02/03/98

Temperature (Celcius):4

RTEX (EPA 8020)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

Client Sample #: GY04-B

Laboratory ID #: Sample Container: Sampling Location: Sampling Date:

98642 Order Type: Normal Matrix: Soil 4oz EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM

02/03/98

Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 02/09/98

Page <u>3</u> of <u>5</u>

Client Name: Rhino Env. - Farmington Submission #: 9802000056 Project Name: GY 0298 Report Date: 02/12/98

TPH (EPA 418.1)
Analyte
Total Petroleum Hydrocarbons

TS-TOTAL SOLIDS (EPA 160.3) <u>Analyte</u>

**Total Solids** 

Results(mg/kg) <10

Detection Limit 10

Results(%)

88.9

**Detection Limit** 

1

Report To: Rhino Environmental

Lab Number: 9802000056

Page <u>5</u> of <u>5</u>

Project: GYO298

#### **QUALITY CONTROL DATA**

<u>METHOD</u>	<u>ANALYST</u>		MATE	<u>RIX</u>	DATE	EXTRACTED	DATE AN	ALYZED
BTEX 8020	Howard Hay	den den	Solid		2/6/98		2/6/98	
SPIKE COMPOUND	SPIKE <u>AMOUNT</u>	% RE	C	% RE	С	% REC QC LIMIT	% VAR.	% VAR QC <u>LIMIT</u>
Benzene	100 ppb	91.4		81.7		80-120	11	20.0
Toluene	100 ppb	93.1		83.3		80-120	11	20.0
Ethyl Benzene	100 ppb	92.0		81.8		80-120	11	20.0
Xylenes	300 ppb	96.6		86.1		80-120	11	20.0

#### **QUALITY CONTROL DATA**

TPH results are reported in parts per million (ppm) in solid.

Value 1 Value 2 % Var.

TPH: 430 420 2.3

CONCENTRATION UNITS: TPH - ppm

DETECTION LIMITS: TPH - 10

<u>ANALYST</u> <u>ANALYTE</u> <u>DATE EXTRACTED</u> <u>DATE ANALYZED</u>

Anthony Taylor TPH 2/9/98 2/9/98

#### **QUALITY CONTROL DATA**

ANALYTE	DATE <u>ANALYZED</u>	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF <u>VAR %</u>	<u>REC1/%</u>	REC2/%
Total Solids	2/11/98		0.354	0.4		

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100 Purchase Order/Chain Of Custody

Page 1 of

Fax: 972-727-9686 Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003

In the event that Anachem deterphines that a sample is hazardous, the client grees to: Submission # 9802 - 56 Analysis Pay For Sample Disposal Accept Returned Sample X 1.814 HOL 1. Amethorox 1 chrothand School Sample Notes methodick 4% 505 242 6464 Fax: 247-494 Sample Receipt Notes Method of Shipment City, State, Zip: A16., NM 8712S Preserved Properly 1742 2-3/1742 1733 1735 COC Seals Intact 1723 1735 17.2 Temperature Date/Time Berardel RH98-1998 Address: PO BOX 25547 Quote #: 2-3 5-0 2-3 2-3 2-3 %2%/ %2%/ Bill To: (Buyer) Kho 20:00 Time Matrix 300 2-7-68 2/6/18 Date City, State: NM Purchase Order #: Sampled By: Phone: 100% City, State, Zip: Farmington, MM 87401 598-9627 Received By 78635 8 37 39 \$ 2 7 20% 37 25% 2-3-98 Itent Sample ID Lab & 24/98 1808 Berarde Time Rush: (0%) Phone 50398-9626 Fax: Project Location: Lea Crty Project Name: GYO298 Date Address: 5 CR GOGS عاعاتمم Company: Khino <u>ö</u> % 7 ထ ۲i 4. ĸ. ø. m Conplex Sample GY03-B GVO4-B GYO3-A Gro4-A GYD2-B CY01-A GYOI-B GVDD-A Report To: Date Due:

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

010 REV 5/97



**Customer Name:** Date Received: Rhino Env. - Farmington

February 6, 1998 at 10:00:00

**Date Reported:** Submission #: February 19, 1998 9802000057

Project:

GY 0298 BCK

972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

**SAMPLES** The submission consisted of 1 sample with sample

I.D. shown in the attached data table.

TESTS

The sample listed in the attached result pages was analyzed for:

\* BICARBONATE ION (EPA 310.1)

\* CALCIUM/Ca (EPA 6010)

\* CARBONATE ION (EPA 310.1)

\* CHLORIDE (EPA 9056)

\* FLUORIDE (EPA 9056)

\* MAGNESIUM/Mg (EPA 6010) \* MERCURY DIGESTION (EPA 7470)

\* MERCURY/Hg BY COLD VAPOR (EPA 7471)

\* MICROWAVE DIGESTION (EPA 3051) SOLID

\* NITRATE (EPA 9056)

pH (EPA 9045A)

\* PHOSPHATE (EPA 9056)

\* POTASSIUM/K (EPA 6010)

\* SODIUM/Na (EPA 6010) \* SULFATE (EPA 9056)

\* TOTAL RCRA METALS (EPA 6010)

\* TPH (EPA 418.1)

**Distribution Of Reports** 

Submission #: 9802000057 lims

1-Ms. Daniele Berardelli of Rhino Env. - Farmington Ph. 505-598-9626 Fax 505-598-9627

Respectfully Submitted. Anachem, Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. 98643 to 98643 Page

Purchase Order/Chain Of Custody

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

Report To.	T. F. C. C.	Bill To: (Birver)	, q				Analysis	
7	Statamin	/1 (m/m)	5				•	
Company: Kin	Livino	Purchase Order #: RHQ8-1998	R498-	1998				
Address: SCR 6065	ROOS	Address: PO Box 25547	15562	23				
City, State, Zip: 斤	City, State, Zip: Farmeng CTY, NW 8746)	City, State, Zip: Alb., NM 87125	mo, d	87125			va	
Phone: 598-	598-9626 Fax: 598-9627	Phone: SOS 242-6464 Fax: 247-494	2-6464	Fax: コヤフ-	फ्प्पा	77 71d	H6	
Project Name:	Project Name: GYO298 BCK			Quote #:		工	/כל	
Project Location:		City, State: NM	, 			1.	W	
Date Due:	6) 25% 50% 100%	Sampled By:	S. Ben	rardelli		811	οίν	
Lab#	Client Sample ID	2	Matrix	Date/Time	Sample Notes	<u>上</u>	אַן	
Eh986	1. GYO6	( <u>()</u>	1,00	2-3/755	عي	×	X	
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	3.							
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Relinguished By	Date Time Received By	Date	Time	Sample Receipt Notes	ites	In the ev	In the event that Anachem determines that a	that a
Mary Mills	MM 24/98 1808 1000	1,808	2-4-8	Temperature	Tak	Pay F	Pay For Sample Disposal ()	·
	Mad My	4.91 2/6/98	00:00	Preserved Properly	-	- Vice	The recuired Sample	
		•		COC Seals Intact				
				Method of Shipment	ınt			
						Submission #	on# 9802-57	

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.



300 Broadway NE • Albuquerque, New Mexico 87102 (505) 242-6464 • Fax (505) 247-4941

December 3, 1997

Ms. Martyne J. Kieling NM Energy, Mineral and Natural Resources Oil Conservation Division Environmental Bureau 2040 South Pacheco Street Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility:

**Quarterly Report - November 1997** 

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the November 1997 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

CERVATION DIVISION

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

Table one (1) includes all soils accepted from August 1, 1997 through November 4, 1997. One native soil sample was retrieved from the treatment area in Cell 1, Cell 2, Cell 3 and Cell 4. All samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. An additional cell, number 5, has been constructed. Background samples for this cells were collected and submitted for the appropriate analysis. Figure No. 1 is a site map showing the location of sample collection. Analyses for Cell 1, Cell 2, Cell 3 and Cell 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted February, 1997. Please don't hesitate to call if you have any questions or require additional information.

Sincerely,

Daniele Berardelli

Rhino Environmental Services, Inc.

Attachments

CC: V

Wayne Price OCD, District - 1

TABLE NO. 1 - Soil Log



# GOO-YEA LANDFARM FACILITY QUARTERLY REPORT November 1997

Soil accepted from August 1, 1997 to November 4,1997.

A total of 2,222 cubic yards (cy) of soils were received during this quarter. A list of those soils are shown in the table below. All soils were disced on a regular basis.

#### TABLE NO. 1

DATE	VOLUME	SOURCE	SECTION
09-29-97 to 11-04-97	2,222 cy	Pride Petroleum Services, Inc. Lovington Yard Lovington, New Mexico	Cell 3



**TABLE NO. 2 - Analytical Results** 



#### **Quarterly Soil Sampling:**

One native soil sample was retrieved from Cell 1, Cell 2, Cell 3 and Cell 4 and one background sample was collected from Cell 5. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1, Cell 2, Cell 3 and Cell 4 samples were submitted for analysis by EPA method 418.1 and EPA method 8020. The Cell 5 background sample was submitted for analysis by EPA method 418.1, EPA method 8020, RCRA Total Metals, and General Chemistry. The analytical results are summarized in Table No. 1.

	TABLE NO. 2 Summary of Analytical Results from Native Soil Sampling					
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН	
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10				
Cell 2	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10				
Cell 3	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10				
Cell 4	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10				
Cell 5		< 10	< 3.05 Arsenic 142 Barium 0.55 Cadmium 8.15 Chromium < 2.00 Lead < 2.50 Selenium < 1.50 Silver 5.27 W Haz.	350 Total Alkalinity 326 Bicarbonate 16100 Calcium 24 Carbonate 50.0 Chloride 18300 Magnesium <0.02 Mercury 3060 Potassium 840 Sodium 19.2 Sulfate	9.0	

Background

Analyses for Cells 1, 2, 3 and 4 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. Background samples collected from the center of treatment Cell 5 show trace amounts of Barium, Cadmium and Chromium as being naturally present in the soil.

5.00 PDA ESH MORE FIMIT



**APPENDIX A - Analytical Results** 

#### FIGURE 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.

Ν
<b>^</b>
$\checkmark$
S

Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
X	X	Х	X	X
			·	

X denotes sample collection location

Not to Scale



Customer Name:

Rhino Env. - Farmington

**Date Received:** 

November 19, 1997 at 10:00:00

Date Reported:

November 26, 1997-

Submission #:

9711000213

Project:

**GOOYEA - 1197** 

**SAMPLES** The submission consisted of 9 samples with sample

I.D.'s shown in the attached data tables.

TESTS

The samples listed in the attached result pages were analyzed for:

\* ALKALINITY, TOTAL (EPA 310.1)
\* BICARBONATE ALKALINITY (EPA 310.1)

\* BTEX (EPA 8020)

\* CALCIUM/Ca (EPA 215.1)

\* CARBONATE ALKALINITY (EPA 310.1)

\* CHLORIDE (EPA 300.0)

MAGNESIUM/Mg (EPA 242.1)

\* MERCURY DIGESTION (EPA 7470)

\* MERCURY/Hg BY COLD VAPOR (EPA 7471)

\* METHANOL ŠAMPLE CONTAINER PREP, NEW MEXICO

\* MICROWAVE DIGESTION (EPA 3051) SOLID

pH (EPA 150.1)

POTASSIUM/K (EPA 258.1)

\* SODIUM/Na (EPA 273.1)

\* SULFATE (EPA 300.0)

\* TOTAL RCRA METALS (EPA 6010)

\* TPH (EPA 418.1)

\* TS-TOTAL SOLIDS (EPA 160.3)

**Distribution Of Reports** 

1-Ms. Daniele Berardelli of Rhino Env. - Farmington

Ph. 505-598-9626 Fax 505-598-9627

Submission #: 9711000213 lims

Respectfully Submitted, Anachem, Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

C EN

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page \_\_/\_ of 94459 to 94467

Client Name: Rhino Env. - Farmington

**Submission #:** 9711000213 Project Name: GOOYEA - 1197 Report Date: 11/26/97

Client Sample #: CELL 1-01

Laboratory ID #: Sample Container:

94459 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid

Sampling Location: Sampling Date:

LEA COUNTY, NM 11/18/97

Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 11/20/97

<u>Analyte</u> Total Petroleum Hydrocarbons Results(mg/kg) <10

<u>Detection Limit</u>

10

TS-TOTAL SOLIDS (EPA 160.3)

<u>Analyte</u>

Results(%) 89.5

Detection Limit

**Total Solids** 

Client Sample #: CELL 1-02

Laboratory ID #:

94460 Order Type: Normal Matrix: Soil

Sample Container: Sampling Location: Methanol Jar LEA COUNTY, NM

Sampling Date:

11/18/97

Temperature (Celcius):4

BTEX (EPA 8020)

Analyte	Results(mg/kg)	Detection Limit
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	<0.50	0.50

Client Sample #: CELL 2-01

Laboratory ID #: Sample Container: 94461 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM

Sampling Location:

11/18/97

Sampling Date:

Temperature (Celcius):4

**TPH (EPA 418.1)** 

TPH Prep Date: 11/20/97

<u>Analyte</u> Total Petroleum Hydrocarbons Results(mg/kg)

<10

**Detection Limit** 

10

TS-TOTAL SOLIDS (EPA 160.3)

<u>Analyte</u> **Total Solids**  Results(%) 89.6

Detection Limit

Client Sample #: CELL 2-02

Laboratory ID #:

94462 Order Type: Normal Matrix: Soil

Sample Container:

Methanol Jar

Sampling Location: Sampling Date:

LEA COUNTY, NM 11/18/97

Temperature (Celcius):4

BTEX (EPA 8020)		
Analyte	Results(mg/kg)	Detection Limit
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50

Client Name: Rhino Env. - Farmington Submission #: 9711000213

Project Name: GOOYEA - 1197 **Report Date: 11/26/97** 

BTEX (EPA 8020)

Analyte Results(mg/kg) **Detection Limit** Xylenes < 0.50 0.50

Client Sample #: CELL 3-01

Laboratory ID #: Sample Container: 94463 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid

Sampling Location:

LEA COUNTY, NM

Sampling Date:

11/18/97 Temperature (Celcius):4

**TPH (EPA 418.1)** 

TPH Prep Date: 11/20/97

Results(mg/kg) Detection Limit Analyte Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

Results(%) **Detection Limit** <u>Analyte</u> **Total Solids** 92.9

Client Sample #: CELL 3-02 Laboratory ID #: 94 94464 Order Type: Normal Matrix: Soil

Sample Container:

Methanol Jar LEA COUNTY, NM

Sampling Location:

11/18/97

Sampling Date: Temperature (Celcius):4

BTEX (EPA 8020)

Analyte	Results(mg/kg)	Detection Limit
Benzene	<0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xvlenes	< 0.50	0.50

Client Sample #: CELL 4-01

Laboratory ID #: 94465 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM Sample Container:

Sampling Location:

Sampling Date:

11/18/97

Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 11/20/97

Results(mg/kg) Detection Limit **Analyte** Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

**Detection Limit** <u>Analyte</u> Results(%) **Total Solids** 93.4

Client Name: Rhino Env. - Farmington

**Submission #:** 9711000213 Project Name: GOOYEA - 1197 **Report Date: 11/26/97** 

Client Sample #: CELL 4-02

Laboratory ID #:

94466 Order Type: Normal Matrix: Soil

Sample Container:

Methanol Jar LEA COUNTY, NM 11/18/97

Sampling Location: Sampling Date:

Temperature (Celcius):4

BTEX (I	PA 8	3020)
---------	------	-------

Analyte	Results(mg/kg)	Detection Limit
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	<0.50	0.50

Client Sample #: CELL 5 Laboratory ID #: Sample Container:

94467 Order Type: Normal Matrix: Soil 3x4oz EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM

Sampling Location: Sampling Date:

Temperature (Celcius):4

11/18/97

ALKALINITY, TOTAL (EPA 310.1)

<u>Analyte</u>	•	Results(mg/kg)	<u>Detection Limit</u>
Total Alkalinity		350	

BICARBONATE ALKALINITY (EPA 310.1)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Bicarbonate Alkalinity	<b>326</b>	

CALCIUM/Ca (EPA 215.1)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Calcium	16100	0.5

(EQUIVALENT IN ANION EXTRACT: 100 ppm)

CARBONATE ALKALINITY (EPA 310.1)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Carbonate Alkalinity	24	1

CHLORIDE (EPA 300.0)

Analyte	Results(mg/l)	<b>Detection Limit</b>
Chloride	50.0	0.1

MAGNESIUMIMø (EPA 242.1)

Analyte	Results(mg/kg)	<b>Detection Limit</b>
Magnesium	18300	0.5
(EQUIVALENT IN ANION EXTRACT:53.8 ppm)		

**MERCURY DIGESTION (EPA 7470)** Mercury Digestion Date: 11/19/97

MERCURY/Hg BY COLD VAPOR (EPA 7471)

Analyte	$\frac{\text{Results}(\text{mg/kg})}{\text{mg/kg}}$	<b>Detection Limit</b>
Mercury	< 0.02	0.02

MICROWAVE DIGESTION (EPA 3051) SOLID

Microwave Digestion Date: 11/19/97

Client Name: Rhino Env. - Farmington Submission #: 9711000213
Project Name: GOOYEA - 1197
Report Date: 11/26/97

pH (EPA 150.1) Analyte pH For Liquid	<u>Results()</u> <b>9.00</b>	Detection Limit 0.05
POTASSIUM/K (EPA 258.1) Analyte Potassium (EQUIVALENT IN ANION EXTRACT: 16.5 ppm)	Results(mg/kg) 3060	Detection Limit 0.5
SODIUM/Na (EPA 273.1) Analyte Sodium (EQUIVALENT IN ANION EXTRACT: 6.1 ppm)	Results(mg/kg) 840	Detection Limit 0.5
SULFATE (EPA 300.0) Analyte Sulfate	Results(mg/kg) 19.2	Detection Limit 1.0
TOTAL RCRA METALS (EPA 6010) Analyte Arsenic Barium Cadmium Chromium Lead Selenium Silver	Results(mg/kg) <3.05 142.0 0.55 8.15 <2.00 <2.50 <1.50	Detection Limit 3.05 0.05 0.35 0.38 2.00 2.50 1.50
TPH (EPA 418.1) TPH Prep Date: 11/20/97 Analyte Total Petroleum Hydrocarbons	Results(mg/kg) <10	Detection Limit 10

Report To: Rhino Env.

Lab Number: 9711000213

Page <u>6</u> of <u>7</u>

Project: GooYea - 1197

#### **QUALITY CONTROL DATA**

<u>METHOD</u>	ANALYST	MAT	'RIX DA	TE EXTRACTE	DATE AN	NALYZED
BTEX 8020	Howard Hay	rden Solid	I 11/	19/97		11/19/97
SPIKE COMPOUND	SPIKE <u>AMOUNT</u>	% REC _1	% REC _2	% REC QC LIMIT	% VAR.	% VAR QC <u>LIMIT</u>
Benzene	100 ppb	94.1	95.1	80-120	1.1	20.0
Toluene	100 ppb	94.4	95.4	80-120	1.1	20.0
Ethyl Benzene	100 ppb	90.8	91.9	80-120	1.2	20.0
Xylenes	300 ppb	86.0	87.2	80-120	1.4	20.0

#### **QUALITY CONTROL DATA**

TPH results are reported in parts per million (ppm) in solid.

Value 1

Value 2

% Var.

TPH:

78

76

2.6

**CONCENTRATION UNITS:** 

TPH - ppm

DETECTION LIMITS:

TPH - 10

**ANALYST** 

**ANALYTE** 

DATE EXTRACTED

DATE ANALYZED

Anthony Taylor

TPH

11/20/97

11/20/97

Report To: Rhino Env.

Lab Number: 9711000213

Page <u>7</u> of <u>7</u>

Project: GooYea - 1197

#### QUALITY CONTROL DATA

ANALYTE	DATE ANALYZED	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF <u>VAR %</u>	REC1/%	REC2/%
Alkalinity	11/24/97		1.4	4	97.3	96
Chloride	11/25/97		0.03	2.1	107	104
Mercury	11/20/97		0.509	5.6	107	99
Sulfate	11/24/97		0.06	0.8	106	105
Arsenic	11/19/97		0.148	3.9	93	88
Barium	11/19/97		0.276	4.5	88	78
Cadmium	11/19/97		0.109	3.3	85	. 81
Chromium	11/19/97		0.118	3.2	90	86
Lead	11/19/97		0.110	3.2	86	82
Selenium	11/19/97	1	0.139	4.1	87	83
Silver	11/19/97		0.182	4.5	93	87

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100

# Purchase Order/Chain Of Custody

Page of

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fax: 972-727-9686

Submission # 9711-213	Tex: 347-4941  Quote #:  Date/Time  Date/Time  Sample Notes  Illistry 0345  Illistry 0345  Illistry 0355  Illistry 0365  Illis	Matrix Ma	City, State: Phone: Sampl	25% 50% 10 25% 50% 10 25% 50% 10	Farmington, 1 -9626 Fax: S9 GOOVEQ -1197 LOG COMPLY Push: (0%) 2 Client Sample ID 1. Cell 1-01 2. Cell 1-02 3. Cell 3-01 6. Cell 3-03 7. Cell 4-01 8. Cell 4-03 9. Cell 4-03 10.  Date Time	City, State, Zip: Farming Phone: 598-9626  Project Name: 600 VeO2  Project Location: Loa ( Date Due: 11/24  Lab# Client Sa  94459 1. Ce   60 2. Ce   62 4. Ce   65 7. Ce   66 8. Ce   7. Ce   8. Ce   10.  Relinguished By 10.
tals	17/03/180	60. Bbx 25547	Address: P.O.	TRIODIS	CR 6065	Address: S U
Analysis	Church Environmental	51-CDAY	Bill To: (Buyer) Chund Envi	andelli	aniele Revardalli	
	\			. 11 a	)	/

010 REV 5/97

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.



FIGURE NO. 1 - Site Map



300 Broadway NE • Albuquerque, New Mexico 87102 (505) 242-6464 • Fax (505) 247-4941 RECEIVED

SEP 03 1997

Environmental Bureau
Oil Conservation Division

August 28, 1997

Ms. Martyne J. Kieling
NM Energy, Mineral and Natural Resources
Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea La

Goo-Yea Landfarm Facility: Quarterly Report - August 1997

Dear Ms. Kieling: 2> AND BACKGROUND SAMPLES FOR CELL 3 54

In accordance with the conditions set forth in the permit, enclosed please find the August 31,1997 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

Table one (1) includes all soils accepted from May 1, 1997 through July 31, 1997. One native soil sample was retrieved from the treatment area in Cell 1 and Cell 2. Both samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Additional cells, numbered 3 and 4 have been constructed. Background samples for these cells were collected and submitted for the appropriate analysis. Figure No. 1 is a site map showing the location of sample collection. Analyses for Cell 1 and Cell 2 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted November 31, 1997. Please don't hesitate to call if you have any questions or require additional information.

Daniele Berardelli

Rhino Environmental Services, Inc.

**Attachments** 

Sincere

CC:

Wayne Price OCD, District - 1



TABLE NO. 1 - Soil Log



#### GOO-YEA LANDFARM FACILITY QUARTERLY REPORT August 31, 1997

Soil accepted from May 1, 1997 to July 31,1997.

A total of 3,292 cubic yards (cy) of soils were received during this quarter. A list of those soils are shown in the table below. All soils were disced on a regular basis.

#### TABLE NO. 1

DATE	VOLUME	SOURCE	SECTION
05-07-97 to 05-28-97	1,650 cy	EOTT Energy Denton Gathering System Lea County, New Mexico	Cell 2
05-27-97	4.0 cy	Koch Pipeline, LP Krouch Station Lea County, New Mexico	Cell 2
06-26-97 to 07-02-97	1,638 cy	Bonneville Fuel Corporation Sec. 14, T17S, R37E Lea County, New Mexico	Cell 2 (1,238) Cell 1 (400)



**TABLE NO. 2 - Analytical Results** 



#### **Quarterly Soil Sampling:**

One native soil sample was retrieved from Cell 1 and one background sample was collected from Cell 2. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1 sample was submitted for analysis by EPA method 418.1 and EPA method 8020. The Cell 2 background sample was submitted for analysis by EPA method 418.1, EPA method 8020, RCRA Total Metals, and General Chemistry. The analytical results are summarized in Table No. 1.

	Summary of A		ABLE NO. 2 esults from Native S	oil Sampling	
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН
Cell 1A&B - QTR	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10			
Cell 2A&B- QTR	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10			
Cell 3 - BCK		< 10	< 1.22 Arsenic 104 Barium < 0.14 Cadmium < 0.15 Chromium 2.95 Lead < 1.00 Selenium < 0.60 Silver	125 Total Alkalinity 134 Bicarbonate 30.6 Calcium 9.0 Carbonate <0.2 Chloride 9.11 Magnesium <0.04 Mercury 8.4 Potassium 3.1 Sodium 7.3 Sulfate	9.2
Cell 4 - BCK		< 10	< 1.22 Arsenic 132 Barium < 0.14 Cadmium 2.20 Chromium 4.15 Lead < 1.00 Selenium < 0.60 Silver	130 Total Alkalinity 144 Bicarbonate 32.7 Calcium 6.6 Carbonate 0.74 Chloride 8.17 Magnesium <0.04 Mercury 7.27 Potassium 3.34 Sodium 4.6 Sulfate	9.0

Analyses for Cells 1 and 2 report TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. Background samples collected from the center of treatment Cells 3 and 4 show trace amounts of Barium, Chromium and Lead as being naturally present in the soil.



APPENDIX A - Analytical Results



# ANACHEM INC.

8 Prestige Circle, Suite 104 Allen, Texas 75002 972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

Customer Name:

Rhino Env. - Farmington August 7, 1997 at 10:00:00 August 26, 1997

Date Received: Date Reported:

Submission #:

9708000070 GY 0897Q

Project:

SAMPLES The submission consisted of 6 samples with sample I.D.'s shown in the attached data tables.

TESTS

The samples listed in the attached result pages were analyzed for:

ALKALINITY, TOTAL (EPA 310.1)

- ANION/CATION RATIO (CALCULATION) \* BICARBONATE ALKALINITY (EPA 310.1)
- \* BICARBONATE ION (EPA 310.1)

\* BTEX (EPA 8020)

- \* CALCIUM/Ca (EPA 215.1)
- \* CARBONATE ION (EPA 310.1)

\* CHLORIDE (EPA 325.3)

- \* MAGNESIUM/Mg (EPA 242.1)
- \* MERCURY DIGESTION (EPA 7470)
- \* MERCURY/Hg BY COLD VAPOR (EPA 7471)
- \* METHANOL ŠAMPLE CONTAINER PREP, NEW MEXICO
- \* MICROWAVE DIGESTION (EPA 3051) SOLID

pH (EPA 150.1)

- \* POTASSIUM/K (EPA 258.1)
- \* SODIUM/Na (EPA 273.1)
- SPECIFIC CONDUCTANCE (EPA 120.1)

\* SULFATE (EPA 375.4)

Distribution Of Reports

1-Ms. Daniele Berardelli of Rhino Env. - Farmington

Ph. 505-598-9626 Fax 505-598-9627

Submission #: 9708000070 lims

Respectfully Submitted, Anachem, Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page\_\_/\_of\_



# ANACHEM INC.

8 Prestige Circle, Suite 104 Allen, Texas 75002 972/727-9003 · FAX # 972/727-9686 · 1-800-966-1186

Customer Name: Date Received:

Rhino Env. - Farmington August 7, 1997 at 10:00:00

Date Reported: Submission #: August 26, 1997 9708000070

Project:

GY 0897Q

\* TOTAL DISSOLVED SOLIDS (EPA 160.1)

\* TOTAL RCRA METALS (EPA 6010)

\* TPH (EPA 418.1)

Distribution Of Reports 1-Ms. Daniele Berardelli of Rhino Env. - Farmington

Ph. 505-598-9626 Fax 505-598-9627

Submission #: 9708000070 lims

Howard M. Hayden, B.S.

Anachem.Inc.

Respectfully Submitted.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page\_ 2 of 7 88722 to 88727

Client Name: Rhino Env. - Farmington Submission #: 9708000070

Project Name: GY 0897Q Report Date: 08/26/97

Client Sample #: CELL 1A - QTR Laboratory ID #: 88722

Laboratory ID #: Sample Container:

88722 Order Type: Normal Matrix: Soil 4oz EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM

Sampling Location:

08/04/97

Sampling Date: Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 08/08/97

<u>Analyte</u> Total Petroleum Hydrocarbons Results(mg/kg) <10

Detection Limit

10

Client Sample #: CELL 1B - QTR Laboratory ID #: 88723

Order Type: Normal Matrix: Soil

Sample Container:

Methanol Jar LEA COUNTY, NM

08/04/97

Sampling Location: Sampling Date: Temperature (Celcius):4

BTEX (EPA 8020) Analyte Benzene	Results(mg/kg) <0.40	<u>Detection Limit</u> 0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xvlenes	<0.50	0.50

Client Sample #: CELL 2A - OTR

Laboratory ID \*: Sample Container:

88724 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM

08/04/97

Sampling Location: Sampling Date: Temperature (Celcius):4

*TPH (EPA 418.1)* 

TPH Prep Date: 08/08/97

Analyte Total Petroleum Hydrocarbons Results(mg/kg) <10

Detection Limit

10

Client Sample #: CELL 2B - QTR

Laboratory ID #:

Order Type: Normal Matrix: Soil 88725

Sample Container:

Sampling Location: Sampling Date:

Methanol Jar LEA COUNTY, NM

08/04/97

Temperature (Celcius):4

BTEX (EPA 8020) Analyte Benzene Toluene Ethyl Benzene	<u>Results(mg/kg)</u> <0.40 <0.50 <0.50	<u>Detection Limit</u> 0.40 0.50 0.50
Etnyi Benzene Xylenes	<0.50	0.50

Client Name: Rhino Env. - Farmington Submission #: 9708000070 Project Name: GY 0897Q Report Date: 08/26/97

Client Sample #: CELL 3 - BCK Laboratory ID #: 88726 Sample Container: 402 E.

88726 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM

Sampling Location: Sampling Date: Temperature (Celcius):4

08/04/97

alkalinity,	TOTAL (E	PA 310.1)
Analyte		

Total Alkalinity

Detection Limit Results(mg/kg) 125

ANIONICATION RATIO (CALCULATION)

Analyte\_ Anion/Cation Ratio Results(-----) 0.98

Detection Limit

BICARBONATE ALKALINITY (EPA 310.1)

<u>Analyte</u> Bicarbonate Alkalinity Results(mg/kg) 110

Detection Limit

BICARBONATE ION (EPA 310.1)

Analyte\_ Bicarbonate, HCO3 (CzCO3) Results(mg/kg) 194

Detection Limit

CALCIUMICO (EPA 215.1)

Analyte Calcium

Results(mg/kg) 30.6

Detection Limit 0.02

CARBONATE ION (EPA 310.1)

<u>Analyte</u>

Results(mg/kg) 9.0

Detection Limit

Carbonate, CO3 (CaCO3)

CHLORIDE (EPA 325.3)

<u>Analyte</u> Chloride Results(mg/kg) < 0.2

Detection Limit 0.2

Magnesiuming (EPA 242.1)

**Analyte** Magnesium Results(mg/kg) 9.11

Detection Limit 0.02

MERCURY DIGESTION (EPA 7470)

Mercury Digestion Date: 08/12/97

MERCURYING BY COLD VAPOR (EPA 7471)

Analyte Mercury

Results(mg/kg) < 0.04

Detection Limit 0.04

MICROWAVE DIGESTION (EPA 3051) SOLID

Microwave Digestion Date: 08/11/97

pH (EPA 150.1) Analyte

pH For Liquid

Results(\_\_\_) 9.2

Detection Limit 0.05

POTASSIUMIK (EPA 258.1)

Analyte Potassium Results(mg/kg) 8.4

Detection Limit 0.02

SODIUMING (EPA 273.1)

<u>Analyte</u> Sodium

Results(mg/kg) 3.I

Detection Limit 0.02

Page # of 7

Client Name: Rhino Env. - Farmington

**Submission #: 9708000070** Project Name: GY 0897Q Report Date: 08/26/97

SPECIFIC CONDUCTANCE (EPA 120.1)

<u>Analyte</u> Results(uS) Detection Limit Specific Conductance 256

SULFATE (EPA 375.4)

Analyte\_ Results(mg/kg) Detection Limit Sulfate 7.3 0.2

TOTAL DISSOLVED SOLIDS (EPA 160.1)

Results(mg/l) Analyte Detection Limit Total Dissolved Solids 328

(Results for TDS, conductivity and pH are for the extracts; 100g of each sample was extracted into 200ml of distilled water)

TOTAL RCRA METALS (EPA 6010)

Analyte	Results(mg/kg)	Detection Limit
Arsenic	<1.22	1.22
Barium	104	0.02
Cadmiun	<0.14	0.14
Chromium	<0.15	0.15
Lead	2.95	0.8
Selenium	<1.0	1.0
Silver	<0.6	0.6

TPH (EPA 418.1)

TPH Prep Date: 08/08/97

Detection Limit <u>Analyte</u> Results(mg/kg) Total Petroleum Hydrocarbons 10

Client Sample #: CELL 4 - BCK Laboratory ID #: 88727 88727 Order Type: Normal Matrix: Soil 402 EPA Approved Glass Jar\Aqua Lid LEA COUNTY, NM Sample Container:

Sampling Location: Sampling Date: Temperature (Celcius):4

08/04/97

ALKALINITY, TOTAL (EPA 310.1)

Analyte Results(mg/kg) Detection Limit Total Alkalinity 130

ANIONICATION RATIO (CALCULATION)

Analyte Results(----) Detection Limit Anion/Cation Ratio 0.97

BICARBONATE ALKALINITY (EPA 310.1)

Detection Limit <u>Analyte</u> Results(mg/kg) Bicarbonate Alkalinity 118 2

BICARBONATE ION (EPA 310.1)

Results(mg/kg) Detection Limit Bicarbonate, HCO3 (CaCO3) RAG

CALCIUMICa (EPA 215.1)

Analyte Results(mg/kg) Detection Limit Calcium 32.7 0.02

CARBONATE ION (EPA 310.1)

**Analyte** Results(mg/kg) Detection Limit Carbonate, CO3 (CaCO3) 6.6

Page 5 of 1

Detection Limit

0.02

Client Name: Rhino Env. - Farmington

Submission #: 9708000070 Project Name: GY 0897Q Report Date: 08/26/97

CHLORIDE	(EPA 325.3)
Analyte	
Chloride	

MAGNESIUM/Mg (EPA 242.1) Analyte Magnesium

MERCURY DIGESTION (EPA 7470) Mercury Digestion Date: 08/11/97

MERCURYING BY COLD VAPOR (EPA 7471) <u>Analyte</u> Mercury

MICROWAVE DIGESTION (EPA 3051) SOLID Microwave Digestion Date: 08/11/97

PH (EPA 150.1) Analyte pH For Liquid

POTASSIUMK (EPA 258.1) Analyte Potassium

SODIUMING (EPA 273.1) Analyte Sodium

SPECIFIC CONDUCTANCE (EPA 120.1) Analyte Specific Conductance

SULFATE (EPA 375.4) Analyte Sulfate

Chromium

Selenium

Lead

Silver

TOTAL DISSOLVED SOLIDS (EPA 160.1) Analyte Total Dissolved Solids

TOTAL RCRA METALS (EPA 6010) Analyte Arsenic Barium Cadmium

TPH (EPA 418.1) TPH Prep Date: 08/08/97 Analyte Total Petroleum Hydrocarbons Results(mg/kg) 0.737

Results(mg/kg) Detection Limit 8.17 0.02

Results(mg/kg) < 0.04

Detection Limit 0.04

Results(----) 9.0

**Detection Limit** 0.05

Results(mg/kg) 7.27

Results(mg/kg)

Detection Limit

Results(uS)

3.34

244

Detection Limit

Detection Limit

0.02

0.02

Results(mg/kg) 4.6

Detection Limit 0.02

Results(mg/l) 352

Detection Limit

Results(mg/kg) Detection Limit <1.22 1.22 132 0.02 0.14 < 0.14 2.20 0.15 8.0 4.15 <1.0 1.0 <0.6 0.6

Results(mg/kg) <10

Detection Limit 10

Report To: Rhino Environmental

Lab Number: 9708000070

Page 1 of 1

Project: GYO897Q

#### QUALITY CONTROL DATA

<u>METHOD</u>	ANALYST		MATH	IX	DATE	EXTRACTED	DATE AN	<u>ALYZED</u>
BTEX 8020	Howard Hay	den	Solid		8/7/97		8/7/97	
SPIKE COMPOUND	spike <u>amount</u>	% RE _1	C	% RE(	C	% REC QC LIMIT	% VAR.	% VAR QC <u>LIMIT</u>
Benzene Toluene Ethyl Benzene Xylenes	100 ppb 100 ppb 100 ppb 300 ppb	104 106 111 114		102 103 108 111		80-120 80-120 80-120 80-120	1.9 2.8 2.7 2.6	20.0 20.0 20.0 20.0

# QUALITY CONTROL DATA

# TPH results are reported in parts per million (ppm) in solid.

		Value :	1	Value 2	% Var.
TPH:		132		126	4.5
CONCENTRA	TION UNITS	:	TPH -	ppm	
DETECTION	LIMITS:		TPH -	10	
ANALYST	ANALYTE	DATE	EXTRA	ACTED	DATE ANALYZED
Anthony Taylor	TPH	8/8/97			8/8/97

# QUALITY CONTROL DATA

ANALYTE	DATE ANALYZED	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF <u>VAR %</u>	REC1/%	REC2/%
Total Alkalinity	8/15/97	<b>~</b> to com	7.07	1.1	96.9	98.5
Chloride	8/21/97		0.424	5.1	107	115
Mercury	8/14/97	-200	0.580	8.5	96	108
Sulfate	8/21/97		0.283	0.75	99	100
T.D.S.	8/21/97	~25	9.0	1.0	93	<del>9</del> 8
Arsenic	8/11/97		0.048	1.0	87	86
Barium	8/11/97	V=	0.028	0.6	108	107
Cadmium	8/11/97	<b>5</b> 499	0.035	1.1	83	82
Chromium	8/11/97		0.064	1.6	81	79
Lead	8/11/97	<b>≠</b> 000 0	0.042	1.1	75	76
Selenium	8/11/97		0.156	4.3	85	80
Silver	8/11/97	<u> ~</u> 건 13 55	0.078	1.3	89	87

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100

# Purchase Order/Chain Of Custody

Anachem, Inc. 8 Prestige Orde, Suite 104, Allen, TX 75002 Phone: 972-727-9003 Fam: 972-727-9686

City, State, Zip: Farmington, MM 8 401 Project Name: GYOS918 Labs Date Due: Project Location: Phone: 505598-9626 Fax: 505598-9627 Address: S CR 6065 Company: Colors Report To: Relinguished By mile ভ ō Client Sample ID P Cell IA-QTR 11 21 - 21R CUL 2B- OTR 8th Date Rush: 3 - BOX Š B-OR 25% Single Keived By **50**₹ 888 City, State: Phone: 505 2426464 Purchase Order #: 67-1997 BILL To: (Buyer) RALLO City, Saw, Zip: AIB., NM 87125 Address PO BOX 25547 2 Z 24 Sampled By: 1000 50) Matrix 6.6 Quote #: Preserved Property Method of Shipmen Sample Receipt Notes Date/Time Fax: 525247-494 COC Seals Invact Temperature 5000 a C C 12:15 2145 arayran Ē Sample Notes C 5 ĕ In the event that Anachem determines that a sample is hazardous, the client agrees to:
Pay For Sample Disposal 1 (418.1) TPH Submission # Accept Returned Sample 8020) Tot Mutals/RCRA

Sample information is vital for proper login and reporting. This is a contract subject to the terms and conditions on the reverse side.

010 REV 579.



FIGURE NO. 1 - Site Map



# RHINO ENVIRONMENTAL SERVICES, INC.

# FIGURE 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Each cell is approximately 5 acres in size.

A ↑ S

Cell 1	Cell 2	Celi 3	Cell 4
х	x		
		x	×

X denotes sample collection location

Not to Scale



Environmental Bureau
Oil Conservation Division

CONSERVATION DIVISION

RECEIVED

JUN 1 3 1997

•

June 9, 1997

Ms. Martyne J. Kieling
NM Energy, Mineral and Natural Resources
Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Ph: (505) 827-7153 Fx: (505) 827-8177

Re: Goo-Yea Landfarm Facility: Quarterly Report -May 1997

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the May 1997 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico. Rhino would like to apologize for the tardiness of the report. Samples were collected and submitted for analysis on May 14, 1997, but due to laboratory delays, results were not received until

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

Table one (1) includes all soils accepted from February 1997 through April 30, 1997. One native soil sample was retrieved from the treatment area in Cell 1 and one background sample was collected from Cell 2. Both samples were collected at a depth of between 2 and 3 feet below the soil surface, placed on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a site map showing the location of sample collections. Analysis for Cell 1 reports TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. Background samples collected from the center of treatment Cell 2 show trace amounts of Barium, Cadmium, Chromium and Lead as being naturally present in the soil. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

Rhino's next quarterly report will be submitted August 31, 1997. Please don't hesitate to call if you have any questions or require additional information.

Daniele Berardelli

Rhino Environmental Services, Inc.

5 C.R. 6065 Farmington Nm 87401

**Attachments** 

Sincereto

CC: Wayne Price

TABLE NO. 1 - Soil Log



# GOO-YEA LANDFARM FACILITY QUARTERLY REPORT May 1997

# Soil accepted from February 1997 to April 31,1997.

A total of 1,061.4 cubic yards (cy) of soils were received during this quarter. A list of those soils are shown in the table below. All soils were disced on a regular basis.

# TABLE NO. 1

DATE	VOLUME	SOURCE	SECTION
2-17-97 to 2-22-97	208 cy	Sid Richardson Monostate Compressor Site Lea County, New Mexico	Cell 1
4-1-97 to 4-13-97	853.4 cy	BJ Services 2708 West County Road Hobbs, New Mexico 88240	Cell 2



**TABLE NO. 2 - Analytical Results** 



#### **Quarterly Soil Sampling:**

One native soil sample was retrieved from Cell 1 and one background sample was collected from Cell 2. Each sample was taken 2 to 3 feet below the natural soil surface, stored on ice and submitted to Anachem, Inc. for analysis. Figure No. 1 is a Site Map showing the location of each sample. The Cell 1 sample was submitted for analysis by EPA method 418.1 and EPA method 8020. The Cell 2 background sample was submitted for analysis by EPA method 418.1, EPA method 8020, RCRA Total Metals, and General Chemistry. The analytical results are summarized in Table No. 1.

	TABLE NO. 2 Summary of Analytical Results from Native Soil Sampling						
Sample ID	BTEX mg/kg	TPH mg/kg	RCRA Total Metals mg/kg	General Chemistry mg/kg	рН		
Cell 1 - 02QTR	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	< 10					
Cell 2 - 01BCK		< 10	< 3.05 Arsenic 56.5 Barium 4.78 Cadmium 16.3 Chromium 11.7 Lead < 2.50 Selenium < 1.50 Silver	450 Total Alkalinity 549 Bicarbonate 1020 Calcium <1.0 Carbonate 5.20 Chloride 6.00 Fluoride 521 Magnesium <0.02 Mercury <1.0 Nitrate 294 Potassium 500 Sodium 16.7 Sulfate	7.7		

Analysis for Cell 1 reports TPH and BTEX levels to be below detection, thereby demonstrating that no vertical contaminant migration has occurred. Background samples collected from the center of treatment Cell 2 show trace amounts of Barium, Cadmium, Chromium and Lead as being naturally present in the soil.

**APPENDIX A - Analytical Results** 

FIGURE NO. 1 - Site Map

#### **FIGURE 1 - SITE MAP**

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Two Active Cells, each approximately 5 acres

Ν
$\uparrow$
s

Cell 1	Cell 2		
		X	
x			

X denotes sample collection location

Not to Scale



8 Prestige Circle, Suite 104 Allen, Texas 75002 972/727-9003 • FAX # 972/727-9686 • 1-800-966-1186

**Customer Name:** 

Rhino Env.- Alb.

Date Received:

May 15, 1997 at 10:00:00

**Date Reported:** Submission #: June 4, 1997 9705000155

Project:

GOODYEAR 0597

**SAMPLES** The submission consisted of 2 samples with sample

I.D.'s shown in the attached data tables.

TESTS

The samples listed in the attached result pages were analyzed for:

- \* ALKALINITY, TOTAL (EPA 310.1)
- \* BICARBONATE ION (EPA 310.1)
- \* BTEX (EPA 8020)
- \* CALCIUM/Ca (EPA 215.1)
- \* CARBONATE ION (EPA 310.1)
- \* CHLORIDE (EPA 300.0)
- \* FLUORIDE (EPA 300.0)
- \* MAGNESIUM/Mg (EPA 242.1)
- \* MERCURY DIGESTION (EPA 7470)
- \* MERCURY/Hg BY COLD VAPOR (EPA 7471)
- \* MICROWAVE DIGESTION (EPA 3051) SOLID
- \* NITRATE (EPA 300.0)
- pH (EPA 150.1)
- \* POTASSIUM/K (EPA 258.1)
- \* SODIUM/Na (EPA 273.1)
- \* SULFATE (EPA 300.0)
- \* TOTAL RCRA METALS (EPA 6010)
- \* TPH (EPA 418.1)

**Distribution Of Reports** 

Submission #: 9705000155 lims

1-Mr. Jerry Dunlap of Rhino Env.- Alb. Ph. 505-242-6464 Fax 505-247-4941

Respectfully Submitted,

Anachem.Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page 84477 to 84478



**Customer Name:** 

Rhino Env.- Alb.

**Date Received:** 

May 15, 1997 at 10:00:00

Date Reported:

June 4, 1997

Submission #:

9705000155

**Project:** 

GOODYEAR 0597

\* TS-TOTAL SOLIDS (EPA 160.3)

<u>Distribution Of Reports</u> 1-Mr. Jerry Dunlap of Rhino Env.- Alb. Ph. 505-242-6464 Fax 505-247-4941

Submission #: 9705000155 lims

Anachem,Inc.

Respectfully Submitted.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials.

84477 to 84478

Page 2. of

Client Name: Rhino Env.- Alb.
Submission #: 9705000155
Project Name: GOODYEAR 0597
Report Date: 06/04/97

Client Sample #: 01BCK
Laboratory ID #:
Sample Container:
Sampling Location:
Sampling Date:
Temperature (Celcius):4

84477 Order Type: Normal Matrix: Soil 40z EPA Approved Glass Jar\Aqua Lid LEA COUNEY, NM 05/14/97

ALKALINITY, TOTAL (EPA 310.1) Analyte Total Alkalinity	Results(mg/kg) 450	Detection Limit 1.0
BICARBONATE ION (EPA 310.1) Analyte Bicarbonate, HCO3 (CaCO3)	Results(mg/kg) 549	Detection Limit 1.0
CALCIUM/Ca (EPA 215.1) Analyte Calcium	Results(mg/kg) 1020	Detection Limit 0.5
CARBONATE ION (EPA 310.1) Analyte Carbonate, CO3 (CaCO3)	Results(mg/kg) <1.0	Detection Limit 1.0
CHLORIDE (EPA 300.0) Analyte Chloride	Results(mg/kg) 5.2	Detection Limit 1.0
FLUORIDE (EPA 300.0) Analyte Fluoride	Results(mg/kg) 6.0	Detection Limit 1.0
MAGNESIUM/Mg (EPA 242.1) Analyte Magnesium	Results(mg/kg) 521	Detection Limit 0.5
MERCURY DIGESTION (EPA 7470) Mercury Digestion Date: 05/19/97  MERCURY/Hg BY COLD VAPOR (EPA 7471) Analyte Mercury  MICROWAVE DIGESTION (EPA 3051) SOLID Microwave Digestion Date: 06/03/97	Results(mg/kg) <0.02	Detection Limit 0.02
NITRATE (EPA 300.0) Analyte Nitrate	Results(mg/kg) <1.0	Detection Limit 1.0
pH (EPA 150.1) Analyte pH For Liquid	Results() 7.7	Detection Limit 0.05
POTASSIUM/K (EPA 258.1) Analyte Potassium	Results(mg/kg) 294	Detection Limit 0.5
SODIUM/Na (EPA 273.1) Analyte Sodium	Results(mg/kg) 500	Detection Limit 0.5

Client Name: Rhino Env.- Alb. **Submission #:** 9705000155 Project Name: GOODYEAR 0597

**Report Date:** 06/04/97

SULI	ATE	(EPA	300.0)

Analyte\_ Results(mg/kg) **Detection Limit** Sulfate 16.7 1.0

TOTAL RCRA METALS (EPA 6010)

Analyte	Results(mg/kg)	Detection Limit
Arsenic	< 3.05	3.05
Barium	56.5	0.050
Cadmium	4.78	0.350
Chromium	16.3	0.375
Lead	11.7	2.00
Selenium	<2.50	2.50
Silver	<1.50	1.50

TPH (EPA 418.1)

TPH Prep Date: 05/20/97 Analyte Results(mg/kg) **Detection Limit** Total Petroleum Hydrocarbons <10 10

Client Sample #: 02QTR

Laboratory ID #:
Sample Container:
Sampling Location:
Sampling Date:
Temperature (Celcius):4 84478 Order Type: Normal Matrix: Soil Methanol Jar, Vial, 40z Jar/Aqua Lid

LEA COUNEY, NM 05/14/97

BTEX (EPA 8020)

Analyte	$\frac{\text{Results}(\text{mg/kg})}{\text{mg/kg}}$	Detection Limit
Benzene	< 0.40	0.40
Toluene	< 0.50	0.50
Ethyl Benzene	< 0.50	0.50
Xylenes	< 0.50	0.50

**TPH** (**EPA** 418.1)

TPH Prep Date: 05/20/97 Analyte Results(mg/kg) **Detection Limit** Total Petroleum Hydrocarbons <10 10

TS-TOTAL SOLIDS (EPA 160.3)

Analyte\_ **Detection Limit** Results(%) **Total Solids** 88.7 1.0

Page 4 of 6

Report To: Rhino Environmental

Lab Number: 9705000155

Page <u>6</u> of <u>6</u>

Project: GooYea 0597

# **QUALITY CONTROL DATA**

ANALYTE	DATE ANALYZED	SPIKE (ppm)	STAND. <u>DEV.</u>	COEFF. OF <u>VAR %</u>	REC1/%	REC2/%
Total Alkalinity	5/21/97		28.3	2.4	93.3	98.7
Chloride	5/21/97		0.099	1.3	97.5	90.8
Fluoride	5/21/97		0.0236	1.4	91	96.5
Mercury	5/20/97		0.856	10	99	85
Nitrate	5/21/97		0.151	1.1	98	96.5
Sulfate	5/21/97		0.32	1	99	99
Arsenic	6/3/97		0.247	5.0	92	86
Barium	6/3/97		0.032	0.6	108	106
Cadmium	6/3/97		0.128	2.8	84	87
$\operatorname{Chromium}$	6/3/97				93	93
Lead	6/3/97		0.037	0.7	85	85
Selenium	6/3/97		0.442	8.5	97	86
Silver	6/3/97		0.070	2.5	100	104
Total Solids	5/15/97		0.387	2.5		

Standard Deviation = (x1-x2)/1.414Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100 Report To: Rhino Environmental

Lab Number: 9705000155

Page 5 of 6

**QUALITY CONTROL DATA** 

<u>METHOD</u>	ANALYST	MAT	RIX	DATE EXTRA	ACTED	DATE ANA	ALYZED
BTEX 8020	Howard Hay	rden Solid	I	5/16/97		5/16/9′	7
SPIKE COMPOUND	SPIKE AMOUNT	% REC _1	% RE _2	C % REC	•	% VAR.	% VAR QC LIMIT
Benzene	100 ppb	98.5	100	80-120	1	.5	20.0
Toluene	100 ppb	105	106	80-120	0	.94	20.0
Ethyl Benzene	100 ppb	105	106	80-120	0	.94	20.0
Xylenes	300 ppb	99.4	96.6	80-120	2	8	20.0

# **QUALITY CONTROL DATA**

TPH results are reported in parts per million (ppm) in solid.

Value 1

Value 2

% Var.

TPH:

1024

1000

2.3

CONCENTRATION UNITS:

TPH - ppm

DETECTION LIMITS:

TPH - 10

ANALYST

ANALYTE

DATE EXTRACTED

DATE ANALYZED

Project: GooYea 0597

Anthony Taylor

TPH

5/20/97

5/20/97

Chain Of Custody/Order Form

Anachem Inc. 8 Prestige Circle Sui

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, Tx 75002 Phone: 214-727-9003 Fax: 214-727-9686

Page\_\_of \_\_.

											008 REV 10/94
-155	9705-1		ission #:	Anachem Submission #:							
-2	,										,
		Accept Keturned Sample	Keturne	Accept	Egn		10:00	1 5/15km	Road Market		
	7	Pay For Sample Disposal	Sample	Pay For Sample Dispose			7 /3//5	5/14/97	min lem		WAR AND THE REAL PROPERTY OF THE PROPERTY OF T
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	istr	<u> </u>			City, State, Zip: Alb, NM 87128	116, NA	ate, Zip: A	City, St	City, State, Zip: Farmington, NM 8740]	annighon	City, State, Zip:
	У			·	イン	Address: PO Box 25547	"PO E	Address	,	CR 6065	Address: S CF
					ر ا	Purchase Order #: 640597	e Order #: (	Purchas		90	Company: Rhino
/sis	Analysis	· .•	•——.			ઠ	Phino	Bill To:	rdelle	ouvele Berardelli	Report To:



300 Broadway NE • Albuquerque, New Mexico 87102 (505) 242-6464 • Fax (505) 247-4941

April 28, 1997

Ms. Martyne J. Kieling
NM Energy, Mineral and Natural Resources
Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505
Ph: (505) 827-7153

Fx: (505) 827-8177

1-800499-4393

Re:

Goo-Yea Landfarm Facility: Quarterly Report - April 1997

Dear Ms. Kieling:

In accordance with the conditions set forth in the permit, enclosed please find the April 1997 quarterly report for Rhino's Goo-Yea facility located in Lea County, New Mexico.

This report serves to maintain a written record of the amount of contaminated soil accepted for treatment and to ensure that no contaminant migration has occurred.

Table one (1) includes all soils accepted from February 1997 through April 1997. One native soil sample was retrieved from the treatment area in Cell 1 and submitted to Anachem, Inc. for analysis. This report demonstrates the level of total petroleum hydrocarbons at 68 mg/kg. As we discussed during your site visit, I was not able to dig down to the required depth of three feet and feel the sample is not representative. This sample was collected at a depth of 1.5 to 2.0 feet below the native soil surface. Figure No. 1 is a site map showing the location of sample collection. The analytical results are summarized in Table two (2). A copy of the analytical report is submitted as Appendix A.

A second sample will be collected from the same area at a depth of three feet. In addition, a background sample will be collected from the second treatment area, Cell 2. Sample collection is scheduled for the week of May 12, 1997. Results will be forwarded to you as soon as available.

Please don't hesitate to call if you have any questions or require additional information.

Sincerely

Daniele Berardelli

Rhino Environmental Services, Inc.

1-800-499-8393 Farmington # Wait For Original Lab Dozomsts 5/4/97

W.x

Attachments

**TABLES** 

Table No. 1 - Soil Log

**Table No. 2 - Analytical Results** 

# GOO-YEA LANDFARM FACILITY QUARTERLY REPORT April 1997

#### Soil accepted from February 1997 to April 1997.

A total of 1,061.4 cubic yards (cy) of soils were received during this quarter. A list of those soils are shown in the table below. All soils were disced on a regular basis.

#### TABLE NO. 1

DATE	VOLUME	SOURCE	SECTION
2-17-97 to 2-22-97	208 cy	Sid Richardson Monostate Compressor Site Lea County, New Mexico	Cell 1
4-1-97 to 4-13-97	853.4 cy	BJ Services 2708 West County Road Hobbs, New Mexico 88240	Cell 2

#### **Quarterly Soil Sampling:**

One native soil sample was retrieved from the treatment area 1.5 to 2 feet below the natural soil surface. Figure No. 1 is a Site Map showing the location of the sample. One sample was submitted for analysis by EPA method 418.1 and and EPA method 8020. The analytical results are summarized in Table No. 1.

	TABLE NO. 2 Summary of Analytical Results from	Native Soil Sampling	
Sample ID	BTEX mg/kg	TPH mg/kg	
Cell 1	< 0.40 Benzene < 0.50 Toluene < 0.50 Ethyl Benzene < 0.50 Xylenes	68	

I understand that original analytical report is preferred, however the original has not yet been received. A copy has been submitted as Appendix A of this report. If this is unacceptable, please let me know and the original will be promptly forwarded. The results of the native soil testing are not believed to be representative, therefore, the cell will be re-sampled.

**APPENDIX A - ANALYTICAL RESULTS** 



Customer Name: Rhino Env.- Alb.

Date Received: April 4, 1997 at 09:43:55

Date Reported: Submission #:

April 8, 1997 9704000051

Project:

GOO YEA 4/97

SAMPLES The submission consisted of 1 sample with sample

I.D. shown in the attached data table.

TESTS

The sample listed in the attached result pages were analyzed for:

\* BTEX (EPA 8020)

\* METHANOL SAMPLE CONTAINER PREP, NEW MEXICO

\* TPH (EPA 418.1)

\* TS-TOTAL SOLIDS (EPA 160.3)

Distribution Of Reports 1-Mrs. Daniele Berardelli of Rhino Env.- Alb. Ph. 505-242-6464 Fax 505-247-4941

Submission #: 9704000051 lims

Respectfully Submitted. Anachem Inc.

Howard H. Hayden, B.S.

Chemist

C.E. Newton, Ph.D.

Chemist

NOTE: Submitted material will be retained for 60 days unless notified or consumed in analysis. Material determined to be hazardous will be returned or a \$20 disposal fee will be assessed. Our letters and reports are for the exclusive use of the client to whom they are addressed. The use of our name must receive our prior written approval. Our letters and reports apply to the sample tested and/or inspected, and are not necessarily indicative of the qualitites of apparently identical or similar materials. Page / of 3 82523 to 32525

Client Name: Rhino Env.- Alb. Submission #: 9704000051 Project Name: GOO YEA 4/97 Report Date: 04/08/97

Client Sample #: GOO YEA I Laboratory ID #: 82 Sample Container: 4a

B2528 Order Type: Normal Matrix: Soil 402 EPA Approved Glass Jar\Aqua Lid GOO YEA LANDFARM, LEA COUNTY, NM

Sampling Location: Sampling Date:

04/03/97

Temperature (Celcius):4

TPH (EPA 418.1)

TPH Prep Date: 04/08/97

**Analyte** Total Petroleum Hydrocarbous Results(mg/kg) 68

Detection Limit

10

Client Sumple #: GOO YEA II

Laboratory ID #: Sample Container: 82524 Order Type: Normal Matrix: Soil

Methanol Jar

GOO YEA LANDFARM, LEA COUNTY, NM 04/03/97

Sampling Location: Sampling Date: Temperature (Celcius):4

DTEN (PPA ROSO)

Analyte Benzene	<u>R</u>	esults(mg/kg) <0.40	Defection Limit 0.40
Toluene		<0.50	0.50
Ethyl Benzone		< 0.50	0.50
Xylenes	:	< 0.50	0.50

Client Sample #: GOO YEA III
Laboratory ID #: 82525
Sample Container: Vial

Sample Container:

Order Type: Normal Matrix: Soil

Sampling Location: Sampling Date:

GOO YEA LANDFARM, LEA COUNTY, NM

04/03/97

Temperature (Celcius):4

TS-TOTAL SOLIDS (EPA 160.8)

Analyte Total Solids Results(%)

Detection Limit

89.1



Report To: Rhino Environmental-Alb.

Lab Number: 9704000051

Page of 3

Project: GOO YEA 4/97

# QUALITY CONTROL DATA

METHOD	ANALYST	MA	TRIX DA	TE EXTRACT	ED DATE A	NALYZED
BTEX 8020	Howard Hay	yden Sol	id 4/4/	97	4/4/	97 -1
SPIKE COMPOUND	SPIKE AMOUNT	% REC _1	% REC _2	% REC QC	% <u>VAR.</u>	% VAR QC <u>LIMIT</u>
Benzene	100 ppb	103	109	80-120	5.5	20.0
Toluene	100 ppb	105	110	80-120	4.5	20.0
Ethyl Benzene	100 ppb	107	113	80-120	5.3	20.0
Xylenes	300 ppb	107	113	80-120	5.3	<b>2</b> 0.0

### QUALITY CONTROL DATA

TPH results are reported in parts per million (ppm) in solid.

Value 1 Value 2 % Var.

TPH: 68 66 2.9

CONCENTRATION UNITS: TPH - ppm
DETECTION LIMITS: TPH - 10

DETECTION LIMITS: TPH - 10

ANALYST ANALYTE DATE EXTRACTED DATE ANALYZE

Anthony Taylor TPH 4/8/97 4/8/97

# QUALITY CONTROL DATA

ANALYTE	DATE ANALYZED	SPIKE (ppm)	STAND. DEV	COEFF. OF VAR %	REC1/%	REC25%
Total Solids	4/7/97	***	±0.707	0.8		

Standard Deviation = (x1-x2)/1.414 Coefficient of Variability % = (S.D./Avg.) X 100 Recovery % = [(spiked-unspiked)/expected] X 100 DON KEY JUNE

Sample information is vital for proper legin and reporting. After 65 days, a 3.5% late fee will be assessed for all unpaid submissions.

TOTAL P.05

Analysis

Page of

FIGURE 1 - SITE MAP

# FIGURE 1 - SITE MAP

Goo-Yea Commercial Landfarm SE/4 of Section 14, Township 11 South, Range 38 East Lea County, New Mexico

Two Active Cells, each approximately 5 acres

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<b></b>
S

Cell 1	Cell 2
×	,

X denotes sample collection location

Not to Scale

AEN I.D. 612311

H. Mitchell Rubenstein, Ph. D.

General Manager

December 20, 1996

RHINO ENVIRONMENTAL SERVICES P.O. BOX 25547 ALBUQUERQUE

Project Name

**GOO-YEA** 

Project Number

1196

Attention:

DANIELE BERARDELLI

On 12/5/96 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA methods 8020 and 418.1 were performed by American Environmental Network (NM) Inc., Albuquerque, NM.

All other analyses were perfored by American Environmental Network (FL), Inc., 11 East Olive Rd, Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

Kimberly D. McNeill Project Manager

MR: mt

Enclosure

CLIENT	: RHINO ENVIRONMENTAL SERVICES	AÉN I.D.	: 612311
PROJECT#	: 1196	DATE RECEIVED	: 12/5/96
PROJECT NAME	: GOO-YEA	REPORT DATE	: 12/20/96
AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	CELL 1	SOIL	11/30/96

Printed: 12/20/96; 12:53 Confidential File: 612311.XLS; COVEREP

# **GENERAL CHEMISTRY RESULTS**

418.1

CLIENT

: RHINO ENVIRONMENTAL SERVICES

AEN I.D.

: 612311

PROJECT#

1196

DATE RECEIVED

: 12/5/96

PROJECT NAME

: GOO-YEA

		·					
SAMPLE			DATE	DATE	DATE	DIL.	
ID.#	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR	
01	CELL 1	NON-AQ	11/30/96	12/9/96	12/9/96	1	
PARAME	TER	DET. LIMIT	UNITS	01			
PETROLI	EUM HYDROCARBONS, IR	20	MG/KG	< 20			

**CHEMIST NOTES:** 

N/A

# GENERAL CHEMISTRY - REAGENT BLANK

418.1

: RHINO ENVIRONMENTAL SERVICES CLIENT PROJECT# : 1196

AEN I.D. : 612311 SAMPLE MATRIX

: NON-AQ

PROJECT NAME

: GOO-YEA

UNITS SAMPLE

: MG/KG

PARAMETER

AEN I.D.

RESULT

PETROLEUM HYDROCARBONS

120996

<20

CHEMIST NOTES:

N/A

### GENERAL CHEMISTRY - QUALITY CONTROL

418.1

CLIENT	: RHINO ENVIRONMENTAL SERVICES			3	AEN I.D.		:	612311
PROJECT#	: 1196					SAMPLE MATRIX	:	NON-AQ
PROJECT NAME	: GOO-Y	ΈA				UNITS	;	MG/KG
			SAMPLE	DUP.	%	SPIKED	SPIKE	%
PARAMETER		AEN I.D.	RESULT	RESULT	RPD	SAMPLE	CONC.	REC
PETROLEUM HYDROC	ARBONS	612310-01	<20	<20	NA	151	150	101%

CHEMIST NOTES: N/A

(Spike Sample Result - Sample Result) % Recovery =

X 100

Spike Concentration

(Sample Result - Duplicate Result)

RPD (Relative Percent Difference) =

Average Result

File: 612311.XLS; 418.1 MS MSD

Printed: 12/20/96; 13:00

Confidential

#### "FINAL REPORT FORMAT - SINGLE"

Accession:

Client:

612133 AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO

Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
Test: Group of Single Wetchem

Matrix:

QC Level:

SOIL

Lab ID: 001 Client Sample Id: 61231	1-01		Sample Date/Time Received Date:	: 30-NOV-96 06-DEC-96	
Parameters:	Units:	Results:	Rpt Lmts: Q	: Batch:	Analyst:
CONDUCTIVITY (120.1) FLUORIDE (340.2) NITRITE-NITRATE,	UMH/CM MG/KG	N/A ND	1 4.0	NONE FLS003	N/A ED
NITROGEN (353.2)	MG/KG	2	2	N3S67S	MM
SULFATE (9038) TOTAL SOLIDS (160.3)	MG/KG %	2100 97	1000 + 0.1	SWS015 TSS048	AB ED
CHLORIDE (325.3)	MG/KG	270	50	CIS012	RB

Comments:

#### "Method Report Summary"

Accession Number: 612133
Client: AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number: 612311

Client: AMERICAN ENVIRONMENTAL N
Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
Test: Group of Single Wetchem

Client Sample Id:	Parameter:	Unit:	Result:
612311-01	CONDUCTIVITY (120.1) NITRITE-NITRATE, NITROGEN	UMH/CM	N/A
	(353.2)	MG/KG	2
	SULFATE (9038)	MG/KG	2100
	TOTAL SOLIDS (160.3)	%	97
	CHLORIDE (325.3)	MG/KG	270

			Quality Con	trol Report	
Parameter: Batch Id: Blank Result: Anal. Method: Prep. Method: Analysis Date:	FLUORIDE FLS003 <0.2 340.2 N/A 13-DEC-96	NO2NO3 N3S67S <2 353.2 N/A 12-DEC-96	SULFATE SWS015 <10 9038 N/A 17-DEC-96	TOTL SLDS TSS048 <0.1 160.3 N/A 11-DEC-96	CHLORIDE  CIS012  <50  9252  N/A  17-DEC-96
Prep. Date:	13-DEC-96	12-DEC-96	17-DEC-96	09-DEC-96	17-DEC-96
Sample Dup	lication				
Sample Dup: Rept Limit:	612133-1 <0.2	612133-1 <2	612054-1 <2000+	612091-1  <0.1	612054-1 <50
Sample Result: Dup Result: Sample RPD: Max RPD: Dry Weight%	<0.2 <0.2 N/C 0.2 N/A	2.3   2.3   0G   2   N/A	6060 5900 160G 2000+ N/A	1.1 1.0 10 12 N/A	666   658   1   8   N/A
Matrix Spi	.ke				
Sample Spiked: Rept Limit:	612133-1 <0.2	612133-1  <2	612054-1  <5000+	N/A N/A	612054-1 <50
Sample Result: Spiked Result: Spike Added: % Recovery: % Rec Limits: Dry Weight%	<0.2 19.8 16.0 124 70-129 N/A	2.3 19.7 20.0 87 75-125 N/A	6060  14200  10000  81  51-151  N/A		666   3300   2750   96   80-109   N/A
ICA	· · · · · · · · · · · · · · · · · · ·				
ICV Result: True Result: % Recovery: % Rec Limits:	1.15 1.20 96 90-110	1.91 2.00 96 90-110	21.3 20.0 107 90-110		93.6 100.0 94 90-110
LCS					
LCS Result: True Result: % Recovery: % Rec Limits:					

# "Quality Control Comments"

		Batch Id:	Comments:
FLS003	TIME ON: 12/13/96 @ 1540		
FLS003	TIME ON: 12/13/96 @ 1540		
FLS003	ANALYST: ED		
N3S67S	TIME ON: 12/12/96 @ 1317		
N3S67S	TIME OFF: 12/12/96 @ 1430		
N3S67S	ANALYST: MM		
TSS048	TIME ON: 12/9/96 @ 1149		
TSS048	TIME OFF: 12/11/96 @ 1247		
TSS048	ANALYST: ED		

# ---- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.

N/S = NOT SUBMITTED.

N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.

N/D = NOT DETECTED

DISS. OR D = DISSOLVED

T & D = TOTAL AND DISSOLVED

R = REACTIVE

= TOTAL

G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT

OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".  $Q = THE \ ANALYTICAL \ (POST-DISTILLATION) \ SPIKE IS REPORTED DUE TO PERCENT RECOVERY$ BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.

# = ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE. + = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.

= ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR TO ANALYSIS)

@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO DIGESTION)

P = ANALYTICAL (POST DIGESTION) SPIKE.

I = DUPLICATE INJECTION.

= AUTOMATED

F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.

N/C+ = NOT CALCULABLE

H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".

A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL"

Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER, THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.

NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL". SAMPLE IS NON-HOMOGENEOUS.

 $(\star)$  = DETECTION LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN. (CA) = SEE CORRECTIVE ACTIONS FORM.

\*\*= MATRIX INTERFERENCE

SW-846, 3rd Edition, latest revision EPA 600/4-79-020, Revised March 1983.

STANDARD METHODS, For the Examination of Water and Wastewater, 18TH ED., 1992

NIOSH Manual of Analytical Methods, 4th Edition.

ANNUAL BOOK OF ASTM STANDARDS, VOLUME 11.01, 1991.
METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES, EPA600/R-93/100, AUGUST 1993

1. COLIFORM.

COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE

2. PH.

SAMPLE AND DUPLICATE ANALYSIS.

3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG SG = SCOTT GRESHAM RB = REBECCA BROWN JL = JAN LECLEAR MB = MICHELLE BOTTS NSB = NANCY S. BUTLER MM = MIKE MCKENZIE ED = ESTHER DANTIN AB = ANDY BROTHERTON RH = RICKY HAGENDORFER PLD = PAULA L. DOUGHTY BH = BARRY HICKS

# "FINAL REPORT FORMAT - SINGLE"

Accession:

612133

Client:

AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO

Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
Test: TOTAL ALKALINITY

Matrix: QC Level: SOIL ΙI

Lab ID: 001 Client Sample Id: 612311-01			Sample Date/Time: Received Date:		30-NOV-96 06-DEC-96	0900
Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
ALKALINITY, TOTAL (2320B) PH (9045) BICARBONATE, CACO3	MG/KG UNITS	25000 7.7	1 NA	R	ASS003 PHS243	AB MM
(2330B) CARBONATE, CACO3 (2330B)	MG/KG MG/KG	25000 120	1		NONE NONE	DPH DPH
CARBON DIOXIDE, FREE AS CACO3 HYDROXIDE (2330B) AS	MG/KG	990	1		NONE	DPH
CACO3	MG/KG	ND	1		NONE	DPH

Comments:

R = SAMPLE RECEIVED OUT OF HOLD TIME.

# "Method Report Summary"

Accession Number: 612133
Client: AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO

Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
Test: TOTAL ALKALINITY

Client Sample Id:	Parameter:	Unit:	Result:
612311-01	ALKALINITY, TOTAL (2320B) PH (9045) BICARBONATE, CACO3 (2330B) CARBONATE, CACO3 (2330B) CARBON DIOXIDE, FREE AS CACO3	MG/KG UNITS MG/KG MG/KG MG/KG	25000 7.7 25000 120 990

"WetChem	Quality	Control	Report"
----------	---------	---------	---------

Parameter:	ALKALINITY	PH				
Batch Id:	ASS003	PHS243				
Blank Result:	<1	N/A				
Anal. Method:	2320B	9045				
Prep. Method:	N/A	N/A				
Analysis Date:	18-DEC-96	06-DEC-96				
Prep. Date:	18-DEC-96	06~DEC-96				
Sample Duplication						

Sample Dup:	612133-1	612133-1
Rept Limit:	<1	N/A
Sample Result: Dup Result: Sample RPD: Max RPD: Dry Weight%	25332 25387 0 4 N/A	7.71 7.74 0.03 0.12 N/A

# Matrix Spike

Sample Spiked:	612133-1	N/A	
Rept Limit:	<1	N/A	
Sample Result: Spiked Result: Spike Added: % Recovery: % Rec Limits: Dry Weight%	25332 23520 2000F -91 80-113 N/A		

# ICV

ICV Result:	107	10.06 10.00 101 90-110
True Result:	100	10.00
<pre>% Recovery: % Rec Limits:</pre>	107	101
% Rec Limits:	90-110	90-110
		•

# LCS

# "Quality Control Comments"

Batch Id: Comments:

PHS243 PHS243 PHS243 TIME ON: 12/6/96 @ 1353 TIME OFF: 12/6/96 @ 1830 ANALYST: MM

HS243 ANALYST: MM

### ---- Common Footnotes WetChem -----

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- = AUTOMATED
- = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.

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METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES, EPA600/R-93/100, AUGUST 1993

COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN 1. COLIFORM.

THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE 2. PH.

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# "FINAL REPORT FORMAT - SINGLE"

Accession:

612133

Client:

AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO

Project Number:

612311

Project Name:

RHINO

Project Location: 600 YEA 1196

Test:

Group of Single Metals

SOIL

Matrix: QC Level:

ΙI

001 Lab Id: Client Sample Id: 612311-01 Sample Date/Time: 30-NOV-96 0900 Received Date: 06-DEC-96

Parameters: Units: Results: Rpt Lmts: Q: Batch: Analyst: L6S151 ALUMINUM (6010) MG/KG 4500 6 JR CALCIUM (6010) MG/KG 8300 100 I6S151 JR COPPER (6010) IRON (6010) F6S151 MG/KG 4 JR 1 6400 MG/KG 2 N6S151 JR POTASSIUM (6010) MAGNESIUM (6010) MANGANESE (6010) MG/KG 1200 200 X6S151 JR MG/KG1300 20 J6S151 JR MG/KG 74 G6S151 JR SODIUM (6010) MG/KG 43 20 16S151 JR ZINC (6010) MG/KG 14 56S151

Comments:

# "Method Report Summary"

Accession Number: 612133
Client: AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
Test: Group of Single Metals

Client Sample Id:	Parameter:	Unit:	Result:
612311-01	ALUMINUM (6010)	MG/KG	4500
	CALCIUM (6010) COPPER (6010)	MG/KG MG/KG	8300 4
	IRON (6010)	MG/KG	6400
	POTASSIUM (6010)	MG/KG	1200
	MAGNESIUM (6010)	MG/KG	1300
	MANGANESE (6010)	MG/KG	74
	SODIUM (6010)	MG/KG	43
	ZINC (6010)	MG/KG	14

			uality Cont			
Parameter: Batch Id: Blank Result: Anal. Method: Prep. Method: Analysis Date:	ALUMINUM L6S151 <6 6010 3050 11-DEC-96	CALCIUM  16S151  <100  6010  3050  11-DEC-96	COPPER   F6S151   <1   6010   3050   11-DEC-96	IRON	POTASSIUM X6S151 <200 6010 3050 11-DEC-96	MAGNESIUM J6S151 <20 6010 3050 11-DEC-96
Prep. Date:	10-DEC-96	10-DEC-96	10-DEC-96	10-DEC-96	10-DEC-96	10-DEC-96
Sample Dup	lication					
Sample Dup: Rept Limit:	612169-1 <6	612169-1 <1000+	612169-1  <1	612169-1 <2	612169-1  <200	612169-1
Sample Result: Dup Result: Sample RPD: Max RPD: Dry Weight%	1500 1700 12 20 N/A	320000 320000 0 20 N/A	180 180 0 20 N/A	940 1100 16 20 N/A	2000  2000  0  20  N/A	2500   2500   0   20   N/A
Matrix Spi	ke					
Sample Spiked: Rept Limit:	612169-1 <6	612169-1  <1000+	612169-1  <1	612169-1  <2	612169-1  <200	612169-1
Sample Result: Spiked Result: Spike Added: % Recovery: % Rec Limits: Dry Weight%	1400 1500 200F 50 75-125 N/A	320000 320000 2000F 0 75-125 N/A	2 180 200 89 75-125 N/A	860 940 200F 40 75-125 N/A	<200 2000 2000 100 75-125 N/A	770 2500 2000 87 75-125 N/A
ICV						
ICV Result: True Result: % Recovery: % Rec Limits:	5.1 5.0 102 90-110	9.9  10  99  90-110	5.1  5.0  102  90-110	5.1 5.0 102 90-110	51  50  102  90-110	5.0 5.0 100 90-110
LCS						
LCS Result: True Result: % Recovery: % Rec Limits:	6900 6210 111 62-138	2800 2760 101 64-136	58   58.2   100   79-121	16000 15300 105 58-142	2300 2020 114 70-130	1800 1800 100 80-120

Parameter: Batch Id: Blank Result: Anal. Method: Prep. Method: Analysis Date: Prep. Date:	MANGANESE G6S151 <1 6010 3050 11-DEC-96 10-DEC-96	"Metals Q  SODIUM  16S151  <20  6010  3050  11-DEC-96  10-DEC-96	puality Cont  ZINC  56S151  <2  6010  3050  11-DEC-96  10-DEC-96	rol Report"
Sample Dup	lication			
Sample Dup:	612169-1	612169-1	612169-1	
Rept Limit:	<1	<20	<2	
Sample Result:	180	2300	180	
Dup Result:	180	2200	180	
Sample RPD:	0	4	0	
Max RPD:	20	20	20	
Dry Weight%	N/A	N/A	N/A	
Matrix Spi	ke			
Sample Spiked:	612169-1	612169-1	612169-1	
Rept Limit:	<1	<20	<2	
Sample Result:	16	330	6	
Spiked Result:	180	2300	180	
Spike Added:	200	2000	200	
% Recovery:	82	99	87	
% Rec Limits:	75-125	75-125	75-125	
Dry Weight%	N/A	N/A	N/A	
ICV				
ICV Result:	5.0	9.9	5.1	
True Result:	5.0	10	5.0	
% Recovery:	100	99	102	
% Rec Limits:	90-110	90-110	90-110	
LCS				
LCS Result:	240	430	110	
True Result:	232	474	114	
% Recovery:	103	91	96	
% Rec Limits:	77-123	64-136	74-126	

# "Quality Control Comments"

				Ва	atch	Id:	Comments:
L6S151	ANALYST: JR						
L6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
I6S151	ANALYST: JR		-	-			•
I6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
F6S151	ANALYST: JR		-	•			
F6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
N6S151	ANALYST: JR		_	_			
N6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
X6S151	ANALYST: JR						
X6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
J6S151	ANALYST: JR						
J6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
G6S151	ANALYST: JR						
G6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
16S151	ANALYST: JR	_	_				
16S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
56S151	ANALYST: JR	_	_				
56S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.

## ---- Common Footnotes Metals -----

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F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION. N/C+ = NOT CALCULABLE

- $N/C^*$  = NOT CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
- H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".

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- J = (FLORIDA DEP 'J' FLAG) MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
- THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM. U = (FLORIDA DEP 'U' FLAG) THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.
- S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

# FROM ANALYSIS REPORT:

RL= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES. Q= QUALIFIER (FOOTNOTE)

FROM QUALITY CONTROL REPORT: RPD= RELATIVE PERCENT DEVIATION.

RPT LIMIT= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS NOTE: RUN BASIS.

SW-846, 3rd Edition, latest revision. EPA 600/4-79-020, Revised March 1983.

NIOSH Manual of Analytical Methods, 4th Edition.

Standard Methods For the Examination of Water and Wastewater, 18th Edition, 1992. Methods For the Determination of Metals in Environmental Samples - Supplement I, EPA 600/R-94-111, May 1994.

GJ = GARY JACOBSJLH = JAMES L. HERED CD = CHRISTY DRAPER

JR = JOHN REED

LV = LASSANDRA VON APPEN

# GAS CHROMOTOGRAPHY RESULTS

TEST

: BTEX, MTBE (EPA 8020) METHANOL PRESERVATION

CLIENT

: RHINO ENVIRONMENTAL SERVICES

AEN I.D.: 612311

PROJECT#

: 1196

PROJECT NAME : GOO-YEA

SAMPLE				DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.		MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	CELL 1		NON-AQ	11/30/96	NA	12/5/96	1
PARAMET	ER	DET. LIMIT	UN	ITS	01		
BENZENE		0.025	MG	/KG	< 0.025		
TOLUENE		0.025	MG	/KG	< 0.025		
ETHYLBEN	NZENE	0.025	MG	/KG	< 0.025		
TOTAL XYI	LENES	0.025	MG	/KG	< 0.025		
METHYL-t-	BUTYL ETHER	0.13	MG	/KG	< 0.13		
SURROGA	TE:						
BROMOFL	UOROBENZENE (	%)			102		
SURROGA	TE LIMITS	( 80 - 120 )					
DRY WEIG	SHT (%)				94		

**CHEMIST NOTES:** 

N/A

# GAS CHROMOTOGRAPHY RESULTS REAGENT BLANK

TEST : BTEX, MTBE (EPA 8020) AEN I.D. BLANK I. D. : 120596

DATE EXRACTED NA

: 612311

**CLIENT** : RHINO ENVIRONMENTAL SERVICES DATE ANALYZED 12/5/96

PROJECT# : 1196 SAMPLE MATRIX NON-AQ PROJECT NAME : GOO-YEA

UNITS **PARAMETER** BENZENE MG/KG < 0.025 **TOLUENE** MG/KG < 0.025 **ETHYLBENZENE** MG/KG < 0.025 **TOTAL XYLENES** MG/KG < 0.025 METHYL-t-BUTYL ETHER MG/KG < 0.13

SURROGATE:

**BROMOFLUOROBENZENE (%)** 101

SURROGATE LIMITS: (80 - 120)

**CHEMIST NOTES:** N/A

# GAS CHROMOTOGRAPHY QUALITY CONTROL

MSMSD

**TEST** 

: BTEX, MTBE (EPA 8020)

MSMSD#

: 612304-03

AEN I.D.

: 612311

CLIENT

: RHINO ENVIRONMENTAL SERVICES DATE EXRACTED

NA

PROJECT#

DATE ANALYZED SAMPLE MATRIX 12/5/96

PROJECT NAME

: GOO-YEA

UNITS

FP MG/KG

				011110	•	1110/110			
	SAMPLE	CONC	SPIKED	%	DUP	DUP		REC	RPD
PARAMETER	RESULT	SPIKE	SAMPLE	REC	SPIKE	% REC	RPD	LIMITS	LIMITS
BENZENE	<0.025	0.50	0.55	110	0.56	112	2	(80 - 120)	20
TOLUENE	<0.025	0.50	0.55	110	0.55	110	0	( 80 - 120 )	20
ETHYLBENZENE	<0.025	0.50	0.54	108	0.54	108	0	(80 - 120)	20
TOTAL XYLENES	<0.025	1.50	1.65	110	1.66	111	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	< 0.13	1.00	0.96	96	1.02	102	6	(70 - 133)	20

**CHEMIST NOTES:** 

N/A

(Spike Sample Result - Sample Result)

% Recovery =

Spike Concentration

(Sample Result - Duplicate Result)

RPD (Relative Percent Difference) =

Average Result

File: 612311.XLS; 8020 MS MSD Printed: 12/20/96; 13:04

American Environmental Network Albuquerque, New Mexico

# Interlab Chain of Custody

12/5 PAGE 1 OF

CHEMIATHO о вавмии Gross Alona/Beta t1-01 8270 (TCLP 1311) 8240 (TCLP 1311) ZHE Polynuclear Aromatics (610/8310) Volatile Organics GC/MS (624/8240) **ANALYSIS REQUEST** Base/Neutral Acid Compounds GC/MS (625/8270) Herbicides (615/8150) Pesticides/PCB (608/8080) COD 80D Oil and Grease Gen Chemistry COC XOT **HCRA Metals by ARDR** Metals -Metals - PP List JAT - zisi9M TIME MATRIX LABID American Environmental Network NETWORK PROJECT MANAGER: KIMBERLY D. McNEILL 2709-D Pan American Freeway, NE 0900 Albuquerque, NM 87107 DATE Kim McNeill Q CLIENT PROJECT MANAGER: SAMPLE 1D COMPANY: ADDRESS:

	PROJECT INFORMATION	SAMPLE RECEIPT	SAMPLES SENT TO:	RELINQUISHED BY: 1.	RELINQUISHED BY: 7.
K	PROJECT NUMBER: PL. 12	TOTAL NUMBER OF CONTAINERS	SAN DIEGO	Signalurg: 7 // Time. M	Signature 17 (5) I'm
ک	produce / 11 2 //	O MAIN OF CLICACOLO CERNO	Paragon	Jehn May 120	* 1
_	THUSEUL HAIME. 6/07/	CHAIN OF COSTOD SEALS	TO THE OWNER OF THE OWNER OWNER OF THE OWNER	Printed Name: / Date:	Print State Date
			HENICA	+1 / 11.011 12/ch.	<u> </u>
	OCHEVEL: SIGNIV	INTACT?	PENSACOLA	11117 11 2010 6 Mag	
	OC REOUIDED. MS MSD BLANK	RECEIVED GOOD COND/COLD	PORTLAND	Albuquerque	Company
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à	CLIENT DISCOUNT:			Company	
Ş.	SPECIAL CERTIFICATION REQUIRED: TYES INO				Company: AEN-PN

Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777

Page Lof L.

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, Tx 75002 Phone: 214-727-9003 Fax: 214-727-9686 Chain Of Custody/Order Form

	Report To: Daniele Berardelli	11	Bill To: Khin O	Bill To: Rhin o				Analysis	
Address: PO & SSSY7  City, State, Zip:  Phone: 243-6 464 Pax: 247-494/ Phone: Anadrem: 62096a (196  Project Name: 62096a (196  Project Location: 40bp.5  Date Due: Rear-(03, 50%, 100%, Sample By:  Anadrem iable Client Sample ID Matrix Date/Time Pare-  Anadrem iable Client Sample ID Matrix Date/Time Pare-  I Call L. Call L. Soic Miladology Q. C.  Relingabled By Bate Time Delivery Analyst  Relingabled By Analyst  Relingabled By Analyst  Relingable By	Company: Rheno Enu	Sycs.	Purchase Order	1	٦		123		
City, State, Zip: A10, NM \$71,35  Thome: Q43-64/64 Fax: 347-494/ Phone:  Project Mane: 620 Y 62   Pax: 347-494/ Phone:  Project Location: H0,202   Pax: 347-494/ Phone:  Project Location: H0,202   Pax: 347-494/ Phone:  Anachem Labbs   Cilent Sample ID   Matrix   Date-Time   PreservTemp   N    Anachem Labbs   Cilent Sample ID   Matrix   Date-Time   PreservTemp   N    Anachem Labbs   Cilent Sample ID   Matrix   Date-Time   PreservTemp   N    Anachem Labbs   Cilent Sample ID   Matrix   Date-Time   PreservTemp   N    Anachem Labbs   Cilent Sample ID   Matrix   Date-Time   PreservTemp   N    Anachem Labbs   Cilent Sample ID   Matrix   Date-Time   PreservTemp   N    Anachem Labbs   Cilent Sample ID   Anachem   N    Anachem Labbs   Cilent Sample ID   Co. C.   Illigate   PreservTemp   N    Anachem Labbs   Cilent Sample ID   C.   C.   Illigate   C.   C.   C.   C.   C.   C.   C.   C	Address: PO Box 355	245	Address: SQ	7VE				8	
Phone: 243 - 6464   Fax: 347 - 494   Phone:   Project Name: 620 > 62   1946	City, State, Zip: A (b. , Nn	n 871.05	City, State, Zip:				<u> </u>	71040	
Project Name: GOO Yea   196	Phone: 243 - 6464	Fax: 347-4941	Phone:		Fax:		t m	7.1	
Project Location:	Project Name: 600 Yea	1196					१५ ८	ক্রি	
Date Die:   Rush: (0%) 50% 100% Sampled By:   Anachem Latif   Client Sample ID   Matrix   Date/Time   Preserviffenty   No.   No.	Project Location: Hubbs		". Nim				シ/	124	
Anachem Labb   Client Sample ID   Matrix   Date-Time   Press/Temp   N    1	Date Due:	50% 100%	mpled By:				/ws 18		
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Sample information is vital for proper login and reporting. After 65 days, a 3.5% late fee will be assessed for all unpaid submissions.



Tightness Tests
Removals
New Installations
Repairs
Remedial Services
Contaminated Soils Disposal
Leak Detection

Chris Eustice Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505 April 23, 1996

Re: Goo-Yea Landfarm

Quarterly Report

Dear Chris,

This report represents our 1st Quarterly Report for the above referenced facility. We have received soils only in one 5 acre cell to date. On 04/10/96 one soil sample was taken in Cell #1. The soil sample was retrieved 3 feet below the native soil surface and analyzed for BTEX and TPH. A summary of the analytical results are shown in Table No. 1. A copy of the analytical results are

	9		ABLE NO. 1 ANALYTICAL	RESULTS	
SAMPLE ID	BENZENE (MB/KG)	TOLUENE (MG/KG)	ETHYL- BENZENE (MG/KG)	TOTAL BENZENES (MG/KG)	TOTAL PETROLEUM HYDROCARBONS (MG/KG)
GooYea Cell#1	<0.025	<0.025	<0.025	<0.025	<20

shown in Appendix A. The 2nd Quarterly Report will be submitted to you by July 23, 1996. If you have any questions, please call me at 505-392-4498.

Sincerely,

Royce Cooper, Jr

cc: Wayne Price/OCD Hobbs

RECEIVED APR 2 2 1000

H Mitchell Ruberuster

Laboratory Manager

H. Mitchell Rubenstein, Ph.D.

AEN I.D. 604353

April 19, 1996

Rhino Environmental P.O. Box 2327 Hobbs, NM 88240

Project Name/Number: GOO YEA

Attention: Royce Cooper

On 04/12/96, American Environmental Network (NM), Inc., (ADHS License No. AZ0015) (formerly ATI-NM), received a request to analyze non-aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill Project Manager

MR:jt

Enclosure

CLIENT

: RHINO ENVIRONMENTAL

DATE RECEIVED

:04/12/96

PROJECT #

: (NONE)

PROJECT NAME : GOO YEA

REPORT DATE

:04/19/96

AEN ID: 604353

			DATE
AEN #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	GOO YEA CELL #1	NON-AQ	04/10/96

---TOTALS---

MATRIX NON-AO #SAMPLES

1

# AEN STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

# GAS CHROMATOGRAPHY RESULTS

TEST

: BTEX, MTBE (EPA 8020)

CLIENT

: RHINO ENVIRONMENTAL

AEN I.D.: 604353

PROJECT # : (NONE)

PROJECT NAME : GOO YEA

SAMPLE ID. # CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01 GOO YEA CELL #1	NON-AQ	04/10/96	04/17/96	04/17/96	1
PARAMETER		UNITS	01		
BENZENE		MG/KG	<0.025		
TOLUENE		MG/KG	<0.025		
ETHYLBENZENE		MG/KG	<0.025		
TOTAL XYLENES		MG/KG	<0.025		
METHYL-t-BUTYL ETHER		MG/KG	<0.13		
		•			

SURROGATE:

BROMOFLUOROBENZENE (%)

91

# GAS CHROMATOGRAPHY RESULTS

# REAGENT BLANK

TEST : BTEX, MTBE (EPA 8020) AEN I.D. : 604353 BLANK I.D. : 041796 MATRIX : NON-AQ CLIENT : RHINO ENVIRONMENTAL DATE EXTRACTED : 04/17/96 PROJECT # : (NONE) DATE ANALYZED : 04/17/96 PROJECT NAME : GOO YEA DILUTION FACTOR: 1

PARAMETER UNITS

BENZENE MG/KG <0.025

TOLUENE MG/KG <0.025

ETHYLBENZENE MG/KG <0.025

TOTAL XYLENES MG/KG <0.025

MG/KG

<0.13

SURROGATE:

METHYL-t-BUTYL ETHER

BROMOFLUOROBENZENE (%) 96

# GAS CHROMATOGRAPHY - QUALITY CONTROL

# MSMSD

TEST : BTEX, MTBE (EPA 8020)

MSMSD # : 60335711 AEN I.D. : 604353

CLIENT : RHINO ENVIRONMENTAL DATE EXTRACTED : 04/17/96

PROJECT # : (NONE) DATE ANALYZED : 04/17/96

PROJECT NAME: GOO YEA SAMPLE MATRIX : NON-AQ

REF. I.D. : 60335711 UNITS : MG/KG

	SAMPLE	CONC	SPIKED	%	DUP	DUP	
PARAMETER	RESULT	SPIKE	SAMPLE	REC	SPIKE	% REC	RPD
BENZENE	<0.025	1.00	0.82	82	0.85	85	4
TOLUENE	<0.025	1.00	0.82	82	0.85	85	4
ETHYLBENZENE	<0.025	1.00	0.83	83	0.87	87	5
TOTAL XYLENES	<0.025	3.00	2.49	83	2.57	86	3
METHYL-t-BUTYL ETHER	<0.13	2.00	1.65	83	1.73	87	5

# GENERAL CHEMISTRY RESULTS

CLIENT

: RHINO ENVIRONMENTAL

AEN I.D.

: 604353

PROJECT # : (NONE)

DATE RECEIVED

: 04/12/96

PROJECT NAME : GOO YEA

DATE ANALYZED

: 04/16/96

SAMPLE MATRIX

: NON-AQ

PARAMETER			UNITS	01
PETROLEUM	HYDROCARBONS.	TR	MG/KG	<20

# GENERAL CHEMISTRY - REAGENT BLANK

CLIENT

: RHINO ENVIRONMENTAL

AEN I.D.

: 604353

PROJECT #

: (NONE)

SAMPLE MATRIX

: NON-AQ

PROJECT NAME : GOO YEA

UNITS

: MG/KG

PARAMETER

AEN I.D.

SAMPLE RESULT

PETROLEUM HYDROCARBONS 041696

696 <20

# GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT

: RHINO ENVIRONMENTAL

AEN I.D.

: 604353

PROJECT #

: (NONE)

SAMPLE MATRIX

: NON-AQ

PROJECT NAME: GOO YEA

UNITS

: MG/KG

		SAMPLE	DUP.		SPIKED	SPIKE	8
PARAMETER	AEN I.D.	RESULT	RESULT	RPD	SAMPLE	CONC.	REC
PETROLEUM HYDROCARBONS	60435301	<20	<20	NA	168	150	112

SHADED AREAS ARE FOR LAB USE ONLY	THIS FORM IN COMPLETELY.	PLEASE FILL

San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque Analytical Technologies, Inc., Abuquerque, NM

PAGE DATE: 4/10/96

CUSTODY ٩. آ 능 CHAIN

2>2700

ATI LAB I.D.

NOWBE **CONTAINERS** Ŋ Analytical Technologies, Inc. HCRA Metals by TCLP (1311) **HCRA Metals by Total Digestion** Time: RELINGUISHED BY: Date: The 13 Priority Pollutant Metals Printed Name: SDWA Se∞ndary Standards - Federal Signature: Company: . 2. HECEL SDWA Primary Standards - Federal SDWA Secondary Standards - Arizona 7 SDWA Primary Standards - Arizona ANALYSIS REQUEST Time: Date: Date: Polynuclear Aromatics (610/8310) SAMPLED & RELINQUISHED BY: 1. RELINQUISHED BY: Volatile Organics GC/MS (624/8240) Base/Neutral/Acid Compounds GC/MS (625/8270) RECEIVED Herbicides (615/8150) Printed Name: Printed Name: Signature: Signature: Company: Company: Pesticides/PCB (608/8080) 76/01/1 Phone: 4498 6.18 SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg. Aromatic Hydrocarbons (602/8020) Chlorinated Hydrocarbons (601/8010) Time: Date: Time: Date: とると (0S08) 38TM/3XT8 Printed Name: rinted Name; RECEIVED Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020) 02/16 Signature: Signature: Company: Contractor (MOD 8015) Gas/Diesel Petroleum Hydrocarbons (418.1) LABID Y.W.NA (NORMAL) XZZWEEK Ø ZATION IS REQUIRED FOR RUSH PROJECTS Low Roxweston SAMPLE RECEIPT TIME MATRIX 7017 20200 NO. CONTAINERS CUSTODY SEALS RECEIVED INTACT RECEIVED COLD KOYLE COOPER 21:11 /3/01/ 8511/2 755 544-208-505 232 DATE July 2 (RUSH) [] 24hr [] 48hr [] 72hr [] 1 WEEK RhiND レンクタ INFORMATION SAMPLEID PROJECT MANAGER: 7.08 Pr 200 NOASP PROJECT COMPANY: COMPANY: ADDRESS: ADDRESS SHIPPED VIA: BILL TO: PROJ. NAME: PHONE: PROJ. NO.: Comments FAX: P.O. NO.: 200

DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777



300 Broadway NE • Albuquerque, New Mexico 87102 (505) 242-6464 • Fax (505) 247-4941

196 NO: A AM 8 52

OH CONSERVE FOR DIVISION RECEIVED

November 5, 1996

Chris Eustice Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

Re:

Goo-Yea Landfarm

Quarterly Monitoring Report

Dear Chris,

This report represents our 2nd Quarterly Report for the above referenced facility. We have only one 5 acre treatment cell. One sample was retrieved from Cell #1 on 10/25/96 3 feet below the native soil surface and analyzed for BTEX and TPH. A summary of the analytical results are shown in Table No. 1. A copy of the

TABLE NO. 1 SUMMARY OF ANALYTICAL RESULTS							
SAMPLE ID	BENZENE (MG/KG)	TOLUENE (MG/KG)	ETHYL- BENZENE (MG/KG)	TOTAL XYLENES (MG/KG)	TOTAL PETROLEUM HYDROCARBONS (MG/KG)		
GooYea Cell #1	<0.025	<0.025	<0.025	<0.025	<20		

analytical results are attached. We will perform another Quarterly Monitoring Event in December 1996. The report will be submitted to you by the end of January 1997.

If you have any questions, please call me at 505-242-6464.

Sincerely,

Royce Cooper, Jr.

cc: Wayne Price/OCD Hobbs

AEN I.D.

610386

November 1, 1996

RHINO ENVIRONMENTAL SERVICES P.O. BOX 25547 ALBUQUERQUE, NM 87125 RECEIVED NOV - 4 1996

**Project Name** 

GOO YEA

Project Number

(none)

Attention:

ROYCE COOPER

On 10/28/96 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze non-aq samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

Kimberly D. McNeill Project Manager

MR: mt

Enclosure

H. Mitchell Rubenstein, Ph. D. General Manager

CLIENT	: RHINO ENVIRONMENTAL SERVICES	AEN I.D.	: 610386
PROJECT#	: (none)	DATE RECEIVED	10/28/96
PROJECT NAME	: GOO YEA	REPORT DATE	: 11/1/96
AEN			DATE
1D. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	GOO YEA CELL #1	SOIL	10/25/96

# **GENERAL CHEMISTRY RESULTS**

418.1

CLIENT

SAMPLE

ID.#

: RHINO ENVIRONMENTAL SERVICES

**MATRIX** 

AEN I.D.

: 610386

PROJECT#

: (none)

DATE RECEIVED

: 10/28/96

**PROJECT NAME** 

: GOO YEA

 DATE
 DATE
 DIL.

 SAMPLED
 EXTRACTED
 ANALYZED
 FACTOR

 10/25/96
 10/29/96
 10/29/96
 1

 01
 GOO YEA CELL #1
 NON-AQ
 10/25/96
 10/29/96

 PARAMETER
 DET. LIMIT
 UNITS
 01

PETROLEUM HYDROCARBONS, IR

CLIENT I.D.

20 MG/KG

< 20

**CHEMIST NOTES:** 

N/A

# GENERAL CHEMISTRY - REAGENT BLANK

418.1

CLIENT : RHINO ENVIRONMENTAL SERVICES AEN I.D.
PROJECT # : (none) SAMPLE MATRIX
PROJECT NAME : GOO YEA UNITS

UNITS : MG/KG SAMPLE

PARAMETER AEN I.D. RESULT

PETROLEUM HYDROCARBONS 102996 <20

CHEMIST NOTES:

N/A

: 610386

: NON-AQ

# GENERAL CHEMISTRY - QUALITY CONTROL

418.1

CLIENT : RHINO ENVIRONMENTA		AL SERVICES			AEN I.D.		610386	
PROJECT #	: (none)					SAMPLE MATRIX	:	NON-AQ
PROJECT NAME	: GOO Y	EA				UNITS	:	MG/KG
			SAMPLE	DUP.	%	SPIKED	SPIKE	%
PARAMETER		AEN I.D.	RESULT	RESULT	RPD	SAMPLE	CONC.	REC
PETROLEUM HYDRO	CARBONS	610386-01	<20	<20	N/A	144	150	96%

CHEMIST	NOTES:
---------	--------

N/A

% Recovery = (Spike Sample Result - Sample Result)

Spike Concentration

X 100

(Sample Result - Duplicate Result)

RPD (Relative Percent Difference) =

Average Result

Printed: 10/30/96; 14:07

Confidential

File: 610386.XLS; 418.1 MS MSD

# GAS CHROMOTOGRAPHY RESULTS

TEST

: BTEX (EPA 8020)

CLIENT

: RHINO ENVIRONMENTAL SERVICES

AEN I.D.: 610386

PROJECT#

: (none)

PROJECT NAME

: GOO YEA

SAMPLE				DATE	DATE	DATE	DIL.
ID.#	CLIENT I.D.		MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01 (	GOO YEA CELL#	1	NON-AQ	10/25/96	10/30/96	10/30/96	1
PARAMETER	}	DET. LIMIT		UNITS	01		
BENZENE		0.025		MG/KG	< 0.025		
TOLUENE		0.025		MG/KG	< 0.025		
<b>ETHYLBENZI</b>	ENE	0.025		MG/KG	< 0.025		
<b>TOTAL XYLE</b>	NES	0.025		MG/KG	< 0.025		

SURROGATE:

**BROMOFLUOROBENZENE (%)** 

100

SURROGATE LIMITS

(65 - 120)

**CHEMIST NOTES:** 

N/A

#### GAS CHROMOTOGRAPHY RESULTS REAGENT BLANK

TEST : BTEX (EPA 8020) AEN I.D.

610386

BLANK I. D.

: 103096

DATE EXRACTED

10/30/96

CLIENT

: RHINO ENVIRONMENTAL SERVICES DATE ANALYZED

10/30/96

PROJECT#

SAMPLE MATRIX

**NON-AQ** 

PROJECT NAME

: GOO YEA UNITS

**PARAMETER** 

(80 - 120)

MG/KG MG/KG

<0.025 < 0.025

**TOLUENE ETHYLBENZENE** 

BENZENE

MG/KG

<0.025

**TOTAL XYLENES** 

MG/KG

< 0.025

SURROGATE:

**BROMOFLUOROBENZENE (%)** 

100

SURROGATE LIMITS:

**CHEMIST NOTES:** 

N/A

#### GAS CHROMOTOGRAPHY QUALITY CONTROL **MSMSD**

**TEST** 

: BTEX (EPA 8020)

MSMSD#

: 610386

CLIENT

: 610390-06

AEN I.D.

: 10/30/96

PROJECT#

: RHINO ENVIRONMENTAL SERVICES DATE EXRACTED

DATE ANALYZED

: 10/30/96

PROJECT NAME

: GOO YEA

SAMPLE MATRIX

: NON-AQ

LIMITS

MG/KG

				ONITS		IVIGING			
	SAMPLE	CONC	SPIKED	%	DUP	DUP		REC	RPD
PARAMETER	RESULT	SPIKE	SAMPLE	REC	SPIKE	% REC	RPD	LIMITS	LIMITS
BENZENE	<0.025	1.00	0.80	80	0.83	83	4	(68 - 120)	20
TOLUENE	< 0.025	1.00	0.98	98	1.00	100	2	( 64 - 120 )	20
ETHYLBENZENE	<0.025	1.00	1.05	105	1.08	108	3	( 49 - 127 )	20
TOTAL XYLENES	< 0.025	3.00	3.19	106	3.29	110	3	( 58 - 120 )	20

**CHEMIST NOTES:** 

N/A

(Spike Sample Result - Sample Result)

% Recovery =

----- X 100

Spike Concentration

(Sample Result - Duplicate Result)

RPD (Relative Percent Difference) =

Average Result

Page /of (.

Anachem, Inc. 8 Prestige Circle, Suite 104, Allen, Tx 75002 Phone: 214-727-9003 Fax: 214-727-9686 Chain Of Custody/Order Form

Report To:		Bill To:	244.0				Analysis	
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Phone: 242 - 6464	Fax: 247-494	Phone:		Fax:		13	(	
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00B REV 10/94 Sample informat	Sample information is vital for proper login and		ter 65 days, a 3.5°	reporting. After 65 days, a 3.5% late fee will be assessed for all unpaid submissions.	sessed for all	unpaid submis	8ions.	

Sample information is vital for proper login and reporting. After 65 days, a 3.5% late fee will be assessed for all unpaid submissions.



CHI COMBERLATION DIVISION AND FALLS

January 9, 1996

Mr. Chris Eustice Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

RE:

Goo-Yea Landfarm

**Quarterly Monitoring Report** 

Dear Mr. Eustice:

In accordance with the conditions set forth in the treatment zone monitoring and reporting requirements of the permit, enclosed please find the second quarterly report for Rhino's Goo-Yea Facility, located in Lea County, New Mexico. At this time, Rhino has only one active 5 acre treatment cell.

A sample was retrieved from Cell #1 at two to three feet below the native soil surface. The sample was analyzed for BTEX, TPH, general chemistry and total metals. A summary of the analytical results are shown in Table No. 1. A copy of the analytical results are attached.

If you have any questions, please call me at 505-242-6464.

Sincerely.

Joseph Menicucci

Rhino Environmental Services, Inc.

SAMPLE RESULT	MG/KG (ppm)
TPH/BTEX	
TPH	<20
Benzene	<0.025
Toluene	<0.025
Ethyl benzene	<0.025
Xylenes	<0.025
Total Metals	
Silver	ND
Arsenic	ND
Barium	210
Cadmium	ND
Chromium	5
Mercury	ND
Lead	5
Selenium	ND
General Chemistry	
Fluoride	ND
Nitrite-Nitrate, Nitrogen	2
Sulfate	2100
Total Solids	97%
Chloride	270
Alkalinity, Total	25000
pH	7.7
Bicarbonate, CACO3	25000
Carbonate, CACO3	120
Carbon Dioxide, Free as CACO3	990
Aluminum	4500
Calcium	8300
Copper	4
Iron	6400
Potassium	1200
Magnesium	1300
Manganese	74
Sodium	43
Zinc	14

AEN I.D. 612311

January 3, 1996

RHINO ENVIRONMENTAL SERVICES P.O. BOX 25547 ALBUQUERQUE

**Project Name** 

GOO-YEA

Project Number

1196

Attention:

DANIELE BERARDELLI

On 12/5/96 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA methods 8020 and 418.1 were performed by American Environmental Network (NM) Inc., Albuquerque, NM.

All other analyses were perfored by American Environmental Network (FL), Inc., 11 East Olive Rd, Pensacola, FL.

This report is being reissued in part to include 8 RCRA metals. We apologize for any inconvenience this delay may have occurred.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

Kimberly D. McNeill Project Manager

H. Mitchell Rubenstein, Ph. D.

General Manager

MR: mt

Enclosure

CLIENT	: RHINO ENVIRONMENTAL SERVICES	AEN I.D.	: 612311
PROJECT#	: 1196	DATE RECEIVED	: 12/5/96
PROJECT NAME	: GOO-YEA	REPORT DATE	: 12/20/96
AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	CELL 1	SOIL	11/30/96

Printed: 1/1/97; 17:00

#### "FINAL REPORT FORMAT - SINGLE"

Accession:

612625

Client:

AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO

Client:
Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
RCRA METALS

SOIL

Matrix: QC Level:

II

001 612311-01

Sample Date/Time: 30-NOV-96 0900 Received Date: 17-DEC-96

Lab Id: Client Sample Id:	001 612311-01		Sample Date/Tim Received Date:	e: 30-NOV-9 17-DEC-9	
Parameters:	Units:	Results:	Rpt Lmts:	Q: Batch:	Analyst:
SILVER (6010) ARSENIC (6010) BARIUM (6010) CADMIUM (6010) CHROMIUM (6010) MERCURY (7471) LEAD (6010) SELENIUM (6010)	MG/KG MG/KG MG/KG MG/KG MG/KG MG/KG MG/KG	ND ND 210 ND 5 ND 5	1 5 1 0.5 1 0.02 5	A6S151 R6S151 B6S151 C6S151 H6S151 M4S069 P6S151 S6S151	JR JR JR JR JR JR JR

Comments:

#### "Method Report Summary"

Accession Number: 612625
Client: AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number: 612311
Project Name: RHINO

Project Number: 612311
Project Name: RHINO
Project Location: 600 YEA 1196
Test: RCRA METALS

Client Sample Id:	Parameter:	Unit:	Result:
612311-01	BARIUM (6010)	MG/KG	210
	CHROMIUM (6010) LEAD (6010)	MG/KG MG/KG	5 5

			uality Cont			
Parameter: Batch Id: Blank Result: Anal. Method: Prep. Method: Analysis Date: Prep. Date:	SILVER	ARSENIC	BARIUM	CADMIUM	CHROMIUM	MERCURY
	A6S151	R6S151	B6S151	C6S151	H6S151	M4S069
	<1	<5	<1	<0.5	<1	<0.02
	6010	6010	6010	6010	6010	7471
	3050	3050	3050	3050	3050	7471
	11-DEC-96	11-DEC-96	11-DEC-96	11-DEC-96	11-DEC-96	31-DEC-96
	10-DEC-96	10-DEC-96	10-DEC-96	10-DEC-96	10-DEC-96	31-DEC-96
Sample Dup	lication					
Sample Dup:	612169-1	612169-1	612169-1	612169-1	612169-1	612625-1
Rept Limit:	<1	<5	<1	<0.5	<1	
Sample Result:	170	180	180	170	170	0.42
Dup Result:	170	180	180	170	170	0.45
Sample RPD:	0	0	0	0	0	7
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A
Matrix Spi	ke					
Sample Spiked:	612169-1	612169-1	612169-1	612169-1	612169-1	612625-1
Rept Limit:	<1	<5	<1	<0.5	<1	<0.02
Sample Result:	<1	<5	5	<0.5	6	<0.02
Spiked Result:	170	180	180	170	170	0.42
Spike Added:	200	200	200	200	200	0.42
% Recovery:	85	90	88	85	82	100
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A
ICV						
ICV Result:	5.0	4.9	5.0	4.9	5.1	0.0044
True Result:	5.0	5.0	5.0	5.0	5.0	0.0040
% Recovery:	100	98	100	98	102	110
% Rec Limits:	90-110	90-110	90-110	90-110	90-110	80-120
LCS						
LCS Result:	76	59	260	74	77	2.30
True Result:	69.6	62.7	260	77.4	76.9	2.51
% Recovery:	109	94	100	96	100	92
% Rec Limits:	74-126	70-130	73-127	66-133	77-123	64-135

"Metals (	Quality	Control	Report"
-----------	---------	---------	---------

LEAD	SELENIUM
P6S151	S6S151
< 5	<10
6010	6010
3050	3050
11-DEC-96	11-DEC-96
10-DEC-96	10-DEC-96
	P6S151 <5 6010 3050 11-DEC-96

#### Sample Duplication

Sample Dup:	612169-1	612169-1
Rept Limit:	<5	<10
Sample Result: Dup Result: Sample RPD: Max RPD: Dry Weight%	170 170 0 20 N/A	180 180 0 20 N/A

### Matrix Spike

Sample Spiked:	612169-1	612169-1
Rept Limit:	<5	<10
Sample Result:	<5	<10
Spiked Result:	170	180
Spike Added:	200	200
% Recovery:	85	90
% Rec Limits:	75-125	75-125
Dry Weight%	N/A	N/A

#### ICV

ICV Result:	5.0	5.0	
True Result:	5.0	5.0	
<pre>% Recovery:</pre>	100	100	- 1
% Rec Limits:	90-110	5.0 100 90-110	

#### LCS

LCS Result:	110	100
True Result:	122	91.7
<pre>% Recovery:</pre>	90	109
% Rec Limits:	68-131	71-129

## "Quality Control Comments"

				B-	atch	Id:	Comments
A6S151	ANALYST: JR				_		
A6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
R6S151 R6S151	ANALYST: JR The results reported	under	"Sample	Duplication"	are	the	MS/MSD.
B6S151 B6S151 C6S151	ANALYST: JR The results reported ANALYST: JR	under	"Sample	Duplication"	are	the	MS/MSD.
C6S151 C6S151 H6S151	ANALYST: JR The results reported ANALYST: JR	under	"Sample	Duplication"	are	the	MS/MSD.
H6S151 M4S069	The results reported ANALYST: GJ	under	"Sample	Duplication"	are	the	MS/MSD.
M4S069 P6S151	The results reported ANALYST: JR	under	"Sample	Duplication"	are	the	MS/MSD.
P6S151 S6S151	The results reported ANALYST: JR	under	"Sample	Duplication"	are	the	MS/MSD.
S6S151	The results reported	under	"Sample	Duplication"	are	the	MS/MSD.

#### ---- Common Footnotes Metals -----

N/A = NOT APPLICABLE.

N/S = NOT SUBMITTED.

N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW ATI REPORTING LIMIT; THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.

N/D = NOT DETECTED.

DISS. OR D = DISSOLVED

T & D = TOTAL AND DISSOLVED

R = REACTIVE

T = TOTAL

- G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
- OR BELOW ATI REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".  $Q = THE \ ANALYTICAL \ (POST-DIGESTION) \ SPIKE IS REPORTED DUE TO PERCENT RECOVERY$ BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DIGESTION) SPIKE.

= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.

- + = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
  \* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR TO ANALYSIS)
- @ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO DIGESTION)
- = ANALYTICAL (POST DIGESTION) SPIKE.
- I = DUPLICATE INJECTION.

& = AUTOMATED

= SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.

N/C+ = NOT CALCULABLE

 $N/C^* = NOT$  CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION. H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".

- A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
  Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
- NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL". SAMPLE IS NON-HOMOGENEOUS.
- J = (FLORIDA DEP 'J' FLAG) MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
   THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM.
  U = (FLORIDA DEP 'U' FLAG) THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.
- S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

#### FROM ANALYSIS REPORT:

RL= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES. Q= QUALIFIER (FOOTNOTE)

FROM QUALITY CONTROL REPORT:

RPD= RELATIVE PERCENT DEVIATION.

RPT LIMIT = REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

NOTE: THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS RUN BASIS.

SW-846, 3rd Edition, latest revision. EPA 600/4-79-020, Revised March 1983. NIOSH Manual of Analytical Methods, 4th Edition. Standard Methods For the Examination of Water and Wastewater, 18th Edition, 1992. Methods For the Determination of Metals in Environmental Samples - Supplement I, EPA 600/R-94-111, May 1994.

GJ = GARY JACOBS JLH = JAMES L. HERED CD = CHRISTY DRAPER

JR = JOHN REED

LV = LASSANDRA VON APPEN

American Environmental Network Albuquerque, New Mexico

Interlab Chain of Custody

12/5 PAGE 1 OF

NUMBER OF CONTAINERS Gross AlphavBeta \$1-01 (11E1 9JOT) 07S8 8240 (TCLP 1311) ZHE Polynuclear Aromatics (610/8310) Volatile Organics GC/MS (624/8240) **ANALYSIS REQUEST** Base/Neutral Acid Compounds GC/MS (625/8270) Herbicides (615/8150) Pesticides/PCB (608/8080) COD 80D Oil and Grease Gen Chemistry OOT 7600 XOT RCRA Metals by Metals - BCRA Metals - PP List Metals - TAL LAB ID American Environmental Network 2709-D Pan American Freeway, NE MATRIX 09ab 501 NETWORK PROJECT MANAGER: KIMBERLY D. McNEIL TIME Albuquerque, NM 87107 DATE Kim McNeill Ó CLIENT PROJECT MANAGER: SAMPLE 1D 115219 COMPANY: ADDRESS:

	PROJECT INFORMATION	SAMPLE RECEIPT	SAMPLES SENT TO:	RELINQUISHED BY: 1.	RELINQUISHED BY: / 2
1	PROJECT NUMBER: PL . 7.	TOTAL NUMBER OF CONTAINERS	SAN DIEGO	Signatury: 1/ Time: M	Signature / / / Trib
<u></u>	Consequence / 1 - 2 /	CHAIR WOOLD TO HELL	Paragon	Christian (120	
1	MUJECT WAME. 6/67/	CHAIN OF COSTOUT SEALS	NOTNE	Printed Name: Date:	Print Stante Date
	OCLEVEL. (STO) IV	INTACT?	DINION A	John Co blue 1/ 12/5/2/	
_	OC PEOUJAEO MS MSD BLANK	RECEIVED GOOD COND./COLD	PORTLAND	Albuquerque	Сотралу
	TAT STANDARD RUSH!	LAB NUMBER	PHOENIX	RECEIVED BY:	RECEIVED BY: (LAB) 2
				17	Signature: 6 Time
		And the second of the second o			Res Show 0739
٠,	DUE DATE:			Printed Name Date:	Printed Name: Date:
, -	NUSH SURCHARGE:				R. ELSPERMY 12/6/96
	CLIENT DISCOUNT:			Corpoany:	
	SPECIAL CERTIFICATION REQUIRED: TYES DIO				Company: AFN-PN/

Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Pontland (503) 684-0447 • Abuquerque (505) 344-3777

Depart To Describe   Desirent all   Desired   Desirent all   Des	iite 104,	Allen,Tx 75002 Phone: 214-727-9003	10ne: 214-727	l	Fax: 214-727-9686	Ps	Page Lof L
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City, State, Zip:  Antrix  Date// Phone:  Fex:  City, State, Zip:  Antrix  Date// Phone:  Fex:  City, State, Zip:  Antrix  Date// Phone:  Antrix  Date// Phone:  Antrix  Date// Phone:  Antrix	OMPANY: RHUNG ENU. SUCS.	Purchase Order #:	V - VX	_)		612311/1/2	12133
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(21) L Soir 113496/6120 90 C. Received By Date Time Delivery Analyst  [130] A. C. Mark (1359) 130 140 1		Matrix	Date/Time	Presry/Femp	Sample Notes	41.	
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11:30 Had nazardo nazardo nazardo nazardo nazardo			Delivery	Analyst	In the event the	it Anachem determines that a sa	mple i9
Anachen	Che Called		Hard		nazardous, the	Sample Diaposal	
Anachem Submission #:					Accept	Keturned Sample X	
					Anachem Subm	ission #:	
	Sample information is vital for proper login and reporting. After 65 days, a 3.5% late fee will be assessed for all uppaid submissions	and reporting. After	r 65 days, a 3.5%	blate fee will b	e assessed for all	unosid submissions.	

Sample information is vital for proper login and reporting. After 66 days, a 3.5% late fee will be assessed for all unpaid submissions.



OIL GONSERVATION DIVISION REL: VED

°35 NU 1 4 AM 8 52

Tightness Tests Removals New Installations Repairs Remedial Services Contaminated Soils Disposal Leak Detection

August 1, 1995

Chris Eustice Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

Re:

Goo-Yea Landfarm

Background Sampling

Dear Chris,

Enclosed please find copies of the analytical report for background sampling at the above referenced facility. This should complete all pre-operational requirements for this facility.

If you have any questions, please call me at 505-392-4498.

Sincerely,

Royce Cooper,

Wayne Price/OCD Hobbs

2709-D Pan American Freeway, NE Albuquerque. NM 87107 Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 506441

July 21, 1995

Rhino Environmental P.O. Box 2327 Hobbs, NM 88240

Project Name/Number: GOO-YEA

Attention: Royce Cooper

On 06/30/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze non-aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 418.1 analyses were performed by Analytical Technologies, Inc., Albuquerque, NM.

All other analyses were performed by Analytical Technologies, Inc., 5550 Morehouse Drive, San Diego, CA.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill Project Manager

MR:jt

Enclosure

H. Mitchell Rubenstein, Ph.D.

Laboratory Manager

Analyti

Analytical **Technologies**, Inc.

CLIENT

: RHINO ENVIRONMENTAL

DATE RECEIVED

:06/30/95

PROJECT #

: (NONE)

PROJECT NAME

: GOO-YEA

REPORT DATE

:07/21/95

ATI ID: 506441

	ATI SAN DIEGO	CLIENT		DATE
	ID #	DESCRIPTION	MATRIX	COLLECTED
01	506441-01	BACKGROUND	NON-AQ	06/28/95

---TOTALS---

MATRIX NON-AQ #SAMPLES

#### ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



#### GENERAL CHEMISTRY RESULTS

CLIENT

: RHINO ENVIRONMENTAL

ATI I.D.

: 506441

PROJECT #

: (NONE)

DATE RECEIVED

: 06/30/95

PROJECT NAME

: GOO-YEA

DATE ANALYZED

: 06/30/95

PARAMETER

UNITS

01 <20

PETROLEUM HYDROCARBONS, IR MG/KG



GENERAL CHEMISTRY

QUALITY CONTROL

CLIENT

: RHINO ENVIRONMENTAL

ATI I.D.

: 506441

PROJECT #

: (NONE)

SAMPLE MATRIX

: NON-AQ

PROJECT NAME : GOO-YEA

UNITS

: MG/KG

		SAMPLE	DUP.		SPIKED	SPIKE	8
PARAMETER	ATI I.D.	RESULT	RESULT	RPD	SAMPLE	CONC.	REC
PETROLEUM HYDROCARBONS	50644001	<20	<20	NA	170	150	113

(Sample Result - Duplicate Result)

RPD (Relative Percent Difference) = ----- X 100

Average Result



#### ANALYTICAL SCHEDULE

ANALYT
Analytical **Technologies**, Inc.

Client : ANALYTICAL TECHNOLOGIES, INC.

Project # : 506441

Project Name: RHINO ENV./GOO-YEA

ATI I.D.: 507017

Analysis	Technique/Description
MERICAN SOCIETY OF AGRONOMY 91-4 (CARBONATE IN SO	TITRATION
EPA 320.1 (BROMIDE)	TITRATION
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 6010 (ALUMINUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (ANTIMONY)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 6010 (BARIUM)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 6010 (BERYLLIUM)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 6010 (BORON)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (CALCIUM)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (CHROMIUM)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 6010 (COBALT)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (COPPER)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (LEAD)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (MAGNESIUM)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (MOLYBDENUM)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (NICKEL)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (SILICON)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (SILVER)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (VANADIUM)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 6010 (ARSENIC)	INDUCTIVELY COUPLED ARGON PLASMA
PA 6010 (CADMIUM)	INDUCTIVELY COUPLED ARGON PLASMA
SPA 6010 (SELENIUM)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 6010 (THALLIUM)	INDUCTIVELY COUPLED ARGON PLASMA
CPA 9038 (SULFATE)	TURBIDIMETRIC
EPA 9045 (pH SOIL)	ELECTRODE
EPA 9253 (CHLORIDE)	TITRIMETRIC, SILVER NITRATE
AOD EPA 9050 (ELECTRICAL CONDUCTIVITY)	ELECTRODE

Analytical **Technologies**, Inc.

#### GENERAL CHEMISTRY RESULTS

Client : ANALYTICAL TECHNOLOGIES, INC.
Project # : 506441
Project Name: RHINO ENV./GOO-YEA

ATI I.D.: 507017

Samp #	ole Client ID		Matrix	Date Sampled	Date Received
1	506441-01		SOIL	28-Jun-95	06-JUL-95
Para	meter	Units	1		
BROM	(IDE	MG/KG	<2.0		
CHLC	DRIDE	MG/KG	<5		
CARE	BONATE	*	0.072		
ELEC	TRICAL CONDUCTIVITY	UMHOS/CM	<20		
FLUC	DRIDE	MG/KG	<5		
На		UNITS	6.6		
SULE	FATE	MG/KG	<100		نهي ا

#### GENERAL CHEMISTRY - QUALITY CONTROL



Analytical **Technologies**, Inc.

DUP/MS

Client

: ANALYTICAL TECHNOLOGIES, INC.

Project # : 506441

ATI I.D. : 507017

Project Name: RHINO ENV./GOO-YEA

Parameters	REF I.D. Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
BROMIDE	507017-01 MG/KG	<2.0	<2.0	0	99.4	99.5	100
CARBONATE	507017-01 %	0.072	0.078	8	N/A	N/A	N/A
CHLORIDE	507017-01 MG/KG	<5	<5	0	41.0	40.0	103
ELECTRICAL CONDUCTIVITY	507017-01 UMHOS/CN	1<20	<20	0	N/A	N/A	N/A
FLUORIDE	507017-01 MG/KG	<5	<5	0	37	49	76
SULFATE	507017-01 MG/KG		<100	0	202	201	100
рн	507017-01 UNITS	6.6	6.5	2	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)\*100/Spike Concentration RPD (Relative % Difference) = (Sample Result - Duplicate Result) \*100/Average Result

#### GENERAL CHEMISTRY - QUALITY CONTROL

Analytical **Technologies**, Inc.

#### BLANK SPIKE

: ANALYTICAL TECHNOLOGIES, INC.

Project # : 506441

Project Name: RHINO ENV./GOO-YEA

ATI I.D. : 507017

Parameters	Blank Unit Spike ID#	s Blank Result	Spiked Sample	Spike Conc.	% Rec
BROMIDE	57564 MG/K	G <2.0	99.0	99	100
CHLORIDE	57662 MG/K	G <5	40.0	40.0	100
FLUORIDE	57666 MG/K	G <5	49	50	98
SULFATE	57606 MG/K	G <100	192	196	98

<sup>%</sup> Recovery = (Spike Sample Result - Sample Result)\*100/Spike Concentration RPD (Relative % Difference) = (Sample Result - Duplicate Result)\*100/Average Result

# Analytical Technologies, Inc. Client : ANALYTICAL TECHNOLOGIES, INC. Project # : 506441 Project Name: RHINO ENV./GOO-YEA

METALS RESULTS

ATI I.D.: 507017

Sample Client ID #	Matrix	Date Sampled	Date Received
1 506441-01	SOIL	28-JUN-95	06-JUL-95
Parameter	Units 1		
SILVER	MG/KG <1.0		
ALUMINUM	MG/KG 1910		
ARSENIC	MG/KG <1.0		
BORON	MG/KG <5.0		
BARIUM	MG/KG 12.9		
BERYLLIUM	MG/KG <0.5	•	**
CALCIUM	MG/KG 315	N - 4	•
CADMIUM	MG/KG <0.5		
COBALT	MG/KG <1.0		
CHROMIUM	MG/KG 2.8		
COPPER	MG/KG <1.0		
IRON	MG/KG 2220		
POTASSIUM	MG/KG 432	,	
MAGNESIUM	MG/KG 362		
MANGANESE	MG/KG 21.0		
MOLYBDENUM	MG/KG <1.0		
SODIUM	MG/KG 14.8		
NICKEL	MG/KG 1.5		
LEAD	MG/KG 2.2		
YNOMITNA	MG/KG <3.0		
SELENIUM	MG/KG <1.0		
SILICON	MG/KG 119		
THALLIUM	MG/KG <1.0		
VANADIUM	MG/KG 5.0		
ZINC	MG/KG 5.9		



#### METALS - QUALITY CONTROL

DUP/MS

Client : ANALYTICAL TECHNOLOGIES, INC.

Project # : 506441

ĞС

Project Name: RHINO ENV./GOO-YEA

ATI I.D. : 507017

Parameters	REF I.D. Units Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
ALUMINUM	506385-01 MG/KG 7240	7340	1	8910	250	N/A*V
ANTIMONY	506385-01 MG/KG <3.0	<3.0	0	46.6	50.0	93
ARSENIC	506385-10 MG/KG 3.2	3.1	3	52.1	49.9	98
BARIUM	506385-01 MG/KG 84.4	86.3	2	182	99.9	98
BERYLLIUM	506385-01 MG/KG <0.5	<0.5	0	45.2	49.9	91
BORON	506385-01 MG/KG <5.0	<5.0	0	215	250	86
CADMIUM	506385-10 MG/KG <0.5	<0.5	0	47.3	49.9	95
CALCIUM	506385-01 MG/KG 1630	1580	3	2230 .	499	120
CHROMIUM	506385-01 MG/KG 14.5	14.6	1	-60.2	49.9	92
COBALT	506385-01 MG/KG 5.0	5.0	0	96.8	99.9	92
COPPER	506385-01 MG/KG 10.1	10.2	1	56.3	49.9	93
IRON	506385-01 MG/KG 12100	12100	0	11800	99.9	V*A\N
LEAD	506385-10 MG/KG 16.8	24.9@C	39	64.2	50.0	95
MAGNESIUM	506385-01 MG/KG 3520	3530	0	3800	250	112
MANGANESE	506385-01 MG/KG 182	171	6	262	99.9	80
MOLYBDENUM	506385-01 MG/KG <1.0	<1.0	0	88.2	99.9	88
NICKEL	506385-01 MG/KG 4.4	3.8	15	47.8	49.9	87
POTASSIUM	506385-01 MG/KG 3340	3330	0	3570	250	92
SELENIUM ;	506385-10 MG/KG 1.5	1.4	7	28.9	30.0	91
SILICON	506385-01 MG/KG 92	85	8	142	50	100*1
SILVER	506385-01 MG/KG <1.0	<1.0	Ō	42.9	49.9	86
SODIUM	506385-10 MG/KG 317	322	2	971	625	105
THALLIUM	506385-10 MG/KG <1.0	<1.0	ō	58.8	49.9	118
VANADIUM	506385-01 MG/KG 35.7	36.0	1	127	99.9	91
ZINC	506385-10 MG/KG 46.5	45.0	3	88.0	50.0	83

<sup>%</sup> Recovery = (Spike Sample Result - Sample Result)\*100/Spike Concentration
RPD (Relative % Difference) = (Sample Result - Duplicate Result)\*100/Average Result

#### METALS - QUALITY CONTROL



BLANK SPIKE

Client : ANALYTICAL TECHNOLOGIES, INC.

Project # : 506441

Project Name: RHINO ENV./GOO-YEA

ATI I.D. : 507017

Parameters	Blank Spike ID	Units #	Blank Result	Spiked Sample	Spike Conc.	% Rec
ALUMINUM	57608	MG/KG	<20	229	250	92
ANTIMONY	57608	MG/KG	<3.0	45.1	50.0	90
ARSENIC	57640	MG/KG	<1.0	48.7	50.0	97
BARIUM	57608	MG/KG	<0.5	96.3	100	96
BERYLLIUM	57608	MG/KG	<0.5	44.9	50.0	90
BORON	57608	MG/KG	<5.0	238	250	95
CADMIUM	57640	MG/KG	<0.5	48.0	50.0	96
CALCIUM	57608	MG/KG	<2.5	480	500	96_
CHROMIUM	57608	MG/KG	<0.5	47.6	<sub>z</sub> 50.0	95°
COBALT	57608	MG/KG	<1.0	95.3	100	95
COPPER	57608	MG/KG	<1.0	46.1	50.0	92
IRON	57608	MG/KG	<0.5	92.5	100	93
LEAD	57608	MG/KG	<1.5	47.8	50.0	96
MAGNESIUM	57608	MG/KG	<0.5	241	250	96
MANGANESE	57608	MG/KG	<0.5	95.3	100	95
MOLYBDENUM	57608	MG/KG	<1.0	92.0	100	92
NICKEL	57608	MG/KG	<1.0	45.7	50.0	91
POTASSIUM	57608	MG/KG	<5.0	235	250	94
SELENIUM	57640	MG/KG	<1.0	28.2	30.0	94
SILICON	57608	MG/KG	<40	266	250	106
SILVER	57608	MG/KG	<1.0	44.1	50.0	88
SODIUM	57637	MG/KG	<5.0	600	625	96
THALLIUM	57640	MG/KG	<1.0	59.4	50.0	119
VANADIUM	57608	MG/KG	<0.5	94.7	100	95
ZINC	57608	MG/KG	<2.0	45.2	50.0	90

<sup>%</sup> Recovery = (Spike Sample Result - Sample Result)\*100/Spike Concentration
RPD (Relative % Difference) = (Sample Result - Duplicate Result)\*100/Average Result

## Analytical Technologies, Inc. PROJECT ID ANATECO1 FOR ACCESSIONS RECEIVED WITHIN THE LAST 90 DAYS ACCESSION # FORCES DATE LISTING FOR INORGANICS FOR PROJECT ID ANATECO1

Project Id: ANATEC01

Proj Name : RHINO ENV./GOO-YEA Accession : 507017

Proj Num : 506441

Test:	AMERICAN	SOCIETY	OF	AGRONOMY	91-4	(CARBONATE IN	
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Test:	SOII		OCIETY OF AGR	ONOMY 91-4 (CARBONATE	IN			
				Client ID	Sampled	Received	Analyzed	Prep Date
i.		1		506441-01	28-JUN-95	06-JUL-95	14-JUL-95	N/A
Test:	EPA	320.1	(BROMIDE)					
			Matrix		Sampled	Received	Analyzed	Prep Date
				506441-01	28-JUN-95	06-JUL-95	11-JUL-95	N/Å
Test:	EPA	340.2	(FLUORIDE)					
		ATI #	Matrix	Client ID	Sampled	Received	Analyzed	Prep Date
•		1		506441-01				
Test:	EPA	9038 (	SULFATE)					
		AŢI #			_		Analyzed	
		1		506441-01			12-JUL-95	
Test:	EPA	9045 (	pH SOIL)					
		ATI #	Matrix	Client ID	Sampled	Received	Analyzed	Prep Dat
		1	SOIL	506441-01	28-JUN-95	06-JUL-95	10-JUL-95	N/A
Test:	EPA	9253 (	CHLORIDE)					
		ATI #	Matrix	Client ID	Sampled	Received	Analyzed	Prep Dat
		1	SOIL	506441-01	28-JUN-95	06-JUL-95	14-JUL-95	N/A
Test:	MOD	EPA 90	)50 (ELECTRICA	L CONDUCTIVITY)				
				Client ID	Sampled	Received	Analyzed	Prep Dat
				506441-01	28-JUN-95	06-JUL-95	07-JUL-95	N/A
Test:	EPA	6010 (	ALUMINUM)					
		ATI #	Matrix	Client ID	Sampled	Received	Analyzed	Prep Dat
		1	SOIL	506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test:	EPA	. 6010 (	(ANTIMONY)					
		ATI #	Matrix	Client ID	Sampled	Received	Analyzed'	Prep Da:



## DATE LISTING FOR INORGANICS FOR PROJECT ID ANATECO1 Analytical Technologies, InFOR ACCESSIONS RECEIVED WITHIN THE LAST 90 DAYS ACCESSION # 507017

Proj Name : RHINO ENV./GOO-YEA Project Id: ANATECO1

Accession : 507017 Proj Num : 506441

Test: EPA	,	•	Client ID	Sampled	Pacaivad	Analyzed	Bron Dato
			506441-01	28-JUN-95	00-101-32	12-301-95	N/A
Test: EPA	6010 (	BARIUM)					
			Client ID	Sampled		Analyzed	Prep Date
	1	SOIL	506441-01	28-JUN-95		12-JUL-95	N/A
Test: EPA	6010 (	BERYLLIUM)			-18 sa		
	ATI #	Matrix	Client ID	Sampled	Received	Analyzed	Prep Date
			506441-01				
Test: EPA	6010 (	BORON)					
	ATI #		Client ID				
	1		506441-01	28-JUN-95			
Test: EPA	6010 (	CALCIUM)					
	ATI #	Matrix	Client ID	Sampled		Analyzed	
			506441-01	28-JUN-95			
Test: EPA	6010 (	CHROMIUM)					
	ATI #	Matrix	Client ID	Sampled		Analyzed	Prep Dat
	1	SOIL	506441-01	28-JUN-95		12-JUL-95	N/A
Test: EPA	6010 (	(COBALT)		•			
			Client ID	Sampled	Received	Analyzed	Prep Dat
	1		506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test: EPA	6010 (	(COPPER)					
	ATI #	Matrix	Client ID	Sampled	Received	Analyzed	Prep Da
	1	SOIL	506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test: EPA	6010	(IRON)					
	ATI #	Matrix	Client ID	Sampled	Received	Analyzed <sub>.</sub>	Prep Da
	1	SOIL	506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A



# DATE LISTING FOR INORGANICS FOR PROJECT ID ANATECO1 Analytical Technologies, Infor Accessions Received within the LAST 90 DAYS ACCESSION # 507017

Project Id: ANATECO1 Proj Name: RHINO ENV./GOO-YEA

Proj Num : 506441 Accession : 507017

Test: E	PA 6010	(LEAD)					
	ATI	# Matrix	Client ID	Sampled	Received	Analyzed	Prep Date
,	1	SOIL	506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test: E	PA 6010	(MAGNESIUM					
	ATI	# Matrix	Client ID		Received		Prep Date
	1	soil	506441-01				N/Ā
Test: E	PA 6010	(MANGANESE			× 20		•
	ATI	# Matrix	Client ID	Sampled	Received	Analyzed	Prep Date
	1	SOIL	506441-01	28-JUN-95		12-JUL-95	
Test: E	PA 6010	(MOLYBDENU	4)				
	IŢA	# Matrix	Client ID	Sampled	Received	Analyzed	Prep Date
	1	SOIL	506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test: E	PA 6010	(NICKEL)	·				
	ATI		Client ID	-		-	-
	1		506441-01			12-JUL-95	
Test: E	PA 6010	(POTASSIUM	)				
	ATI	# Matrix	Client ID	Sampled	Received	Analyzed	Prep Dat
			506441-01		06-JUL-95	12-JUL-95	N/A
Test: E	PA 6010	(SILICON)					
			Client ID	Sampled	Received	Analyzed	Prep Dat
	1		506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test: E	EPA 6010	(SILVER)					
	ATI	# Matrix	Client ID	Sampled	Received	Analyzed	Prep Dat
	1	SOIL	506441-01	28-JUN-95	06-JUL-95	12-JUL-95	N/A
Test: E	EPA 6010	(SODIUM)					
	ITA	# Matrix	Client ID	Sampled	Received	Analyzed.	Prep Dat
	1	SOIL	506441-01	28-JUN-95	06-JUL-95	13-JUL-95	N/A

Analytical **Technologies,** Inc. Albuquerque, NIM

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NETWORK PROJECT MANAGER:	COMPANY; ADDRESS;	CLIENT PROJECT MANAGER:		506441'-01									ļ į	PROJECT NUMBER:	PROJECT NAME:	OC LEVEL:	(OC REQUIRED) MS	TAT: (STÁNDARD)		RUSH SURCHARGE:	CLIENT DISCOUNT:_
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ATI Labs: San Chego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

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PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

nalytica|**Technológies,**Inc., Albuquerque, NM n Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

CHAIN OF CUSTODY

ATI LAB I.D.

SDWA Primary Standards - Arizona SDWA Secondary Standards - Federal SDWA Secondary Standards - Federal The 13 Priority Pollutant Metals ACRA Metals by Total Digestion  AUMBER OF CONTAINERS	X					. RELINQUISHED BY:	Signáture: Time:	Printed Name: Date:	Сотрапу:	2. RECEIVED BY (LAB)	Signature Time: 5:8	Minied Name: Date: Date: C.F.F. Proc Klick 6/30/95	Analytical Technologies, Inc.	DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR
Pesticides/PCB (608/8080)  Herbicides (615/8150)  Base/Neutral/Acid Compounds GC/MS (625/8270)  Volatile Organics GC/MS (624/8240)  Polynuclear Aromatics (610/8310)						RELINQUISHED BY:	Signature: Time:	Printed Name: Date:	Сотрапу:	RECEIVED BY:	Time:	Printed Name: Daté:	Company:	
Petroleum Hydrocarbons (418.1)  (MOD 8015) Gas/Diesel  Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)  BTXE/MTBE (8020)  Chlorinated Hydrocarbons (601/8010)  Aromatic Hydrocarbons (602/8020)  Aromatic Hydrocarbons (602/8020)	XX					SAMPLED & RELINQUISHED BY: 1.	Signature:	ne: Date:	Company, Phone: (VC)	RECEIVED BY:	Signature: Time:	Printed Name: Date:	Company:	a (904) 474-1001 • Portland (503) 684-0447 • A
2327 2327 2327 352-4958 352-4998	10 1.13 ato 18/8/9					SAMPLE RECEIPT	NO. CONTAINERS 4	CUSTODY SEALS Y (N) NA	RECEIVED INTACT  RECEIVED COLD  (1)	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	(NOF	water has reach to the solver		1777 - Sept 1 - Phoenix (602) 458-9141 • Phoenix (602) 496-4400 • Sept 1906) 228-8235 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777
PROJECT MANAGER: 69CC  COMPANY: 10 13 0 x 23  ADDRESS: 10 13 0 x 23  PHONE: 505 - 35  FAX: 505 - 35  BILL TO: 500 - 35  COMPANY: 350  BILL TO: 500 - 35  BILL TO: 500		-				PROJECT INFORMATION	PROJ. NO.: 5-30- 127	PROJ. NAME: 606 - 704	P.O. NO.: SHIPPED VIA: (/S //	PRIOR AUTHORIZATION IS	(RUSH) □24hr □48hr □72hr □1WEEK	Withers		ATI 1 she: San Diego (619) 458-9141 • Phoeni